HALLIBURTON

ARRAY RESISTIVITY
DUAL SPACED NEUTRON
SPECTRAL DENSITY

5IN = 100 FT MD

COMPANY	CROWN DRILLING INCORPORATED
WELL	MERMENTAU MINERALS & LAND CO 13 #1
FIELD	MERMENTAU
PARISH	CAMERON
STATE	LA

COMPANY **CROWN DRILLING INCORPORATED**
WELL **MERMENTAU MINERALS & LAND CO 13 #1**
FIELD **MERMENTAU**
PARISH **CAMERON** STATE **LA**

API No. 17023230860000
Location Longitude: 92º 56' 18.00" E
Latitude: 29º 49' 30.00" N
SERIAL NO : 243693

Sect. N/A Twp. N/A Rge. N/A

Other Services:
SWC

Permanent Datum	GL	Elev. 1.0 ft	Elev.: K.B.	15.0 ft
Log measured from	DF	, 13.0 ft above perm. Datum	D.F.	14.0 ft
Drilling measured from	DF		G.L.	1.0 ft

Date		10-Oct-11					
Run No.		ONE					
Depth - Driller		8619.00 ft					
Depth - Logger		8594.0 ft					
Bottom - Logged Interval		8584.O ft					
Top - Logged Interval		2526.0 ft					
Casing - Driller		9.625 in @ 2524.0 ft		@		@	
Casing - Logger		2526.0 ft					
Bit Size		8.500 in		@		@	
Type Fluid in Hole		WBM					
Density	Viscosity	10.0 ppg	43.00 s/qt				
PH	Fluid Loss	9.50 pH	4.0 cptm				
Source of Sample		FLOW LINE					
Rm @ Meas. Temperature		0.650 ohmm @ 85.00 degF		@		@	
Rmf @ Meas. Temperature		0.60 ohmm @ 85.00 degF		@		@	
Rmc @ Meas. Temperature		0.687 ohmm @ 85.00 degF		@		@	
Source Rmf	Rmc	MEASURED	MEASURED				
Rm @ BHT		0.31 ohmm @ 183.0 degF		@		@	
Time Since Circulation		10.6 hr					
Time on Bottom		10-Oct-11 18:07					
Max. Rec. Temperature		183.0 degF @ 8594.0 ft		@		@	
Equipment	Location	10959019	NEW IBERIA				
Recorded By		J. NICHOLSON					
Witnessed By		HERBERT ANTIE					

Fold here

Service Ticket No.: 8535317 API Serial No.: 17023230860000 PGM Version: WL INSITE R3.4.2 (Build 2)

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE					
Date	Sample No.				
Depth-Driller					
Type Fluid in Hole					
Density	Viscosity				
Ph	Fluid Loss				
Source of Sample					
Rm @ Meas. Temp		@		@	
Rmf @ Meas. Temp.		@		@	
Rmc @ Meas. Temp.		@		@	
Source Rmf	Rmc	MEAS	MEAS		
Rm @ BHT		0.31 ohmm @ 183 deg F		@	
Rmf @ BHT		0.29 ohmm @ 183 deg F		@	
Rmc @ BHT		0.33 ohmm @ 183 deg F		@	

RESISTIVITY SCALE CHANGES			
Type Log	Depth	Scale Up Hole	Scale Down Hole

RESISTIVITY EQUIPMENT DATA				
Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other
ONE	ACRT	N/A	1.5" S.O.	N/A
	10982661			
	10976085			

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.	ONE	Run No.		Run No.	ONE	Run No.	ONE
Serial No.	10964330	Serial No.		Serial No.	11012605	Serial No.	11277439
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.	T-102A	Spacing		Log Type	GAM -GAM	Log Type	NEU -NEU
Type	SCINT			Source Type	Cs 137	Source Type	Am241Be
Length	8"	LSA [Y/N]		Serial No.	20790B	Serial No.	DSN - 412
Distance to Source	N/A	FWDA [Y/N]		Strength	1.5 Ci	Strength	15 Ci

LOGGING DATA

GENERAL GAMMA ACOUSTIC DENSITY NEUTRON

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	8594	2526	REC	0	150				60.0 %	0.0 %	2.65 g/cc	60.0 %	0.0 %	SAND

DIRECTIONAL INFORMATION

Maximum Deviation	20.60 deg	@	7998.00 ft	KOP	@ 3800.00 ft

Remarks: GTET-DSNT-SDLT-ACRT RAN IN COMBINATION

LOG TIED INTO DIRECTIONAL SURVEY DATED OCTOBER 9, 2011

ANNULAR HOLE VOLUME CALCULATED FOR 5.5 IN PRODUCTION CASING

MAX TEMP: 183 deg F, 183 deg F, 182 deg F

CHLORIDES: (CaCl) 3300 mg/L

RIG: CROWN #2

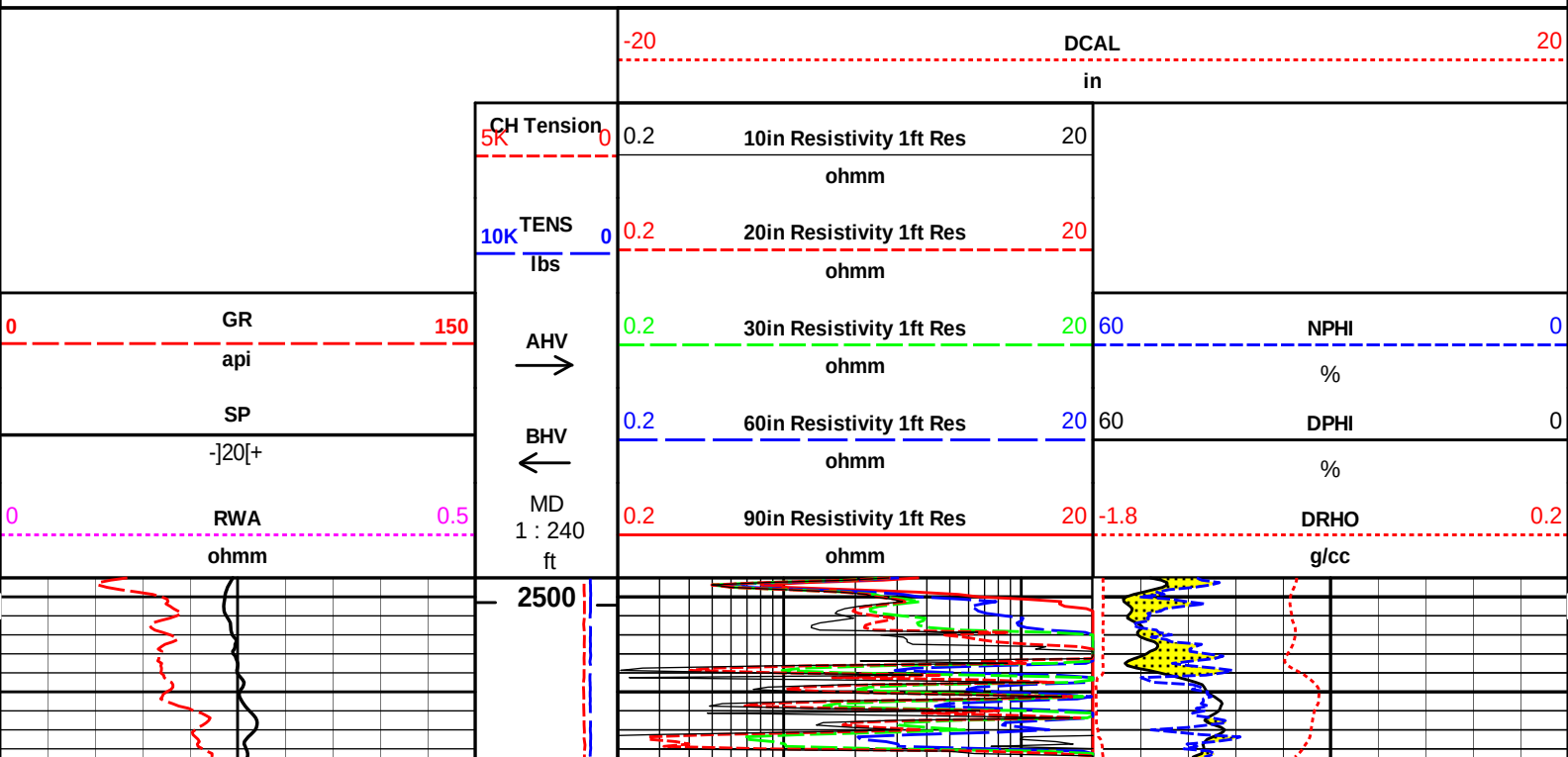
CREW: D. VARNADO, C. THOMAS, D. SIMON

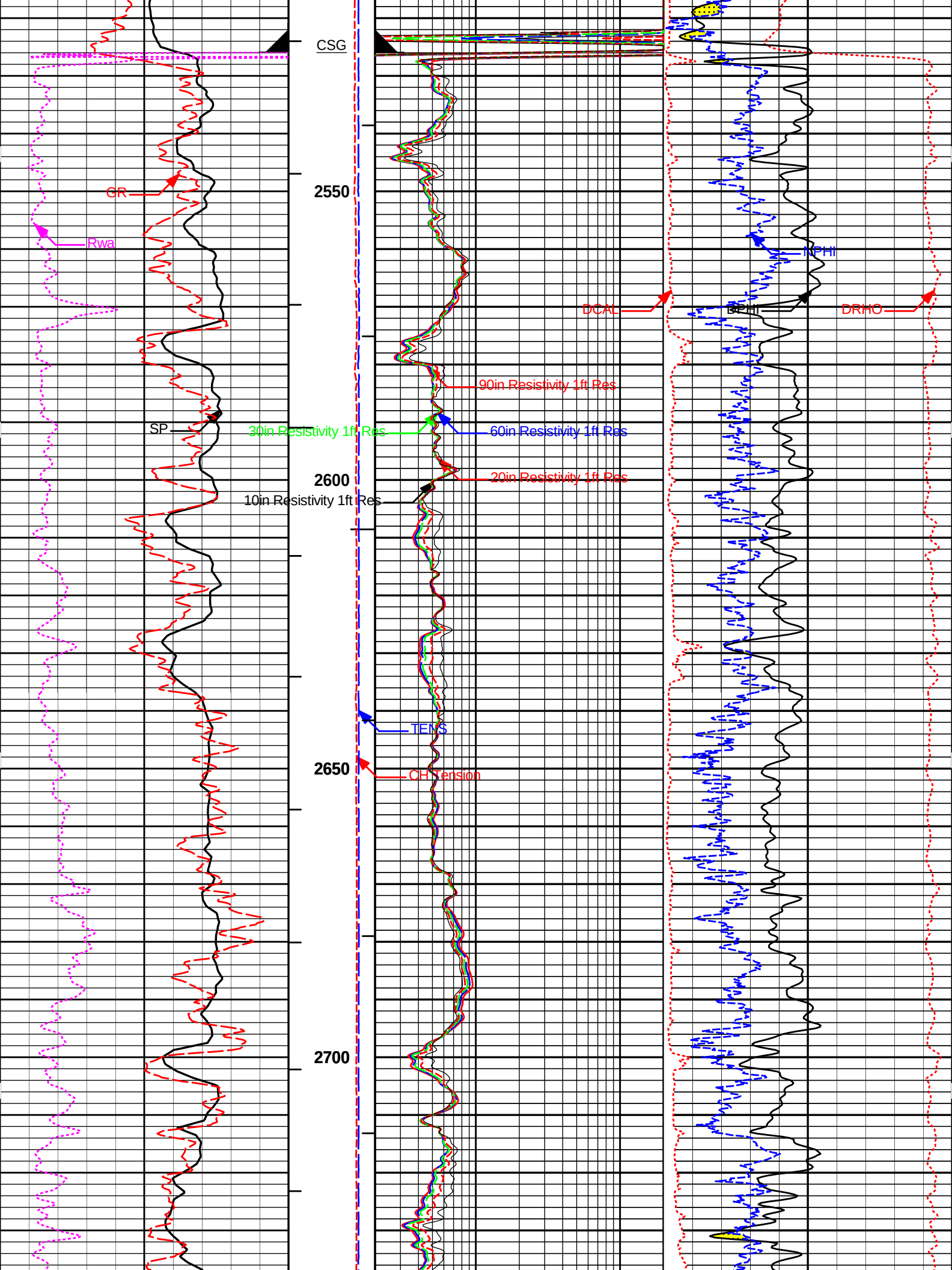
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES -- NEW IBERIA, LA -- 337.367.9261

HALLIBURTON

Plot Time: 10-Oct-11 22:15:33
Plot Range: 2498 ft to 8620 ft
Data: 10_10_CROWN\Well Based\DAQ-0001-003
Plot File: \\5IN_MD\5IN_MD_RTO

5 IN = 100 FT MD
MAIN PASS

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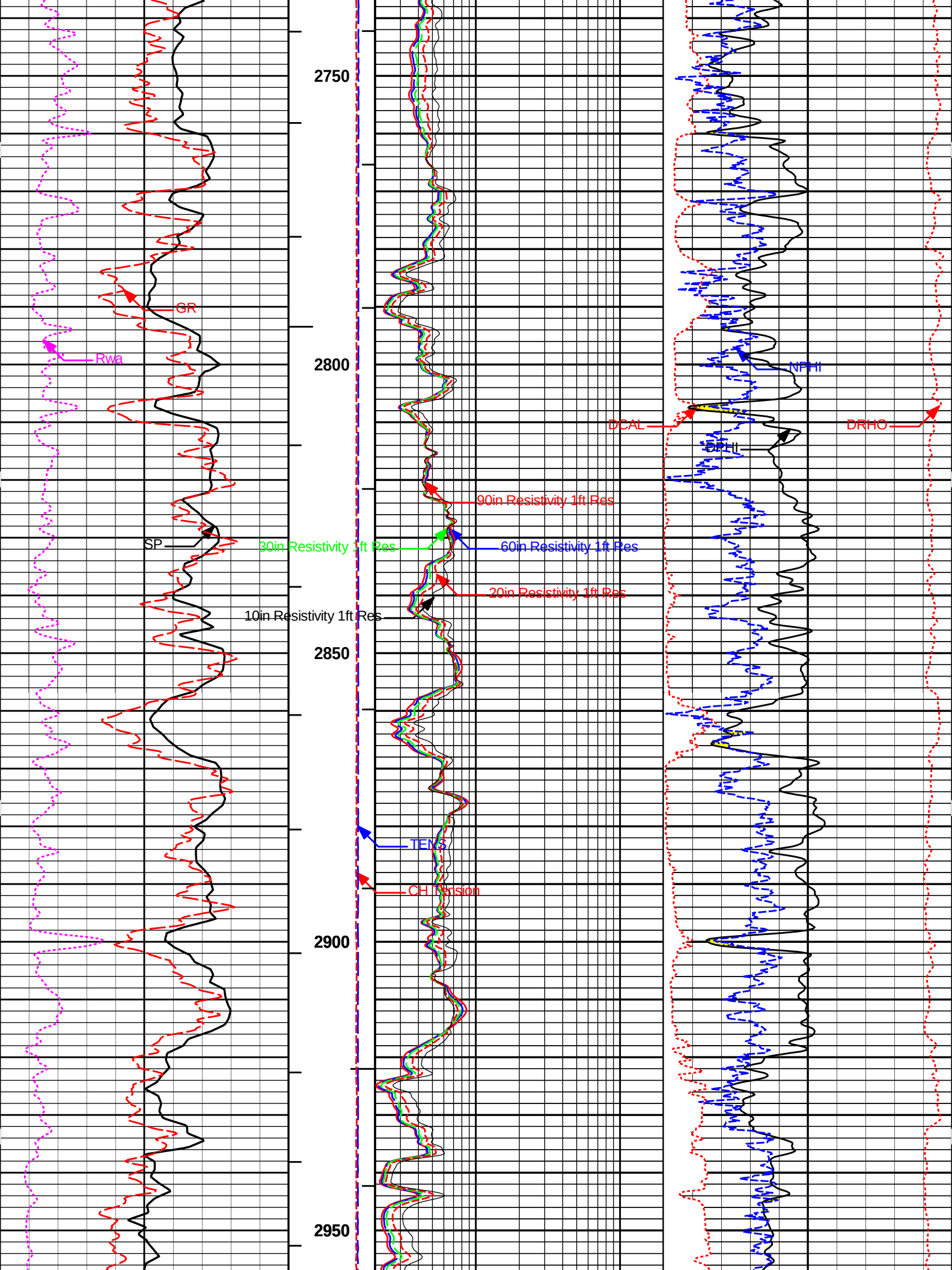
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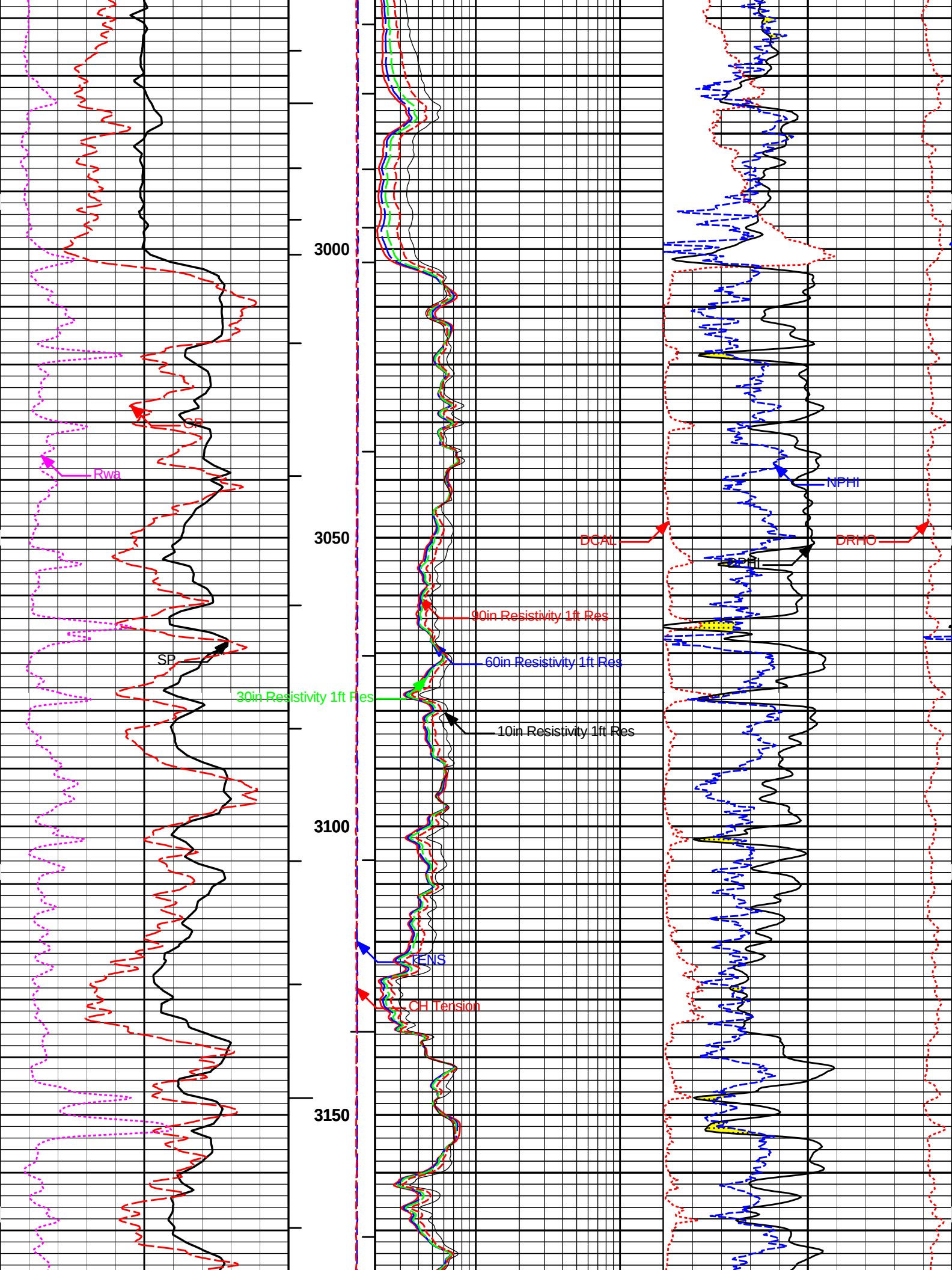
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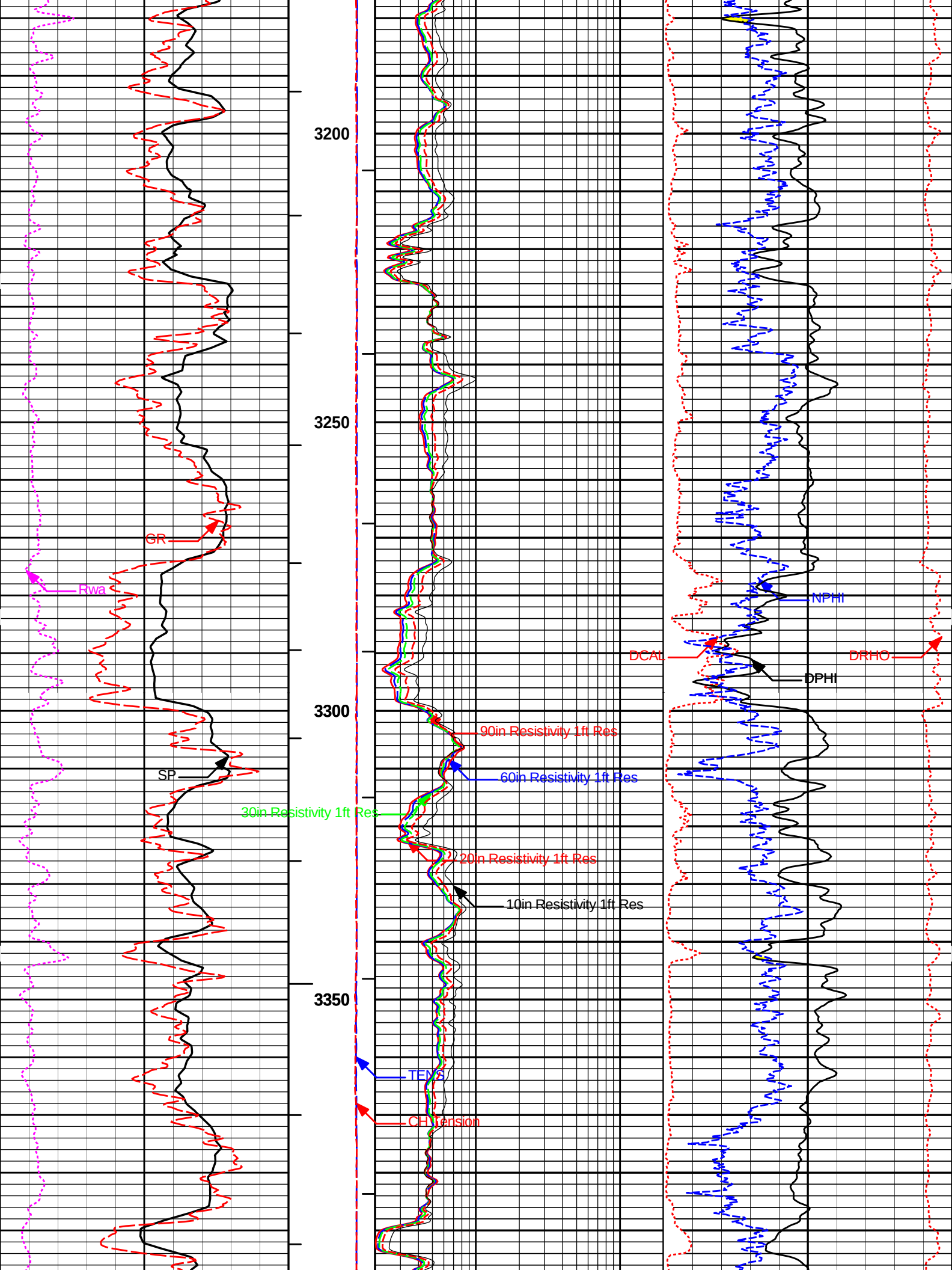
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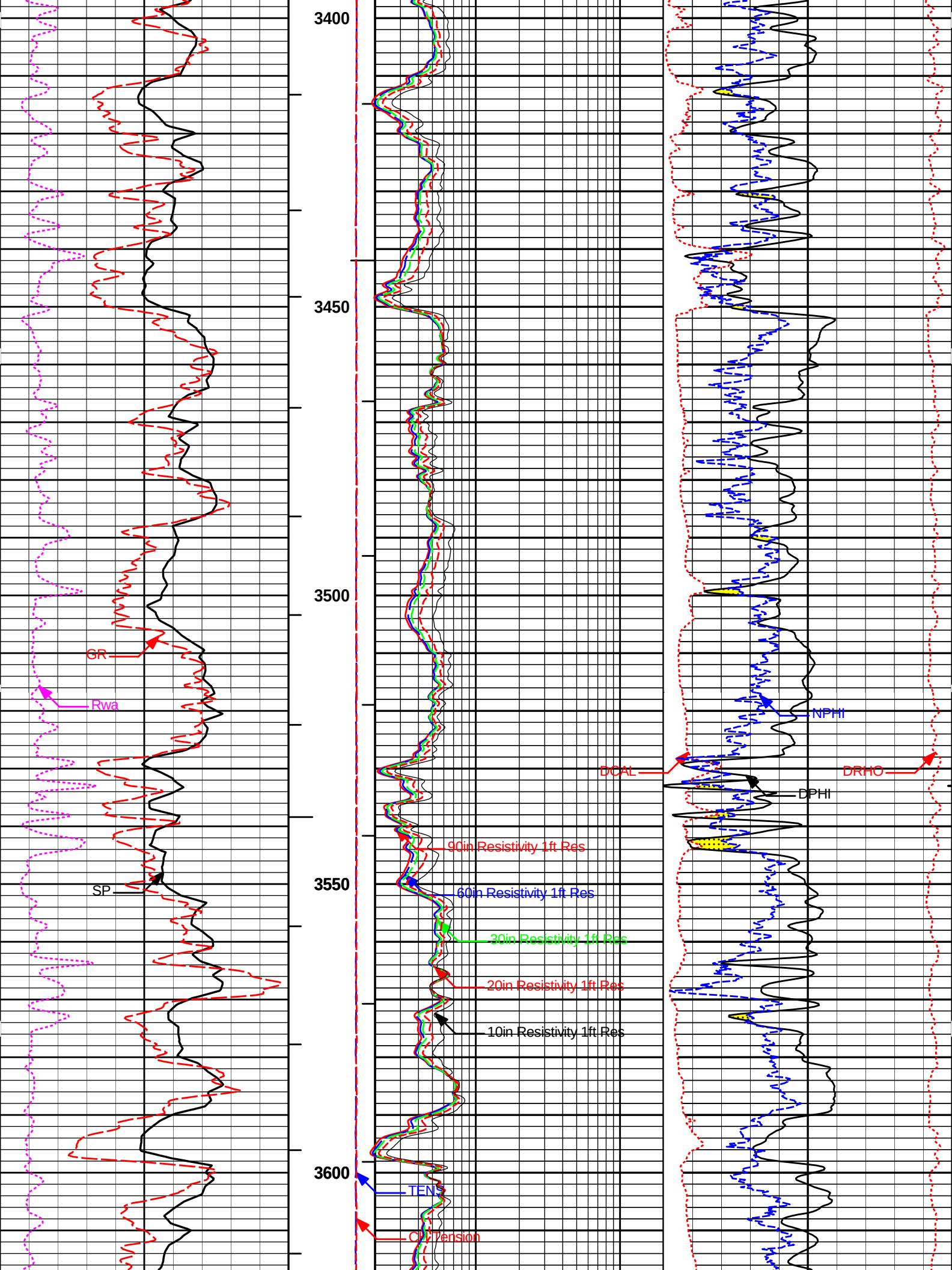
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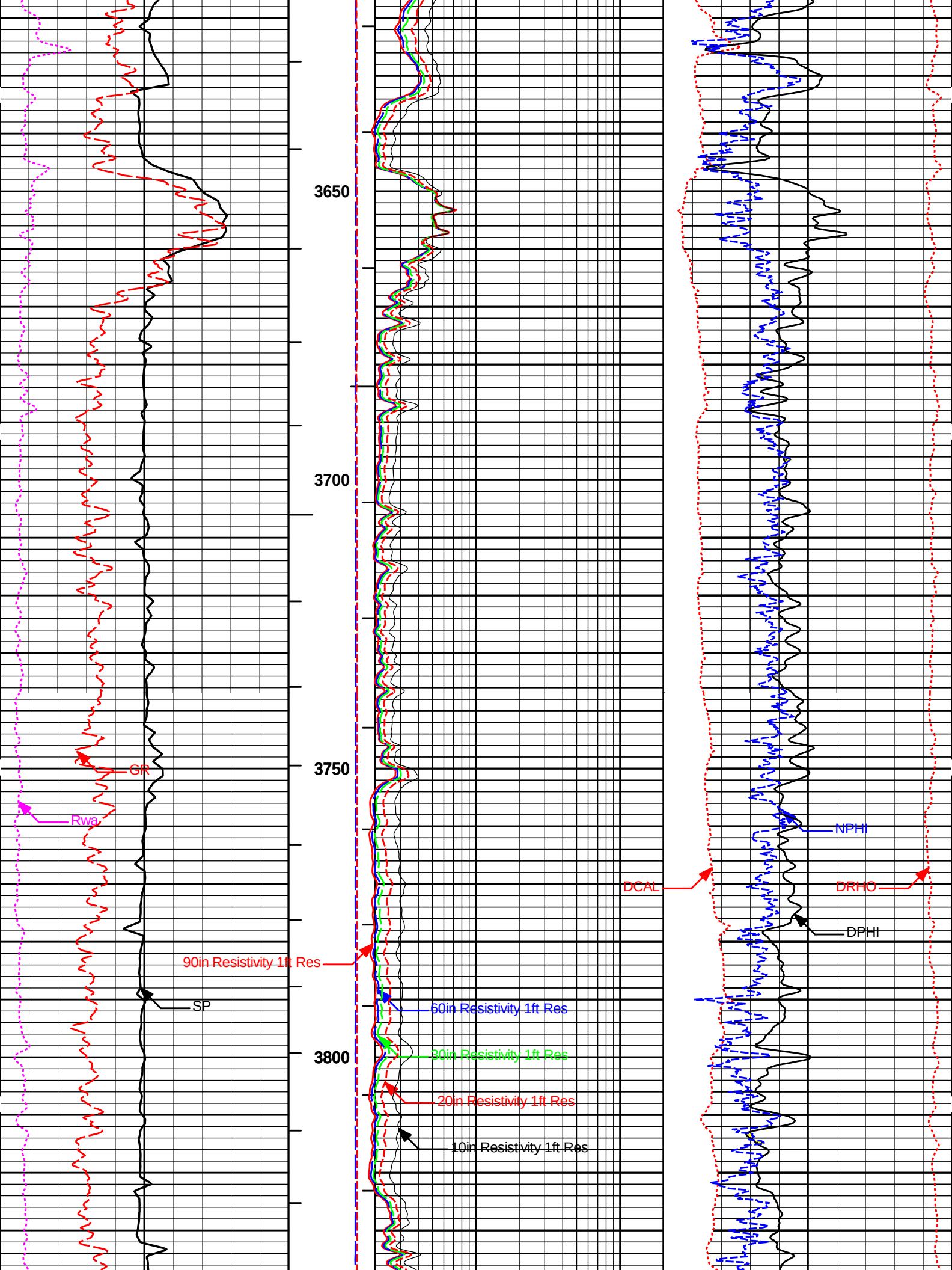
CV Tension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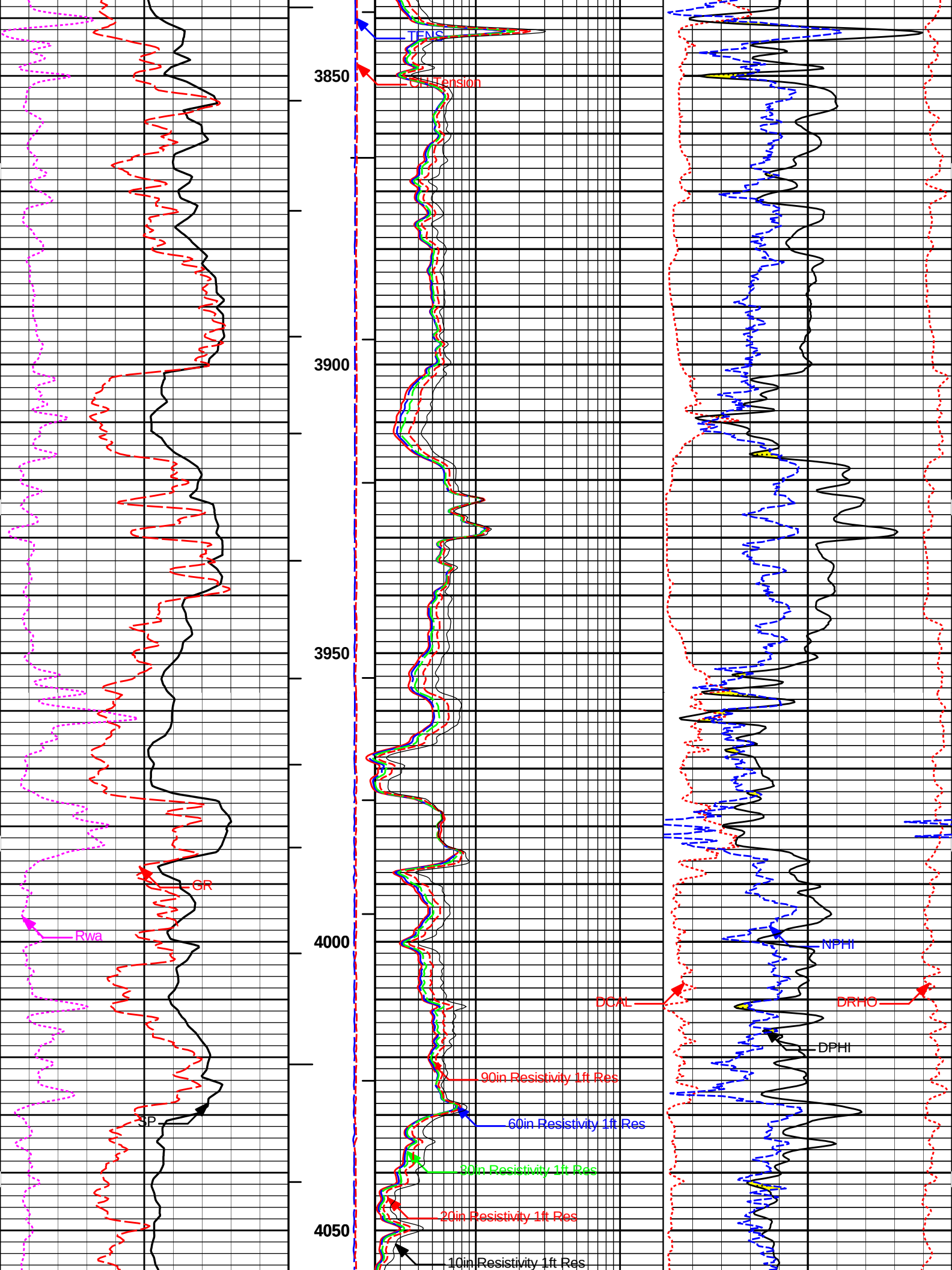
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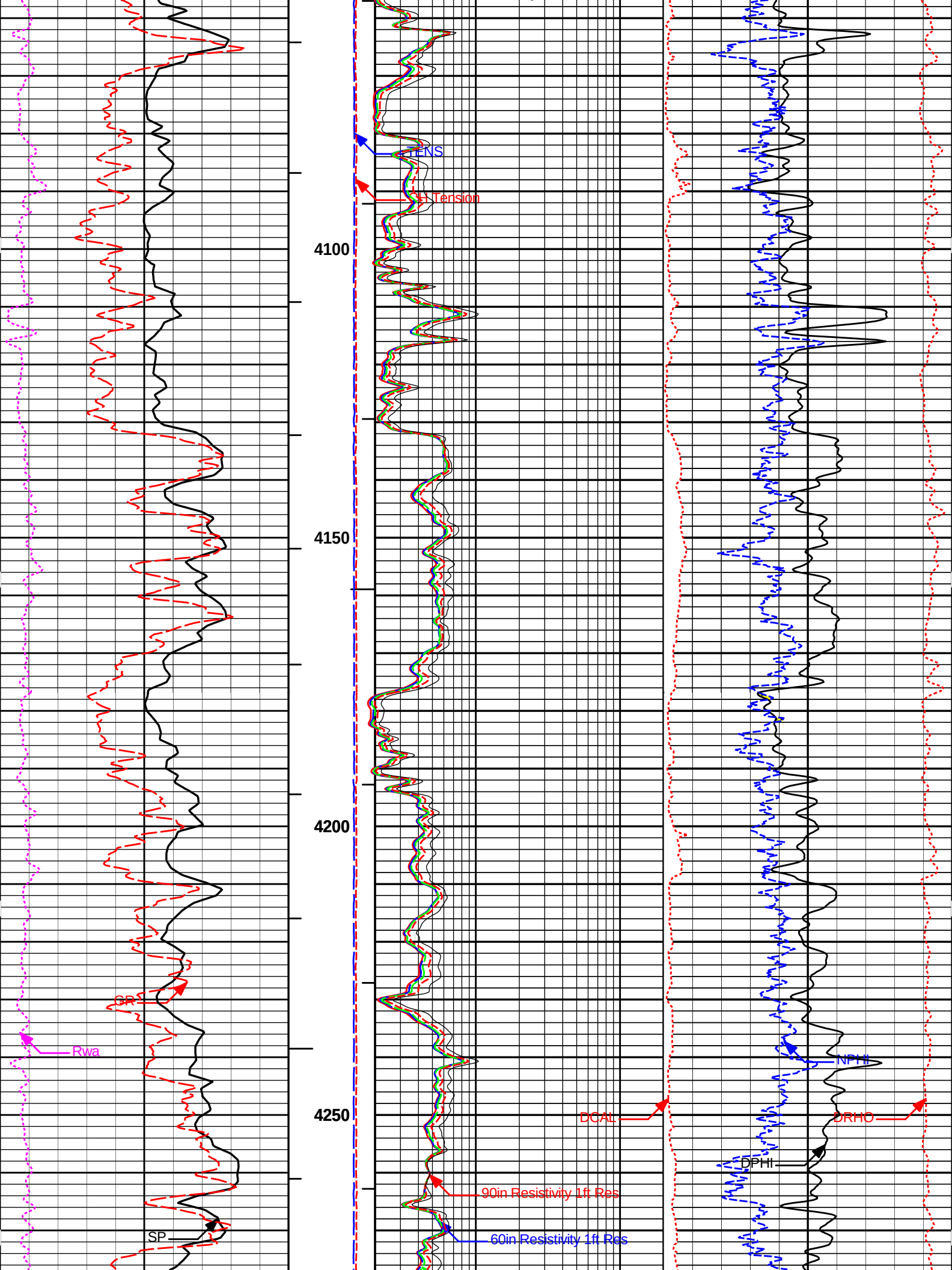
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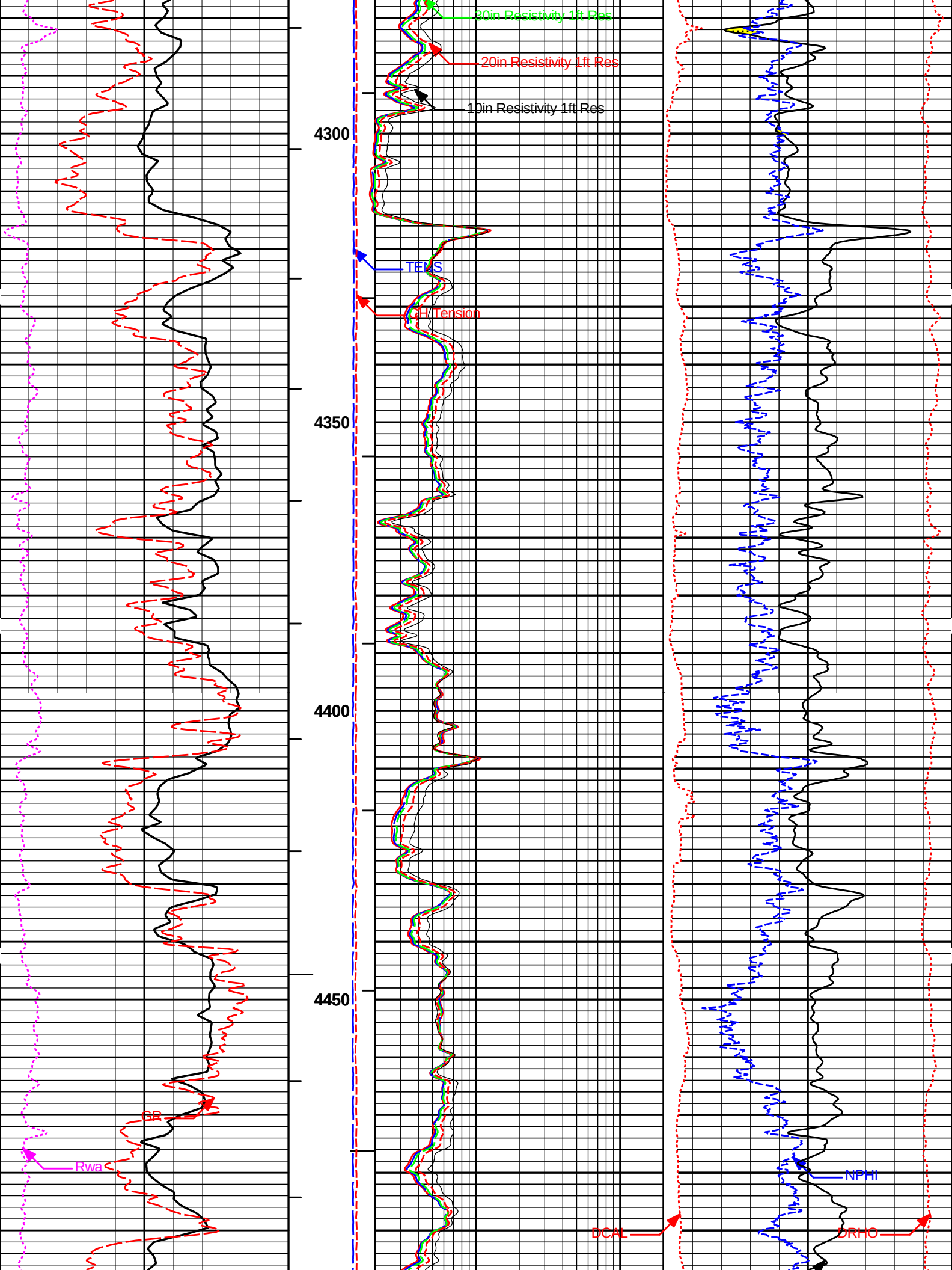
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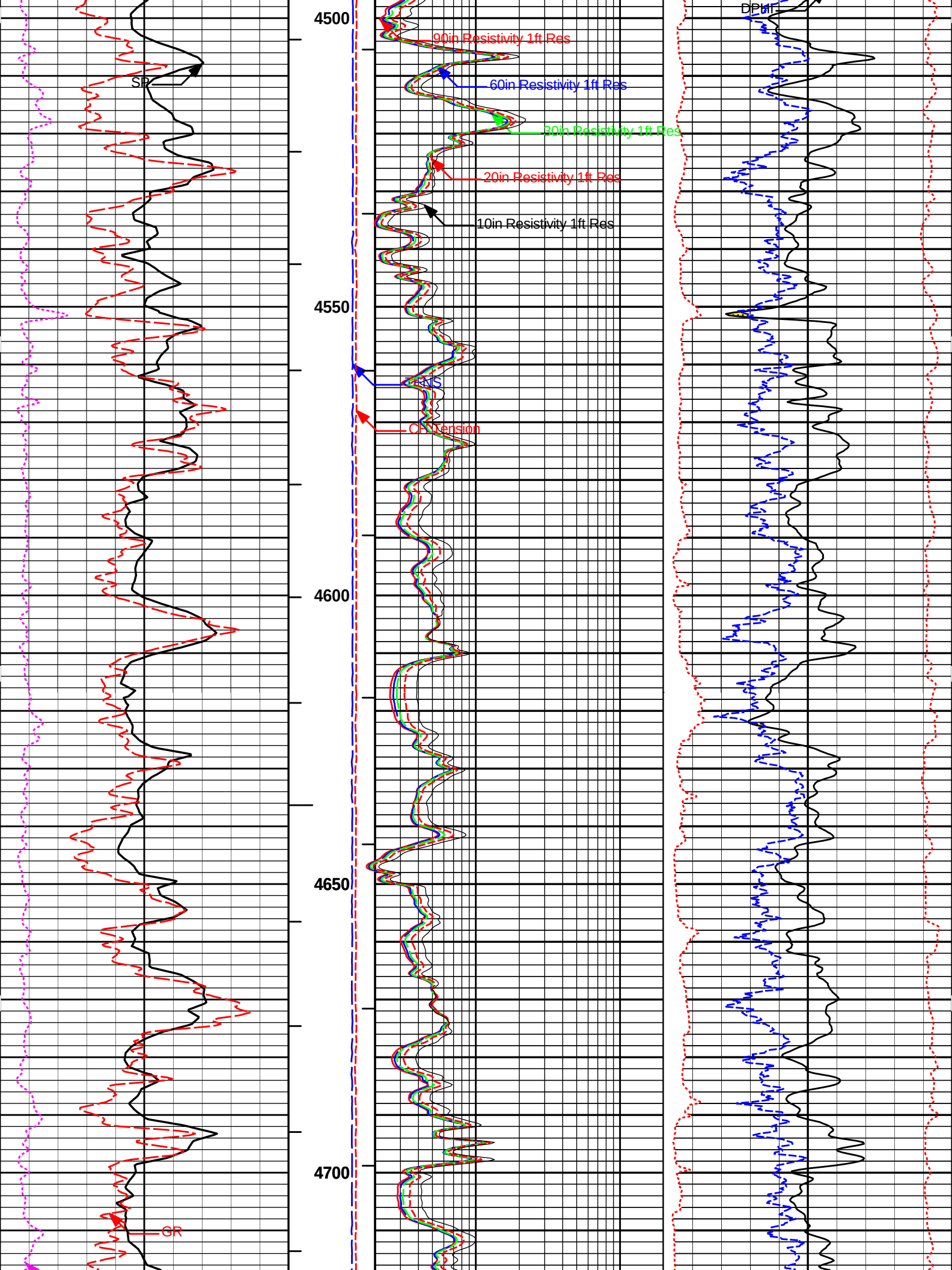
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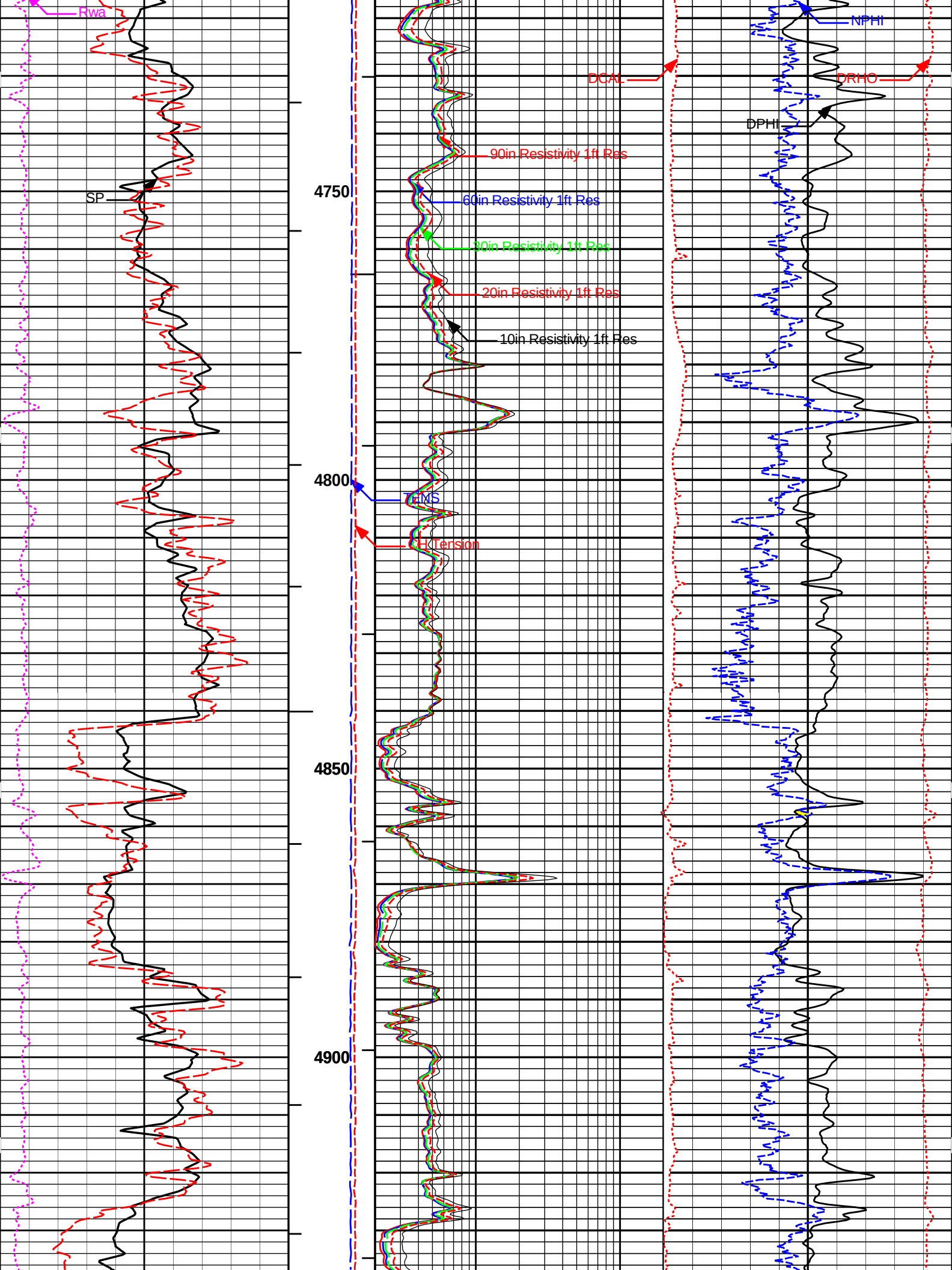
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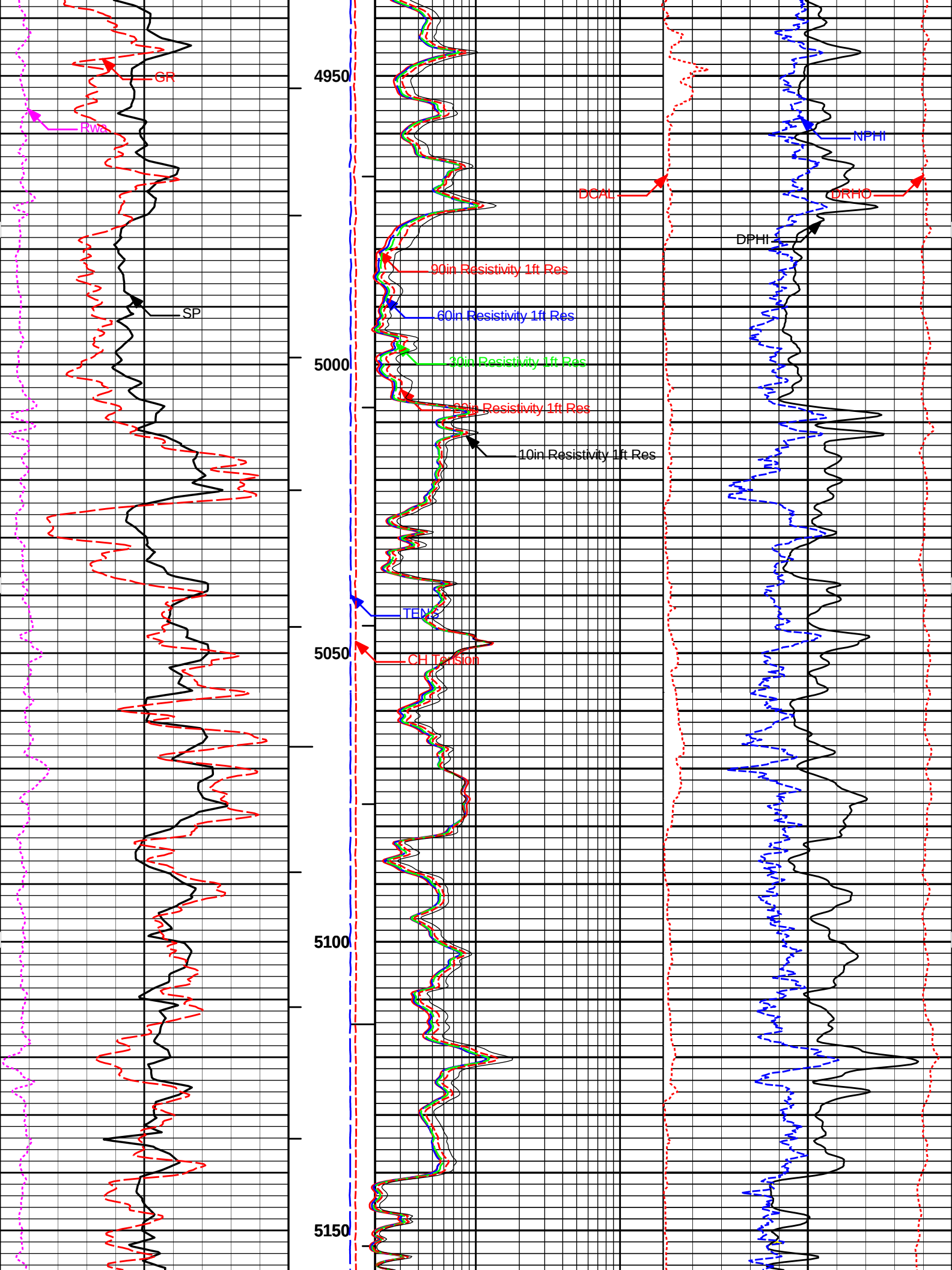
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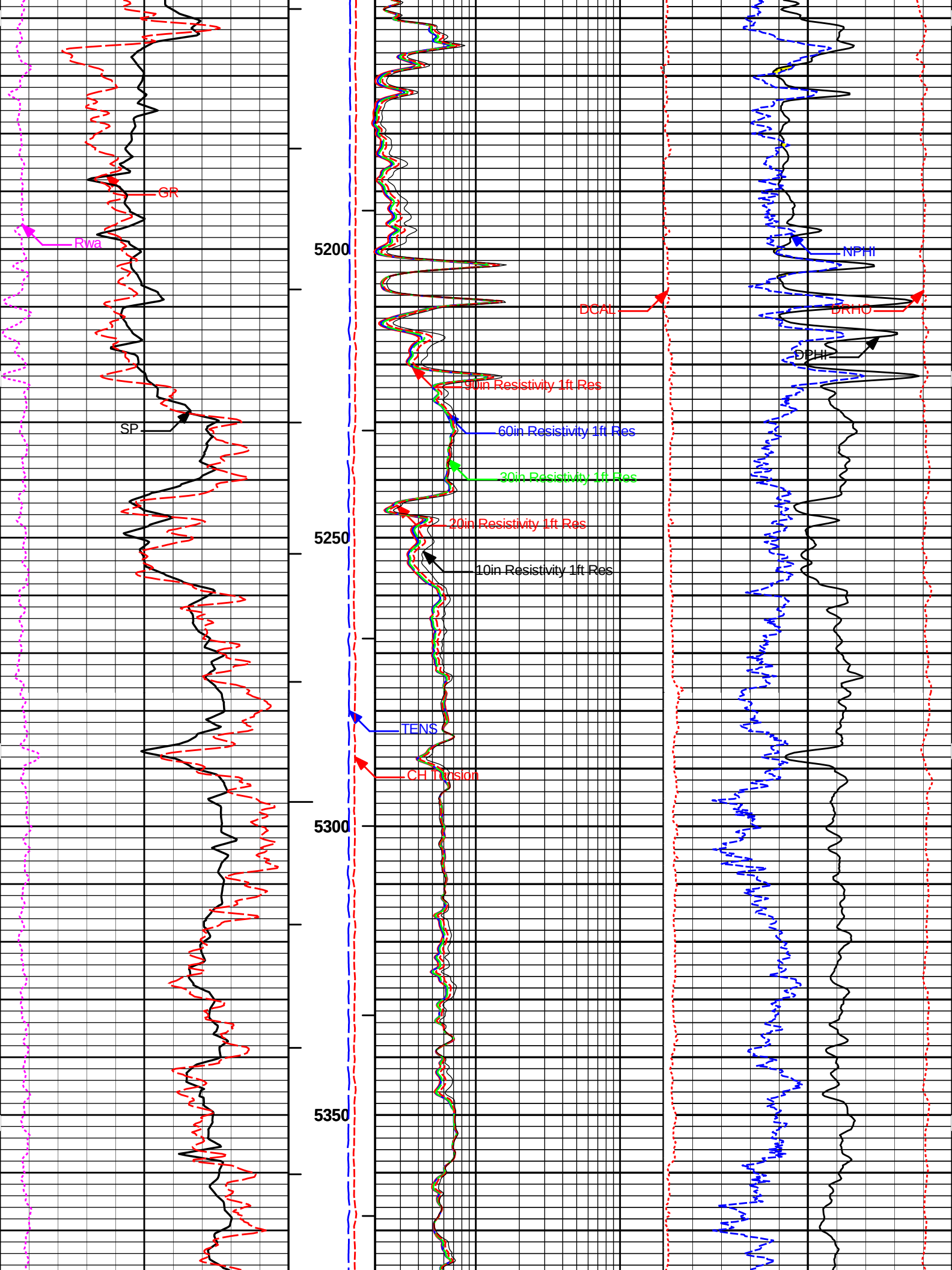
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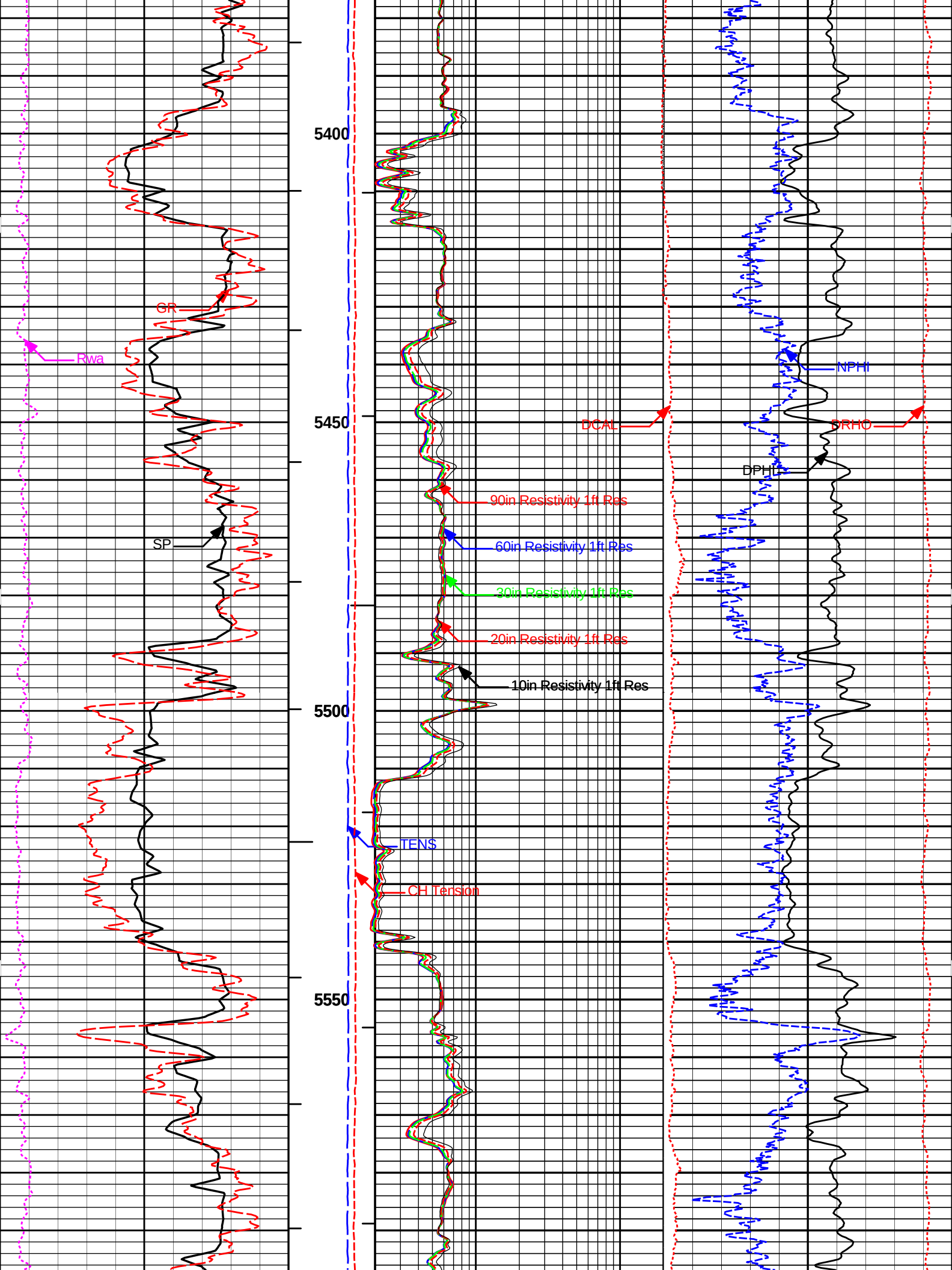
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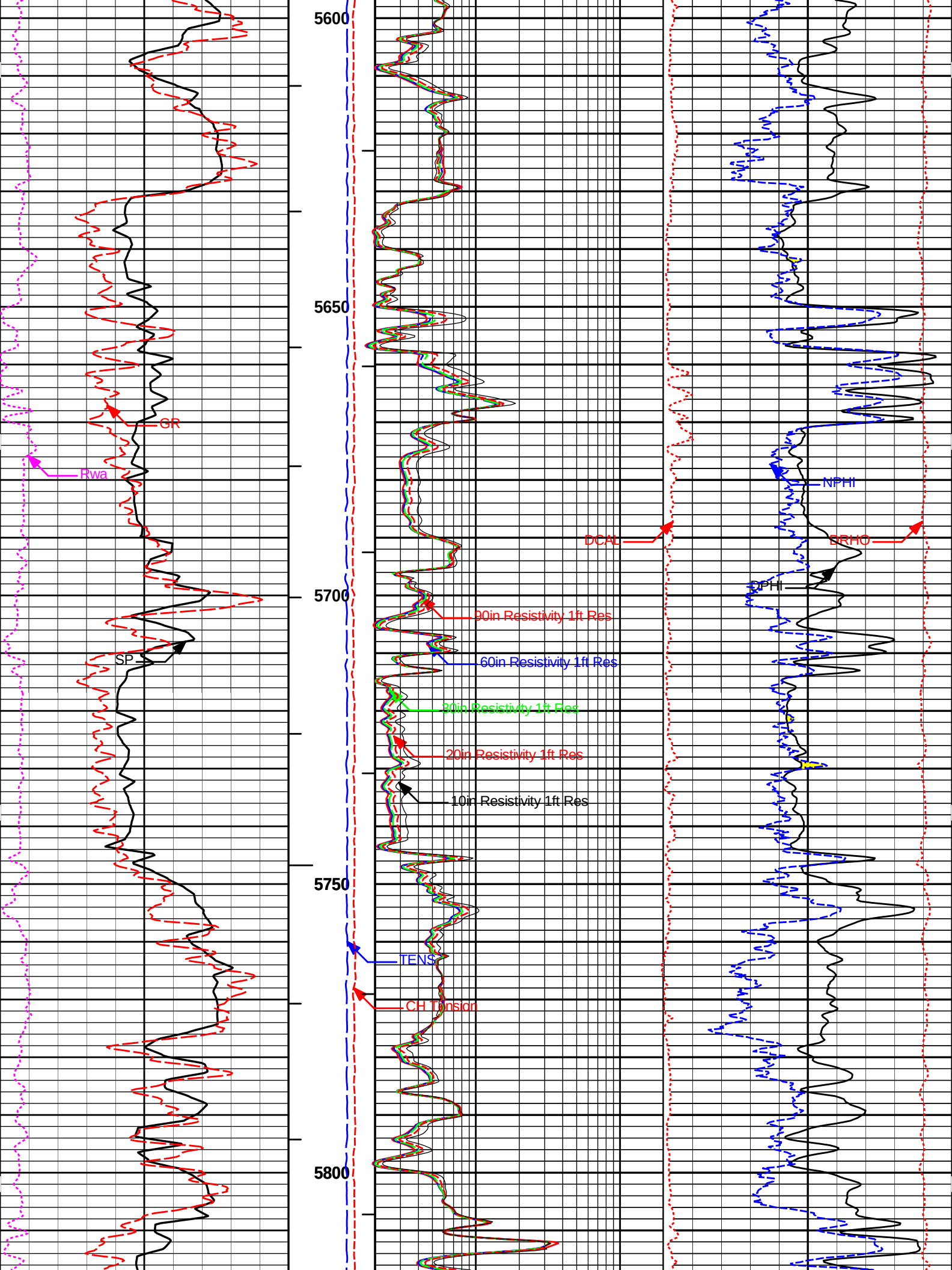
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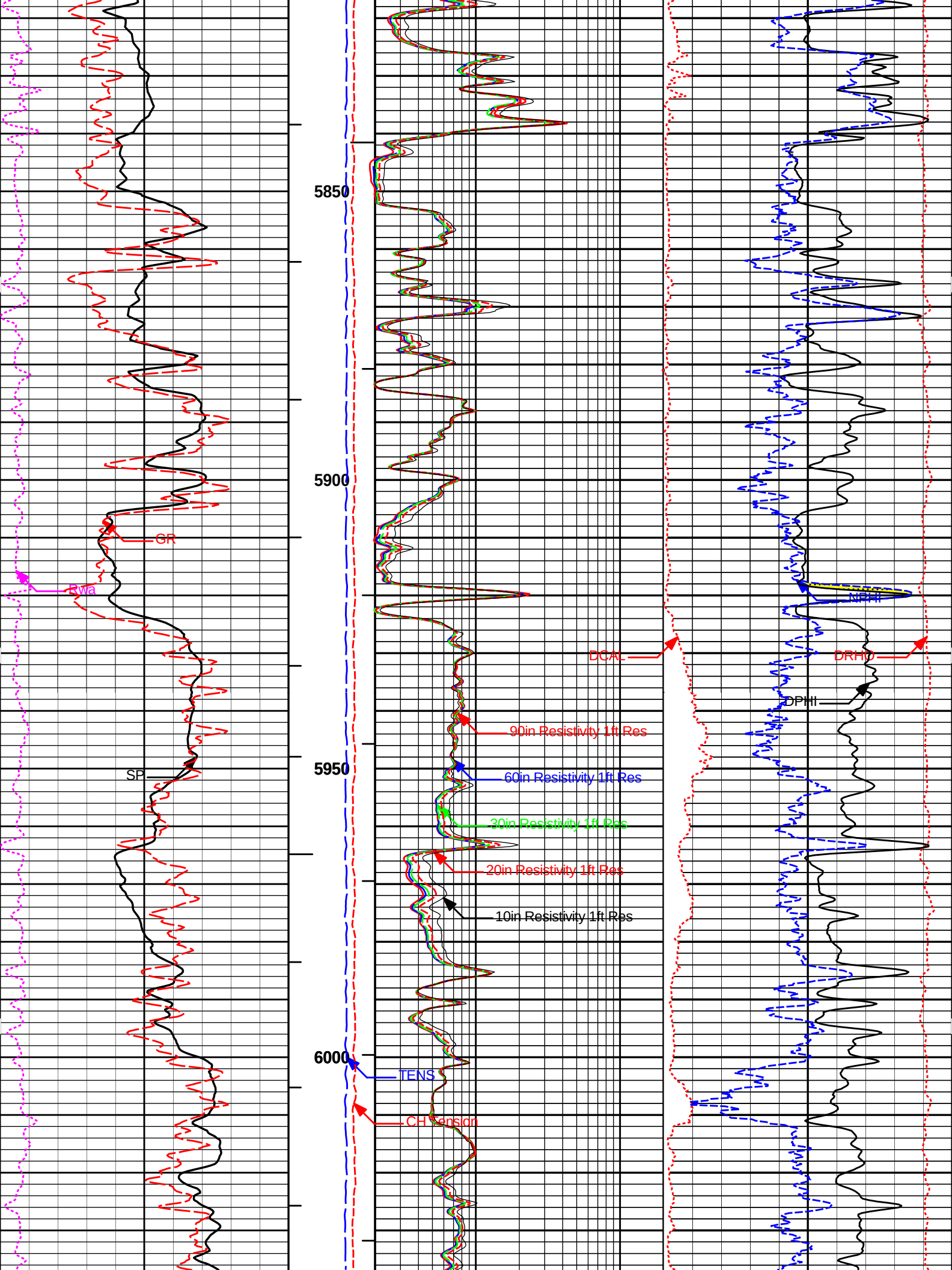
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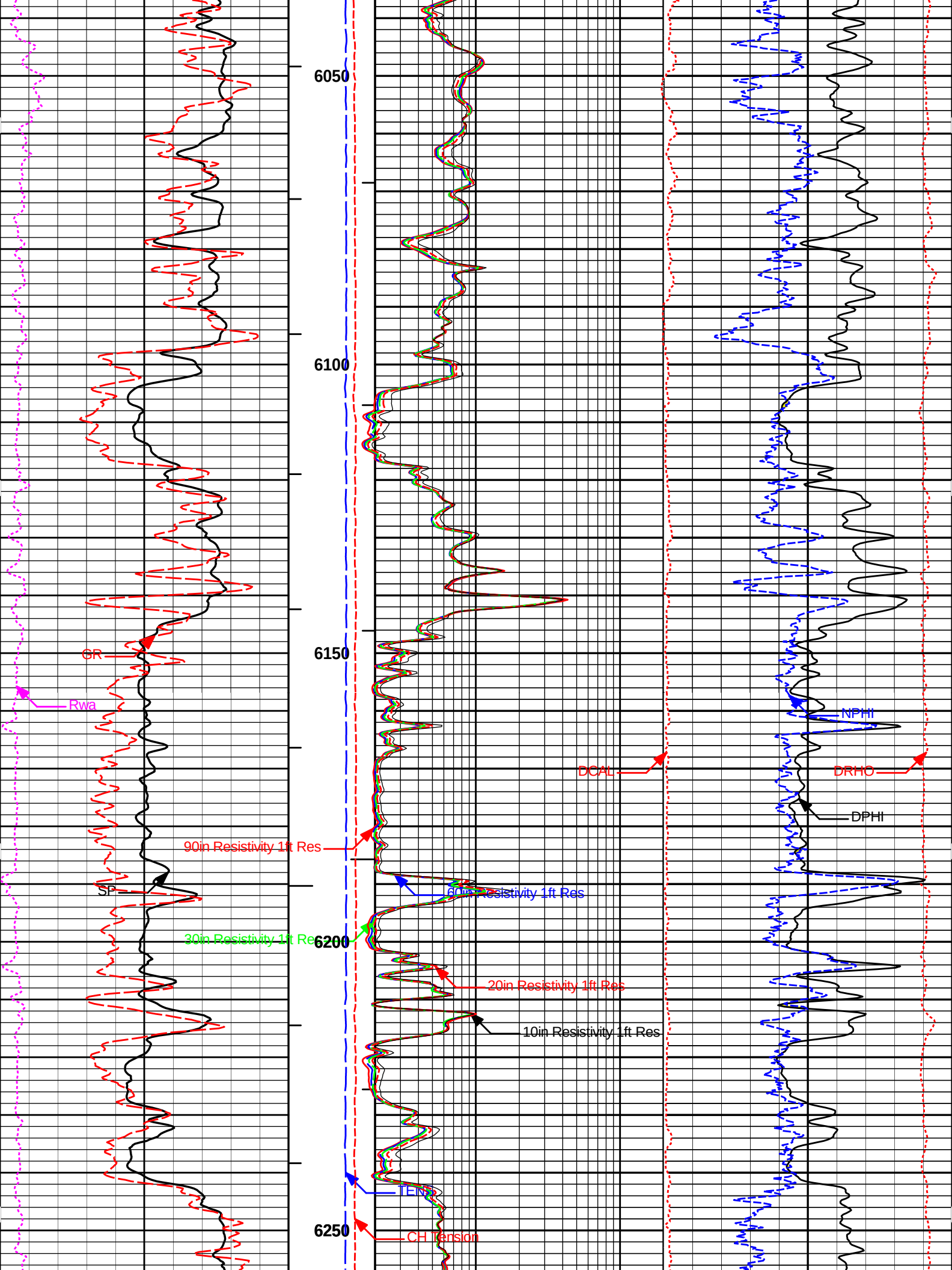
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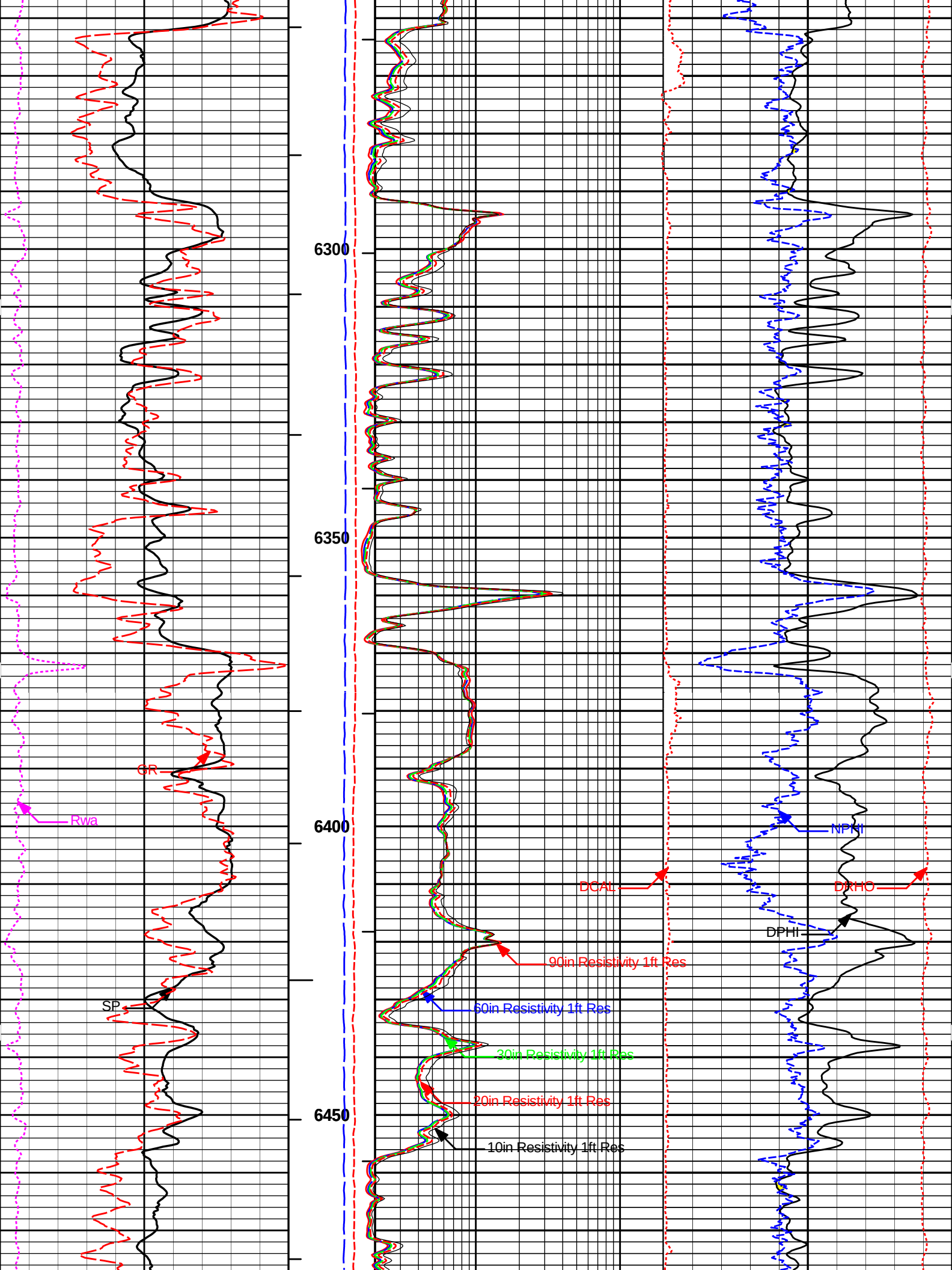
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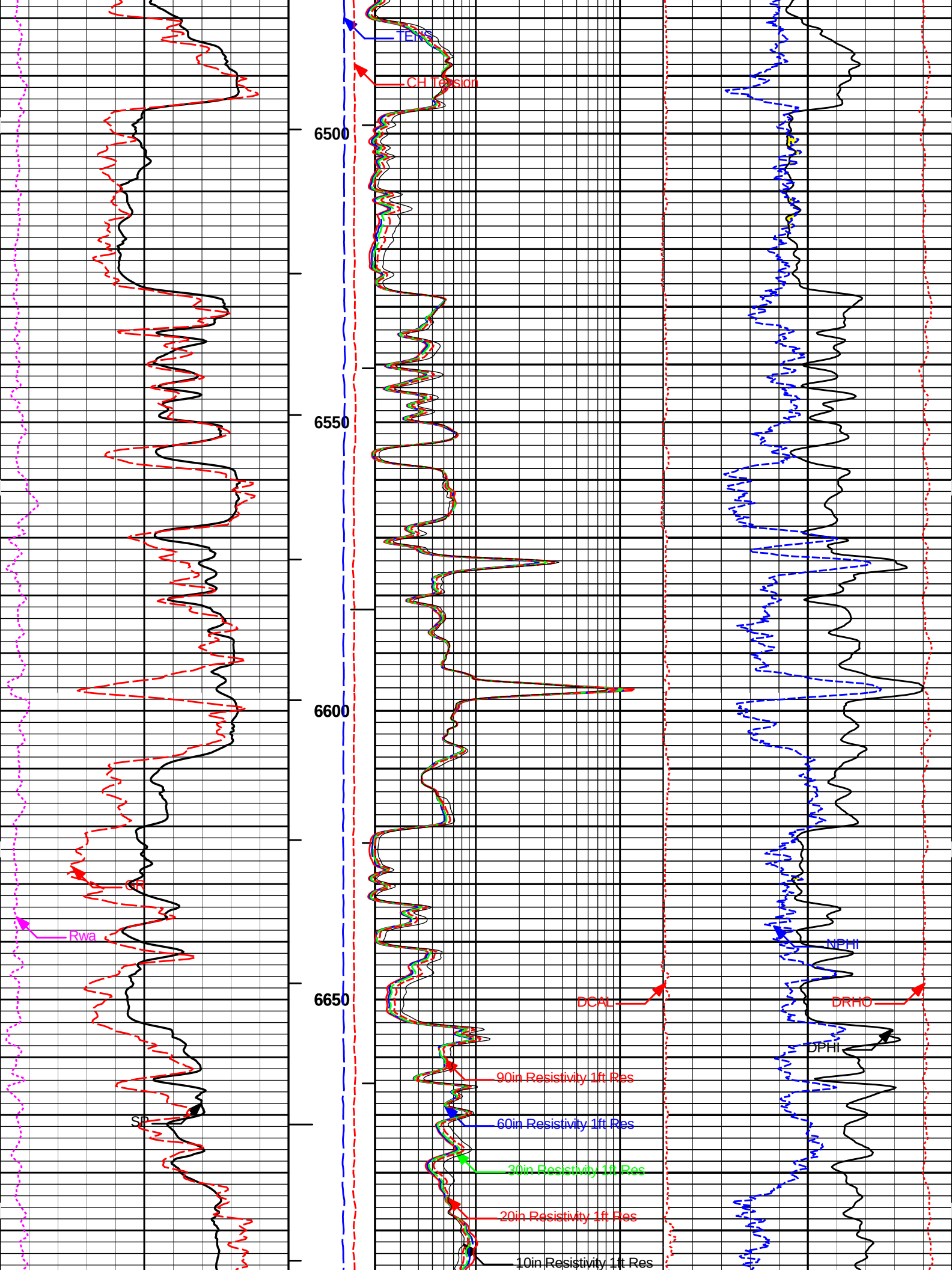
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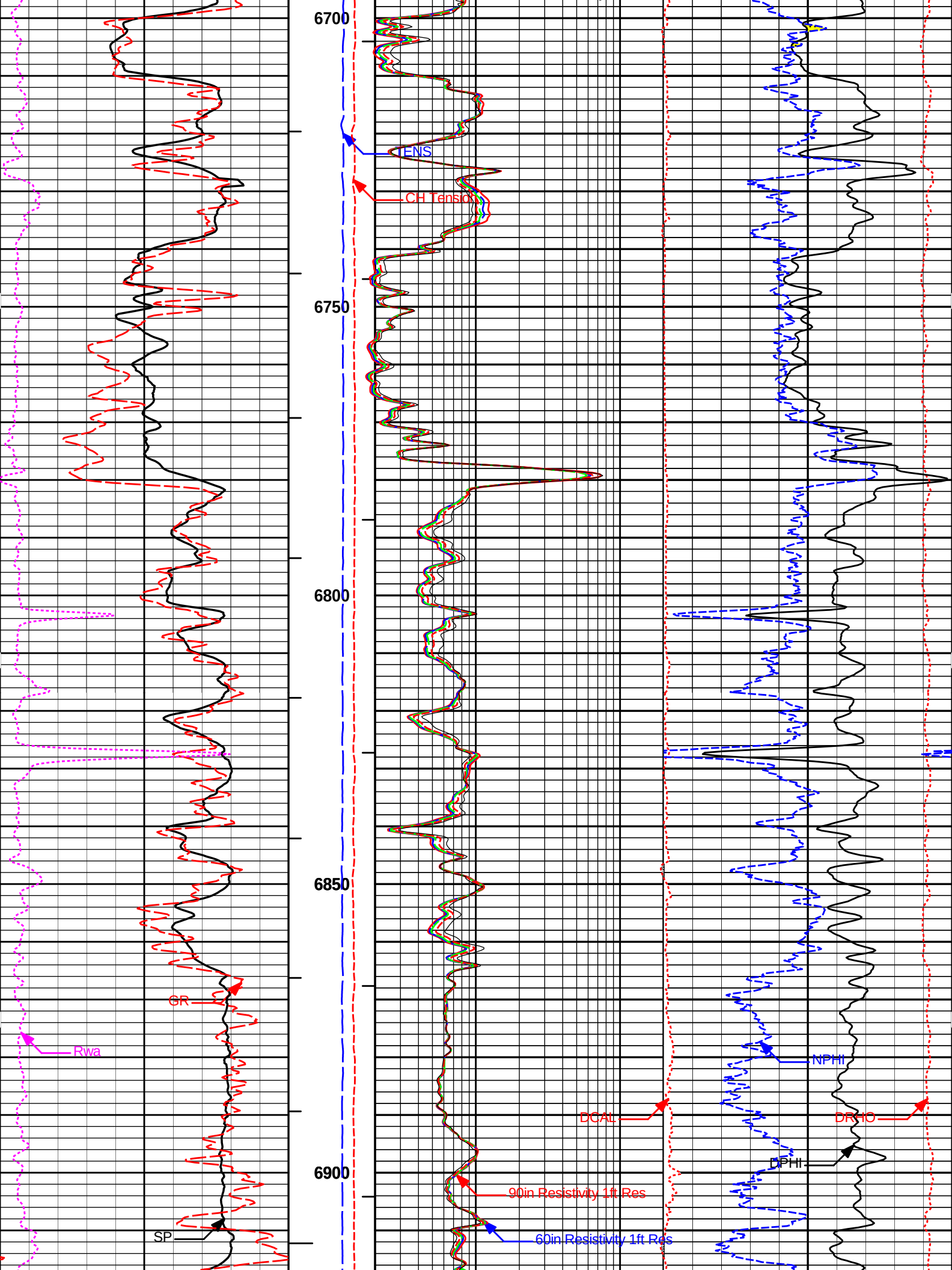
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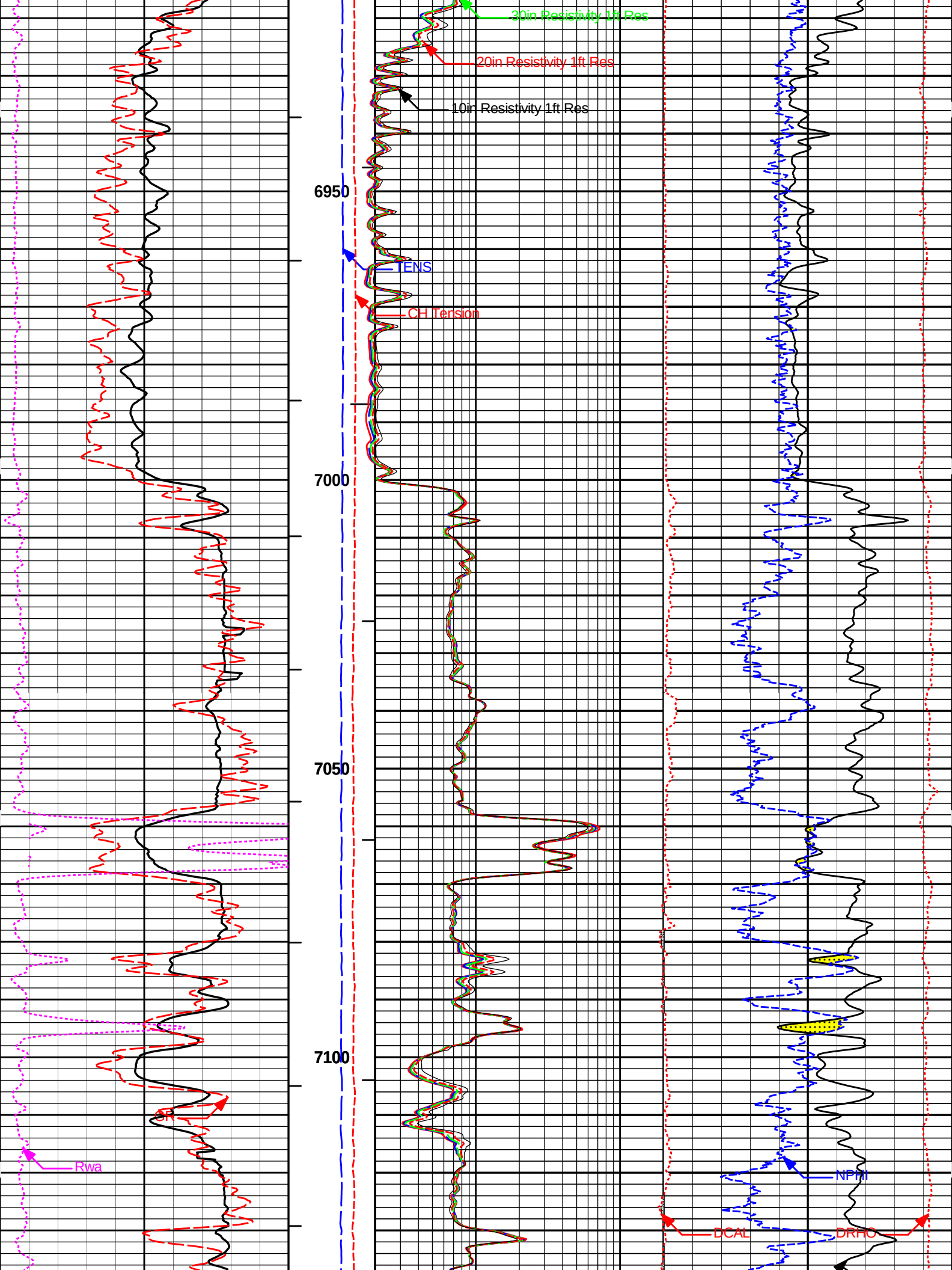
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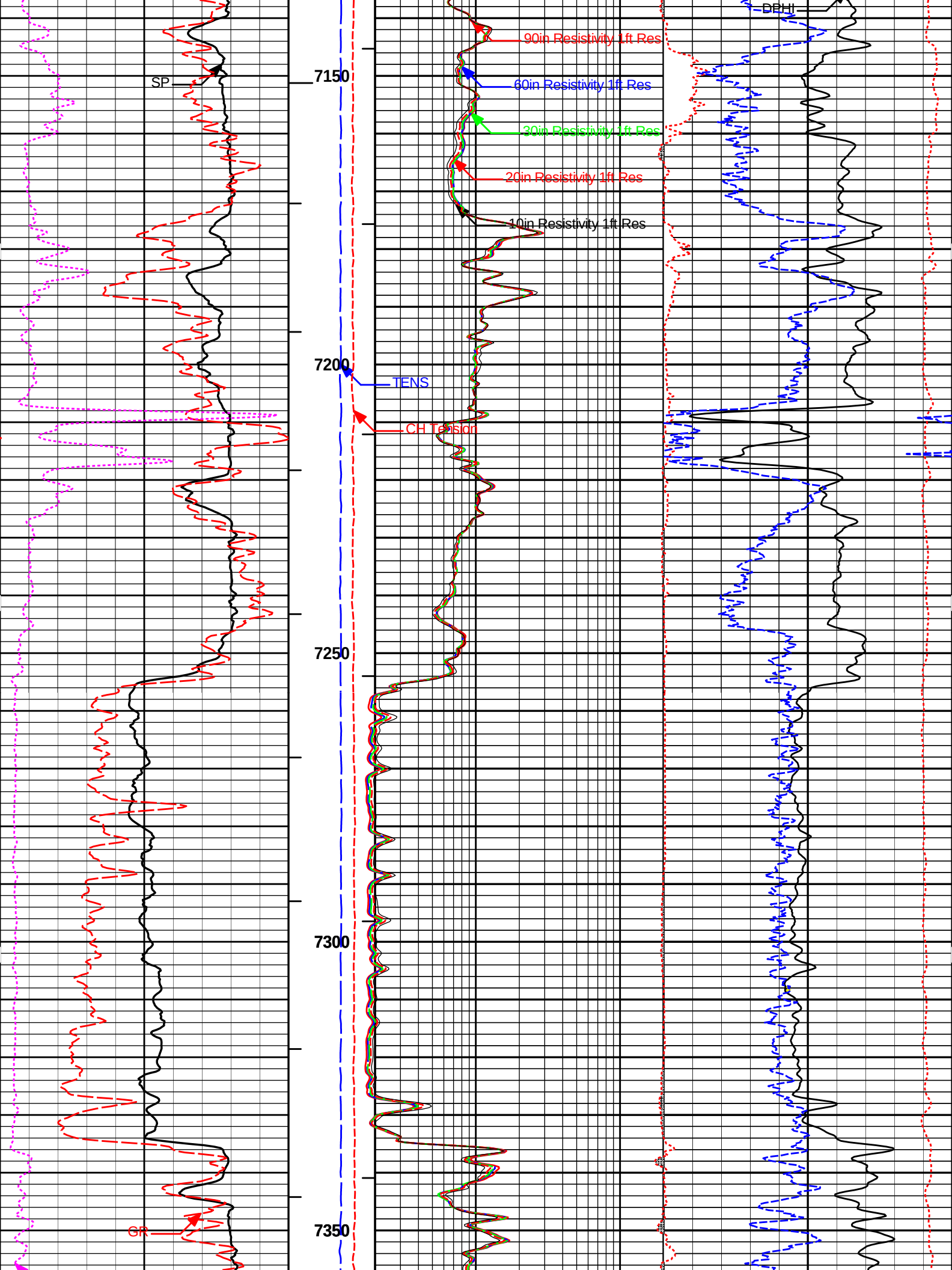
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TENS
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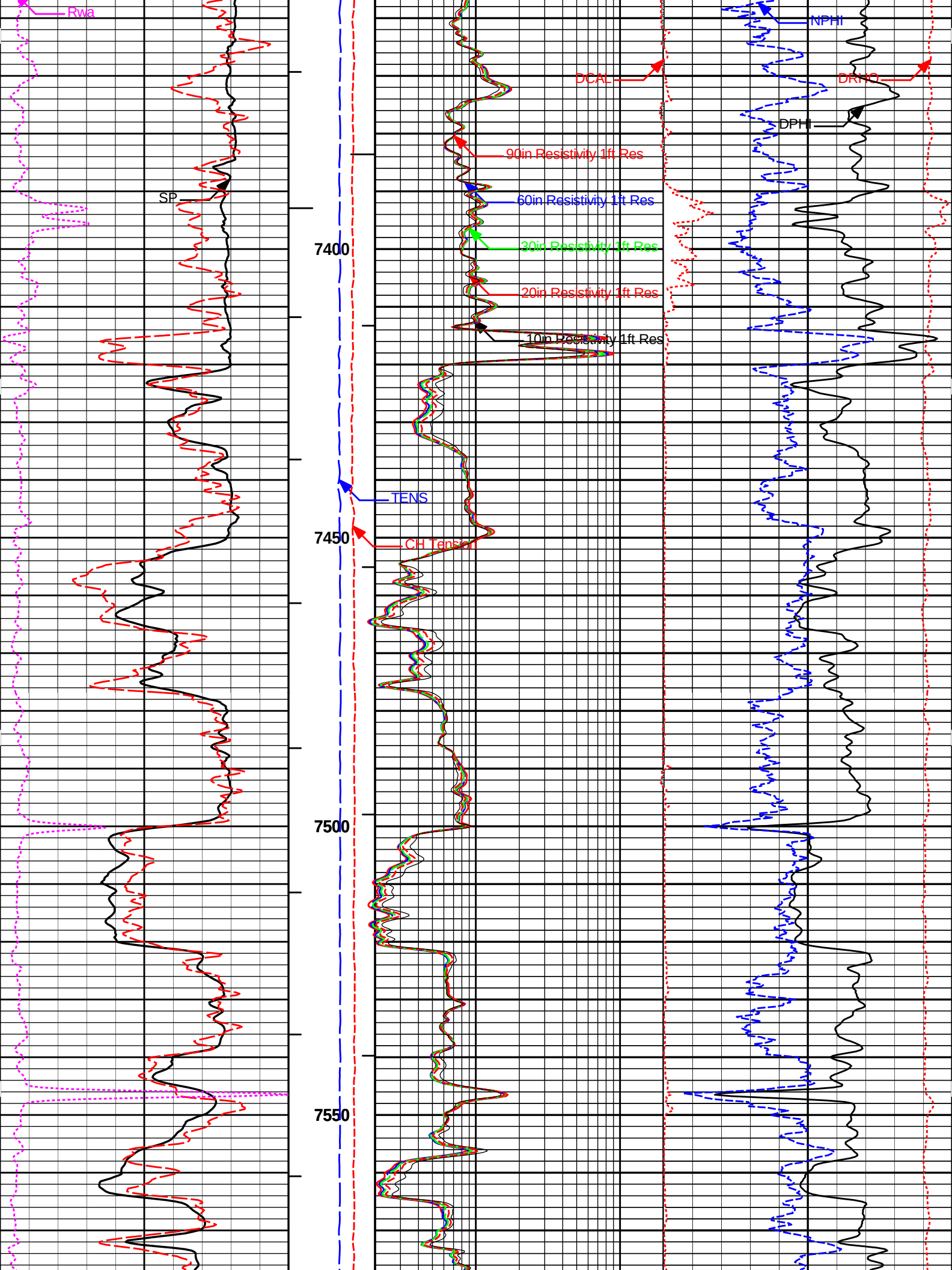
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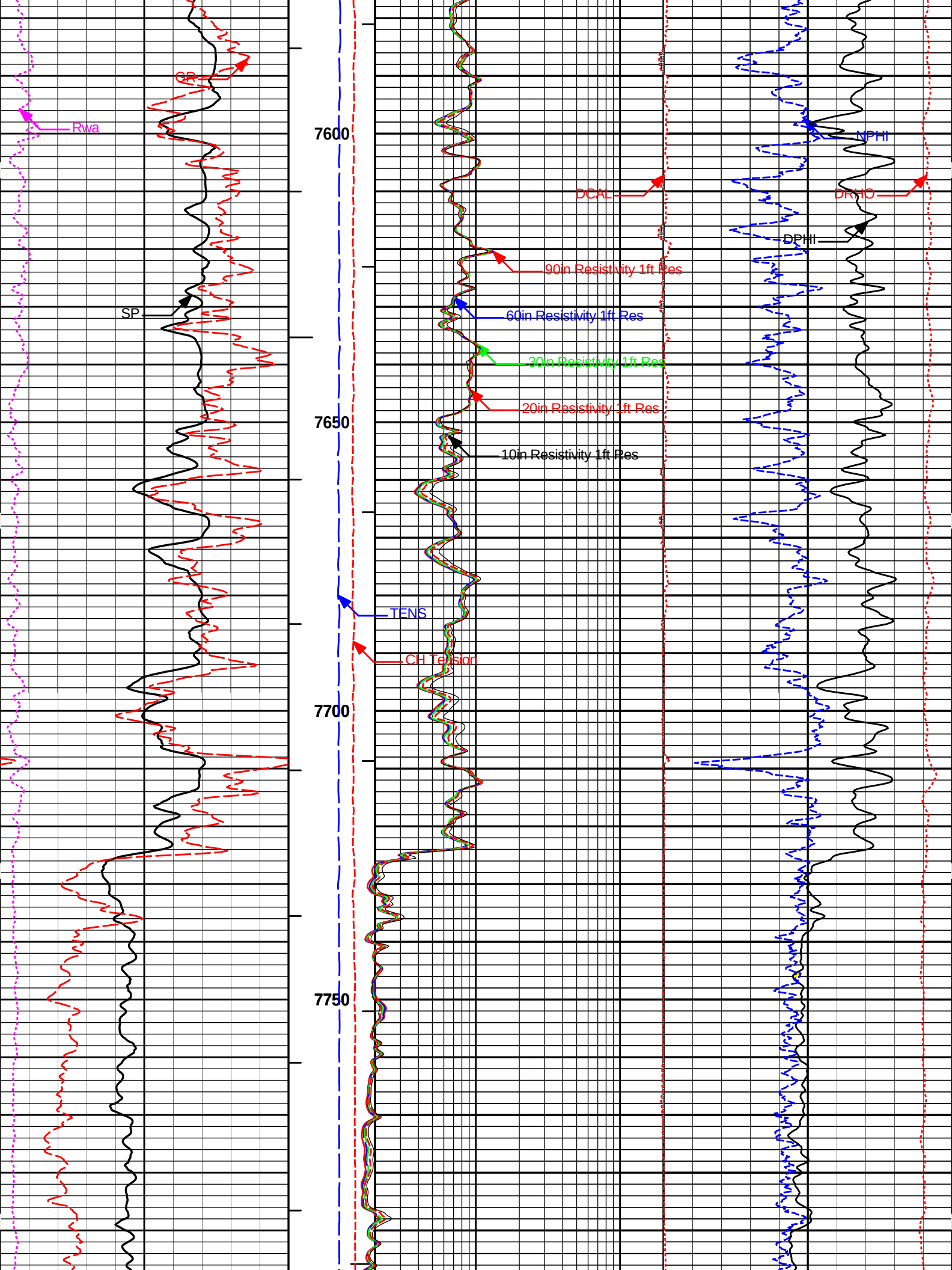
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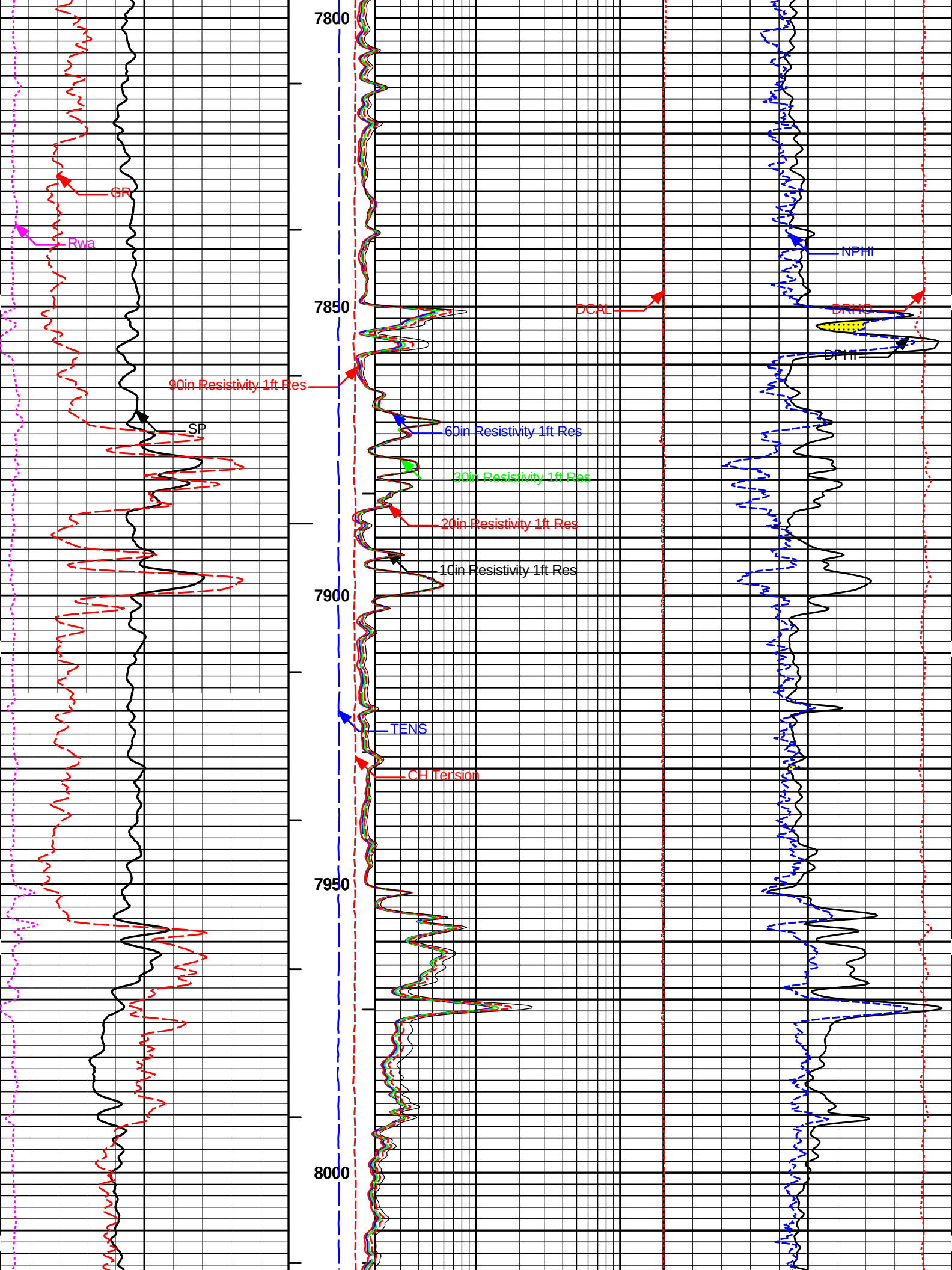
TENS
CH Tension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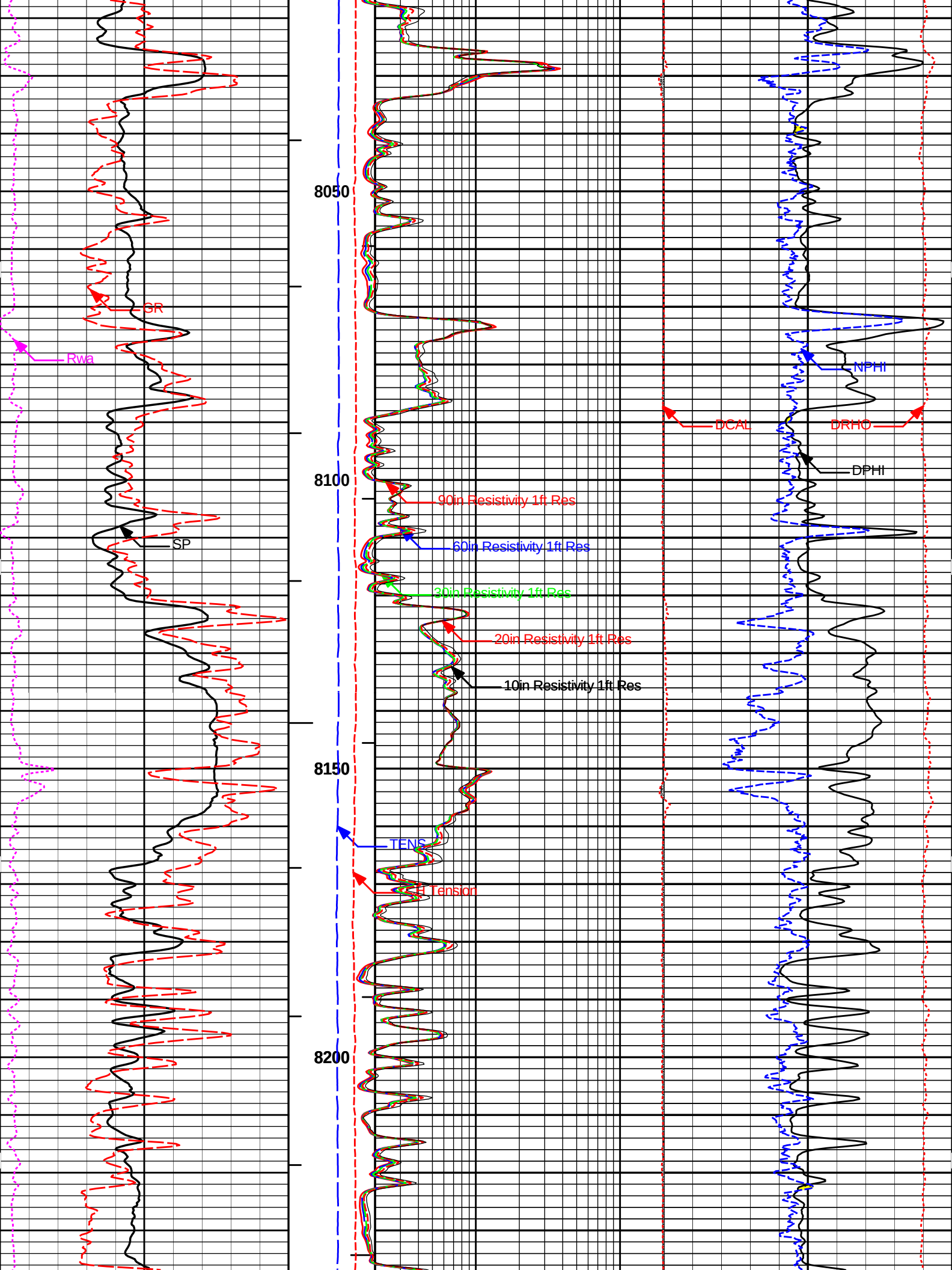
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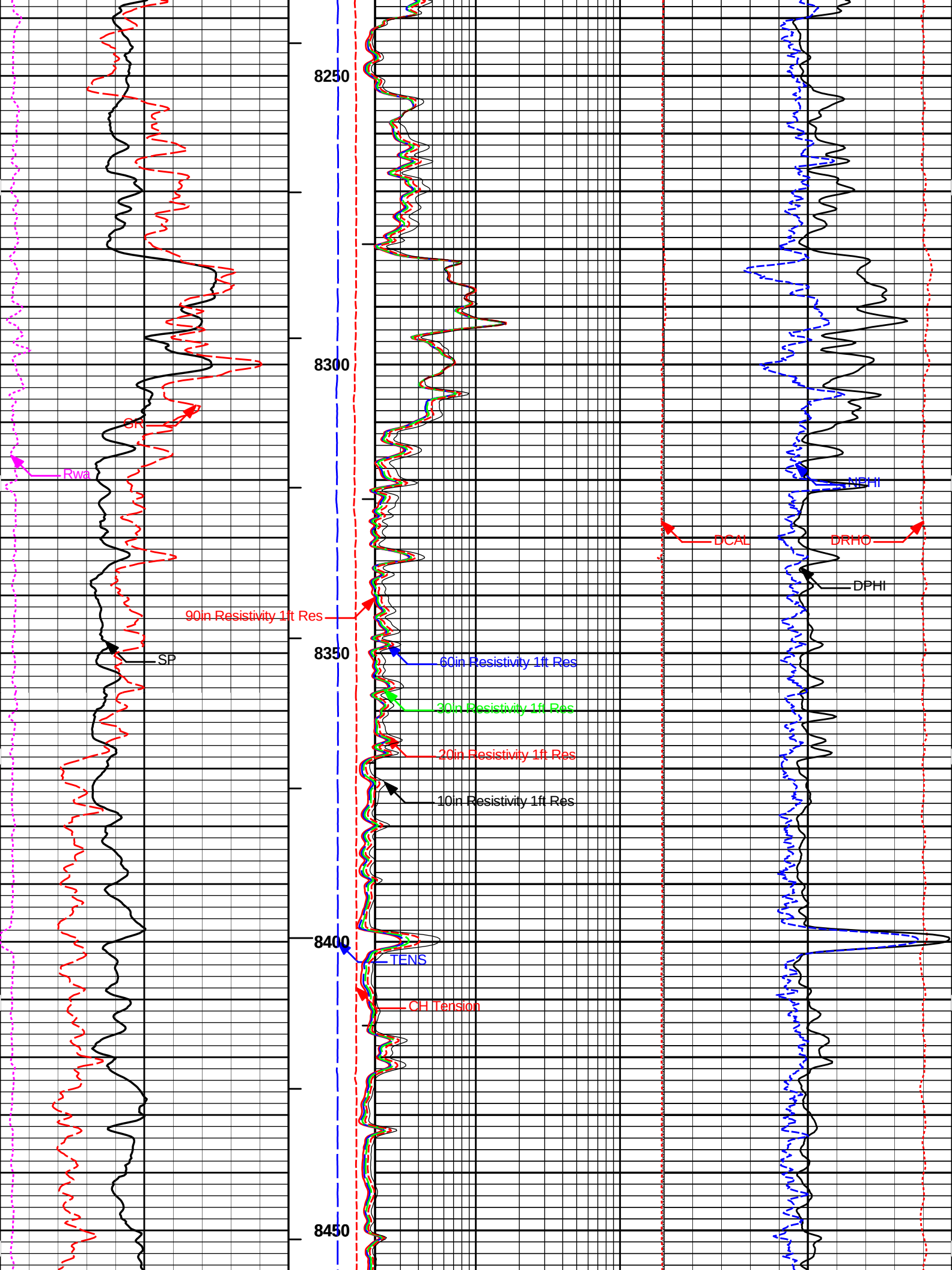
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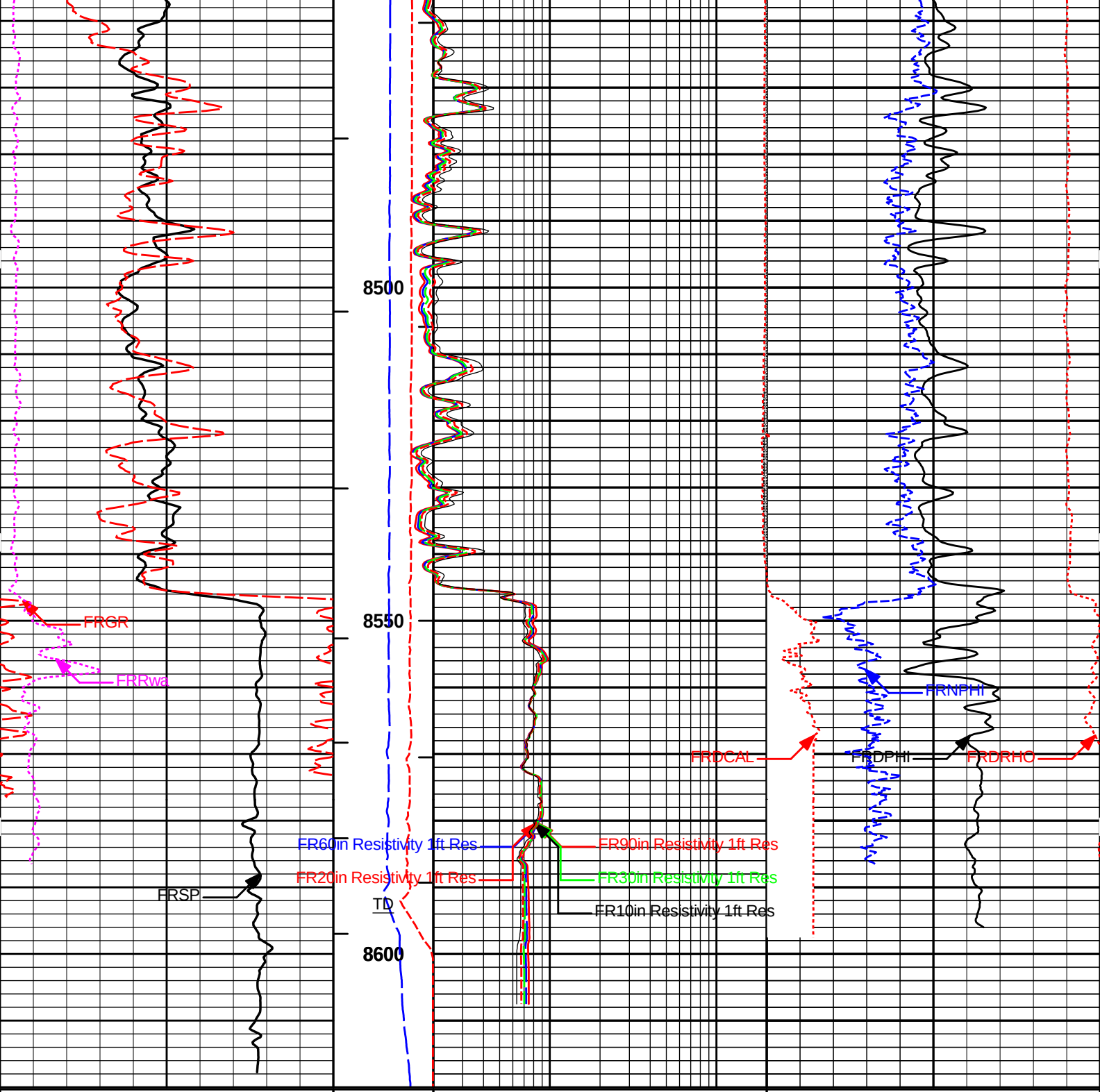


0 RWA 0.5	MD	0.2 90in Resistivity 1ft Res 20
ohmm	1 : 240	ohmm
SP	ft	
-]20[+	BHV ←	0.2 60in Resistivity 1ft Res 20
0 GR 150	AHV →	ohmm
api		0.2 30in Resistivity 1ft Res 20
		ohmm
	10K TENS 0	0.2 20in Resistivity 1ft Res 20
	lbs	ohmm
	5K CH Tension 0	0.2 10in Resistivity 1ft Res 20
		ohmm
		-20 DCAL 20

-1.8 DRHO 0.2	
g/cc	
60 DPHI 0	
%	
60 NPHI 0	
%	

in

HALLIBURTON

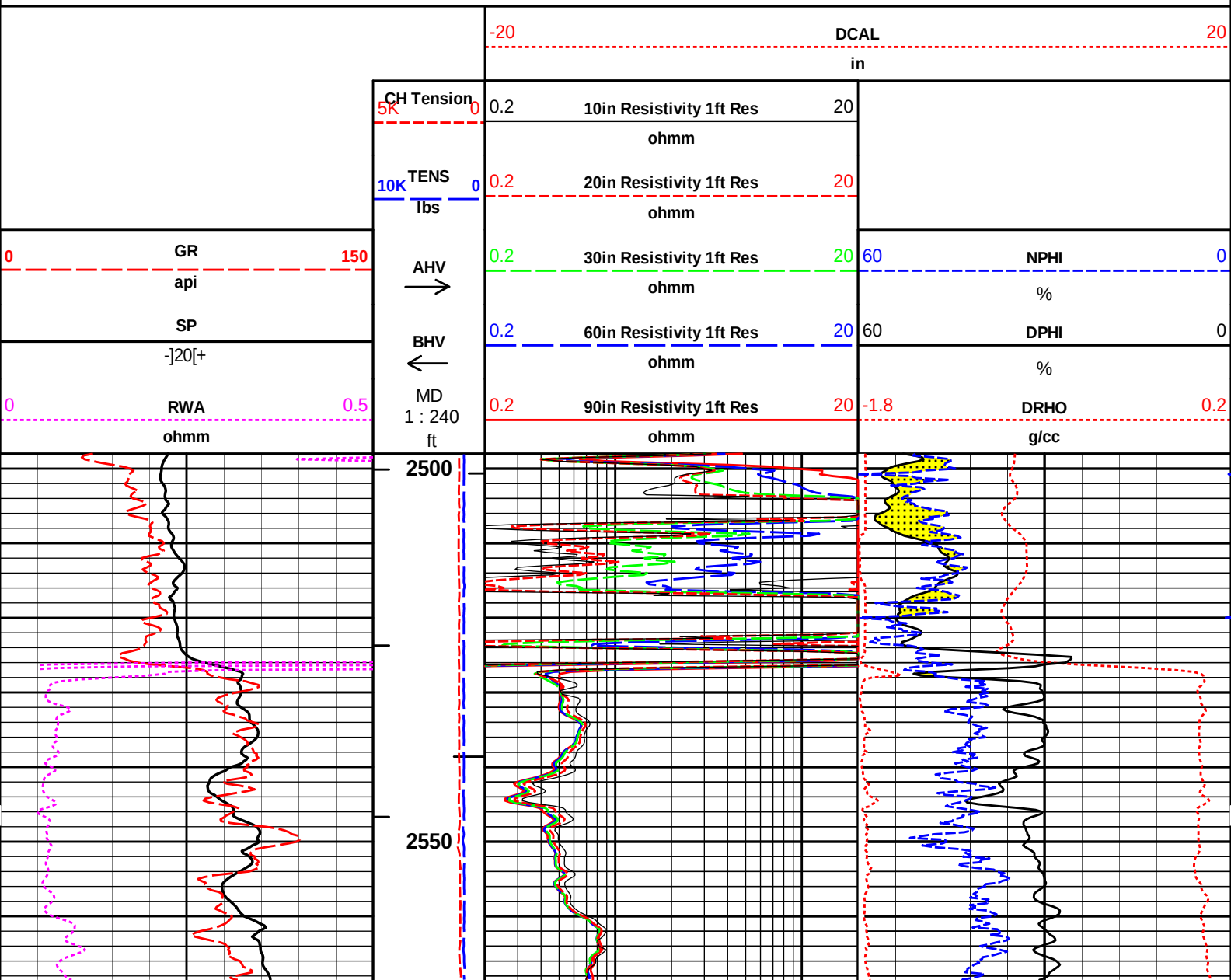
Plot Time: 10-Oct-11 22:16:22
Plot Range: 2498 ft to 8620 ft
Data: 10_10_CROWN\Well Based\DAQ-0001-003\
Plot File: \\5IN_MD\5IN_MD_RTO

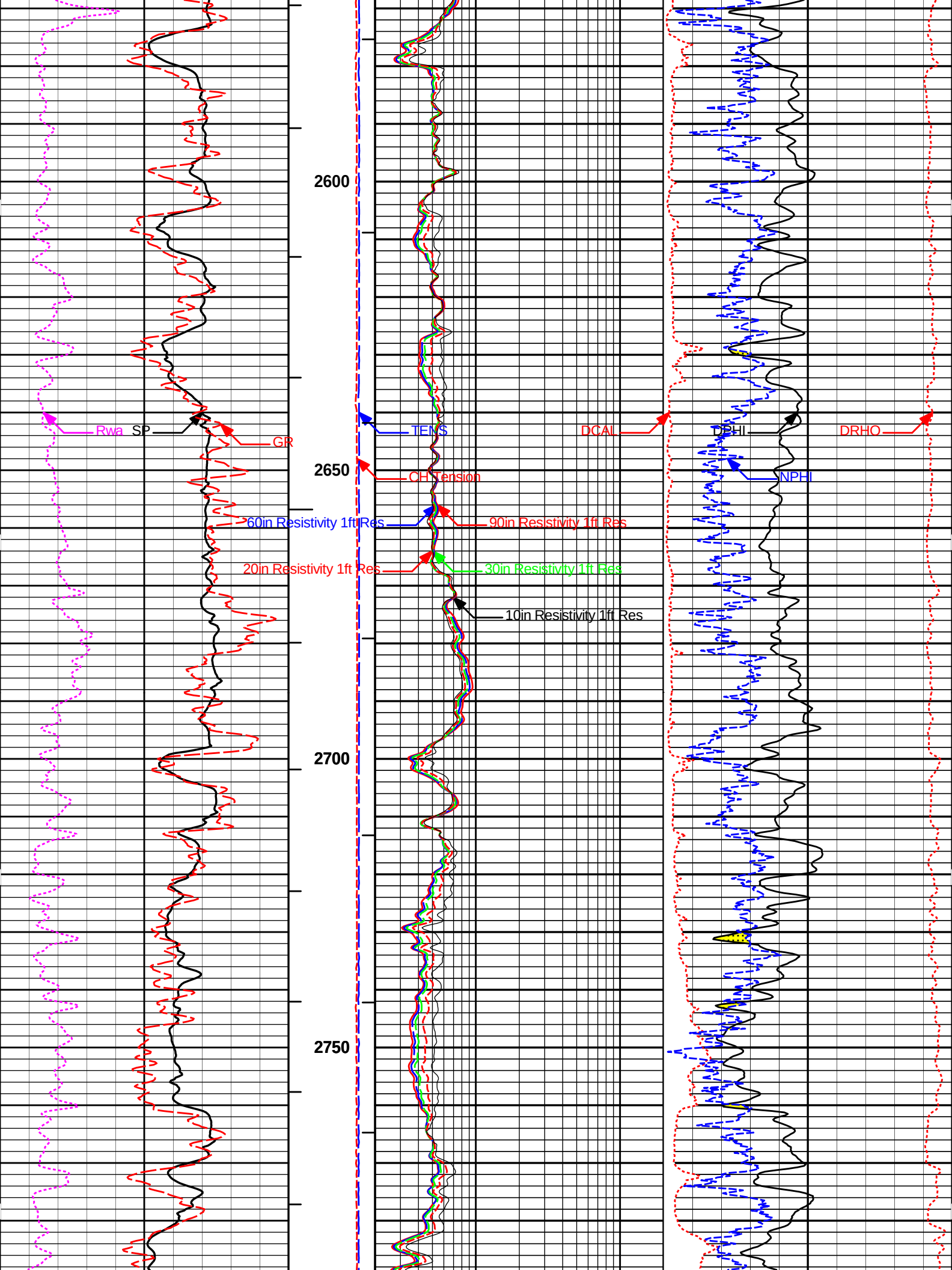
5 IN = 100 FT MD
MAIN PASS

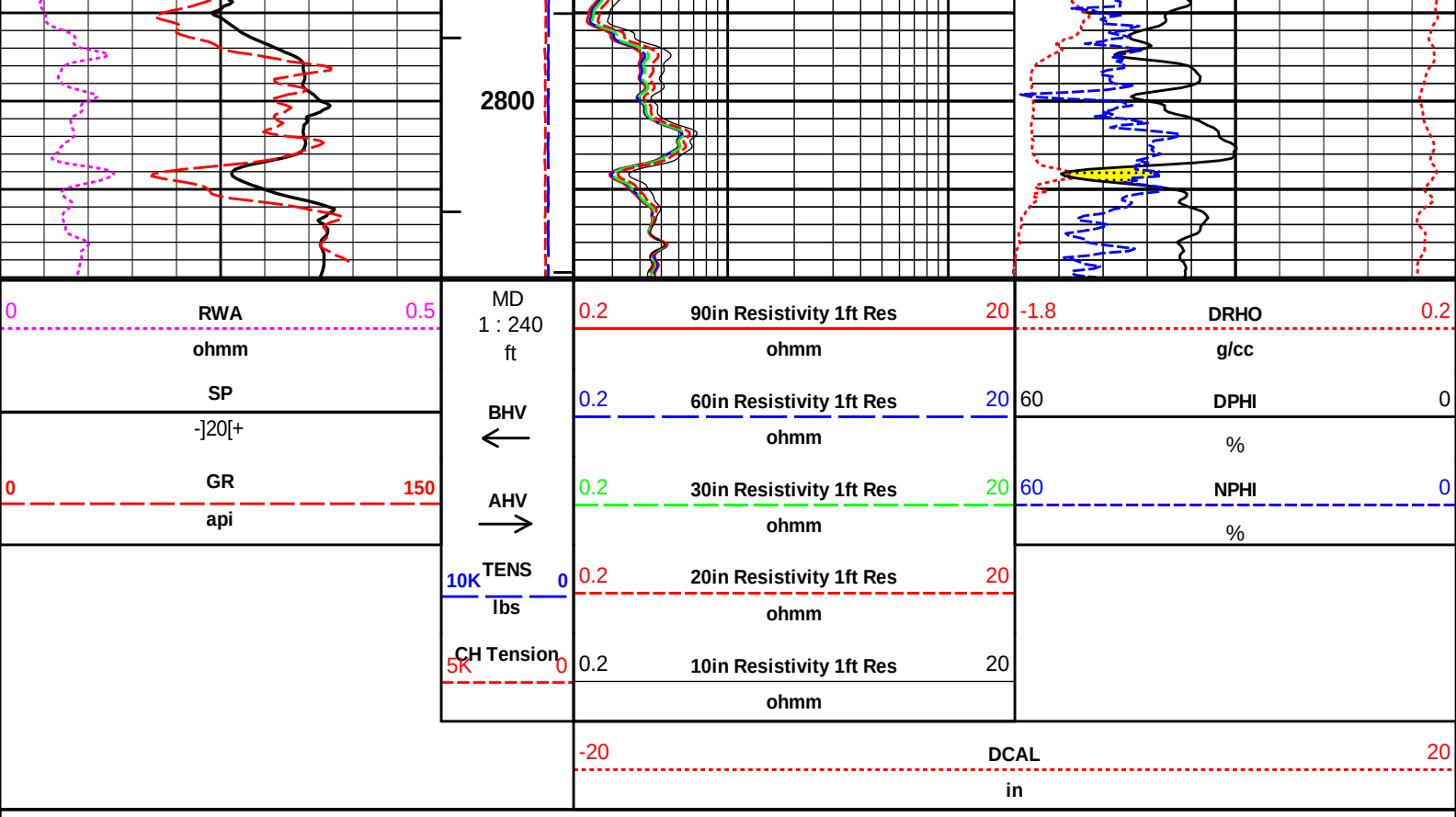
HALLIBURTON

Plot Time: 10-Oct-11 22:16:22
Plot Range: 2498 ft to 2820 ft
Data: 10_10_CROWN\Well Based\DAQ Current\
Plot File: \\5IN_MD\REPEAT

5 IN = 100 FT MD
REPEAT SECTION




2600
2650
2700
2750
Rwa
SP
GR
TENS
CH Tension
60in Resistivity 1ft Res
20in Resistivity 1ft Res
90in Resistivity 1ft Res
30in Resistivity 1ft Res
10in Resistivity 1ft Res
DCAL
DPHI
NPHI
DRHO



HALLIBURTON

Plot Time: 10-Oct-11 22:16:28
Plot Range: 2498 ft to 2820 ft
Data: 10_10_CROWN\Well Based\DAQ Current
Plot File: \\5IN_MD\REPEAT

5 IN = 100 FT MD
REPEAT SECTION

HALLIBURTON

PARAMETERS REPORT

Depth ((ft))	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	8.500	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	10.000	ppg
	SHARED	WAGT	Weighting Agent	Barite	
	SHARED	BSAL	Borehole salinity	0.00	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	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	8619.00	ft

SHARED	BHT	Bottom Hole Temperature	179.0	degF
SHARED	SVTM	Navigation and Survey Master Tool	NONE	
SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
SHARED	TEMM	Temperature Master Tool	NONE	
SHARED	BHSM	Borehole Size Master Tool	NONE	
Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
Rwa / CrossPlot	FCHO	Select Source of F	Density	
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	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GRSO	Gamma Tool Standoff	0.000	in
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
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	Gradient	
DSNT	DNTT	Top Zone Temperature Value	75.0	degF
DSNT	DNBT	DSN Bottom Zone Temperature Value	180.0	degF
DSNT	DTDT	Top Depth for Temperature Gradient Calculation (Measured Depth)	0	ft
DSNT	DBDT	Bottom Zone Temperature Depth (Measured Depth)	8619	ft
DSNT	DPRS	DSN Pressure Correction Type	Gradient	
DSNT	DNTP	DSN Top Zone Pressure Value	14.70	psia
DSNT	DNBP	DSN Bottom Zone Pressure Value	4481.00	psia
DSNT	DTDP	Top Depth for Pressure Gradient Calculation (Measured Depth)	0	ft
DSNT	DNDP	Bottom Zone Pressure Depth (Measured Depth)	8619	ft
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
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
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
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	

BOTTOM

BOTTOM

HALLIBURTON

CUSTOMER EVENT LOG

Event Type	Time & Date	Depth (ft)	Event Description
	10-Oct-11 17:00:00	2495.75	Logging 001 10-Oct-11 16:59 Up @2495.8f
	10-Oct-11 17:00:35	2466.36	Halting 001 10-Oct-11 16:59 Up @2495.8f
	10-Oct-11 17:04:13	2443.50	Logging 002 10-Oct-11 17:04 Dn @2443.5f
	10-Oct-11 18:06:09	8580.01	Halting 002 10-Oct-11 17:04 Dn @2443.5f
	10-Oct-11 18:07:29	8621.00	Logging 003 10-Oct-11 18:07 Up @8621.0f
	10-Oct-11 19:57:50	2271.07	Halting 003 10-Oct-11 18:07 Up @8621.0f
	10-Oct-11 20:02:05	2863.25	Logging 004 10-Oct-11 20:02 Up @2863.3f
	10-Oct-11 20:12:03	2358.06	Halting 004 10-Oct-11 20:02 Up @2863.3f

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 10964330 **Reference Calibration Date:** 21-Sep-11 13:21:34

Engineer: C. HARRELL **Calibration Date:** 21-Sep-11 13:25:39

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

Calibrator Source S/N: TB-243

Calibrator API Reference:252.00 api

Equivalent Calibrator API Reference:256.4 api

Measurement	Measured	Calibrated	Units
Background	34.4	34.7	api
Background + Calibrator	288.3	291.1	api
Calibrator	254.0	256.4	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: GTET - 10964330 **Reference Calibration Date:** 21-Sep-11 13:25:39

Engineer: J. NICHOLSON **Calibration Date:** 10-Oct-11 15:42:17

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

Calibrator Source S/N: TB-243

Calibrator API Reference:252.00 api

Equivalent Calibrator API Reference:256.4 api

Field Verification	Shop	Field	Units
Background	34.7	53.2	api
Background + Calibrator	291.1	313.6	api
Calibrator	256.4	260.3	api

Shop	Field	Difference	Tolerance
256.4	260.3	-3.9	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 11277439 **Reference Calibration Date:** 24-Aug-11 08:29:00

Tool Name:	**DSNT - 11277439**	**Reference Calibration Date:**	**24-Aug-11 08:29:00**
Engineer:	**C. HARRELL**	**Calibration Date:**	**21-Sep-11 13:11:45**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

Logging Source S/N: DSN-412
Tank Serial Number: 105048
Reference value assigned to Tank: 54.020
Snow Block S/N: E1
Calibration Tank Water Temperature: 78 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	1.002	1.003	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):	0.2237	0.2240	0.0003	+/- 0.0020
Calibrated Ratio:	10.16	10.17	0.010	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0758	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 - 11277439**	**Reference Calibration Date:**	**21-Sep-11 13:11:45**
Engineer:	**J. NICHOLSON**	**Calibration Date:**	**10-Oct-11 15:32:58**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

Logging Source S/N: DSN-412
Snow Block S/N: E1

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0758	0.0898	0.0140	+/- 0.0150

PASS/FAIL SUMMARY

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

DUAL SPACED NEUTRON POST CALIBRATION

Tool Name:	**DSNT - 11277439**	**Reference Calibration Date:**	**10-Oct-11 15:32:58**
Engineer:	**J. NICHOLSON**	**Calibration Date:**	**10-Oct-11 21:26:29**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

Logging Source S/N: DSN-412
Snow Block S/N: E1

NEUTRON POST-CHECK SUMMARY				
	Field Value	Post Value	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0898	0.0791	-0.0107	+/- 0.0150

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

DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - 10951313 **Reference Calibration Date:** 23-Sep-11 11:45:56

Engineer: C. HARRELL **Calibration Date:** 23-Sep-11 11:50:29

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-1078.71	-1122.32	-7000.00 - -1000.00
Pad Gain	0.0003757	0.0003811	0.000200 - 0.000600
Arm Offset	-1331.41	-1591.12	-5000.00 - 3000.00
Arm Gain	0.0005159	0.0005416	0.000300 - 0.000700
Arm Power	-0.000002685	-0.000004209	-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)	3.71	3.75	0.04	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.56	6.50	-0.06	+/- 0.20
Medium Ring (in)	8.25	8.25	0.00	+/- 0.20
Large Ring (in)	15.00	15.00	0.00	+/- 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 - 10951313 **Reference Calibration Date:** 23-Sep-11 11:50:29

Engineer: J. NICHOLSON **Calibration Date:** 10-Oct-11 15:40:32

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.75	0.00	+/- 0.10
Ring Diameter	8.25	8.29	0.04	+/- 0.15

PASS/FAIL SUMMARY

Pad Extension Check:	Passed
Diameter Check:	Passed

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

Tool Name:	**ACRt Sonde - 10976085**	**Reference Calibration Date:**	**25-Aug-11 11:51:56**
Engineer:	**C. HARRELL**	**Calibration Date:**	**21-Sep-11 13:25:24**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

TYPICAL GAIN RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	0.9924	1.05	0.95	0.9956	1.05	0.95	0.9952	1.05
A2 (50")	0.95	0.9945	1.05	0.95	0.9995	1.05	0.95	1.0009	1.05
A3 (29")	0.95	0.9941	1.05	0.95	0.9993	1.05	0.95	1.0031	1.05
A4 (17")	0.95	0.9969	1.05	0.95	1.0010	1.05	0.95	1.0047	1.05
A5 (10")	N/A	N/A	N/A	0.95	0.9959	1.05	0.95	1.0005	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9858	1.05	0.95	0.9908	1.05

TYPICAL SONDE OFFSET RANGE

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	-5	-2.963	2	-6	-4.407	-2	-8	-4.643	-2
A2 (50")	-7	-4.858	-1	-6	-3.767	-2	-7	-4.975	-2
A3 (29")	-27	-20.460	-9	-9	-5.711	-3	-7	-5.051	-1
A4 (17")	-180	-113.185	-60	-45	-40.318	-15	-39	-33.099	-13
A5 (10")	N/A	N/A	N/A	-150	-134.249	-50	-80	-77.987	-10
A6 (6")	N/A	N/A	N/A	175	228.787	525	90	71.182	270

TRANSMITTER CURRENT GAIN

Signal	Lower	R	Upper
12K	0.6	0.9195	1.3
36K	1.0	1.2263	2.0
72K	1.0	1.4527	2.0

R-MUD VERIFICATION

Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
Mud Cell	0.95	1.002	1.05

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	**SDLT Pad - 11012605**	**Reference Calibration Date:**	**23-Sep-11 10:53:48**
Engineer:	**C. HARRELL**	**Calibration Date:**	**23-Sep-11 11:13:00**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

Logging Source S/N: 20790B

Aluminum Block S/N: 63060	Density: 2.598g/cc	Pe: 3.150
Magnesium Block S/N: 63361	Density: 1.680g/cc	Pe: 2.594

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0493	1.0383	0.90 - 1.10
Near Dens Gain	1.0203	1.0178	0.90 - 1.10
Near Peak Gain	1.0248	1.0263	0.90 - 1.10
Near Lith Gain	1.0285	1.0139	0.90 - 1.10
Far Bar Gain	1.0116	1.0124	0.90 - 1.10
Far Dens Gain	0.9970	0.9974	0.90 - 1.10
Far Peak Gain	0.9930	0.9909	0.90 - 1.10
Far Lith Gain	0.9751	0.9727	0.90 - 1.10

Near Bar Offset	-0.3507	-0.2489	NONE
Near Dens Offset	-0.0396	-0.0182	NONE
Near Peak Offset	-0.0754	-0.0888	NONE
Near Lith Offset	-0.1371	-0.0193	NONE
Far Bar Offset	-0.0585	-0.0678	NONE
Far Dens Offset	0.0743	0.0686	NONE
Far Peak Offset	0.1092	0.1259	NONE
Far Lith Offset	0.2192	0.2375	NONE

Near Bar Background	988.50	990.43	700 - 1450
Near Dens Background	325.49	325.96	230 - 480
Near Peak Background	142.77	144.16	100 - 210
Near Lith Background	175.92	175.52	125 - 260
Far Bar Background	579.25	578.45	450 - 900
Far Dens Background	227.52	225.37	175 - 345
Far Peak Background	88.36	89.71	70 - 140
Far Lith Background	92.82	92.70	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.679	1.679	-0.000	+/- 0.015
Pe	2.537	2.566	0.029	+/- 0.150
ALUMINUM				
Density (g/cc)	2.597	2.597	0.001	+/- 0.01500
Pe	3.099	3.120	0.021	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0002	+/- 0.0110	0.0009	+/- 0.0140
Magnesium Block	0.0004	+/- 0.0110	-0.0014	+/- 0.0140
Aluminum Block	-0.0008	+/- 0.0110	0.0003	+/- 0.0140
Resolution	8.55	6.00 - 11.50	9.15	6.00 - 11.50
Internal Verifier(B+D+P+L)	1636	1200 - 2700	986	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 - 11012605 **Reference Calibration Date:** 23-Sep-11 11:13:00

Engineer: J. NICHOLSON **Calibration Date:** 10-Oct-11 15:28:20

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

Pad Temperature: 93.5 degF

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1636.073	1629.923	-6.150	16.254
Far (B+D+P+L) cps	986.222	989.088	2.866	16.843
Near Resolution	8.55	8.60	0.050	0.50
Far Resolution	9.15	9.39	0.240	1.00

PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

SPECTRAL DENSITY POST CHECK

Tool Name: SDLT Pad - 11012605 **Reference Calibration Date:** 10-Oct-11 15:28:20

Engineer: J. NICHOLSON **Calibration Date:** 10-Oct-11 21:21:07

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

Pad Temperature: 85.8 degF

DENSITY POST CALIBRATION SUMMARY

Measurement	Field	Post	Change	Control Limit +/-
Near (B+D+P+L) cps	1629.923	1630.569	0.646	16.254
Far (B+D+P+L) cps	989.088	983.972	-5.116	16.843
Near Resolution	8.60	8.66	0.060	0.50
Far Resolution	9.39	9.28	-0.110	1.00

PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

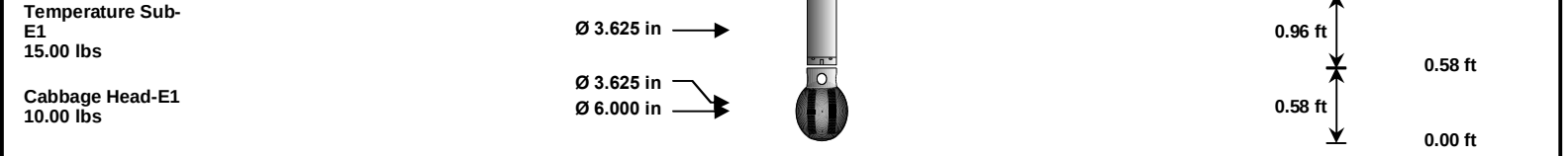
CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10964330						
Gamma Ray Calibrator	256.4	260.3	----------	-3.9	+/- 9.00	api
DSNT-11277439						
Snow-Block Porosity	0.0758	0.0898	0.0791	0.0107	+/- 0.0150	decp
SDLT-10951313						
Pad Extension	3.75	3.75	----------	0.00	+/-0.10	in
Ring Diameter	8.25	8.29	----------	-0.040	+/-0.15	in
ACRt Sonde-10976085						
Mud Cell	1.002	----------	----------	0.000	----------	ohm-m
SDLT Pad-11012605						
Near(B+D+P+L)	1636.073	1629.923	1630.569	-0.646	+/-16.254	cps
Far(B+D+P+L)	986.222	989.088	983.972	5.116	+/-16.843	cps

Data: 10_10_CROWN\0001 TRIPLE COMBO\IDLE **Date: 10-Oct-11 22:07:14**

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
						51.81 ft
Cable Head Tension-A023 30.00 lbs		Ø 3.625 in		Load Cell @ 50.81 ft	2.00 ft	
						49.81 ft
GTET-10964330 165.00 lbs		Ø 3.625 in			8.52 ft	
				GammaRay @ 43.75 ft		
						41.29 ft
	DSN Decentralizer-10971181 6.60 lbs	Ø 5.000 in*				
DSNT-11277439 174.00 lbs		Ø 3.625 in			9.69 ft	
				DSN Far @ 34.35 ft		
				DSN Near @ 33.60 ft		
						31.60 ft
SDLT-10951313 360.00 lbs		Ø 4.500 in			10.81 ft	
	SDLT Pad-11012605 65.00 lbs	Ø 4.750 in*		SDL Caliper @ 23.61 ft		
				SDL @ 23.60 ft		
						20.79 ft
ACRt Instrument-10982661 50.00 lbs		Ø 3.625 in			5.03 ft	
						15.76 ft
				Mud Resistivity @ 14.40 ft		
				ACRt @ 10.42 ft		
ACRt Sonde-10976085 200.00 lbs		Ø 3.625 in			14.22 ft	
	SP Ring-10976085 0.00 lbs	Ø 3.625 in*		SP @ 2.82 ft		
						1.54 ft



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)		Accumulated Length (ft)	Max.Log. Speed (fpm)
CHT	Cable Head with Load Cell	A023	30.00	2.00		49.81	300.00
GTET	Gamma Telemetry Tool	10964330	165.00	8.52		41.29	60.00
DSNT	Dual Spaced Neutron	11277439	174.00	9.69		31.60	60.00
DCNT	DSN Decentralizer	10971181	6.60	5.13	*	34.93	300.00
SDLT	Spectral Density Tool	10951313	360.00	10.81		20.79	60.00
SDLP	Density Insite Pad	11012605	65.00	2.55	*	23.00	60.00
ACRt	Array Compensated True Resistivity Instrument Section	10982661	50.00	5.03		15.76	300.00
ACRt	Array Compensated True Resistivity	10976085	200.00	14.22		1.54	300.00
SP	SP Ring	10976085	0.00	0.25	*	2.82	300.00
TMAX	Temperature Sub - 3_625 OD	E1	15.00	0.96		0.58	300.00
CBHD	Cabbage Head	E1	10.00	0.58		0.00	300.00
Total			**1,075.60**	**51.81**			

* Not included in Total Length and Length Accumulation.

Data: 10_10_CROWN\0001 TRIPLE COMBO\003 10-Oct-11 18:07 Up @8621.0f **Date: 10-Oct-11 20:38:01**

COMPANY	**CROWN DRILLING INCORPORATED**		
WELL	**MERMENTAU MINERALS & LAND CO 13 #1**		
FIELD	**MERMENTAU**		
PARISH	**CAMERON**	STATE	**LA**

HALLIBURTON

ARRAY RESISTIVITY
DUAL SPACED NEUTRON
SPECTRAL DENSITY

5IN = 100 FT MD