

Company: **CASCADE PETROLEUM, LLC.**

Well: **CRAIG 9S-55W-19-41**

Field: **WILDCAT**

County: **LINCOLN**

State: **COLORADO**

[illegible]

Logging Date						
Run Number						
Depth Driller						
Schlumberger Depth						
Bottom Log Interval						
Top Log Interval						
Casing Driller Size @ Depth		@				
Casing Schlumberger						
Bit Size						
Type Fluid In Hole						
Density	Viscosity					
Fluid Loss	PH					
Source Of Sample						
RM @ Measured Temperature		@				
RMF @ Measured Temperature		@				
RMC @ Measured Temperature		@				
Source RMF	RMC					
RM @ MRT	RMF @ MRT	@		@		
Maximum Recorded Temperatures						
Circulation Stopped	Time					
Logger On Bottom	Time					
Unit Number	Location					
Recorded By						
Witnessed By						

DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

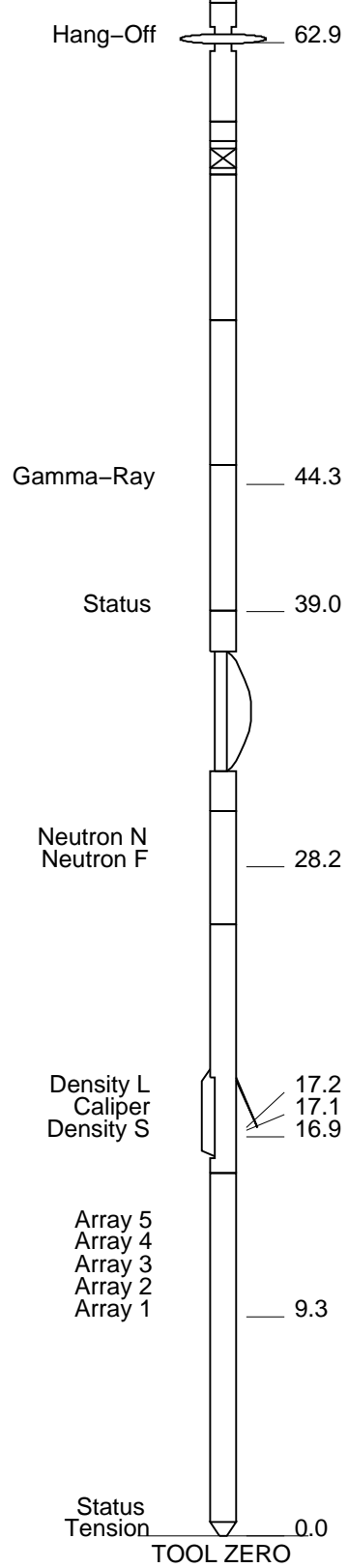
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
SERVICE: VERTICAL MEMORY, BIT DEPTH: 8271' LOGGED TO: 4000'	
ALL SCALES AND PRESENTATIONS PER CLIENT REQUEST	
TOOLSTRING RAN WITH LARGE DECENTRALIZER AND SWIVEL	
IHV REPRESENTS TOTAL BOREHOLE VOLUME, ft3	
ICV REPRESENTS ANNULAR HOLE VOLUME CALCULATED FOR 5.5" CSG. ft3	
DEPTH REFERENCE: PIPE TALLY	

RUN 1			RUN 2		
SERVICE ORDER #: PROGRAM VERSION: 19C2-270 FLUID LEVEL: 0 ft			SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

WITM (ThruBit)	SURFACE EQUIPMENT	
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Cell Line	Height (mm)
TBT-A	72.5
THEAD	
CCL	69.6
BDOT-B	
THOT	
T10_1	
TBUJ1	
TBAT1_2	

TBAT2 26
TMG-A 4
TILE-B
TBN-A 13
NNLS-EWA 4619
TBD-A 23
GGLS-FZ 3394
TBI-A 38



MAXIMUM STRING DIAMETER 2.13 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Schlumberger

MAIN PASS

MAXIS Field Log

Company: CASCADE PETROLEUM, LLC. Well: CRAIG 9S-55W19-41

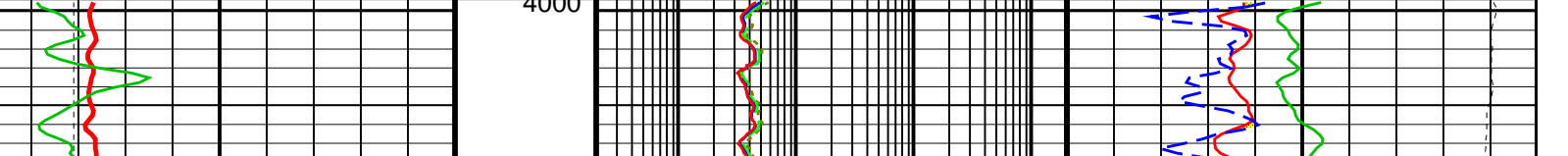
Input DLIS Files

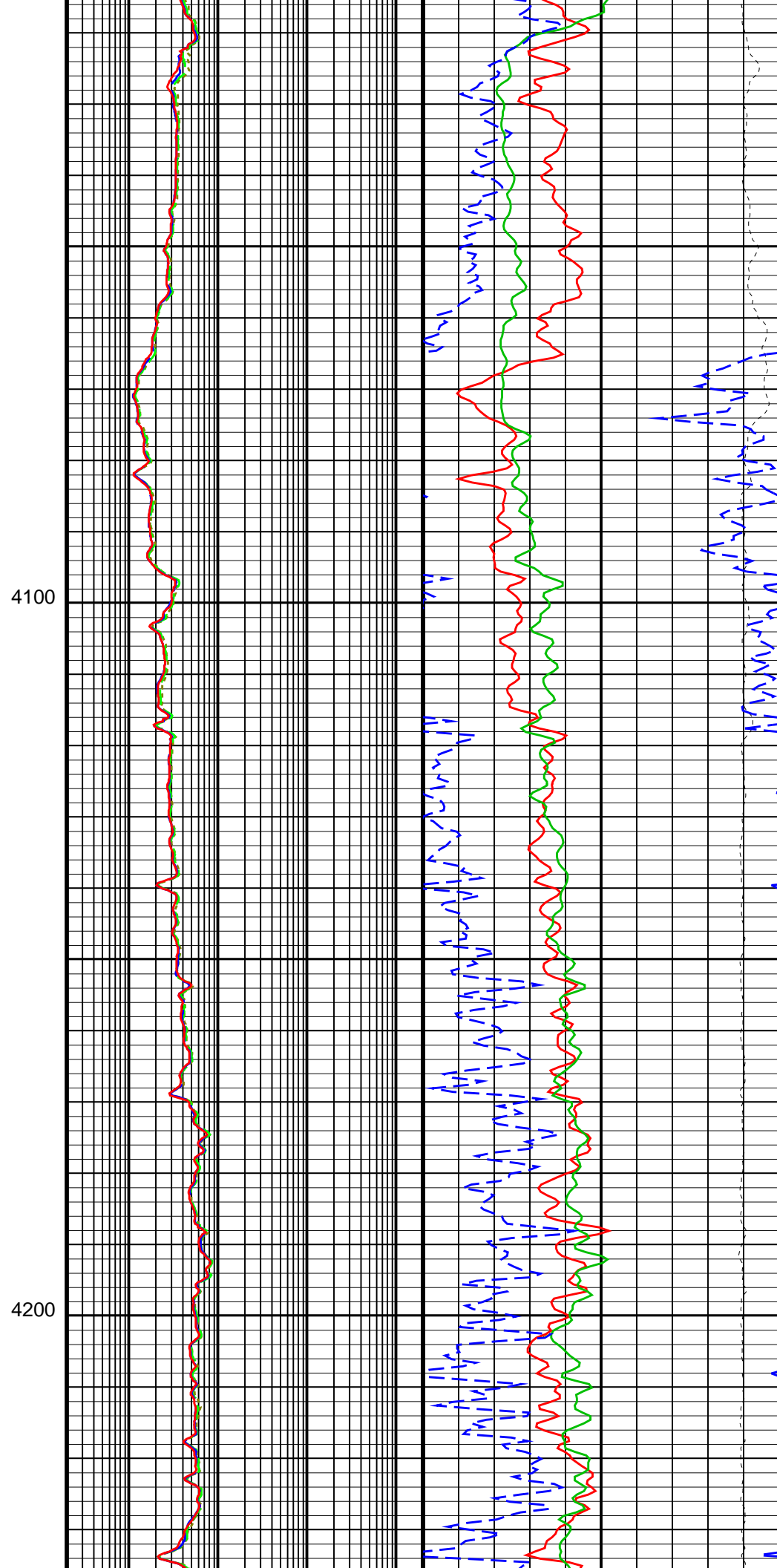
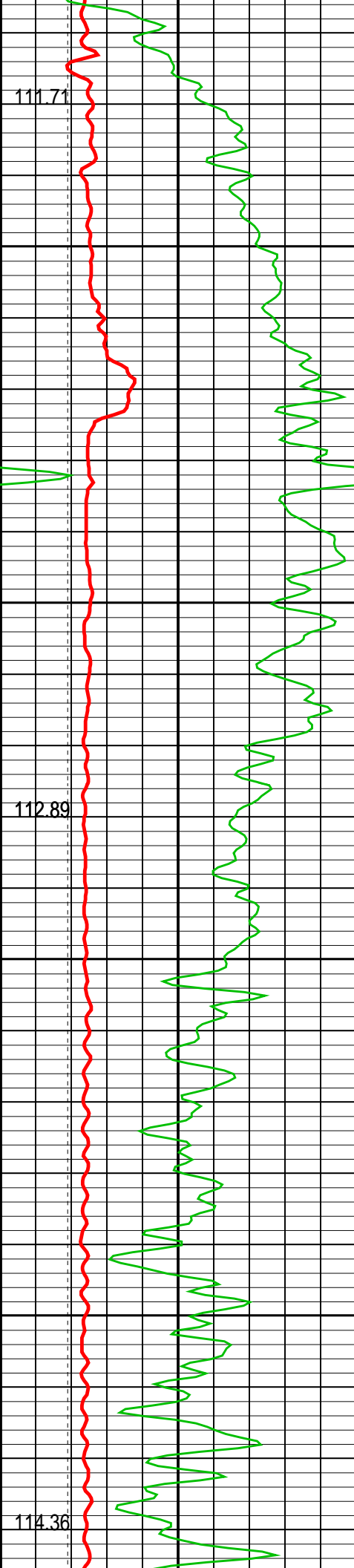
DEFAULT ThruBit_007PUP FN:6 PRODUCER 03-Jun-2014 03:43 8332.0 FT 3415.5 FT

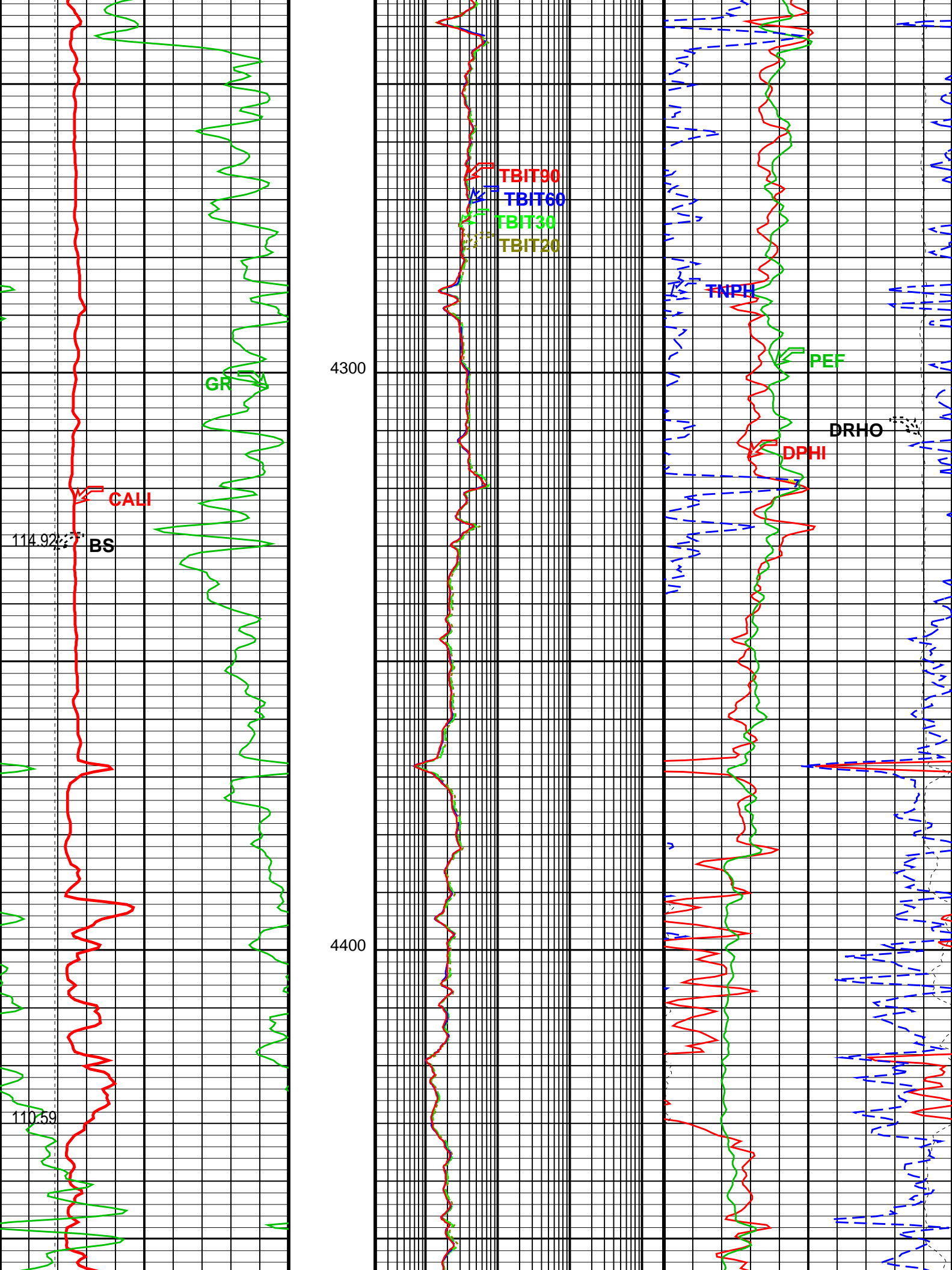
OP System Version: 19C2-270

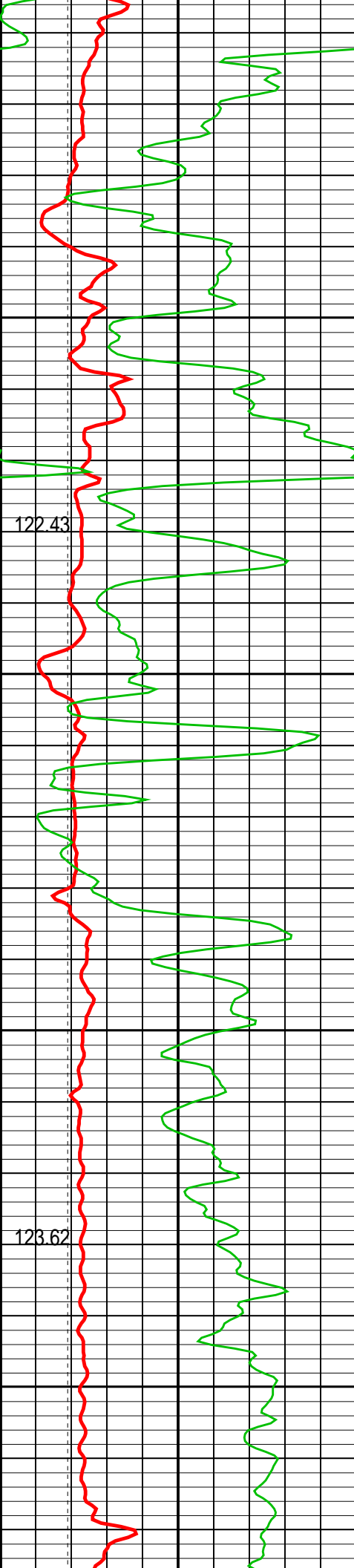
TBT SRPC-5298-ThruBit

Caliper (CALI) 6 (IN) 16		TBI 90 Inch Investigation (TBIT90) 0.2 (OHMM) 2000		TNPH (TNPH) 0.3 (V/V) -0.1	
Gamma Ray (GR) 0 (GAPI) 150		TBI 60 Inch Investigation (TBIT60) 0.2 (OHMM) 2000		PEF (PEF) 0 (----) 10	
Bit Size (BS) 6 (IN) 16		TBI 30 Inch Investigation (TBIT30) 0.2 (OHMM) 2000		DRHO (DRHO) -1.8 (G/C3) 0.2	
Well Temp (WTEP) (DEGF)		TBI 20 Inch Investigation (TBIT20) 0.2 (OHMM) 2000		DPHI (DPHI) 0.3 (V/V) -0.1	



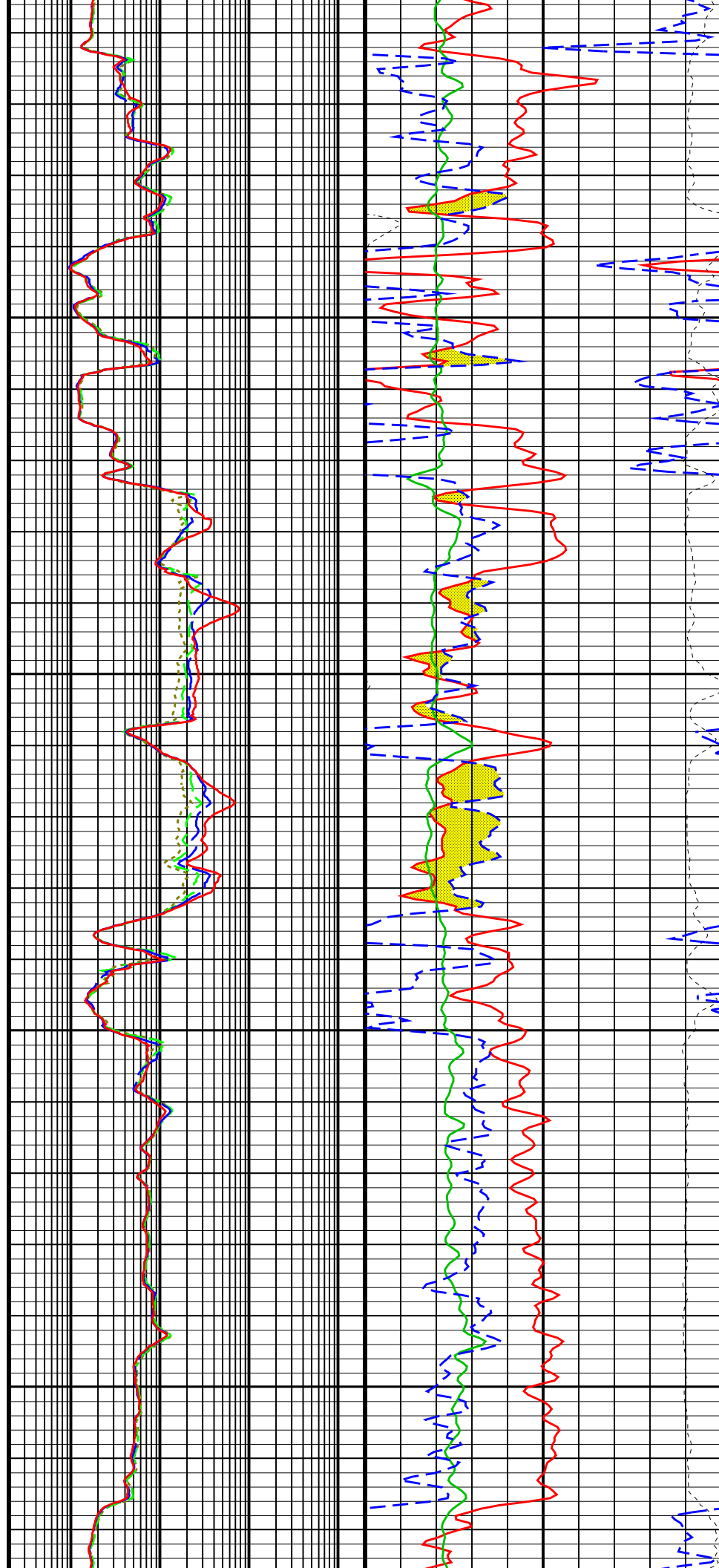


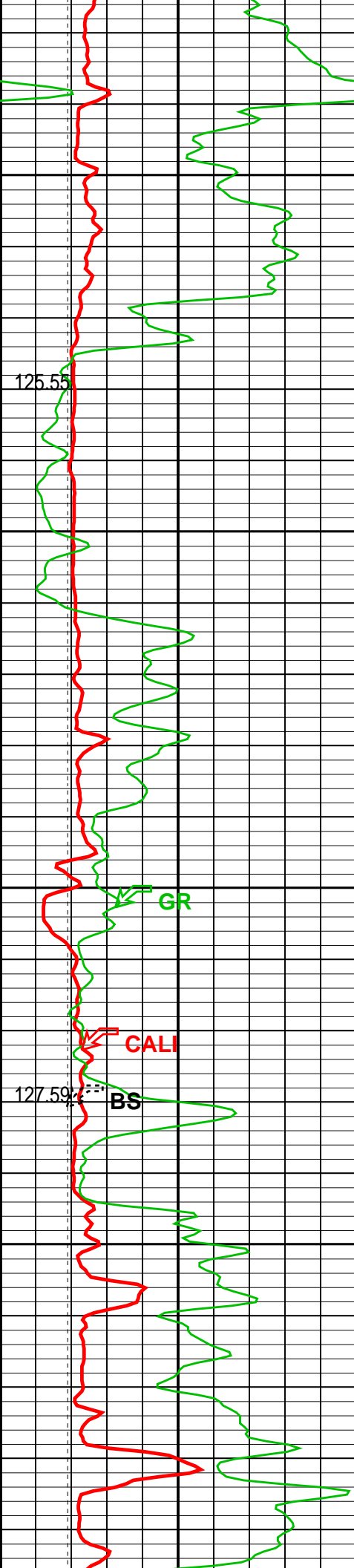




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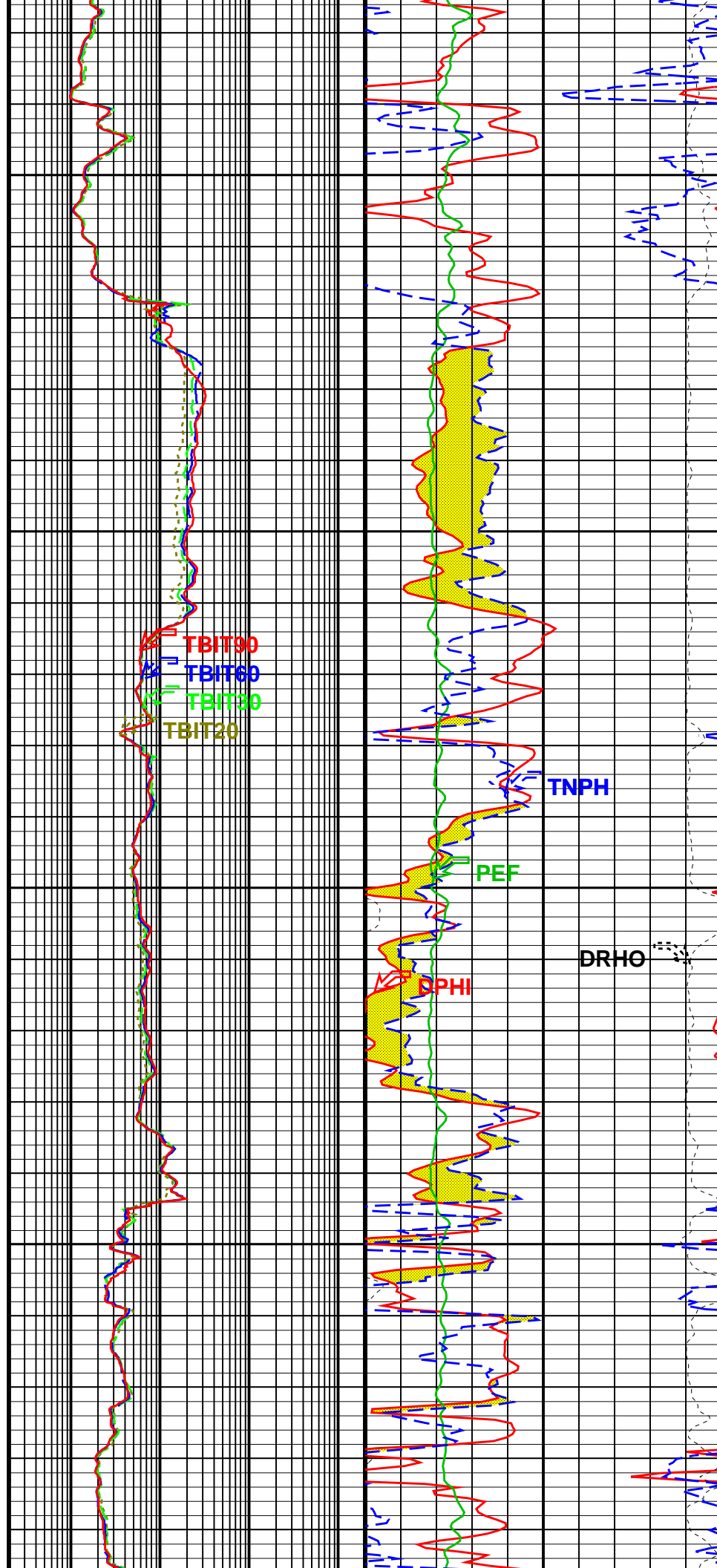
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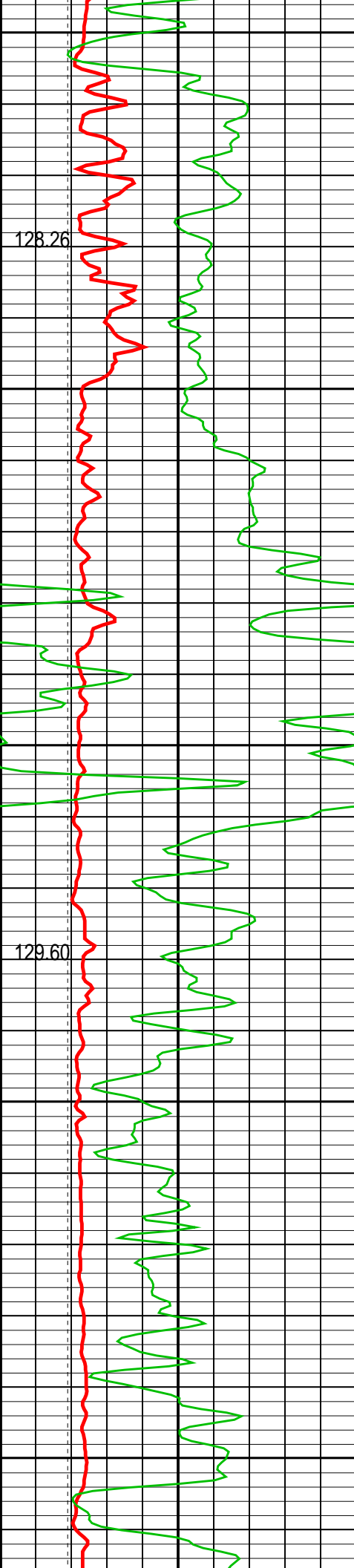




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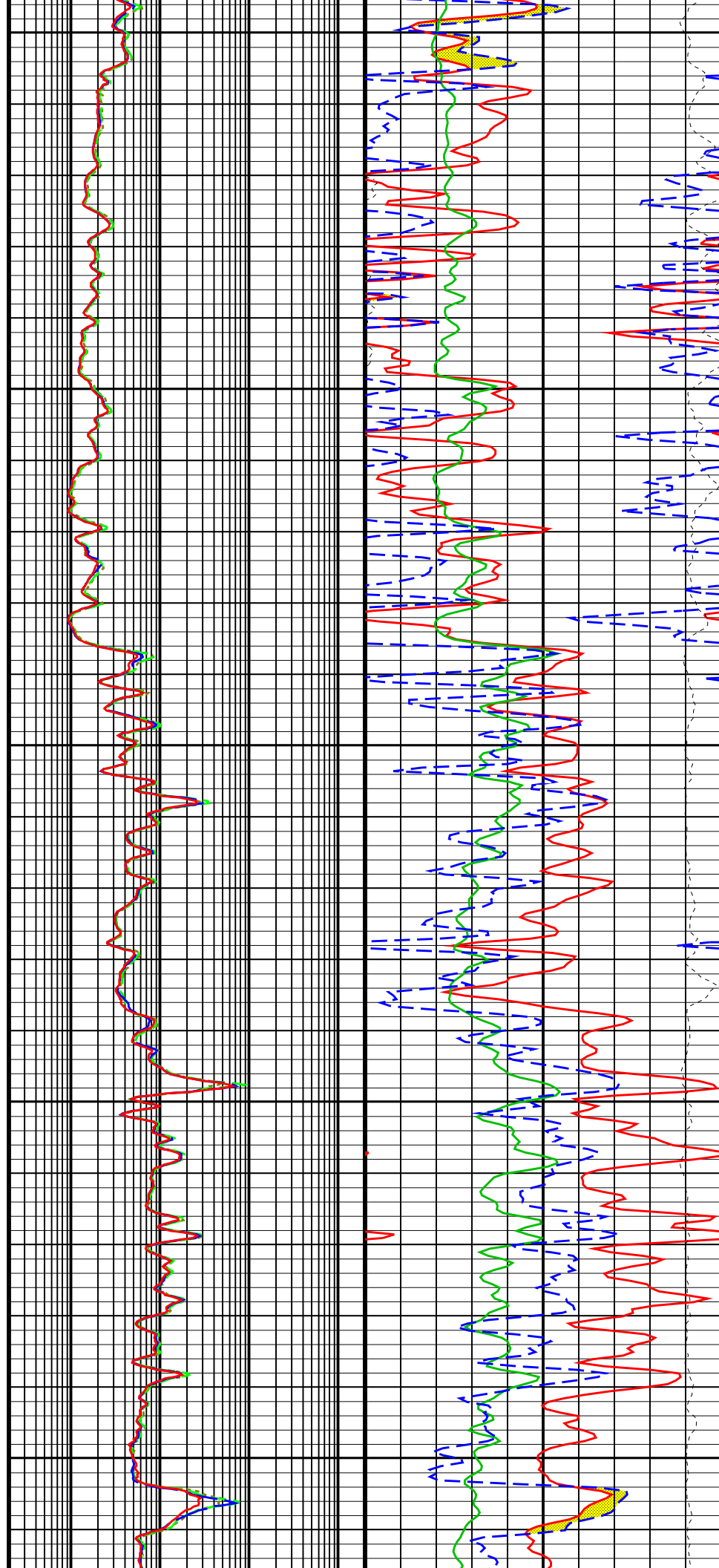


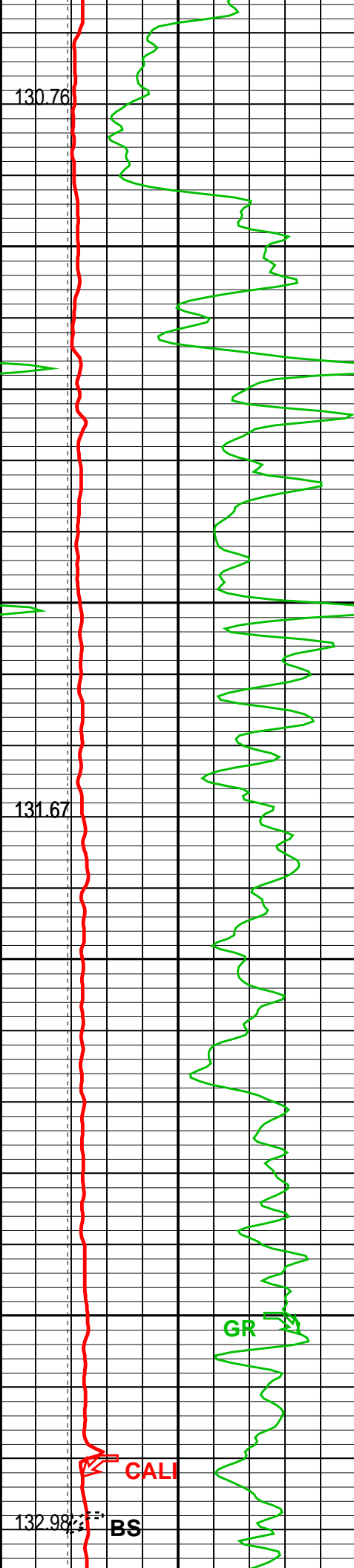


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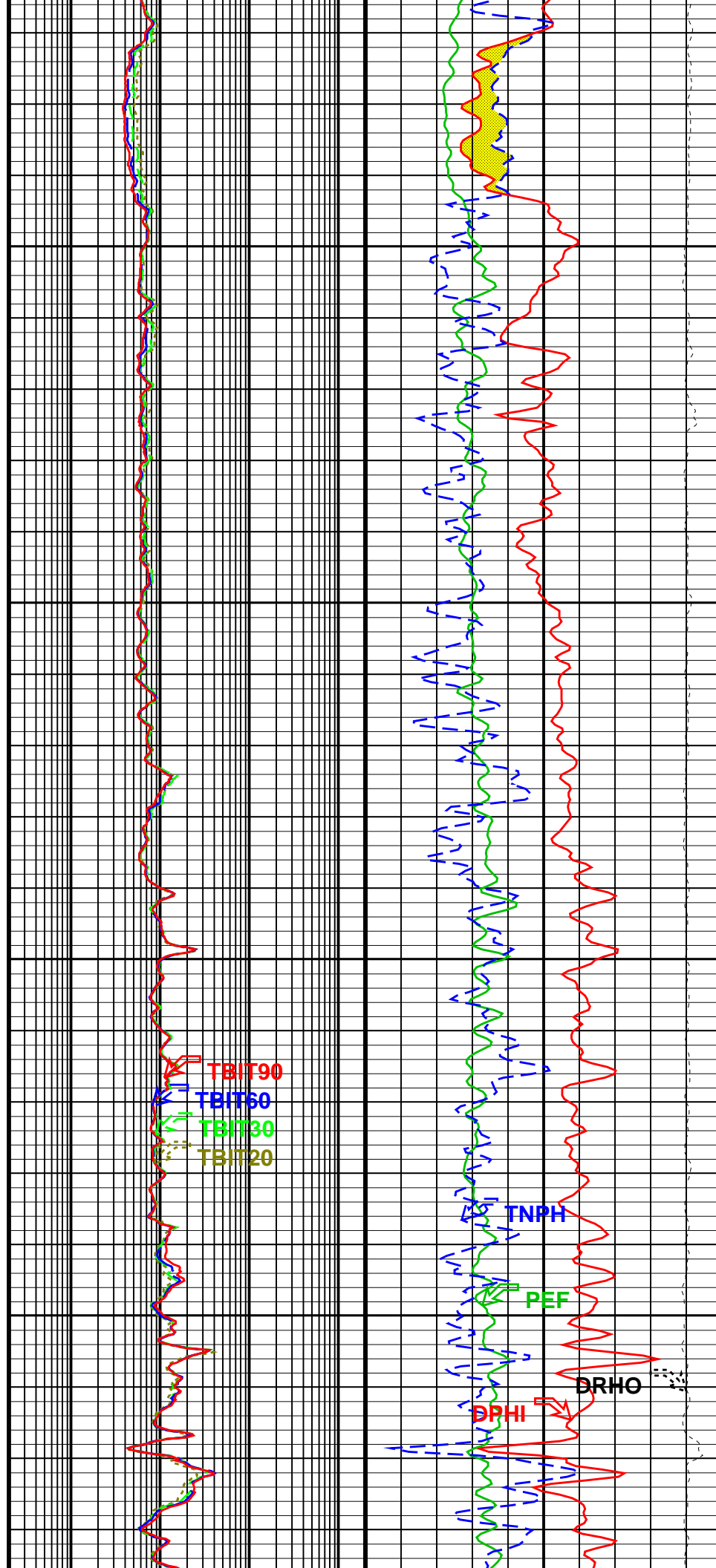
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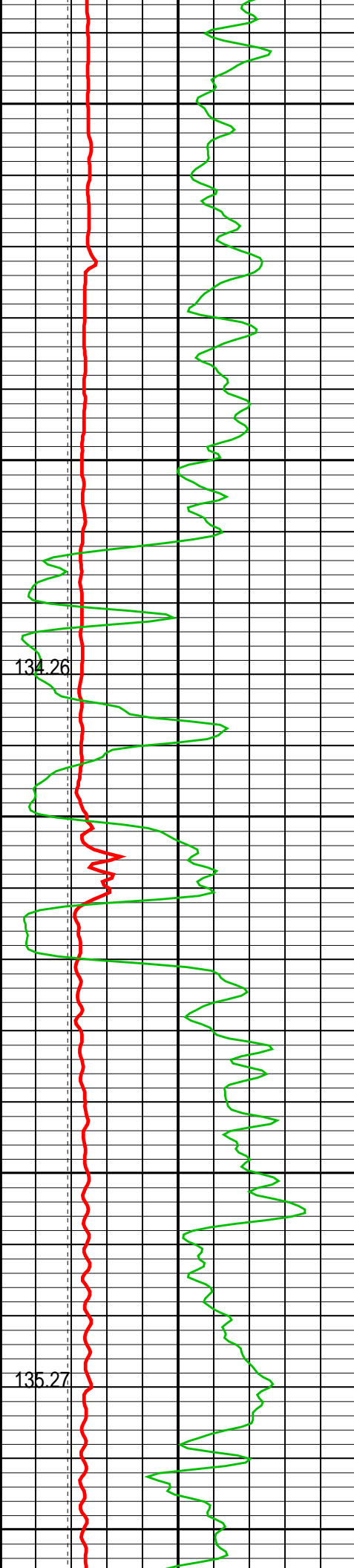




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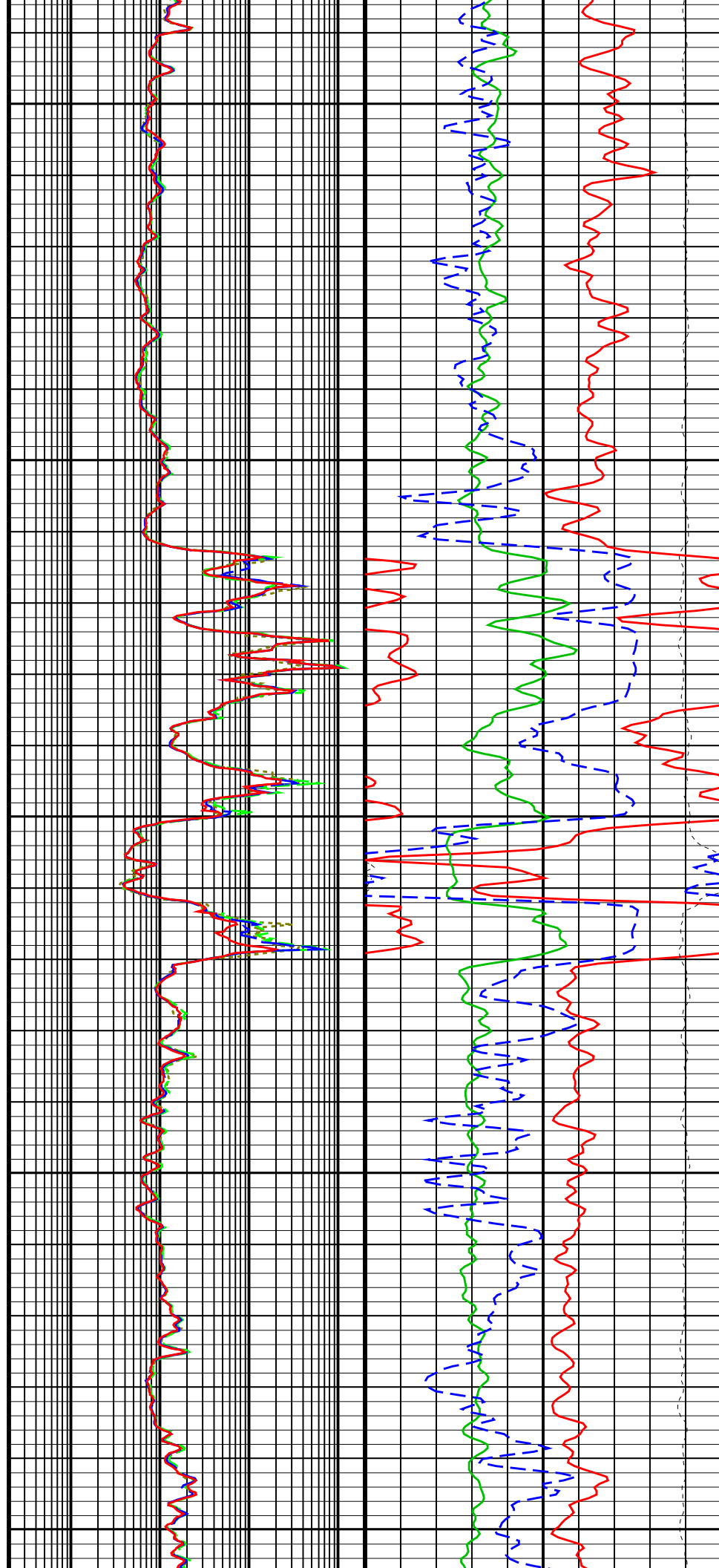
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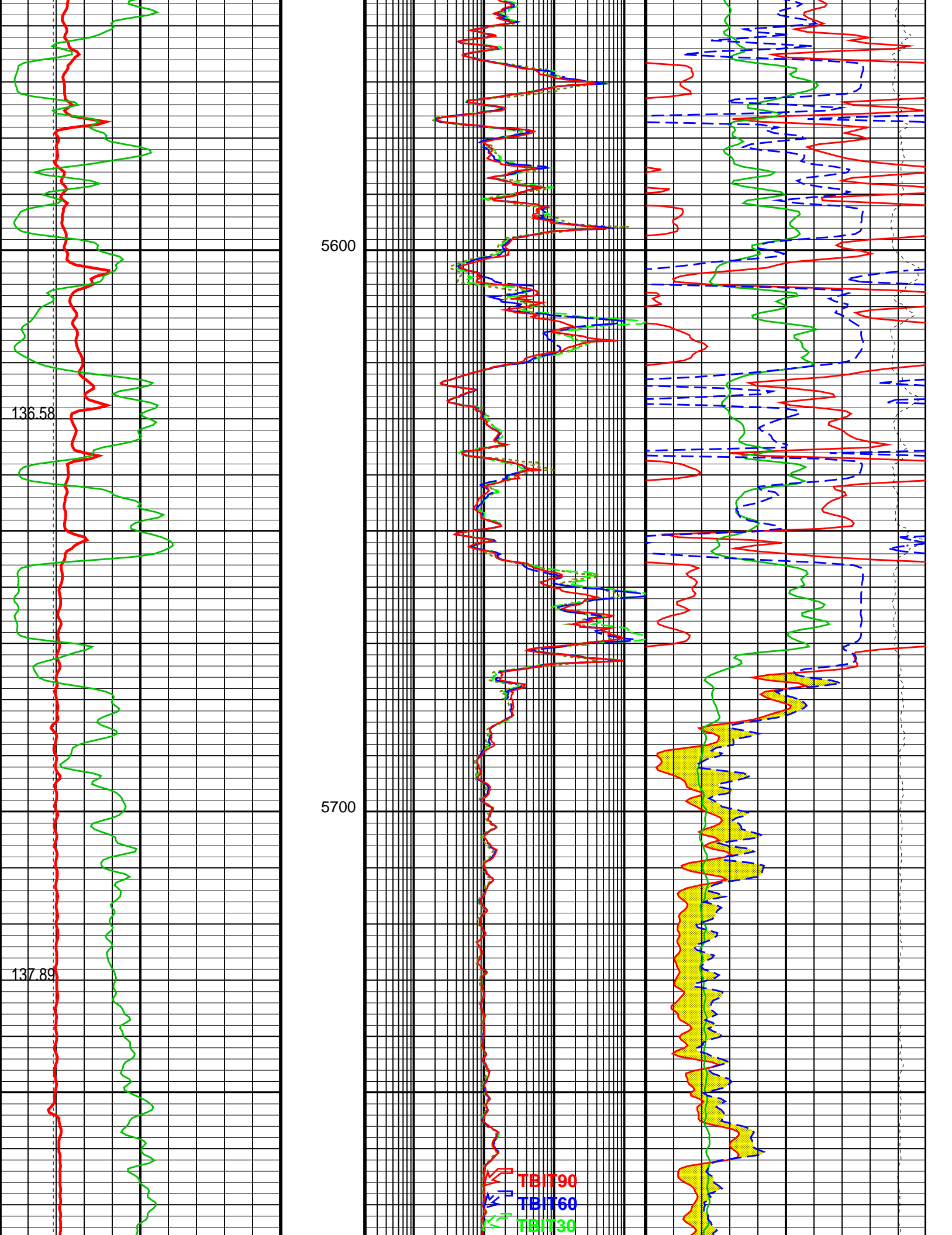


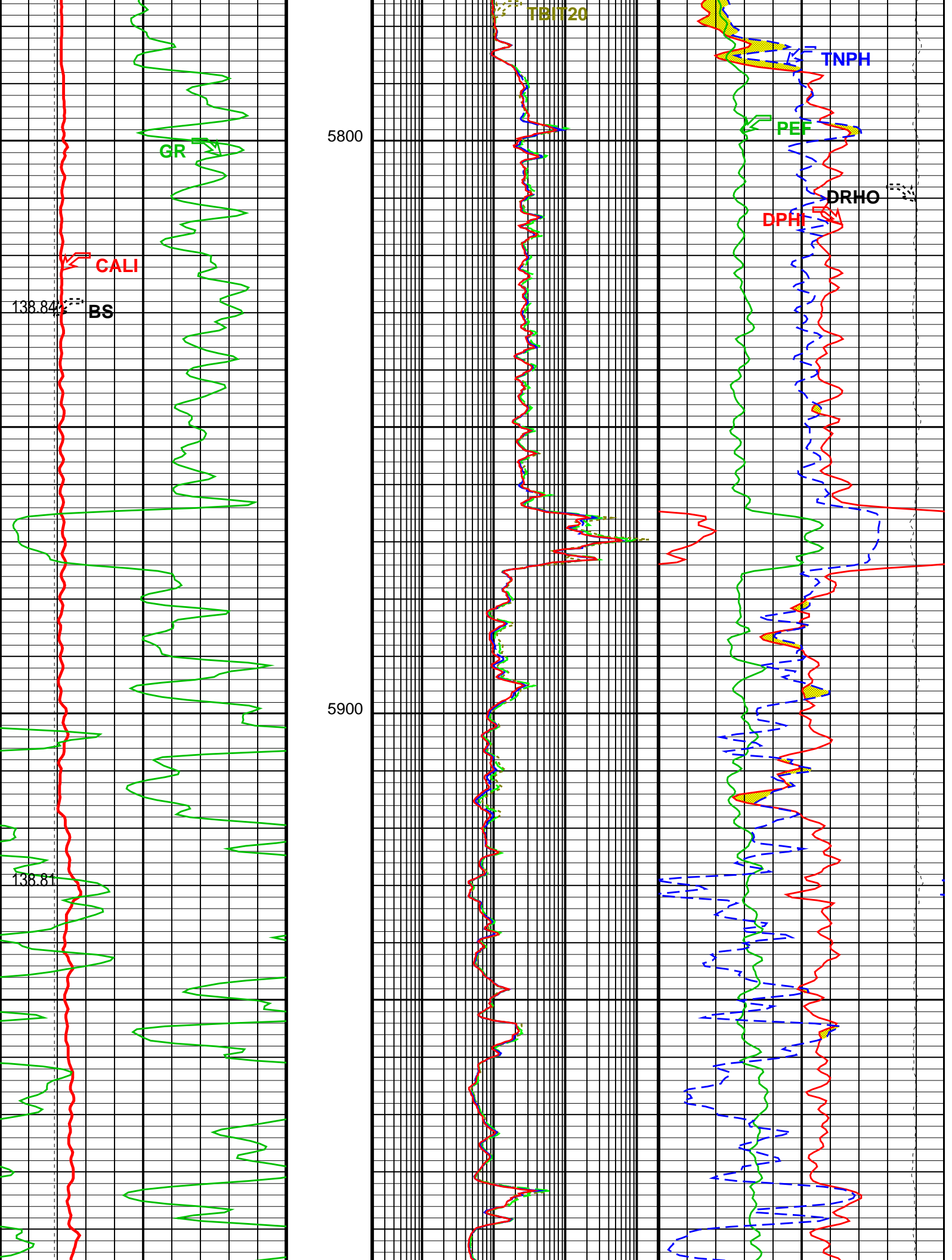


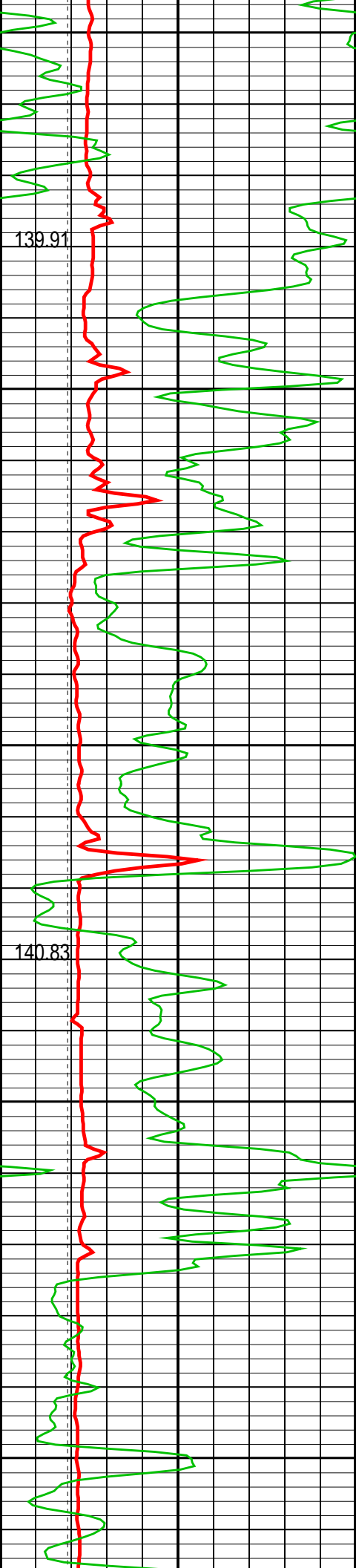
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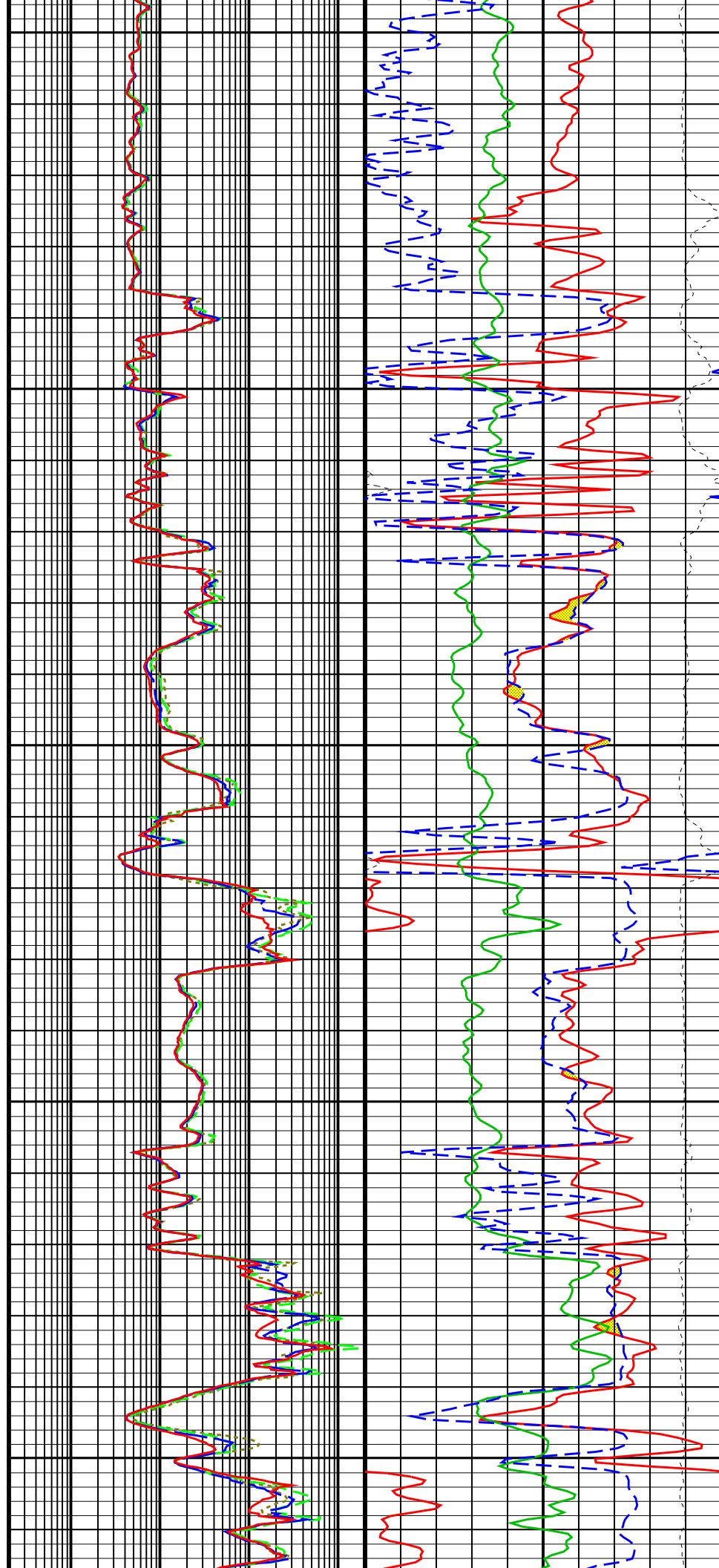


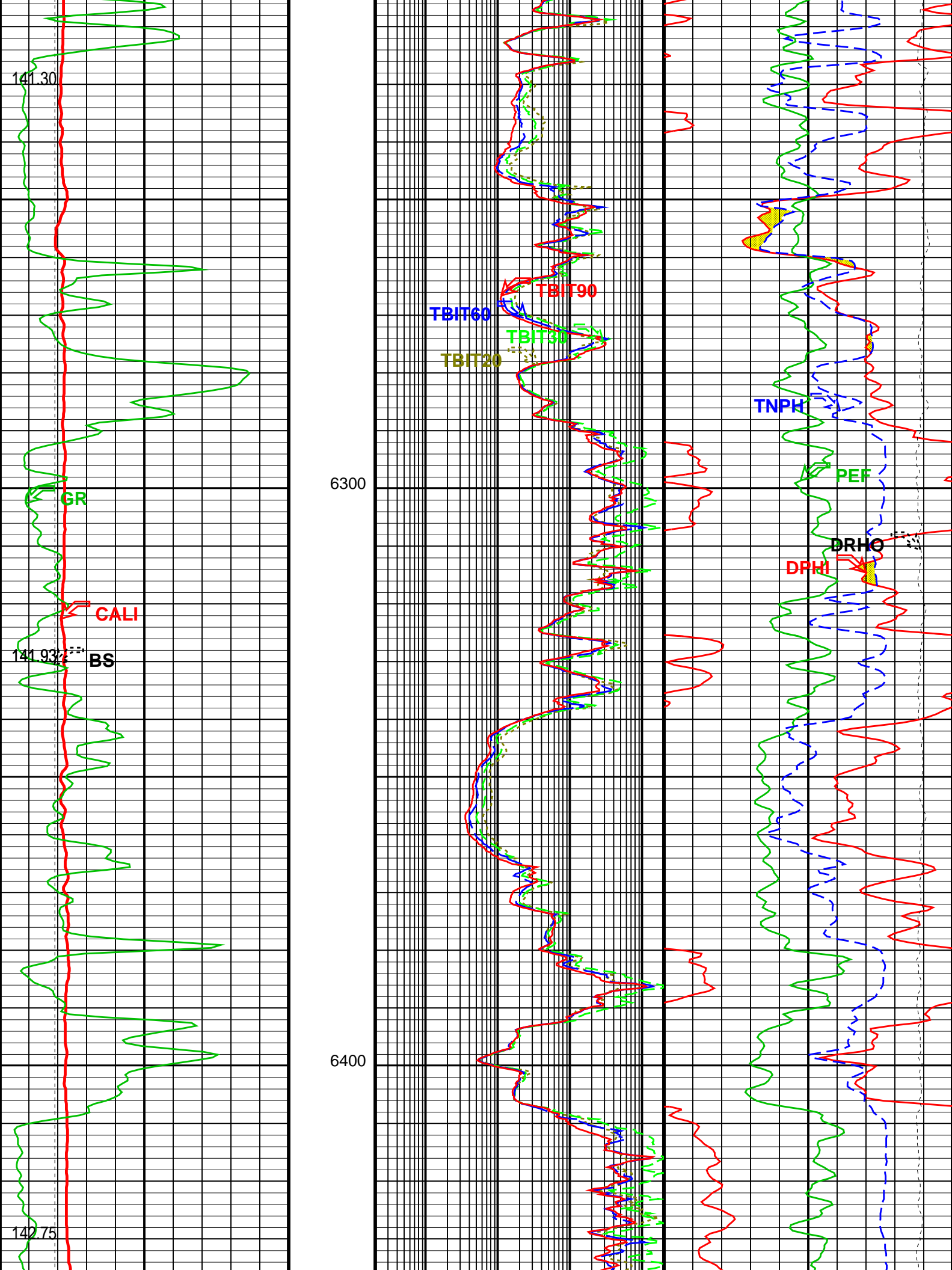


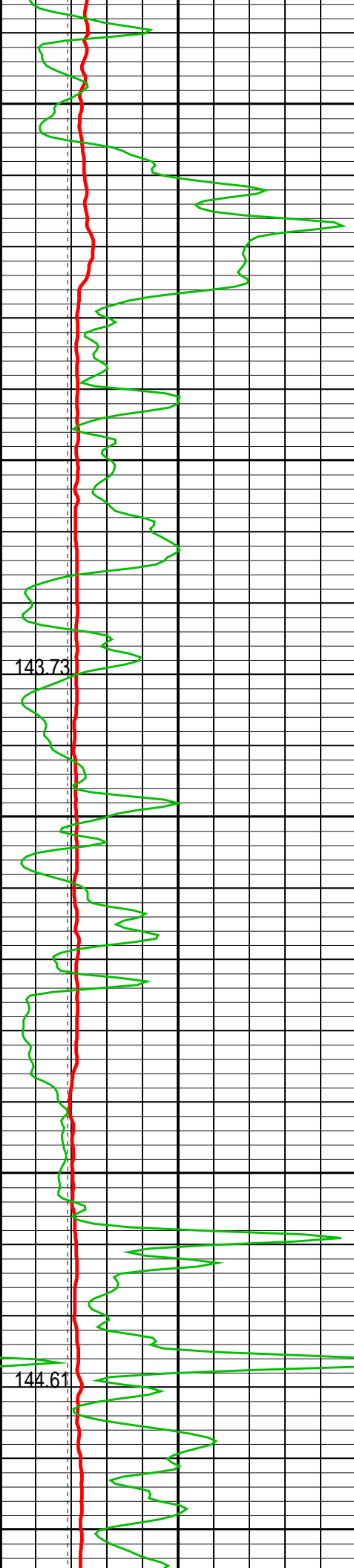
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6100

6200

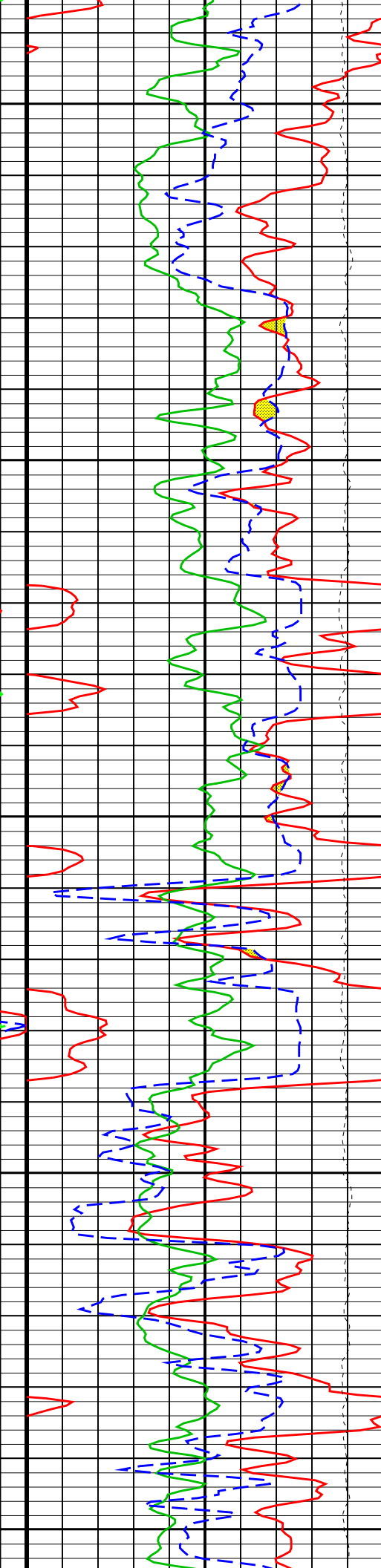
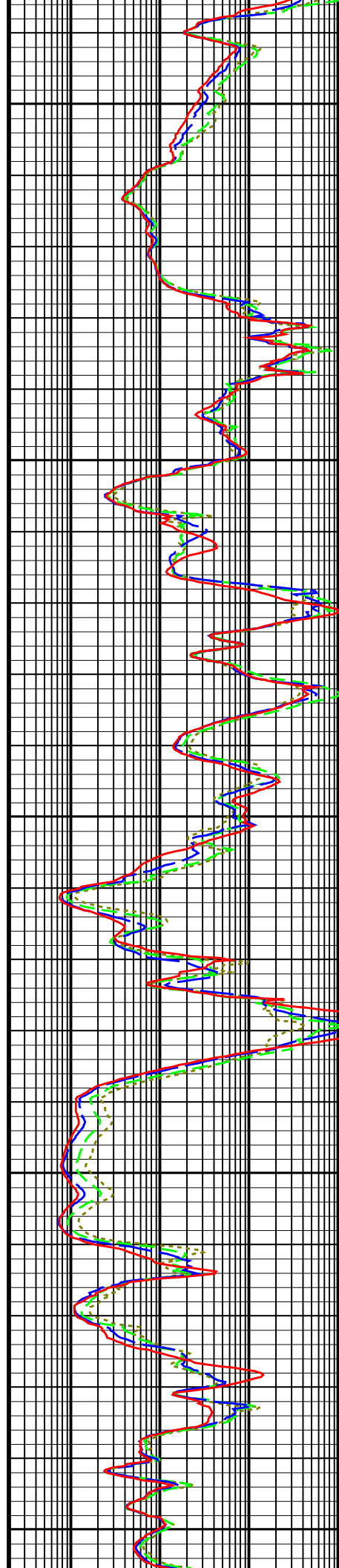


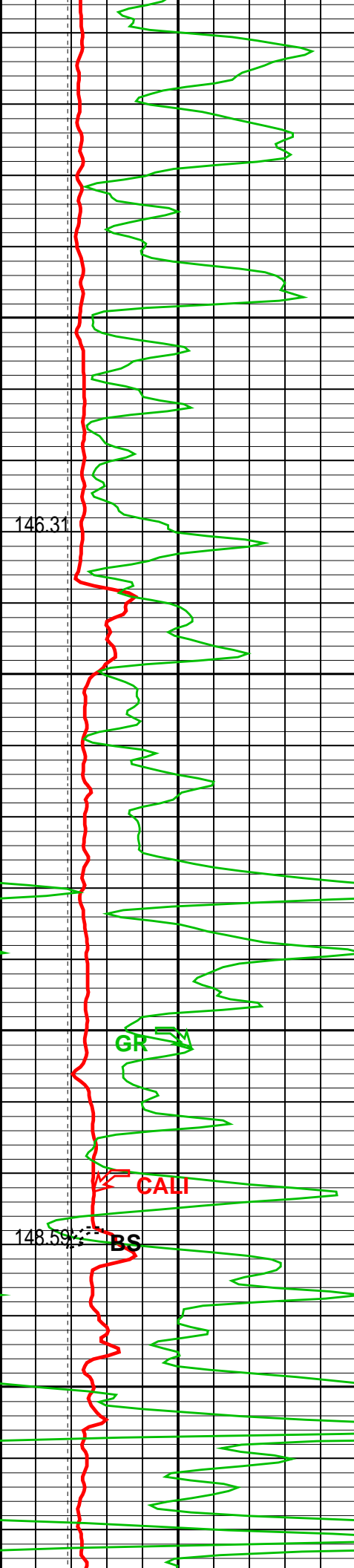




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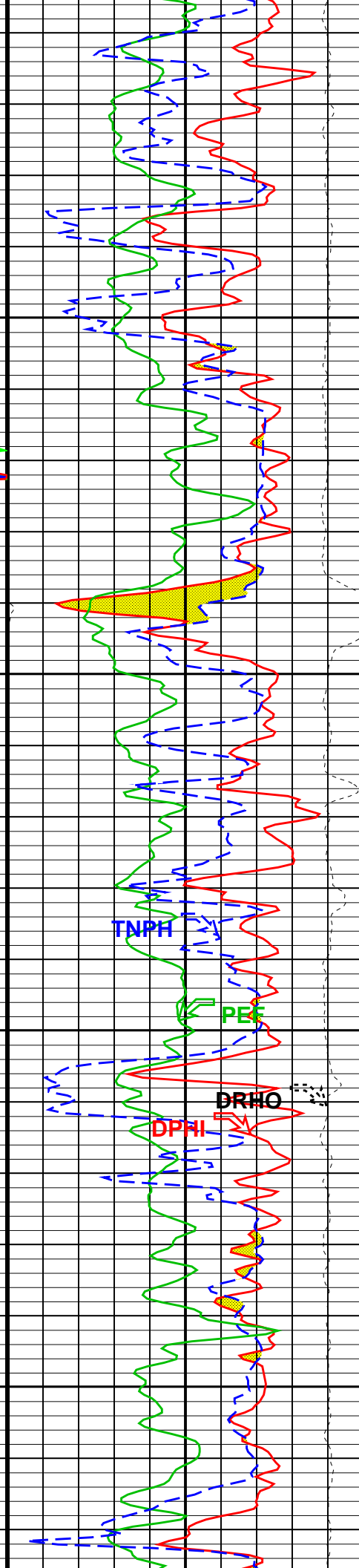
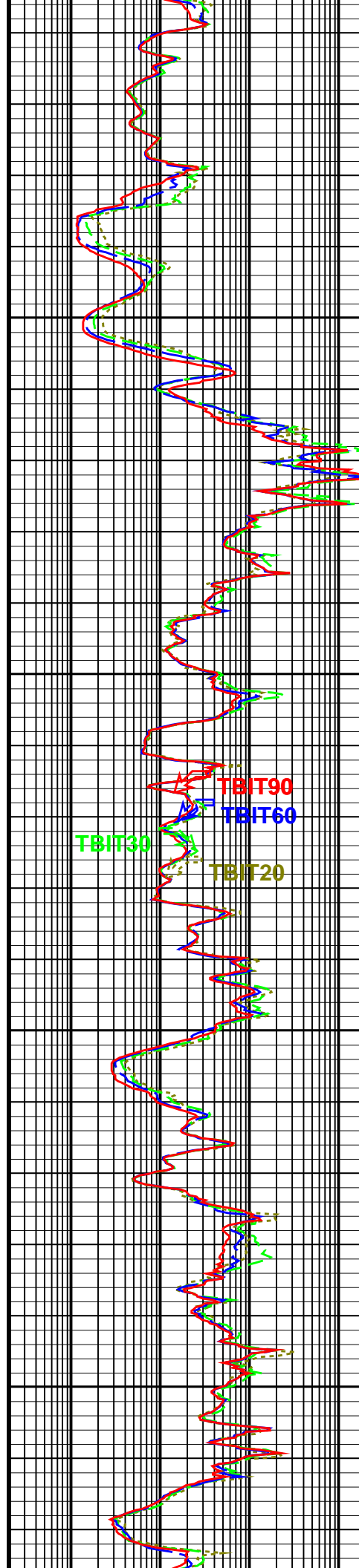
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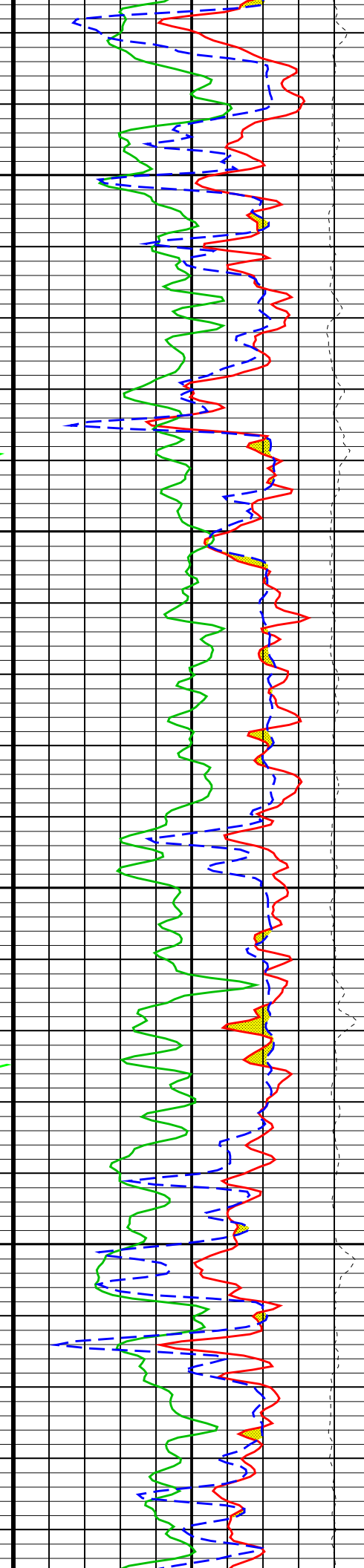
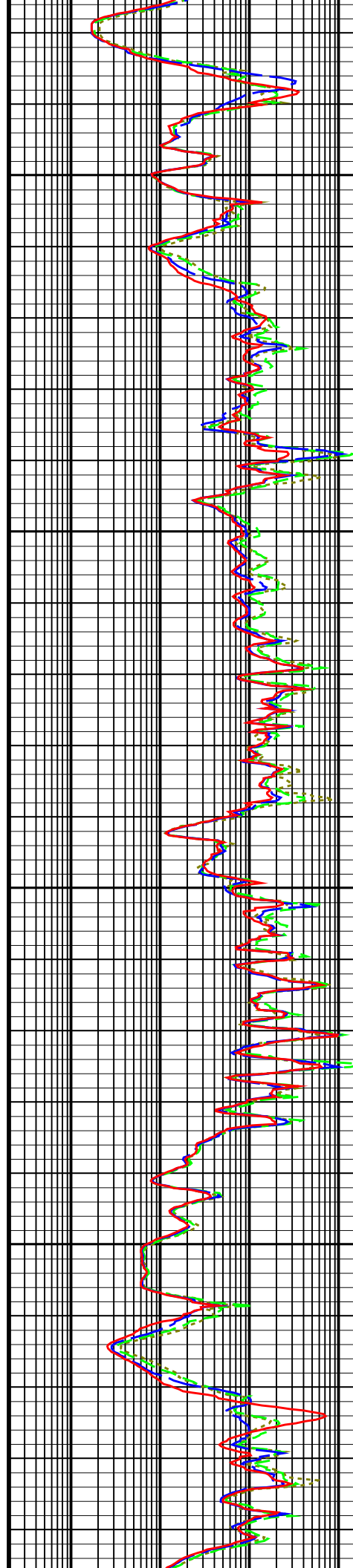
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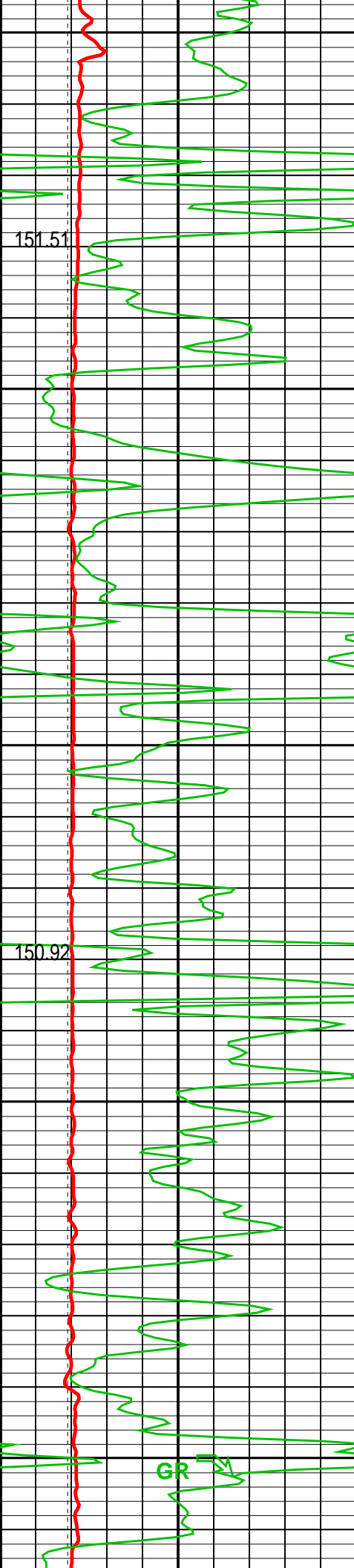




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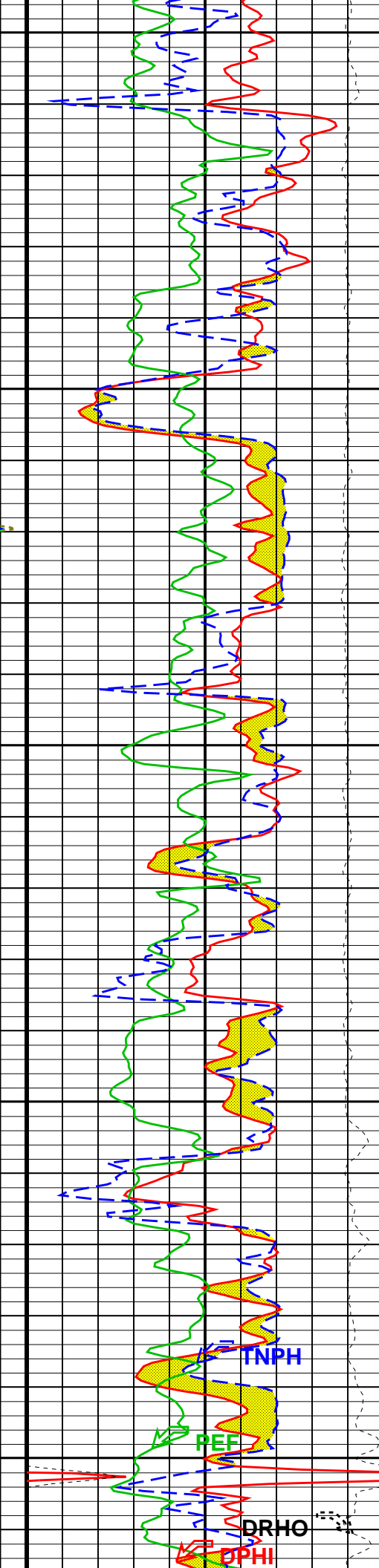
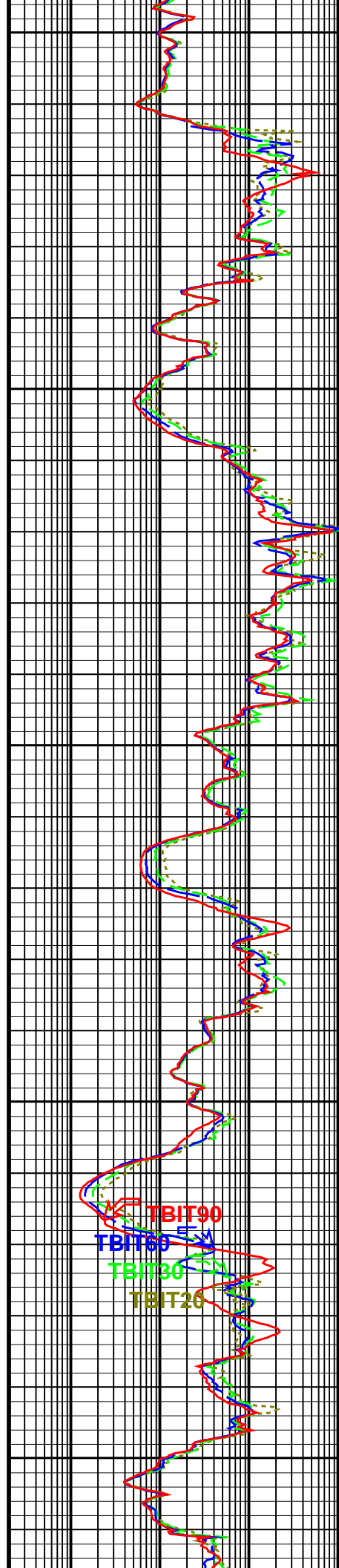


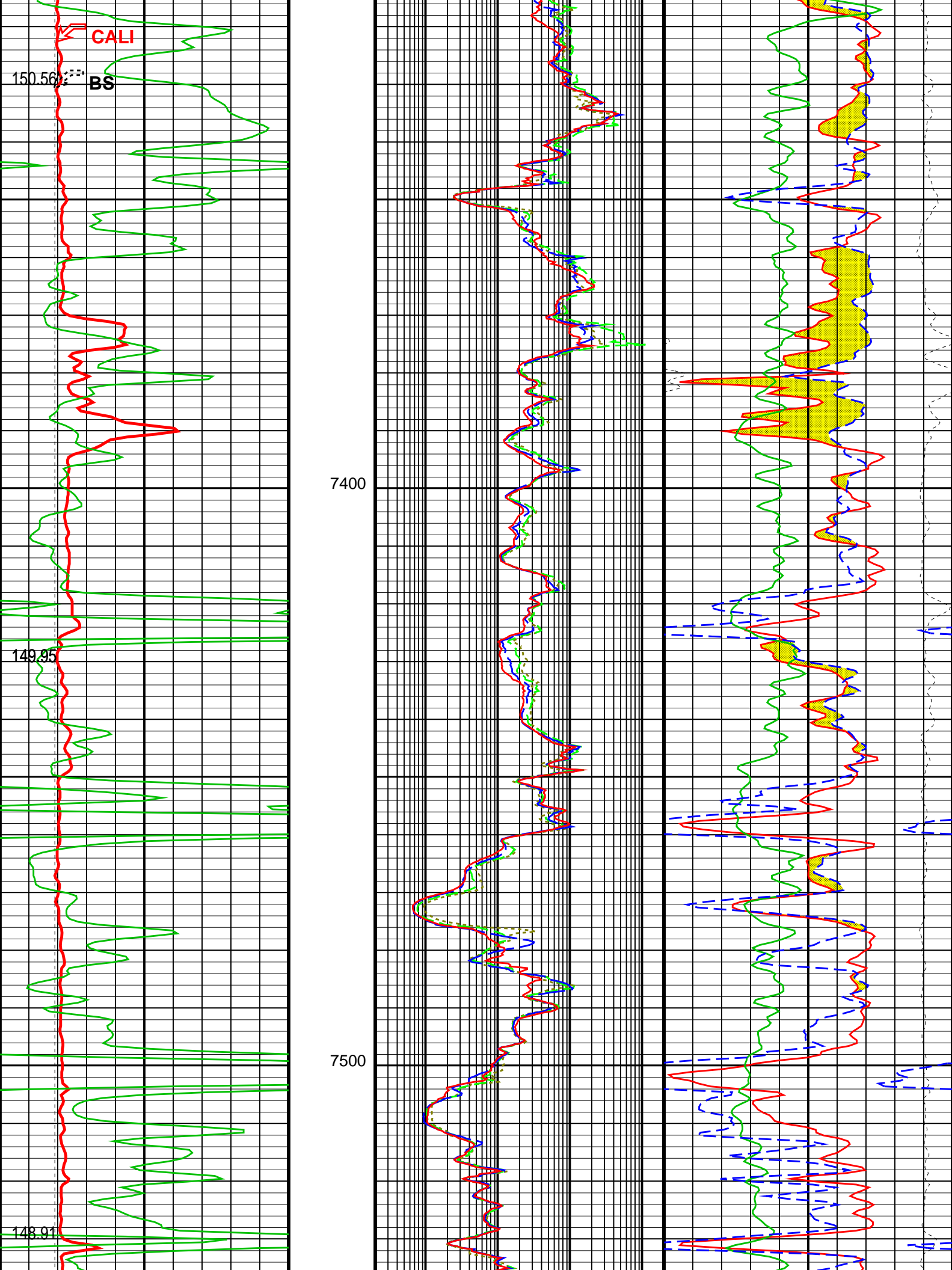


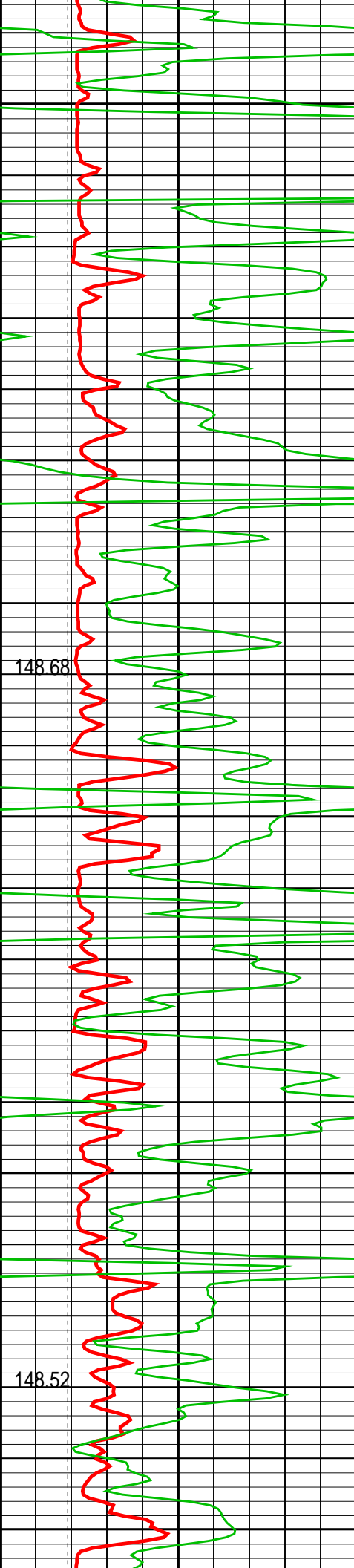
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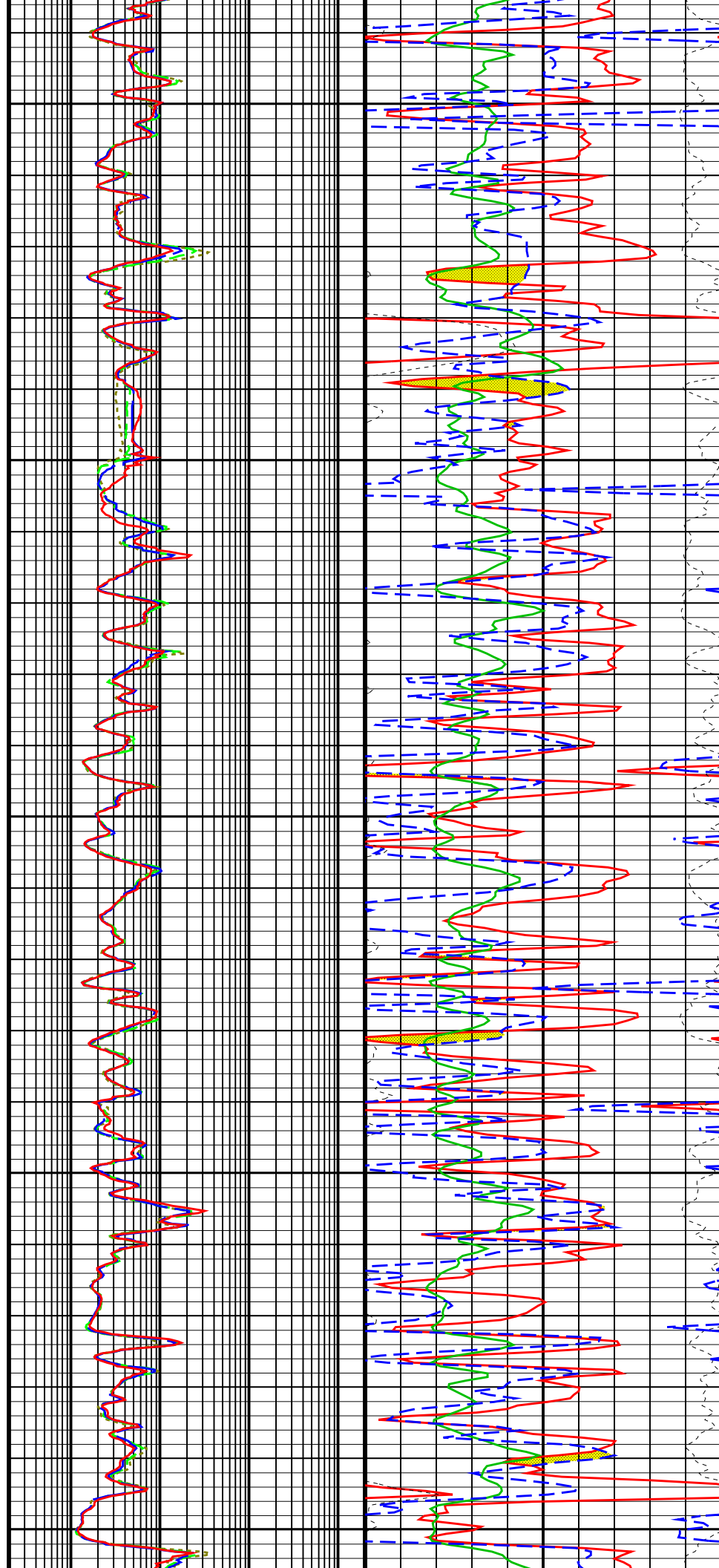


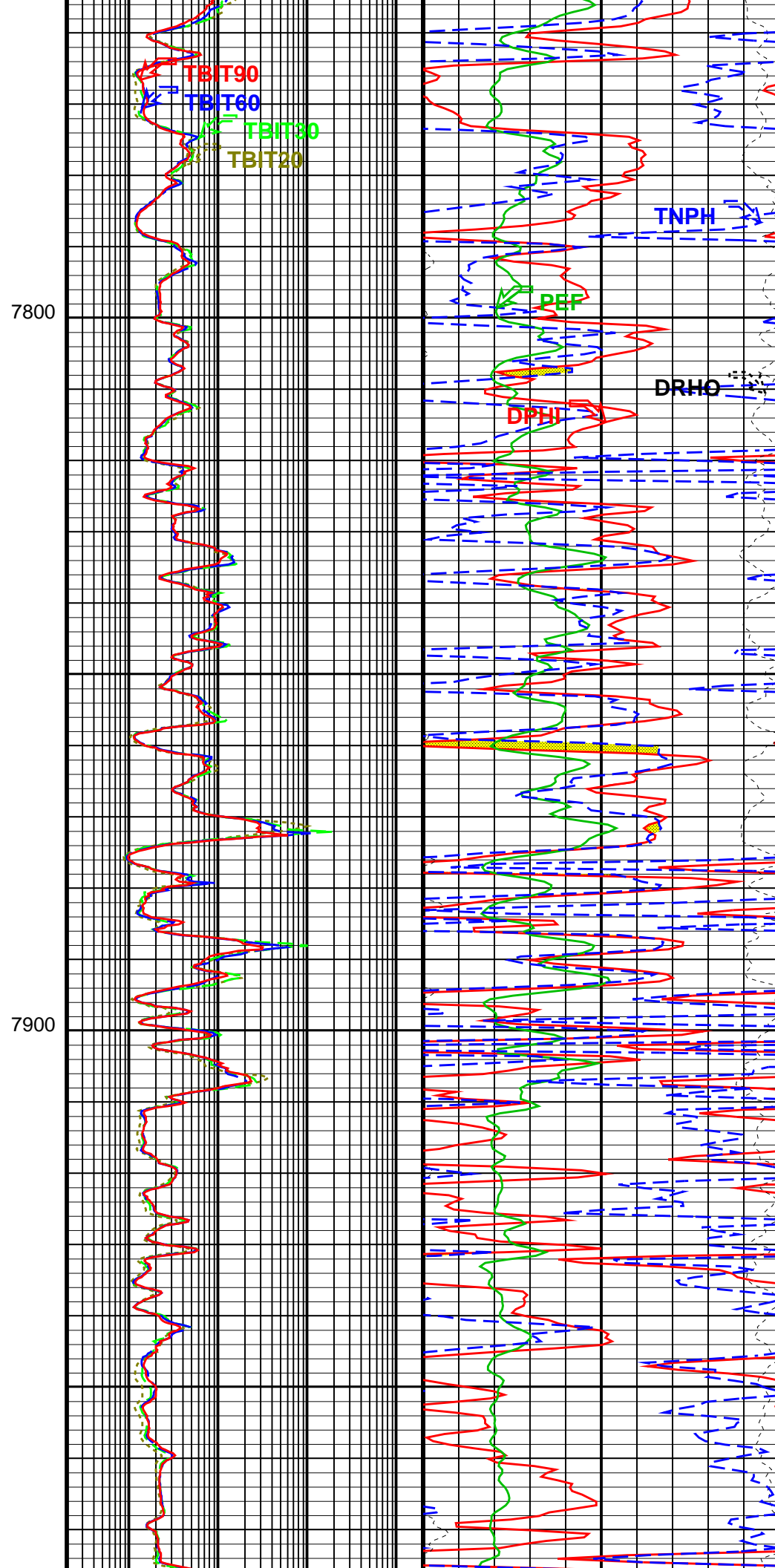
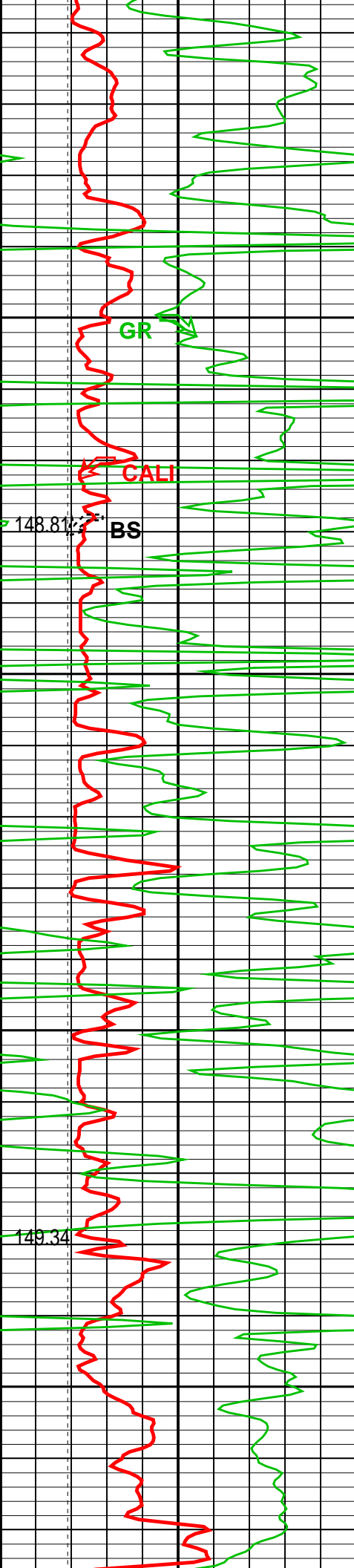


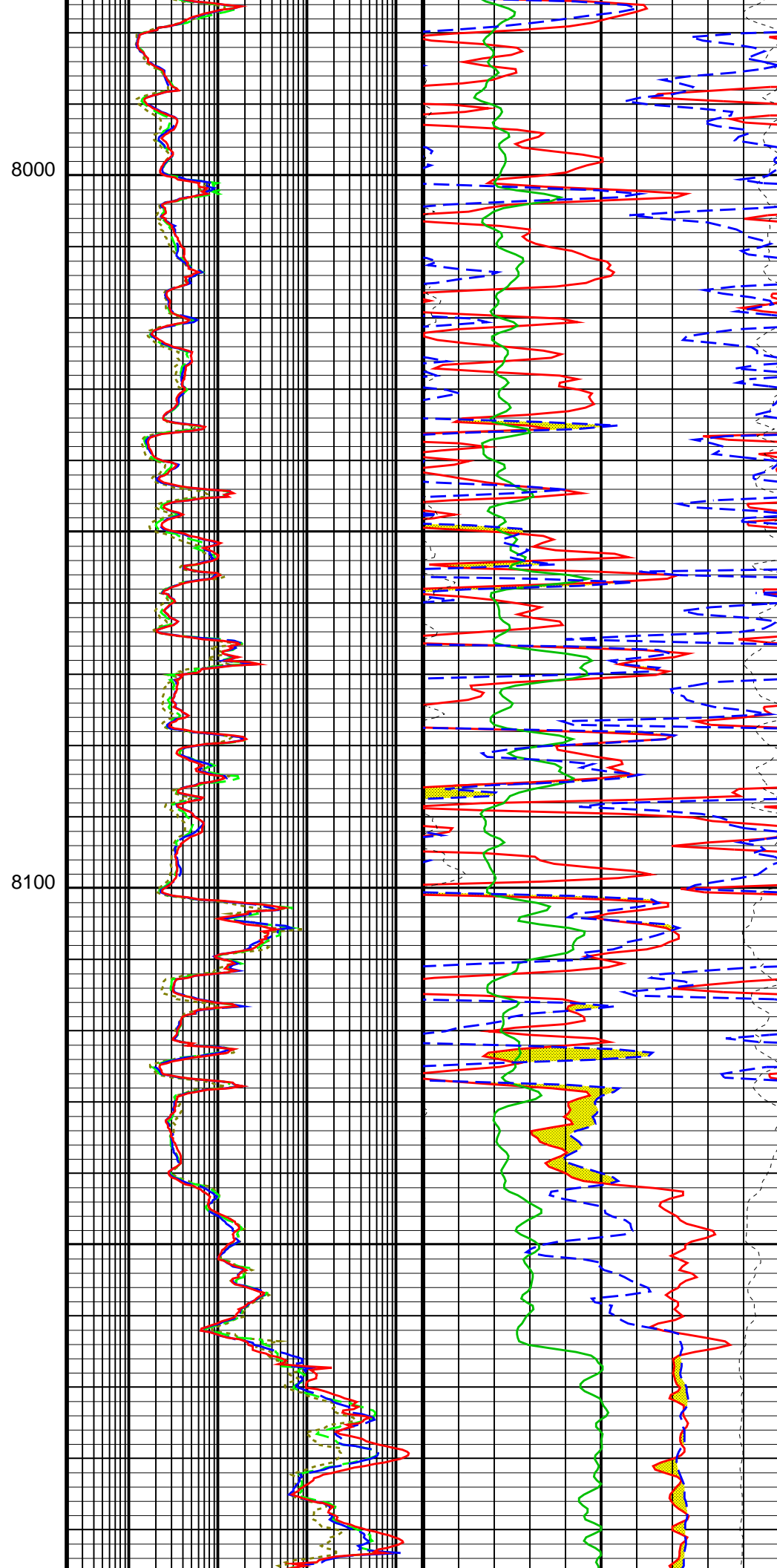
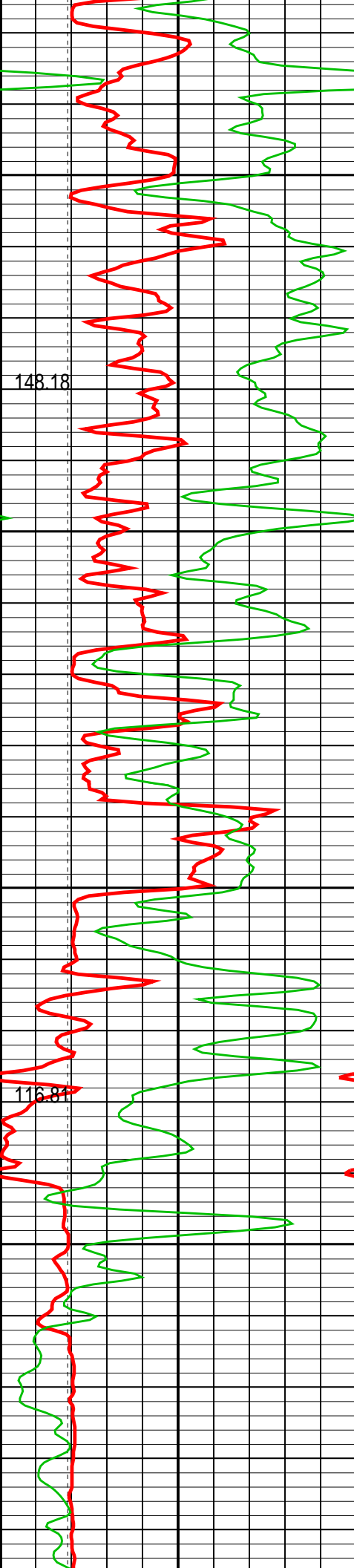


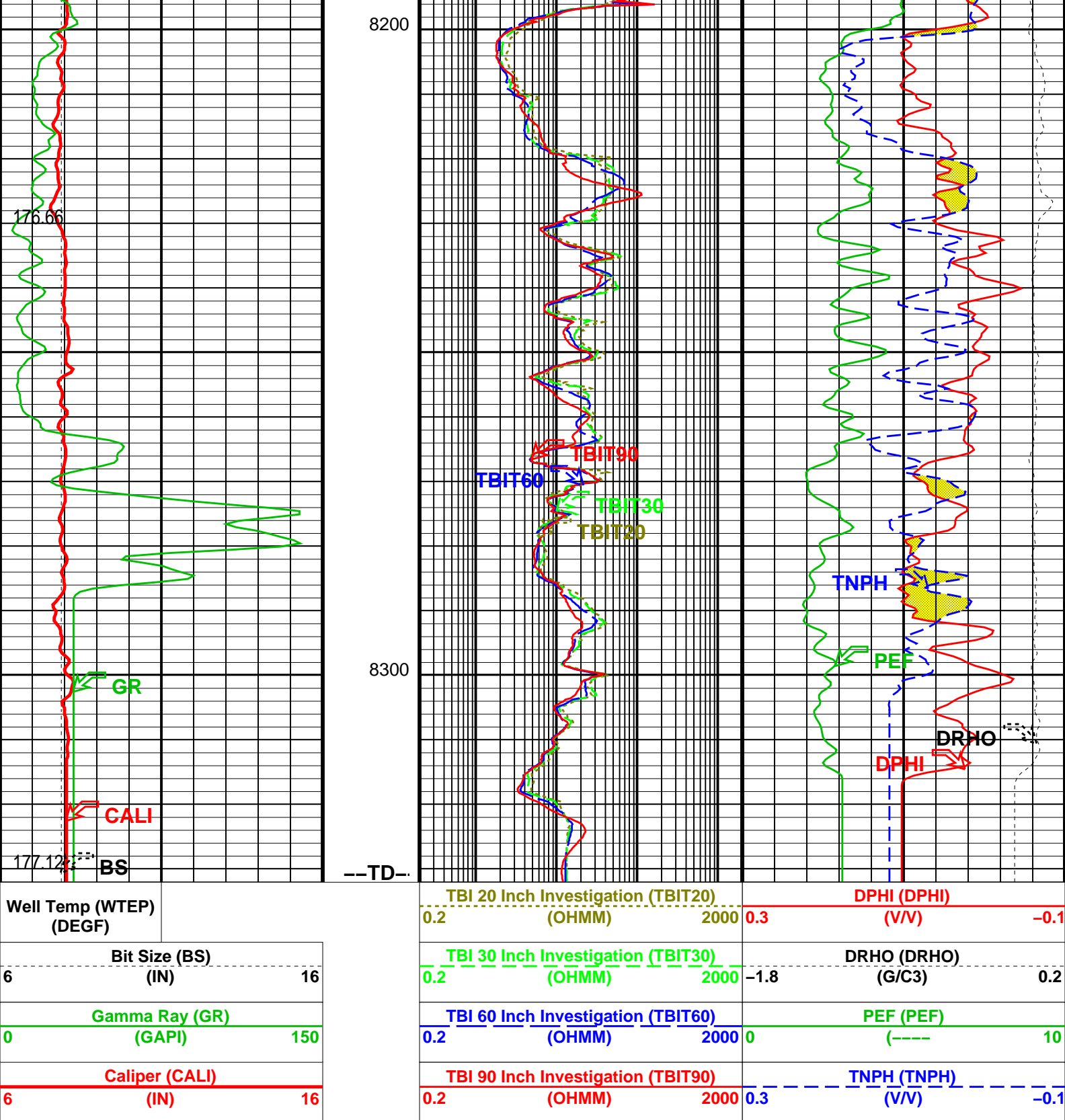
7600

7700









Parameters

DLIS Name

Description

Value

TBT-A: ThruBit String

BHS	Borehole Status	OPEN	
CSAL	Cement Salinity	0.000	ppm
CSID	Casing Size I.D.	8.913	in
DHC	Density Hole Correction	CALIPER	
FD	Fluid Density	1.000	g/cm3
FSAL	Formation Salinity	0.000	ppm
FSCO	Formation Salinity Correction Enabled? (for TBN)	NO	
MATR	Rock Matrix for Neutron Porosity Corrections	LIME	
MDEN	Matrix Density	2.710	g/cm3
MT	Mud Type (for TBN and TBI correction)	WBM	
MWCO	Mud-Weight Correction Enabled? (for TBN)	NO	

SOCO	Stand-Off Correction Enabled? (for TBN)	NO	
SOFF	TBN Standoff	0.000	in
TBD_CAL_BLOCK	TBD Calibration Block Type	THRUBIT	
TBD_SPIKE_REJECT	TBD Spike Detection Option	DETECT	
TBD_SPIKE_THRESHOLD	TBD Attenuation Change Threshold for Spike Detection	5.000	%
TBI_ALGO	TBI Algorithm Selection	AIT	
TBI_BHC_OP	Borehole Correction Option (for TBI)	CALIPER	
TBI_CALTYP	TBI Mastercal Type	THRUBIT	
TBI_REPL_ARRAY_DEST	TBI: Replace This Array	NONE	
TBI_REPL_ARRAY_SOURCE	TBI: With This Array	NONE	
TBI_TC_OP	Induction Temperature Correction Option	LOWER	
TBN_BHC_OP	Borehole Correction Option (for TBN)	CALIPER	
TBN_CAL_TANK	TBN Calibration Tank Type	THRUBIT	
TBN_PRES_OP	Pressure Correction Enabled? (for TBN)	NO	
TBN_TEMP_OP	Temperature Correction Enabled? (for TBN)	NO	
TBN_WPRE	Well Pressure (for TBN)	14.696	psi
WMUD	Mud Weight	9.200	lbm/gal
	HOLEV: Integrated Hole/Cement Volume		
BHS	Borehole Status	OPEN	
MATR	Rock Matrix for Neutron Porosity Corrections	LIME	
	System and Miscellaneous		
BS	Bit Size	7.875	in
BSAL	Borehole Salinity	1000.0	ppm
CSIZ	Current Casing Size	9.625	in

Format: TB_TCOM Vertical Scale: 5" per 100' Graphics File Created: 03-Jun-2014 03:58

OP System Version: 19C2-270

TBT SRPC-5298-ThruBit

Input DLIS Files

DEFAULT	ThruBit_007PUP	FN:6	PRODUCER	03-Jun-2014 03:43	8332.0 FT	3415.5 FT
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Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
ThruBit String Master Calibration – TBI Master Calibration Sonde Errors							
Master: 26-Mar-2014 10:12							
Freq 1, A1, R	-457.000	-475.519	--	--	--	--	
Freq 1, A1, X	300.000	117.548	--	--	--	--	
Freq 1, A2, R	-141.000	-140.328	--	--	--	--	
Freq 1, A2, X	320.000	6.26844	--	--	--	--	
Freq 1, A3, R	-28.0000	-29.9205	--	--	--	--	
Freq 1, A3, X	50.0000	-136.784	--	--	--	--	
Freq 1, A4, R	-16.0000	-16.5721	--	--	--	--	
Freq 1, A4, X	300.000	237.608	--	--	--	--	
Freq 1, A5, R	-14.0000	-14.7728	--	--	--	--	
Freq 1, A5, X	150.000	148.997	--	--	--	--	
Freq 2, A1, R	-237.000	-251.774	--	--	--	--	
Freq 2, A1, X	150.000	47.8460	--	--	--	--	
Freq 2, A2, R	-92.0000	-90.0568	--	--	--	--	
Freq 2, A2, X	160.000	-27.1928	--	--	--	--	
Freq 2, A3, R	-21.0000	-21.4449	--	--	--	--	
Freq 2, A3, X	-20.0000	-141.907	--	--	--	--	
Freq 2, A4, R	-20.0000	-20.0884	--	--	--	--	
Freq 2, A4, X	100.000	66.3410	--	--	--	--	
Freq 2, A5, R	-20.0000	-19.9189	--	--	--	--	
Freq 2, A5, X	-25.0000	-0.375576	--	--	--	--	
Freq 3, A1, R	-149.000	-161.863	--	--	--	--	
Freq 3, A1, X	25.0000	-35.3843	--	--	--	--	
Freq 3, A2, R	-70.0000	-68.0500	--	--	--	--	
Freq 3, A2, X	70.0000	-64.0107	--	--	--	--	
Freq 3, A3, R	-17.0000	-17.9968	--	--	--	--	
Freq 3, A3, X	-90.0000	-163.244	--	--	--	--	
Freq 3, A4, R	-22.0000	-21.9657	--	--	--	--	
Freq 3, A4, X	-50.0000	-48.3732	--	--	--	--	
Freq 3, A5, R	-22.0000	-22.9372	--	--	--	--	
Freq 3, A5, X	-110.000	-108.322	--	--	--	--	
Freq 4, A1, R	-80.0000	-90.6203	--	--	--	--	
Freq 4, A1, X	-190.000	-179.485	--	--	--	--	
Freq 4, A2, R	-50.0000	-49.0302	--	--	--	--	
Freq 4, A2, X	-75.0000	-130.332	--	--	--	--	
Freq 4, A3, R	14.0000	14.4546	--	--	--	--	

Freq 4, A3, R	-14.0000	-14.4348	--	--	--	--
Freq 4, A3, X	-190.000	-216.487	--	--	--	--
Freq 4, A4, R	-25.0000	-24.9451	--	--	--	--
Freq 4, A4, X	-235.000	-220.507	--	--	--	--
Freq 4, A5, R	-28.0000	-28.5455	--	--	--	--
Freq 4, A5, X	-300.000	-288.549	--	--	--	--

ThruBit String Master Calibration – TBI Master Calibration COMPLEX GAINS

Master: 26-Mar-2014 10:12

Freq 1, R – 0	1.000	0.9972	--	--	--	--
Freq 1, R – 1	1.000	0.9930	--	--	--	--
Freq 1, R – 2	1.000	1.002	--	--	--	--
Freq 1, R – 3	1.000	0.9898	--	--	--	--
Freq 1, R – 4	1.000	0.9957	--	--	--	--
Freq 1, X – 0	0	-0.005746	--	--	--	--
Freq 1, X – 1	0	-0.001636	--	--	--	--
Freq 1, X – 2	0	-0.008086	--	--	--	--
Freq 1, X – 3	0	0.002072	--	--	--	--
Freq 1, X – 4	0	-0.001271	--	--	--	--
Freq 2, R – 0	1.000	0.9901	--	--	--	--
Freq 2, R – 1	1.000	0.9856	--	--	--	--
Freq 2, R – 2	1.000	0.9890	--	--	--	--
Freq 2, R – 3	1.000	0.9833	--	--	--	--
Freq 2, R – 4	1.000	0.9899	--	--	--	--
Freq 2, X – 0	0	-0.01154	--	--	--	--
Freq 2, X – 1	0	-0.008551	--	--	--	--
Freq 2, X – 2	0	-0.008077	--	--	--	--
Freq 2, X – 3	0	-0.005489	--	--	--	--
Freq 2, X – 4	0	-0.009517	--	--	--	--
Freq 3, R – 0	1.000	0.9994	--	--	--	--
Freq 3, R – 1	1.000	0.9953	--	--	--	--
Freq 3, R – 2	1.000	0.9983	--	--	--	--
Freq 3, R – 3	1.000	0.9912	--	--	--	--
Freq 3, R – 4	1.000	0.9997	--	--	--	--
Freq 3, X – 0	0	-0.01187	--	--	--	--
Freq 3, X – 1	0	-0.009270	--	--	--	--
Freq 3, X – 2	0	-0.009141	--	--	--	--
Freq 3, X – 3	0	-0.006555	--	--	--	--
Freq 3, X – 4	0	-0.01056	--	--	--	--
Freq 4, R – 0	1.000	0.9935	--	--	--	--
Freq 4, R – 1	1.000	0.9891	--	--	--	--
Freq 4, R – 2	1.000	0.9943	--	--	--	--
Freq 4, R – 3	1.000	0.9846	--	--	--	--
Freq 4, R – 4	1.000	1.001	--	--	--	--
Freq 4, X – 0	0	-0.008592	--	--	--	--
Freq 4, X – 1	0	-0.006893	--	--	--	--
Freq 4, X – 2	0	-0.008512	--	--	--	--
Freq 4, X – 3	0	-0.004107	--	--	--	--
Freq 4, X – 4	0	-0.01115	--	--	--	--

ThruBit String Master Calibration – TBD Caliper Master Calibration

Master: 6-May-2014 10:46

Caliper 12in Ring	1949.8	1873.6	--	--	--	--	IN
Caliper 9in Ring	2096.7	2041.1	--	--	--	--	IN
Caliper 6in Ring	2285.7	2206.0	--	--	--	--	IN

ThruBit String Master Calibration – TBD Density Master Calibration. PEEK Window, ThruBit blocks

Master: 6-May-2014 10:19

Aluminium Density	2.607	2.607	--	--	--	--	G/C3
Magnesium Density	1.752	1.752	--	--	--	--	G/C3
LS1 Background	140.00	134.49	--	--	--	--	CPS
SS1 Background	140.00	134.89	--	--	--	--	CPS
LS4 Background	29.00	27.62	--	--	--	--	CPS
SS1 Aluminium	4850.00	4864.48	--	--	--	--	CPS
LS1 Aluminium	870.00	930.05	--	--	--	--	CPS
SS1 Magnesium	8000.00	8135.94	--	--	--	--	CPS
LS4 Aluminium	955.00	973.24	--	--	--	--	CPS
SS Slope	1.645	1.608	--	--	--	--	
LS1 Al + Sleeve	725.00	773.07	--	--	--	--	CPS
LS Slope	0.4150	0.4141	--	--	--	--	
LS4 Al + Sleeve	426.50	421.53	--	--	--	--	CPS
Pef K Factor	4.840	4.660	--	--	--	--	
LS1 Magnesium	5800.00	6312.81	--	--	--	--	CPS
Pef B Factor	-0.5550	-0.4814	--	--	--	--	

ThruBit String Master Calibration – TBD Density Master Calibration

Master: Calibration not done

SS1 Background	140.00	134.89	--	--	--	--	CPS
SS2 Background	0	37.5379	--	--	--	--	CPS
SS3 Background	0	21.6571	--	--	--	--	CPS
SS4 Background	0	29.0656	--	--	--	--	CPS
LS1 Background	140.00	134.49	--	--	--	--	CPS

LS2 Background	0	34.2690	--	--	--	--	CPS
LS3 Background	0	20.6986	--	--	--	--	CPS
LS4 Background	29.00	27.62	--	--	--	--	CPS
SS1 Aluminium	4850.00	4864.48	--	--	--	--	CPS
SS2 Aluminium	0	2523.74	--	--	--	--	CPS
SS3 Aluminium	0	2138.90	--	--	--	--	CPS
SS4 Aluminium	0	2139.1252	--	--	--	--	CPS
LS1 Aluminium	870.00	930.05	--	--	--	--	CPS
LS2 Aluminium	0	904.876	--	--	--	--	CPS
LS3 Aluminium	0	961.413	--	--	--	--	CPS
LS4 Aluminium	955.00	973.24	--	--	--	--	CPS
SS1 Al + Sleeve	0	N/A	--	--	--	--	CPS
SS2 Al + Sleeve	0	N/A	--	--	--	--	CPS
SS3 Al + Sleeve	0	N/A	--	--	--	--	CPS
SS4 Al + Sleeve	0	N/A	--	--	--	--	CPS
LS1 Al + Sleeve	725.00	773.07	--	--	--	--	CPS
LS2 Al + Sleeve	0	679.830	--	--	--	--	CPS
LS3 Al + Sleeve	0	582.362	--	--	--	--	CPS
LS4 Al + Sleeve	426.50	421.53	--	--	--	--	CPS
SS1 Magnesium	8000.00	8135.94	--	--	--	--	CPS
SS2 Magnesium	0	4270.14	--	--	--	--	CPS
SS3 Magnesium	0	3514.33	--	--	--	--	CPS
SS4 Magnesium	0	3577.20	--	--	--	--	CPS
LS1 Magnesium	5800.00	6312.81	--	--	--	--	CPS
LS2 Magnesium	0	6324.89	--	--	--	--	CPS
LS3 Magnesium	0	6591.73	--	--	--	--	CPS
LS4 Magnesium	0	6706.50	--	--	--	--	CPS

ThruBit String Master Calibration – Thermal Neutron Master Calibration

Master: 6–May–2014 9:02

TNF, Background	1.0	0.72	--	--	--	--	CPS
TNN, Background	1.0	0.39	--	--	--	--	CPS
TNF, Tank	96.00	120.6	--	--	--	--	CPS
TNN, Tank	2860.0	3735.5	--	--	--	--	CPS
TNF, Tank + Al Sleeve	3040.0	3777.3	--	--	--	--	CPS
TNN, Tank + Al Sleeve	32350.0	41579.6	--	--	--	--	CPS
Tank + Al Sleeve Ratio	10.797	10.998	--	--	--	--	
Tank + Al Sleeve Porosity	14.40	14.46	--	--	--	--	PU
Tank, Ratio	30.958	30.986	--	--	--	--	
Tank, Temperature	70.0	62.0	--	--	--	--	DEGF

ThruBit String Master Calibration – TMG Accelerometer Calibration

Master: Calibration not done

Minimum Ax, m/s2	–9.810	N/A	--	--	--	--	
Maximum Ax, m/s2	9.810	N/A	--	--	--	--	
Minimum Ay, m/s2	–9.810	N/A	--	--	--	--	
Maximum Ay, m/s2	9.810	N/A	--	--	--	--	
Minimum Az, m/s2	0	N/A	--	--	--	--	
Maximum Az, m/s2	9.810	N/A	--	--	--	--	
RB Offset, degrees	0	N/A	--	--	--	--	

ThruBit String Master Calibration – TMG Gamma-Ray Calibration

Master: Calibration not done



GR Background	30.00	N/A	--	--	--	--	GAPI
GR Jig–Background	152.0	N/A	--	--	--	--	GAPI


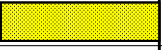






























ThruBit String / Equipment Identification

Primary Equipment:

Induction Resistivity	TBI – A	38
Density	TBD – A	23
Gamma–Ray Logging Source	GGLS – FZ	
Thermal Neutron	TBN – A	13
Neutron Logging Source	NNLS – EWA	
Telemetry Memory GR	TMG – A	4
Battery	TBAT –	26
Battery	TBAT –	2

Auxiliary Equipment:

ThruBit String Master Calibration					
TBI Master Calibration Sonde Errors					
Freq 1, A1, R	Value	Nominal	Freq 1, A1, X	Value	Nominal
	–475.519	–457.000		117.548	300.000
–536.000	–387.000		–500.000	1100.00	







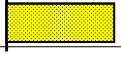









(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
Freq 1, A2, R			Value	Nominal	Freq 1, A2, X	
			-140.328	-141.000		
-162.000 (Minimum)	(Nominal)	-120.000 (Maximum)			-75.0000 (Minimum)	700.000 (Maximum)
Freq 1, A3, R			Value	Nominal	Freq 1, A3, X	
			-29.9205	-28.0000		
-38.0000 (Minimum)	(Nominal)	-18.0000 (Maximum)			-375.000 (Minimum)	475.000 (Maximum)
Freq 1, A4, R			Value	Nominal	Freq 1, A4, X	
			-16.5721	-16.0000		
-24.0000 (Minimum)	(Nominal)	-8.00000 (Maximum)			25.0000 (Minimum)	575.000 (Maximum)
Freq 1, A5, R			Value	Nominal	Freq 1, A5, X	
			-14.7728	-14.0000		
-21.0000 (Minimum)	(Nominal)	-7.00000 (Maximum)			25.0000 (Minimum)	275.000 (Maximum)
Freq 2, A1, R			Value	Nominal	Freq 2, A1, X	
			-251.774	-237.000		
-293.000 (Minimum)	(Nominal)	-186.000 (Maximum)			-375.000 (Minimum)	675.000 (Maximum)
Freq 2, A2, R			Value	Nominal	Freq 2, A2, X	
			-90.0568	-92.0000		
-106.000 (Minimum)	(Nominal)	-76.0000 (Maximum)			-100.000 (Minimum)	425.000 (Maximum)
Freq 2, A3, R			Value	Nominal	Freq 2, A3, X	
			-21.4449	-21.0000		
-28.0000 (Minimum)	(Nominal)	-13.0000 (Maximum)			-325.000 (Minimum)	250.000 (Maximum)
Freq 2, A4, R			Value	Nominal	Freq 2, A4, X	
			-20.0884	-20.0000		
-28.0000 (Minimum)	(Nominal)	-10.0000 (Maximum)			-75.0000 (Minimum)	275.000 (Maximum)
Freq 2, A5, R			Value	Nominal	Freq 2, A5, X	
			-19.9189	-20.0000		
-27.0000 (Minimum)	(Nominal)	-10.0000 (Maximum)			-125.000 (Minimum)	75.0000 (Maximum)
Freq 3, A1, R			Value	Nominal	Freq 3, A1, X	
			-161.863	-149.000		
-193.000 (Minimum)	(Nominal)	-108.000 (Maximum)			-375.000 (Minimum)	425.000 (Maximum)
Freq 3, A2, R			Value	Nominal	Freq 3, A2, X	
			-68.0500	-70.0000		
-81.0000 (Minimum)	(Nominal)	-57.0000 (Maximum)			-125.000 (Minimum)	250.000 (Maximum)
Freq 3, A3, R			Value	Nominal	Freq 3, A3, X	
			-17.9968	-17.0000		
-23.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)			-300.000 (Minimum)	125.000 (Maximum)
Freq 3, A4, R			Value	Nominal	Freq 3, A4, X	
			-21.9657	-22.0000		
-31.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)			-200.000 (Minimum)	100.000 (Maximum)
Freq 3, A5, R			Value	Nominal	Freq 3, A5, X	
			-22.9372	-22.0000		
-32.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)			-250.000 (Minimum)	-25.0000 (Maximum)
Freq 4, A1, R			Value	Nominal	Freq 4, A1, X	
			-90.6203	-80.0000		
-108.000 (Minimum)	(Nominal)	-54.0000 (Maximum)			-450.000 (Minimum)	75.0000 (Maximum)
Freq 4, A2, R			Value	Nominal	Freq 4, A2, X	
			-49.0302	-50.0000		
-60.0000 (Minimum)	(Nominal)	-41.0000 (Maximum)			-200.000 (Minimum)	50.0000 (Maximum)

(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Freq 4, A3, R			Freq 4, A3, X		
	Value	Nominal		Value	Nominal
-14.4546	-14.0000		-216.487	-190.000	
-19.0000 (Minimum)	-8.00000 (Maximum)		-350.000 (Minimum)	-25.0000 (Maximum)	
Freq 4, A4, R			Freq 4, A4, X		
	Value	Nominal		Value	Nominal
-24.9451	-25.0000		-220.507	-235.000	
-37.0000 (Minimum)	-11.0000 (Maximum)		-400.000 (Minimum)	-75.0000 (Maximum)	
Freq 4, A5, R			Freq 4, A5, X		
	Value	Nominal		Value	Nominal
-28.5455	-28.0000		-288.549	-300.000	
-43.0000 (Minimum)	-12.0000 (Maximum)		-475.000 (Minimum)	-125.000 (Maximum)	
Master: 26-Mar-2014 10:12					


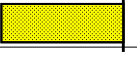


ThruBit String Master Calibration					
TBI Master Calibration COMPLEX GAINS					
Freq 1, R			Freq 1, X		
	Value	Nominal		Value	Nominal
0.9972	1.000		-0.005746	0	
	0.9930	1.000		-0.001636	0
	1.002	1.000		-0.008086	0
	0.9898	1.000		0.002072	0
	0.9957	1.000		-0.001271	0
0.9500 (Minimum)	1.050 (Maximum)		-0.05000 (Minimum)	0.05000 (Maximum)	
Freq 2, R			Freq 2, X		
	Value	Nominal		Value	Nominal
0.9901	1.000		-0.01154	0	
	0.9856	1.000		-0.008551	0
	0.9890	1.000		-0.008077	0
	0.9833	1.000		-0.005489	0
	0.9899	1.000		-0.009517	0
0.9500 (Minimum)	1.050 (Maximum)		-0.05000 (Minimum)	0.05000 (Maximum)	
Freq 3, R			Freq 3, X		
	Value	Nominal		Value	Nominal
0.9994	1.000		-0.01187	0	
	0.9953	1.000		-0.009270	0
	0.9983	1.000		-0.009141	0
	0.9912	1.000		-0.006555	0
	0.9997	1.000		-0.01056	0
0.9500 (Minimum)	1.050 (Maximum)		-0.05000 (Minimum)	0.05000 (Maximum)	
Freq 4, R			Freq 4, X		
	Value	Nominal		Value	Nominal
0.9935	1.000		-0.008592	0	
	0.9891	1.000		-0.006893	0
	0.9943	1.000		-0.008512	0
	0.9846	1.000		-0.004107	0
	1.001	1.000		-0.01115	0
0.9300 (Minimum)	1.070 (Maximum)		-0.05000 (Minimum)	0.05000 (Maximum)	
Master: 26-Mar-2014 10:12					







ThruBit String Master Calibration								
TBD Caliper Master Calibration								
Caliper 12in Ring IN			Caliper 9in Ring IN			Caliper 6in Ring IN		
	Value	Nominal		Value	Nominal		Value	Nominal
1873.6	1949.8		2041.1	2096.7		2206.0	2285.7	
1799.8 (Minimum)	2099.8 (Maximum)		1946.7 (Minimum)	2246.7 (Maximum)		2135.7 (Minimum)	2435.7 (Maximum)	

Master: 6-May-2014 10:46

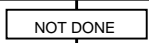
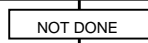
ThruBit String Master Calibration					
TBD Density Master Calibration. PEEK Window, ThruBit blocks					
Aluminium Density G/C3	Value	Nominal	Magnesium Density G/C3	Value	Nominal
	2.607	2.607		1.752	1.752
2.557 (Minimum)	(Nominal)	2.657 (Maximum)	1.702 (Minimum)	(Nominal)	1.802 (Maximum)
LS1 Background CPS	Value	Nominal	SS1 Background CPS	Value	Nominal
	134.49	140.00		134.89	140.00
100.00 (Minimum)	(Nominal)	187.00 (Maximum)	100.00 (Minimum)	(Nominal)	185.00 (Maximum)
LS4 Background CPS	Value	Nominal	SS1 Aluminium CPS	Value	Nominal
	27.62	29.00		4864.48	4850.00
20.00 (Minimum)	(Nominal)	38.00 (Maximum)	4076.00 (Minimum)	(Nominal)	5613.00 (Maximum)
LS1 Aluminium CPS	Value	Nominal	SS1 Magnesium CPS	Value	Nominal
	930.05	870.00		8135.94	8000.00
750.00 (Minimum)	(Nominal)	982.00 (Maximum)	6695.00 (Minimum)	(Nominal)	9269.00 (Maximum)
LS4 Aluminium CPS	Value	Nominal			
	973.24	955.00			
796.00 (Minimum)	(Nominal)	1169.0 (Maximum)			
LS1 Al + Sleeve CPS	Value	Nominal			
	773.07	725.00			
650.00 (Minimum)	(Nominal)	838.00 (Maximum)			
LS4 Al + Sleeve CPS	Value	Nominal			
	421.53	426.50			
382.00 (Minimum)	(Nominal)	638.00 (Maximum)			
LS1 Magnesium CPS	Value	Nominal			
	6312.81	5800.00			
5158.00 (Minimum)	(Nominal)	6486.00 (Maximum)			
SS Slope	Value	Nominal			
	1.608	1.645			
1.520 (Minimum)	(Nominal)	1.770 (Maximum)			
LS Slope	Value	Nominal			
	0.4141	0.4150			
0.3800 (Minimum)	(Nominal)	0.4500 (Maximum)			
Pef K Factor	Value	Nominal			
	4.660	4.840			
3.510 (Minimum)	(Nominal)	6.170 (Maximum)			
Pef B Factor	Value	Nominal			
	-0.4814	-0.5550			
-0.7000 (Minimum)	(Nominal)	-0.4100 (Maximum)			

Master: 6-May-2014 10:19

ThruBit String Master Calibration					
Thermal Neutron Master Calibration					
TNF, Background CPS	Value	Nominal	TNN, Background CPS	Value	Nominal
	0.72	1.0		0.39	1.0
0 (Minimum)	(Nominal)	2.0 (Maximum)	0 (Minimum)	(Nominal)	2.0 (Maximum)
TNF, Tank CPS	Value	Nominal	TNN, Tank CPS	Value	Nominal
	120.6	96.00		3735.5	2860.0
25.00 (Minimum)	(Nominal)	200.0 (Maximum)	750.00 (Minimum)	(Nominal)	5700.0 (Maximum)
TNF, Tank + Al Sleeve CPS	Value	Nominal	TNN, Tank + Al Sleeve CPS	Value	Nominal

727.00 (Minimum)		3777.3	3040.0		41579.6	32350.0
(Nominal)		6080.0 (Maximum)		(Minimum)	(Nominal)	64700.0 (Maximum)
Tank + AI Sleeve Ratio		Value	Nominal	Tank + AI Sleeve Porosity PU		Value
		10.998	10.797			14.46
10.300 (Minimum)	(Nominal)	11.300 (Maximum)		13.40 (Minimum)	(Nominal)	15.40 (Maximum)
Tank, Ratio		Value	Nominal	Tank, Temperature DEGF		Value
		30.986	30.958			62.0
28.000 (Minimum)	(Nominal)	34.000 (Maximum)		20.0 (Minimum)	(Nominal)	120 (Maximum)
Master: 6-May-2014 9:02						

ThruBit String Master Calibration							
TMG Accelerometer Calibration							
Minimum Ax, m/s2		Value	Nominal	Maximum Ax, m/s2		Value	Nominal
<div>NOT DONE</div>		N/A	-9.810	<div>NOT DONE</div>		N/A	9.810
-10.81 (Minimum)	(Nominal)	-8.810 (Maximum)		8.810 (Minimum)	(Nominal)	10.81 (Maximum)	
Minimum Ay, m/s2		Value	Nominal	Maximum Ay, m/s2		Value	Nominal
<div>NOT DONE</div>		N/A	-9.810	<div>NOT DONE</div>		N/A	9.810
-10.81 (Minimum)	(Nominal)	-8.810 (Maximum)		8.810 (Minimum)	(Nominal)	10.81 (Maximum)	
Minimum Az, m/s2		Value	Nominal	Maximum Az, m/s2		Value	Nominal
<div>NOT DONE</div>		N/A	0	<div>NOT DONE</div>		N/A	9.810
-1.000 (Minimum)	(Nominal)	1.000 (Maximum)		8.810 (Minimum)	(Nominal)	10.81 (Maximum)	
RB Offset, degrees		Value	Nominal				
<div>NOT DONE</div>		N/A	0				
-360.0 (Minimum)	(Nominal)	360.0 (Maximum)					
Master: Calibration not done							

ThruBit String Master Calibration						
TMG Gamma-Ray Calibration						
GR Background GAPI		Value	Nominal	GR Jig-Background GAPI		Value
		N/A	30.00			N/A
0 (Minimum)	(Nominal)	120.0 (Maximum)		121.6 (Minimum)	(Nominal)	182.4 (Maximum)
Master: Calibration not done						

Company: **CASCADE PETROLEUM, LLC.**

Schlumberger

Well: **CRAIG 9S-55W-19-41**
Field: **WILDCAT**
County: **LINCOLN**
State: **COLORADO**

ARRAY INDUCTION
NEUTRON / DENSITY
GAMMA RAY MEMORY LOG