Company: **Woodside Energy Limited**

Well: **Geographe North−1** **12 1/4 in. Hole**

Field: **Permit VIC/P43**

Rig: **Ocean Bounty** State: **Victoria**

Rig: Ocean Bounty
Field: Permit VIC/P43
Location: Otway Basin
Well: Geographe North−1
Company: Woodside Energy Limited

Schlumberger

CDR − Resistivity
1:500 Measured Depth
Recorded Mode

Location

		Elevation		
Total depth:	2156 m		K.B.	Top Drive
Spud date:	29 September 2001		G.L.	−107 m
Runs:	1 To 2		D.F.	25 m

Permanent datum:	L.A.T.	Elev.:	0.0 m
Log measured from:	Drill Floor	25 m	above Perm. datum
Depth reference:	Driller's Depth		

API serial no.		Longitude	Latitude
		E 142 54' 57.647	S 39 04' 39.928

Depth logged:	565 m To 1.775 m	Mag decl: 11.034	Other services:
Date logged:	01−Oct−01 To 05−Oct−O1	Mag dip: −70.256	Directional Surveys

Bore hole record

Hole size	from	to
12.25 in	565 m	1,790 m

Casing record

Size	Density	from	to
13.375 in	61 lb/ft	165 m	558 m

Mud record

Type	from	to
Aquadrill	565 m	1,790 m

Borehole deviation record

Min	Max	from	to
0.5 deg	1.94 deg	565 m	1,790 m

Surface equipment		Software record	
Unit	TWIS − EA	IDEAL Wis	6.1c_03
Depth system	Geolograph	SPM	6.1c_03
		LWD	6.3
		MWD	6.1

IDEAL
services from
Anadrill

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.

OTHER SERVICES FOR RUN

OTHER SERVICES FOR RUN1
Directional Surveys
Drilling Mechanics (DWOB, DTORQ, 4−axis vibration monitoring)

OTHER SERVICES FOR RUN

REMARKS: RUN NUMBER

REMARKS: RUN NUMBER

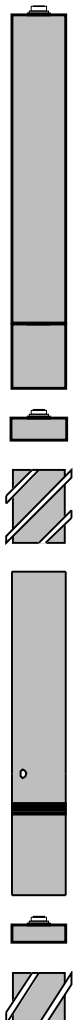
REMARKS: RUN NUMBER 1
CDR GR is corrected for bit size and mud weight.
CDR Resistivity is borehole compensated but not environmentally corrected.

Rotary Drilled from 565 1790 m
Depth logged: 565 − 1775 m

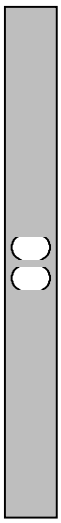
EQUIPMENT DESCRIPTION

RUN1	RUN	RUN

DOWNHOLE EQ



8.25 in. Pow	29.6
S/n: MDC−	
D&I	25.8
XOS	22.1
In−line Sta	21.6
8.25 in. C	20.2
Gamma	18.5
S/n: 81	
R−O P	16.1
Pressu	15.7
Upper	15.2
Receiv	15.1
Lower	15.0
XOS	13.7
Stabiliz	13.3

Stabiliz		13.3
		
XOS		11.0
A962M Mud		10.6
12.25 in P		0.00 0.36

MAXIMUM STRING DIA

ALL LENGTHS I

Bit Run Summary

Run number		1									
Bit size	in.	12.25									
Bit start depth	m	565 m									
Bit end depth	m	1790 m									
Top interval logged	m	558 m									
Bottom interval logged	m	1775 m									
Begin log: time		21:29 hrs									
Begin log: date		01 Oct 01									
End log: time		10:00 hrs									
End log: date		05 Oct 01									
Mud data											
Depth	m	1790									
Type		Aquadrill									
Mud weight	sg	1.15									
Solids	%vol	12.0									
Chlorides	mg/l	45000									
Rm	ohm.m@degC	0.123@22									
Rmf	ohm.m@degC	0.081@22									
Rmc	ohm.m@degC	0.248@22									
Potassium	mg/l	33450									
Environmental data											
GR											

Environmental data											
GR											
Mud weight	sg	1.15									
Bit size	in.	12.25									
Resistivity											
Neutron porosity											
Hole Size		n/a									
Mud weight		n/a									
Temperature		n/a									
Mud salinity		n/a									
Formation salinity		n/a									
Recording rate 1	SEC	6 sec	GR								
Recording rate 2	SEC	6 sec	RES								
Filtering GR		3 point									
Filtering density											
Filtering Neutron											
Company representative		D. Bell	M. Bilek	G. Westie							
Anadrill personnel		A. Abad	M. Saicic								

IDEAL Version: ID6_1C_10

IDF

Format: CDRDepthLog **Vertical Scale: 1:500** **Graphics File Created: 30−Oct−2001 16:21**

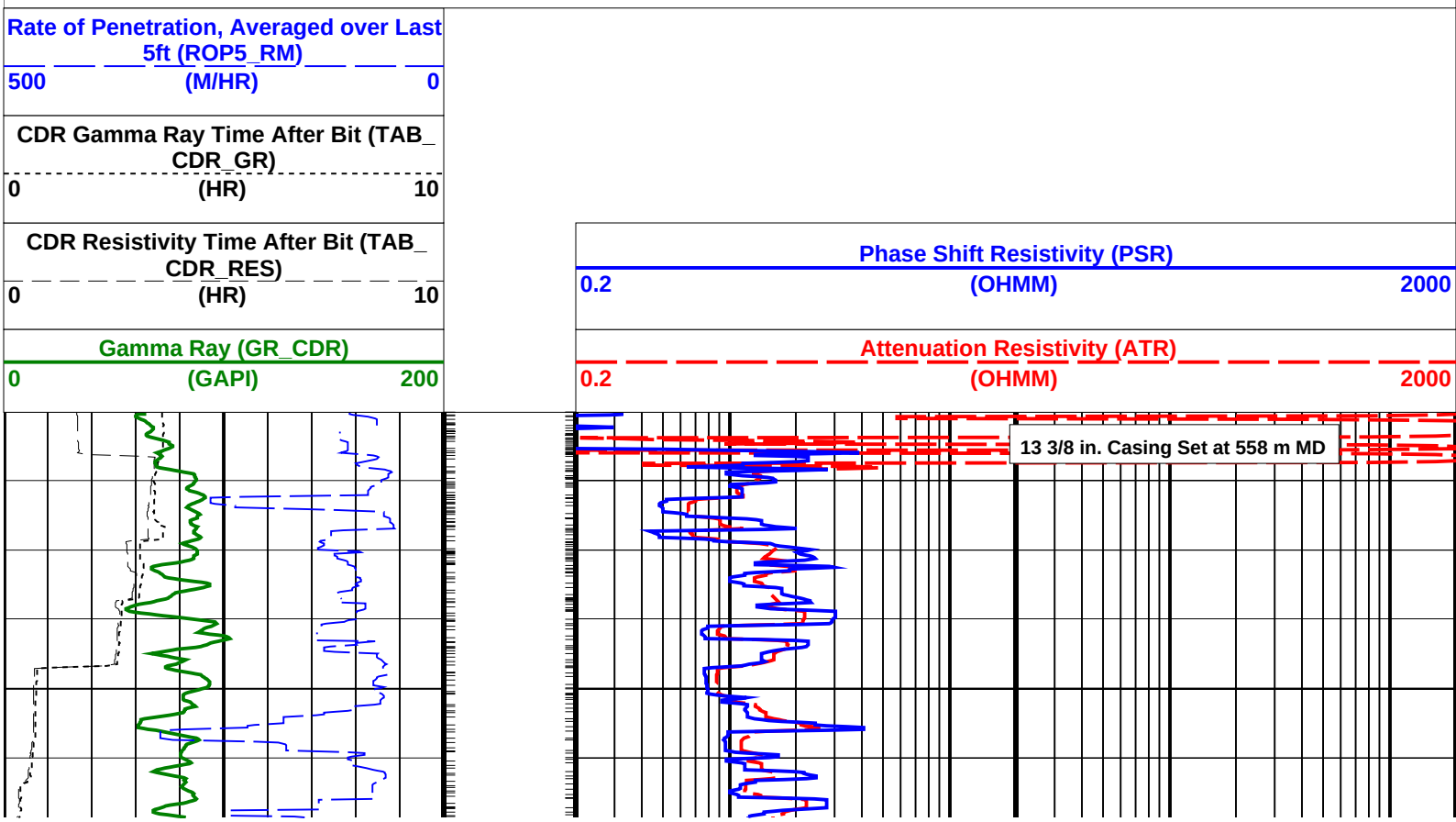
Parameters

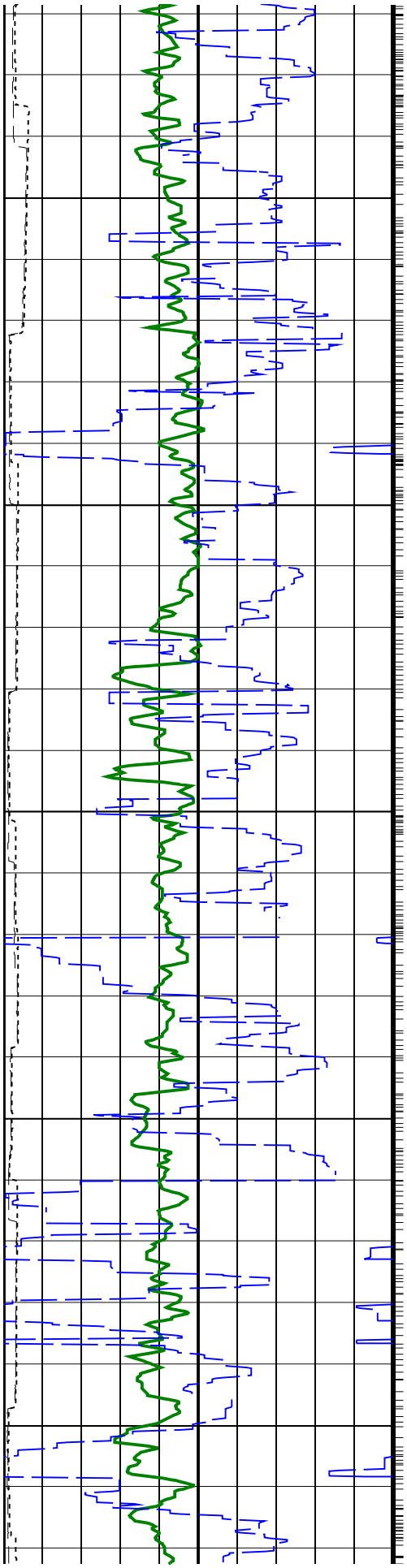
DLIS Name	Description	Value
DO	Depth Offset	0.0 m

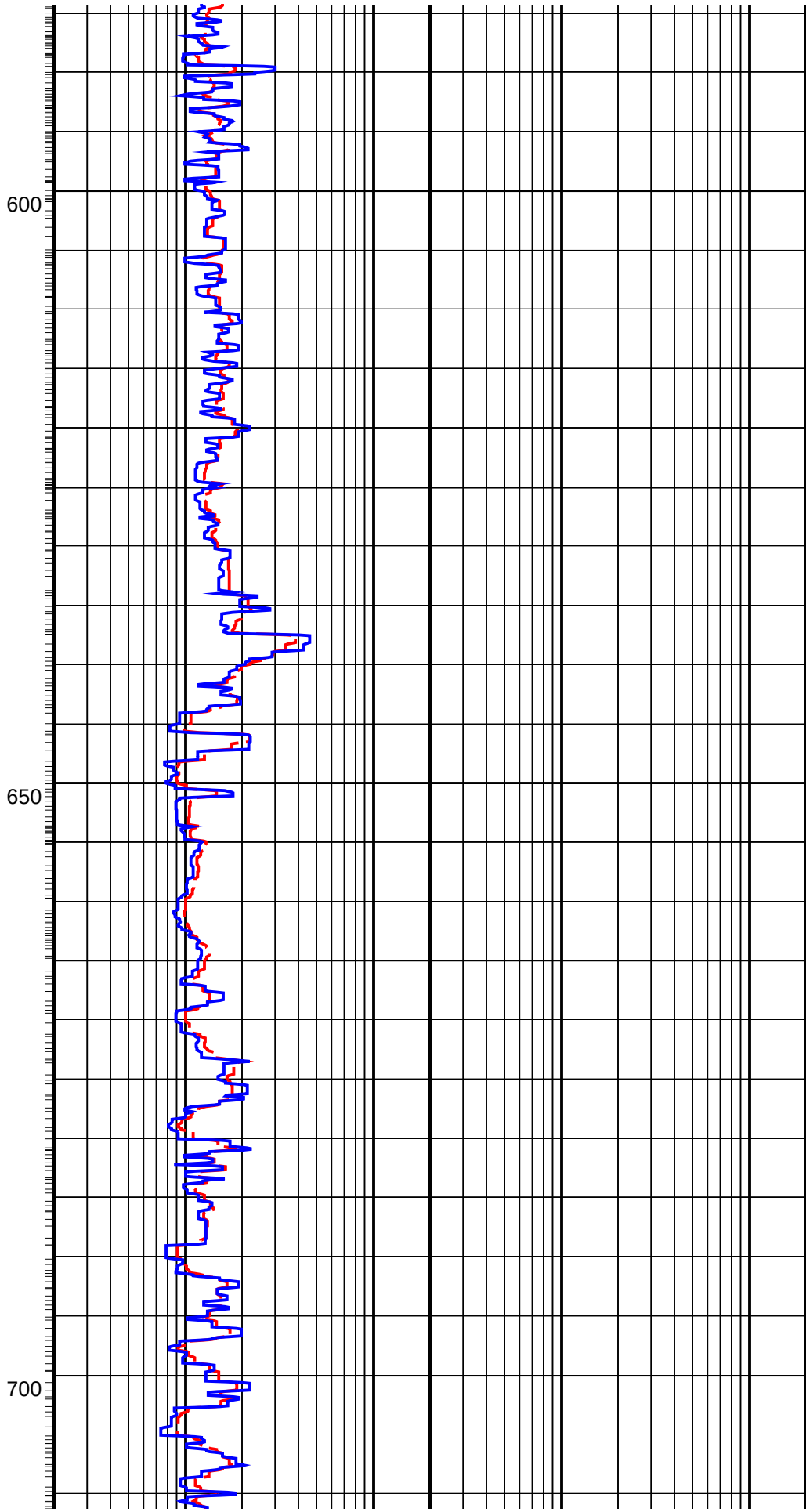
PIP SUMMARY

CDR Gamma Ray Samples

CDR Resistivity Samples



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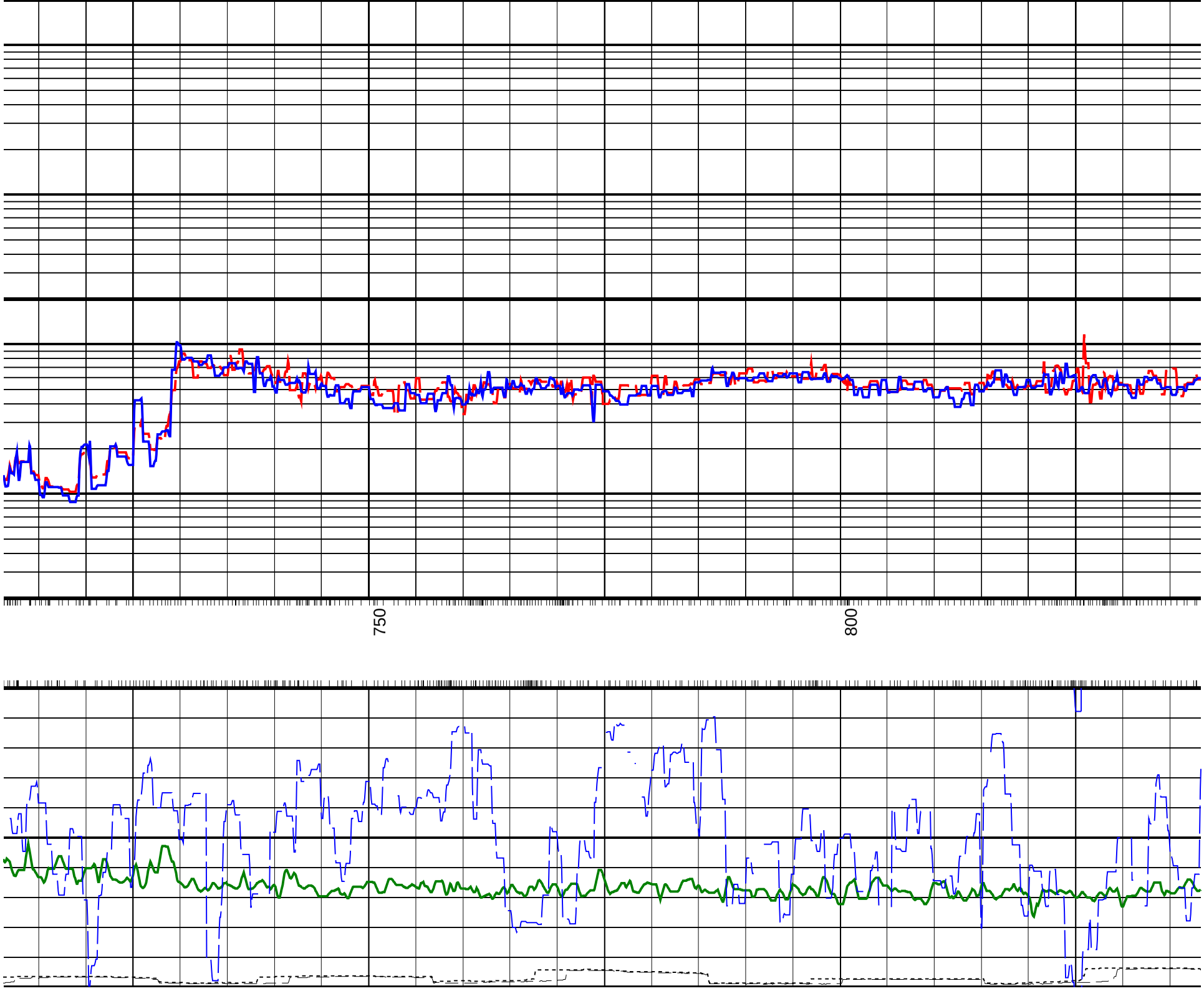
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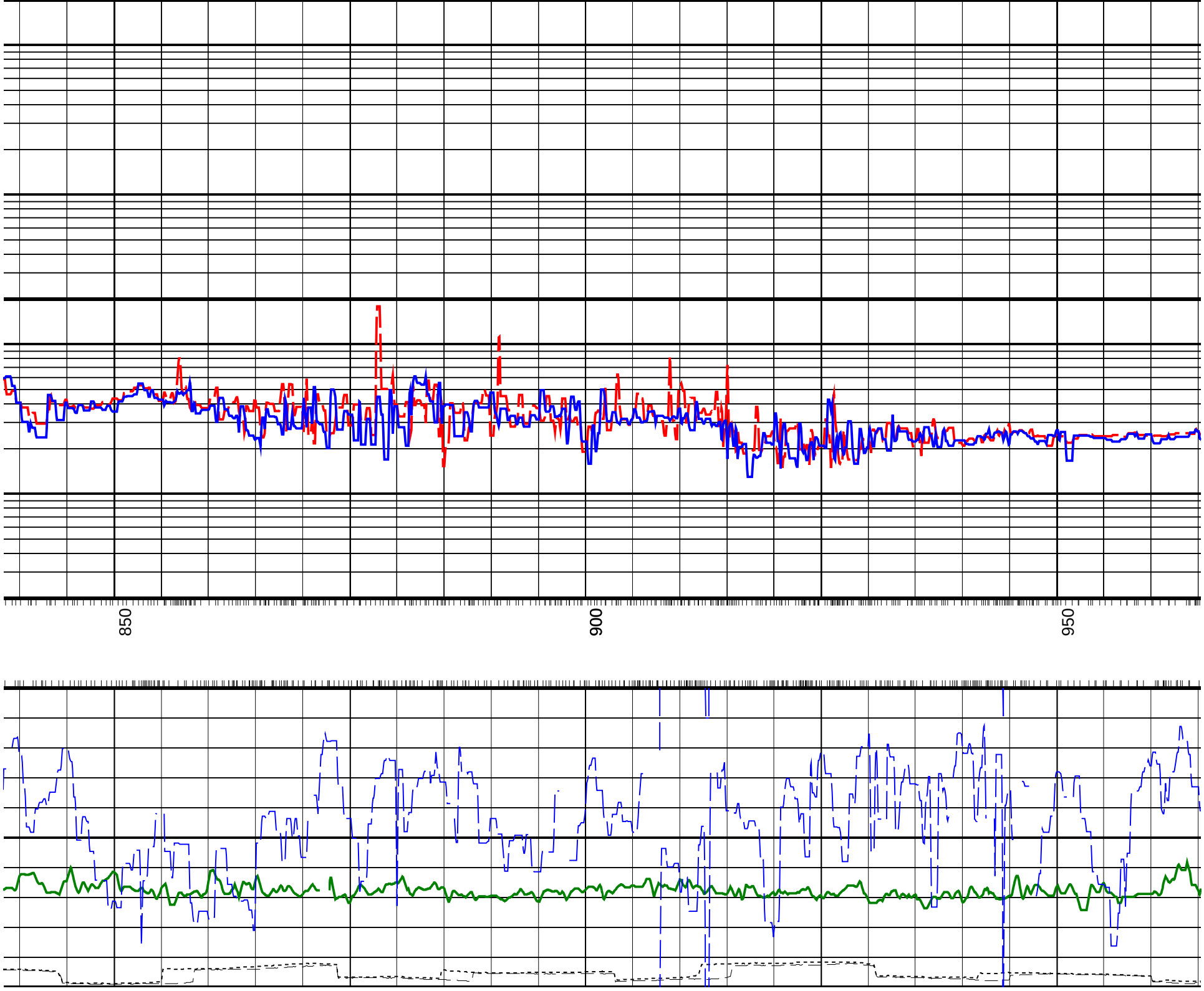
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900
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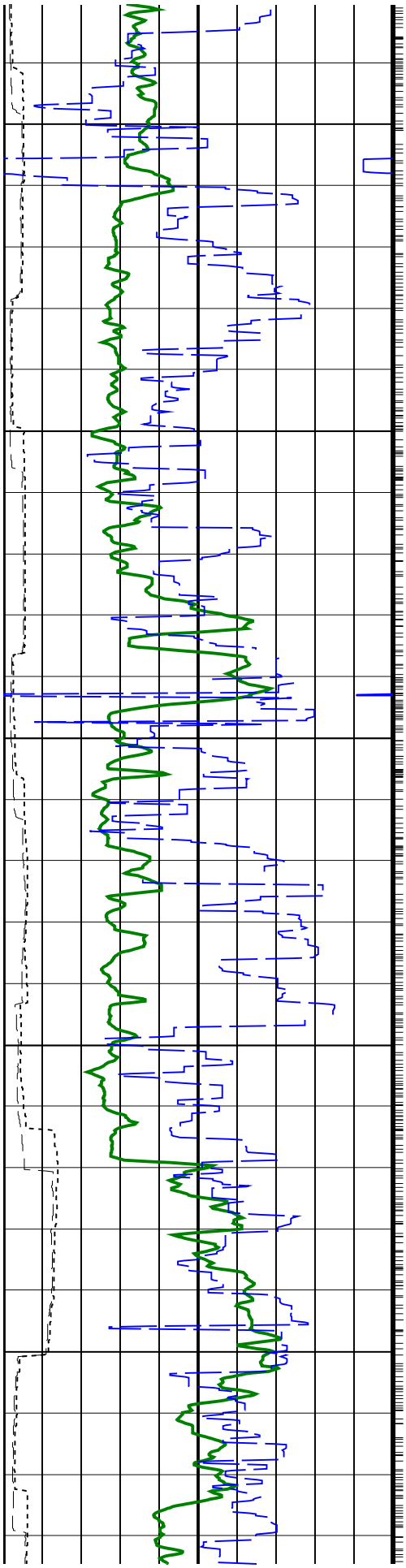

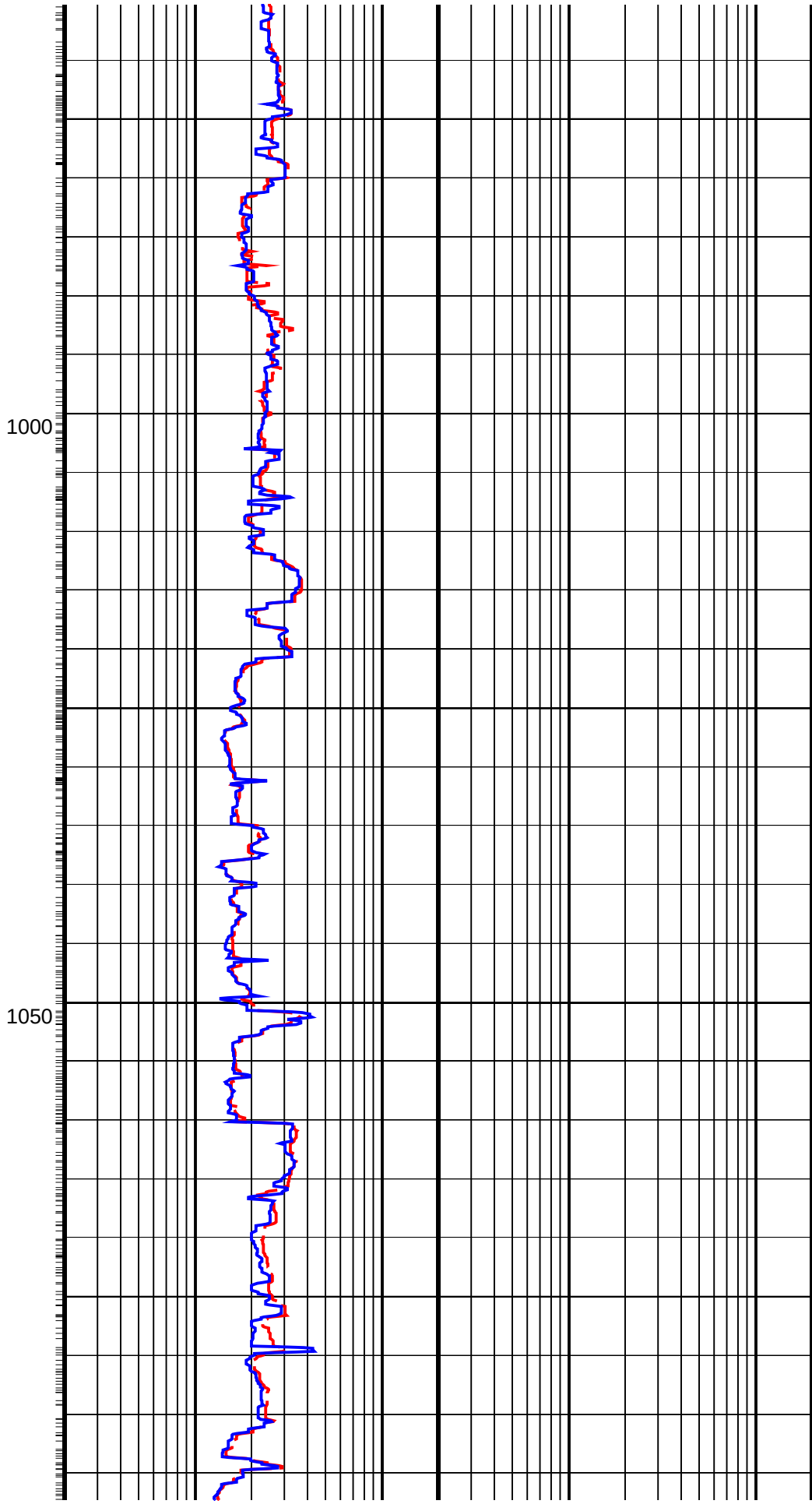
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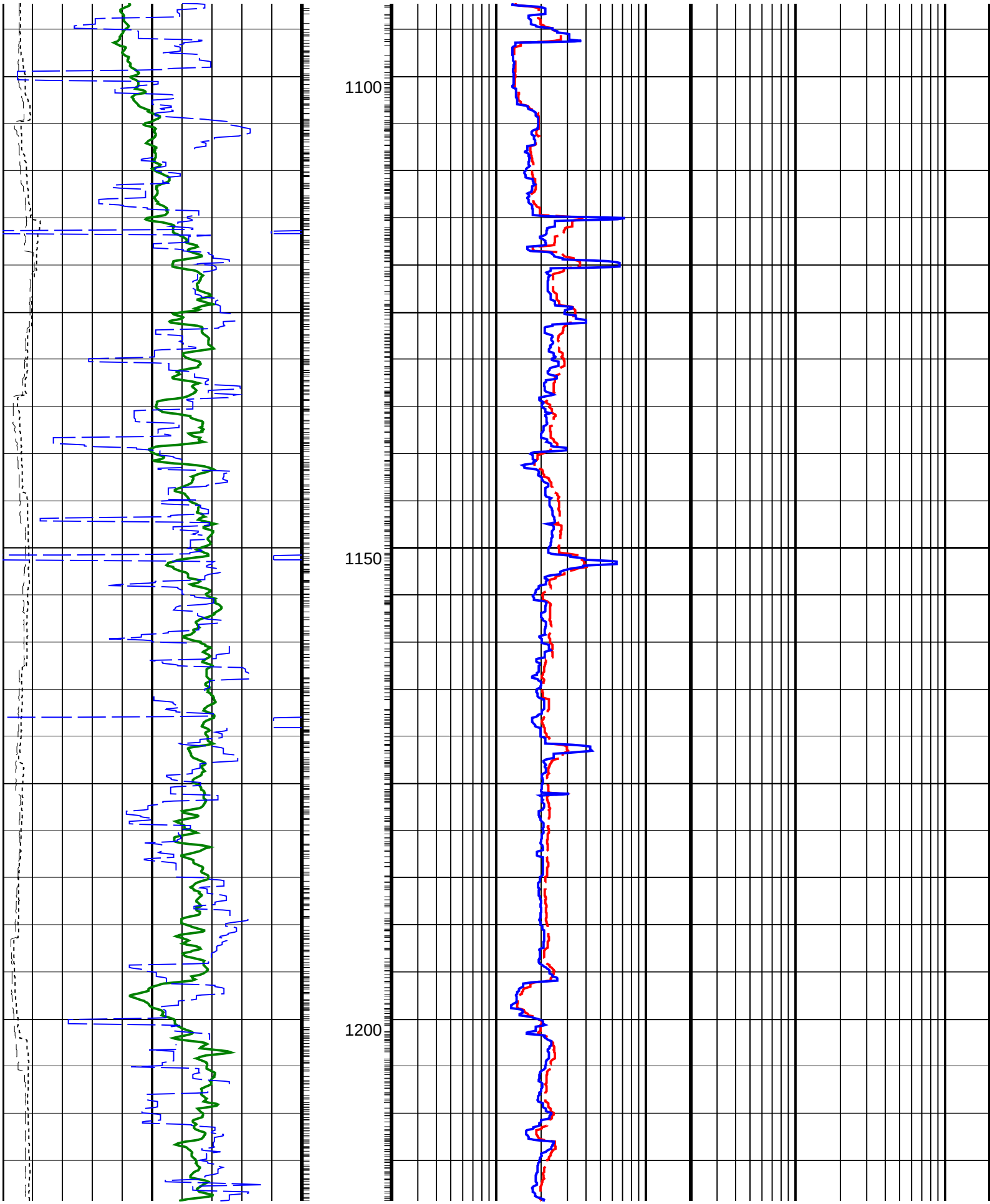
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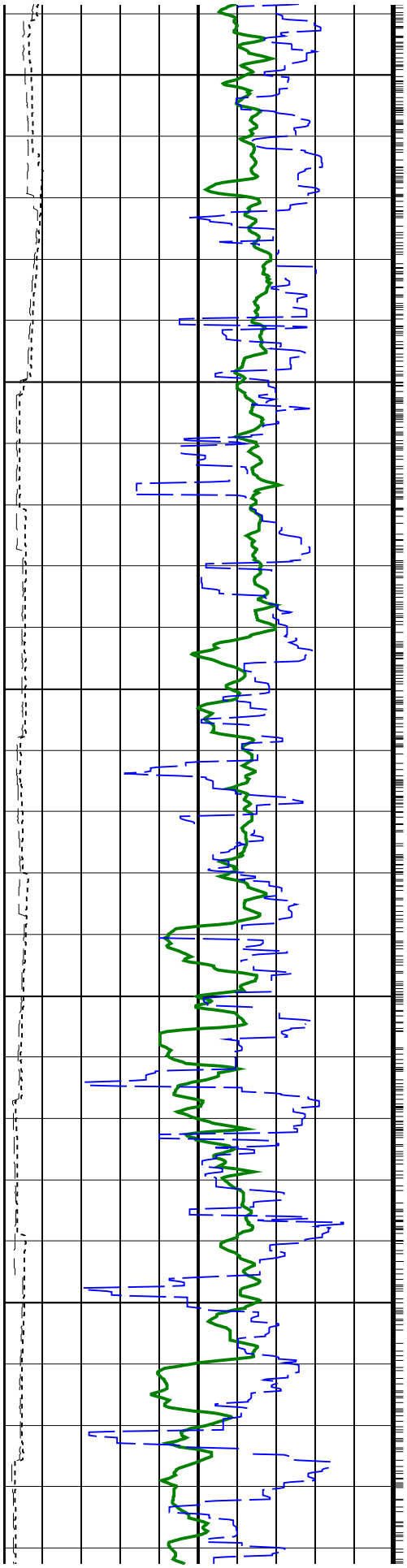

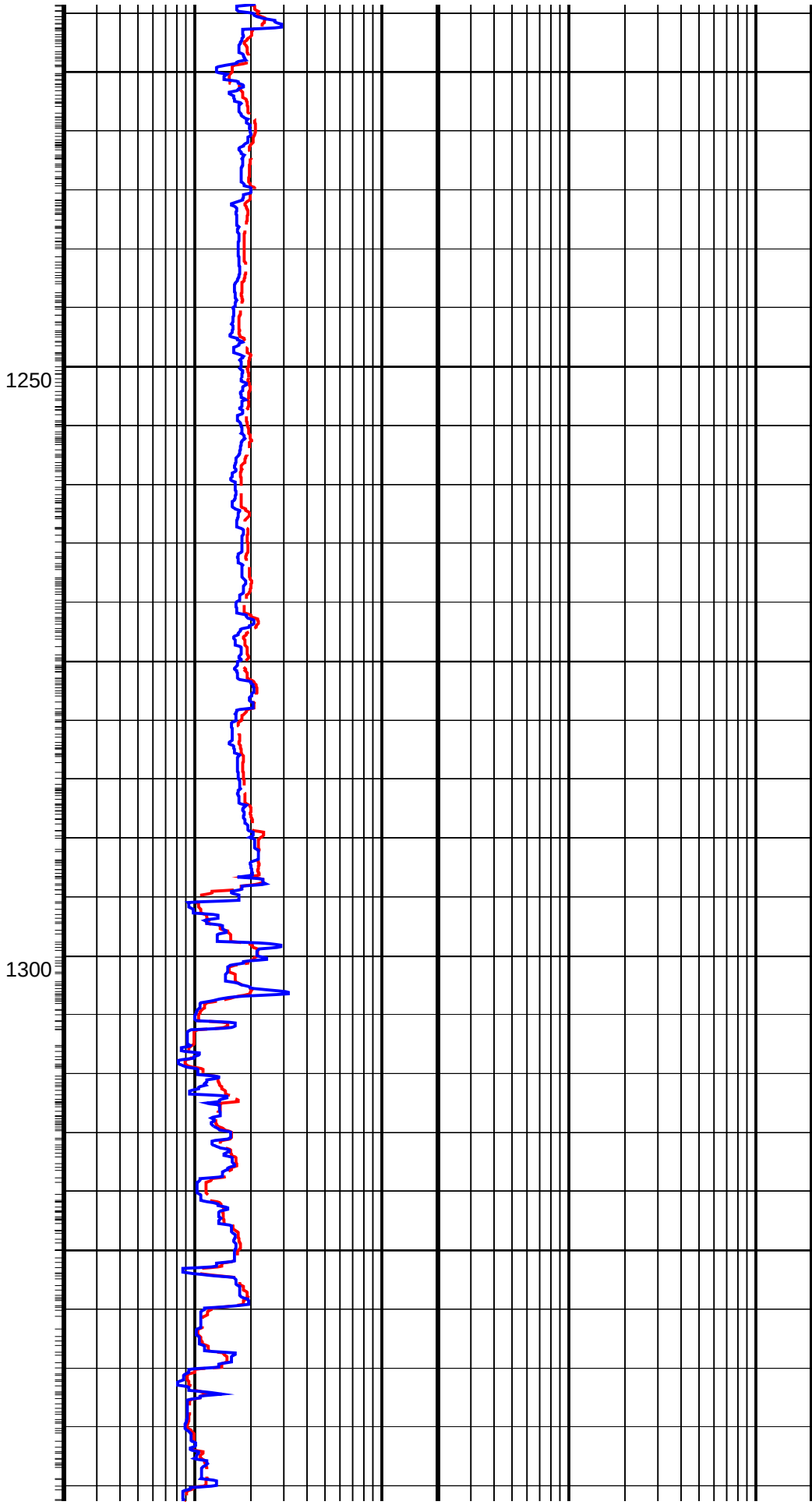
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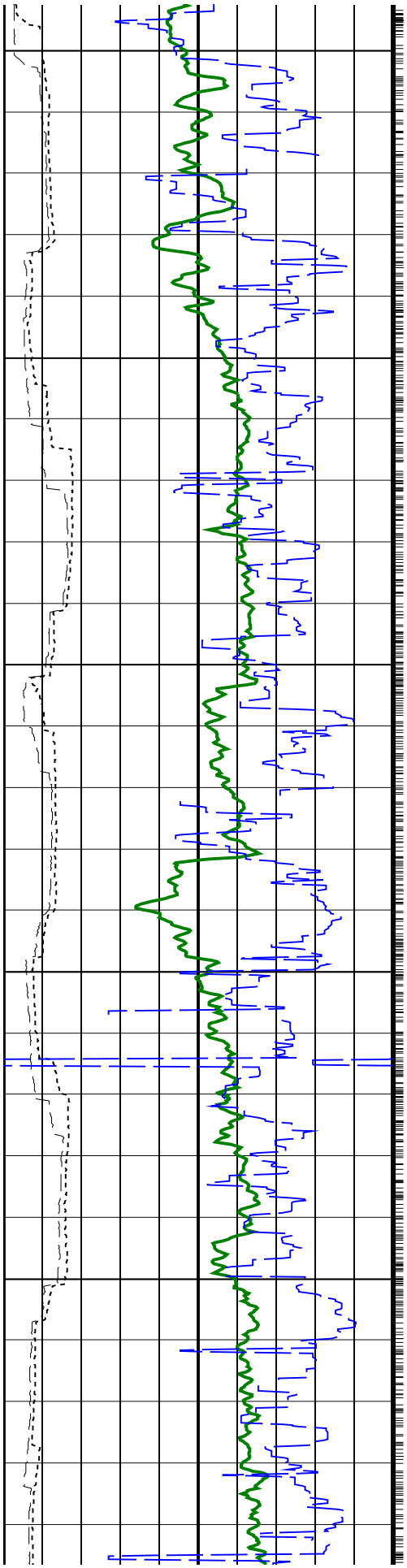

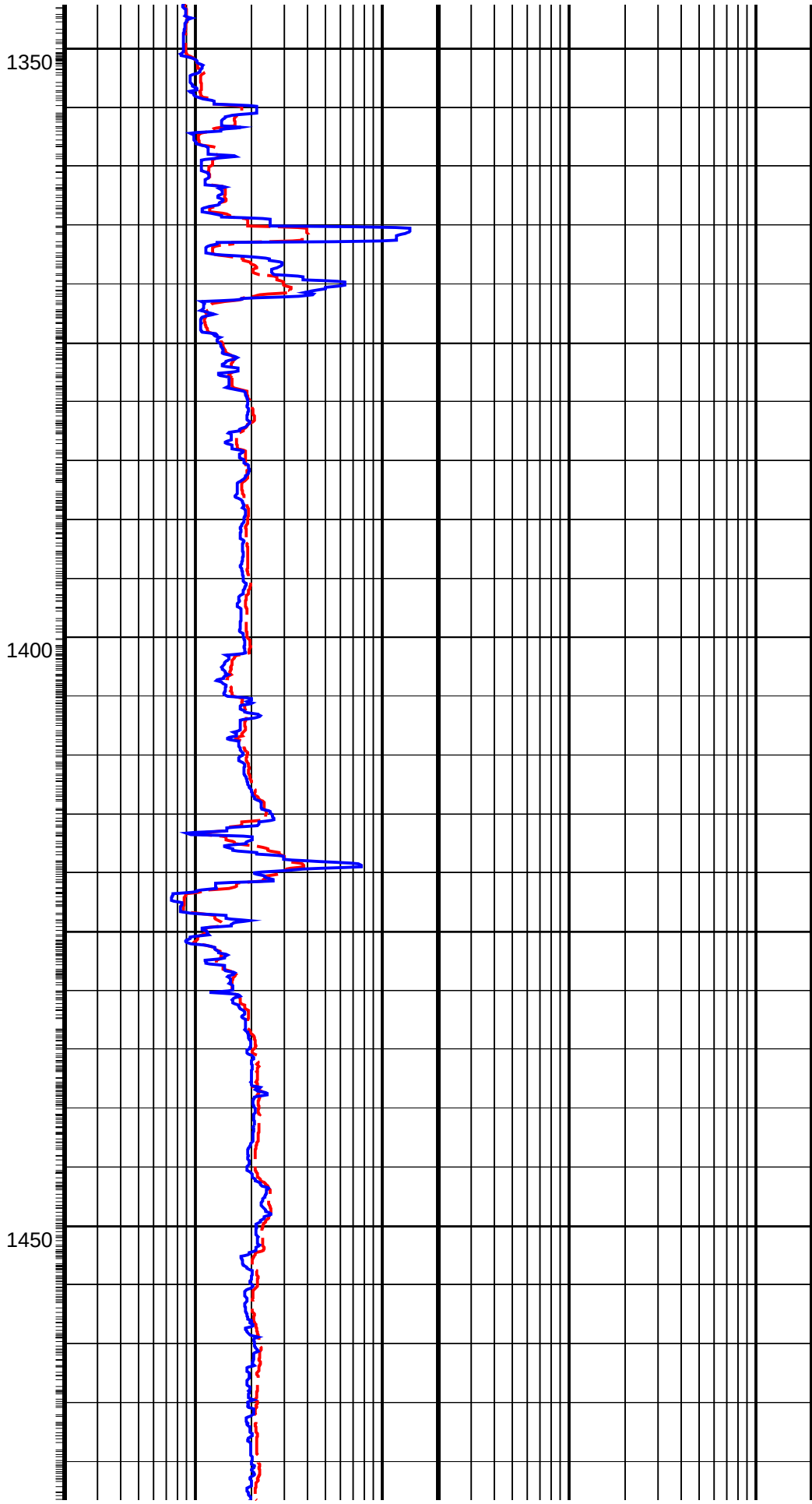
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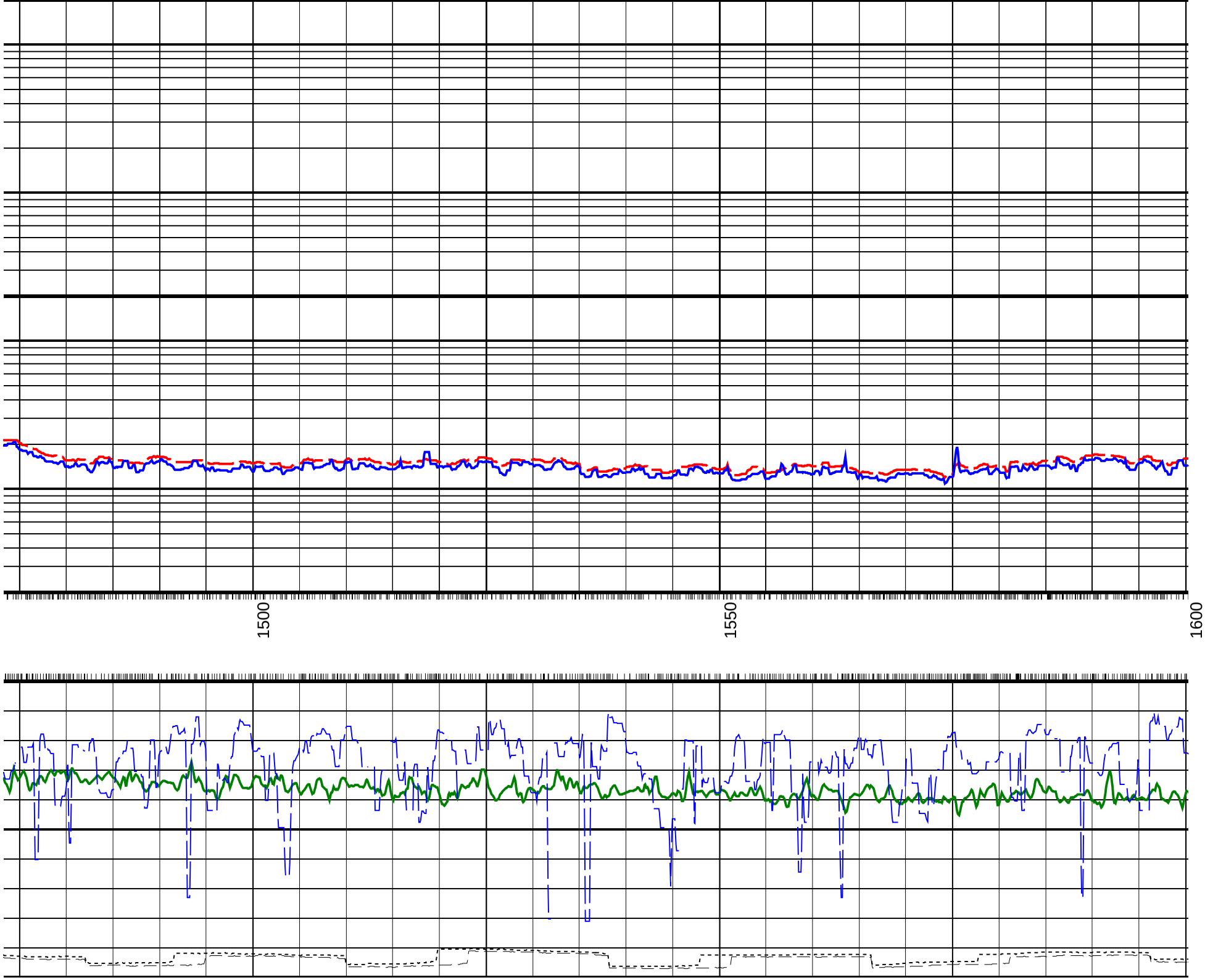
1400
1450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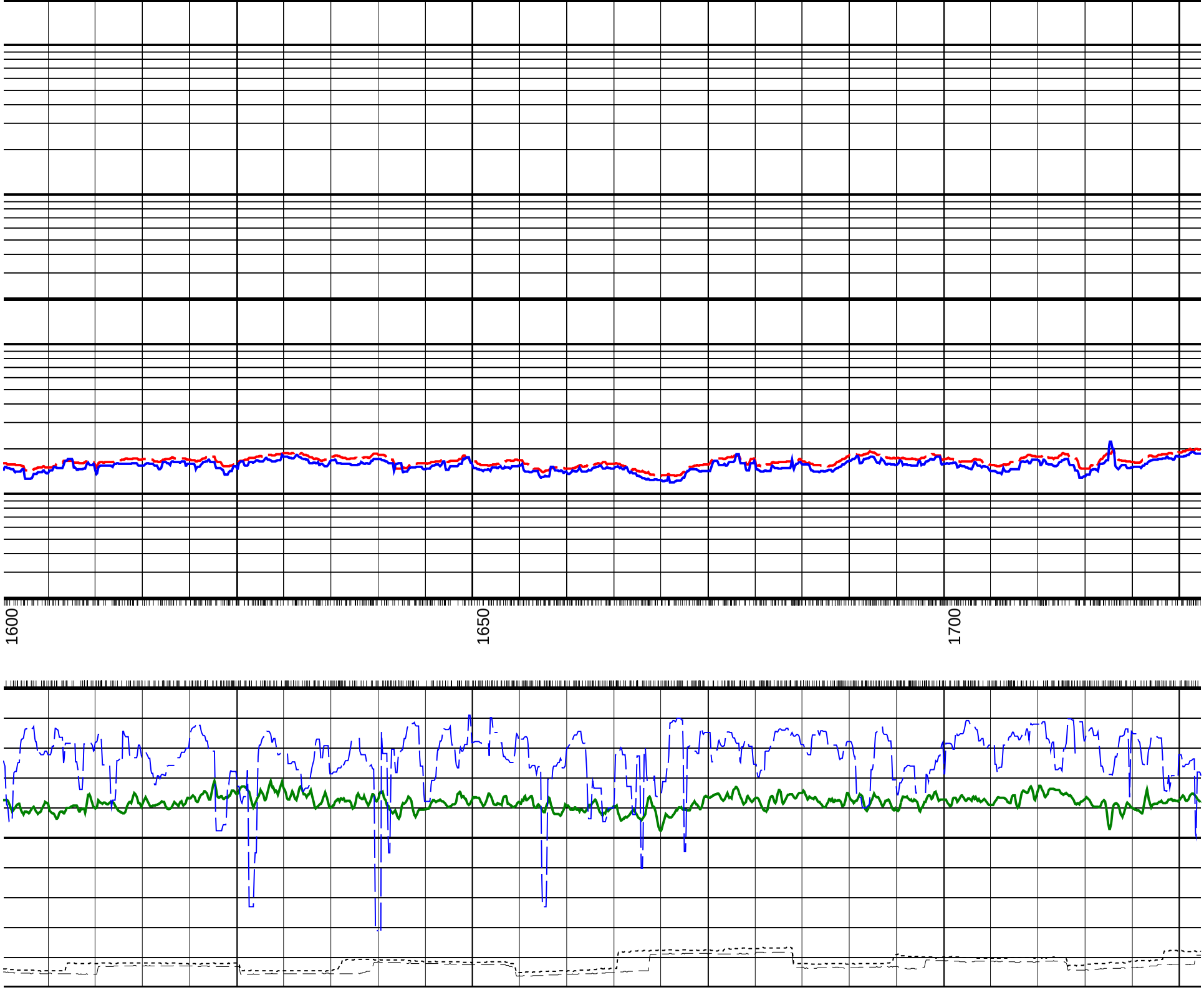
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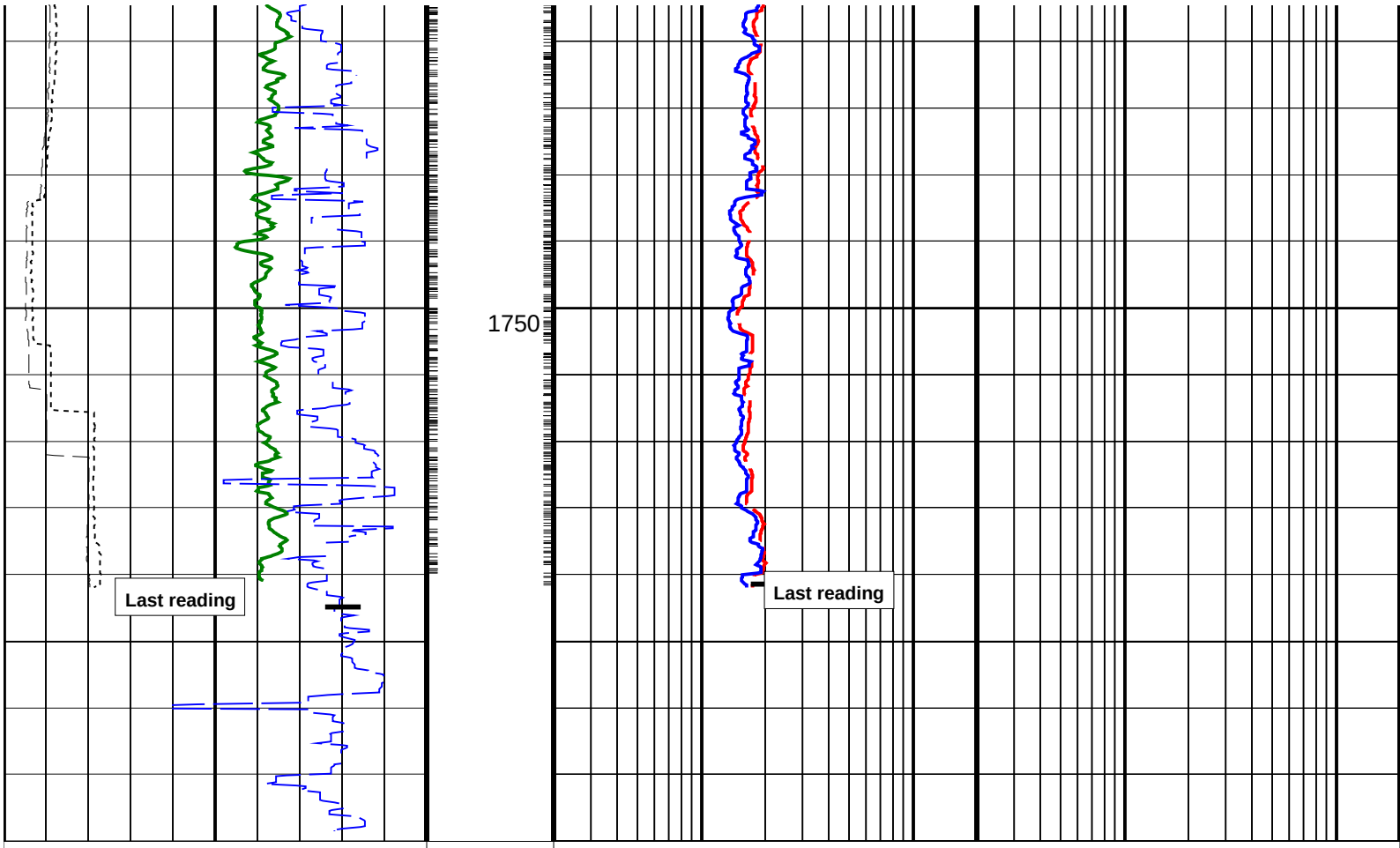

Gamma Ray (GR_CDR)
0 (GAPI) 200

CDR Resistivity Time After Bit (TAB_CDR_RES)
0 (HR) 10

CDR Gamma Ray Time After Bit (TAB_CDR_GR)
0 (HR) 10

Rate of Penetration, Averaged over Last 5ft (ROP5_RM)
500 (M/HR) 0

Attenuation Resistivity (ATR)
0.2 (OHMM) 2000

Phase Shift Resistivity (PSR)
0.2 (OHMM) 2000

PIP SUMMARY

CDR Gamma Ray Samples
CDR Resistivity Samples

IDEAL Version: ID6_1C_10

IDF

8.25−in. Compensated Dual Resistivity / Equipment Identification

Primary Equipment:
Tool Name and Serial Number — CDR8 − AA — 8134
Gamma Ray Type — Plat − GR
Valid

Master: 19−JUL−2001 10:15

8.25−in. Compensated Dual Resistivity Calibration

Resistivity: Air

Phase	Attenuation down DB	Value
Master	4.931	
	4.400 (Minimum) / 5.000 (Nominal) / 5.600 (Maximum)	

Phase	Attenuation up DB	Value
Master	5.008	
	4.400 (Minimum) / 5.000 (Nominal) / 5.600 (Maximum)	

Phase	BHC attenuation DB	Value
Master	4.970	
	4.900 (Minimum) / 5.000 (Nominal) / 5.100 (Maximum)	

Master: 19−JUL−2001 16:54

8.25−in. Compensated Dual Resistivity Calibration

Resistivity: Air

Phase	Phase shift down DEG	Value
Master	0.3130	
	−2.400 (Minimum) / 0.1000 (Nominal) / 2.600 (Maximum)	

Phase	Phase shift up DEG	Value
Master	0.02900	
	−2.400 (Minimum) / 0.1000 (Nominal) / 2.600 (Maximum)	

Phase	BHC phase shift DEG	Value
Master	0.1710	
	−0.9000 (Minimum) / 0.1000 (Nominal) / 1.100 (Maximum)	

Master: 19−JUL−2001 16:39

8.25−in. Compensated Dual Resistivity Calibration

Gamma Ray: Blanket

Phase	Gain	Value
Master	1.005	
	0.8000 (Minimum) / 1.000 (Nominal) / 1.200 (Maximum)	

ANADRILL

SCHLUMBERGER

Survey report 8−Oct−2001 21:45:01 Page 1 of 2

```
Client...................: Woodside Energy Ltd.
Field....................: Permit VIC/P43

Well.....................: Geograph North−1
API number...............:
Engineer.................: A.Abad, M.Saicic

Rig:.....................: Ocean Bounty
STATE:...................: Victoria

----- Survey calculation methods-------------
Method for positions.....: Minimum curvature
Method for DLS...........: Mason & Taylor

----- Depth reference ------------------------
Permanent datum..........: L.A.T.
Depth reference..........: Driller's Depth
GL above permanent.......:    107.00 m
KB above permanent.......:     82.00 m
DF above permanent.......:     25.00 m

----- Vertical section origin----------------
Latitude (+N/S−).........:      0.00 m
Departure (+E/W−).........:      0.00 m

----- Platform reference point---------------
Latitude (+N/S−).........:      0.00 m
Departure (+E/W−).........:      0.00 m

Azimuth from rotary table to target:    0.00 degrees

Spud date................: 29 Sep 01
Last survey date.........: 08−Oct−01
Total accepted surveys...: 17
MD of first survey.......:   561.00 m
MD of last survey........:  2142.68 m

----- Geomagnetic data ----------------------
Magnetic model...........: BGGM version 2000
Magnetic date............: 01−Oct−2001
Magnetic field strength..:    1222.77 HCNT
Magnetic dec (+E/W−).....:      11.03 degrees
Magnetic dip.............:     −70.26 degrees

----- MWD survey Reference Criteria ---------
Reference G..............:    1000.10 mGal
Reference H..............:    1222.77 HCNT
Reference Dip............:     −70.26 degrees
Tolerance of G...........: (+/−) 2.50 mGal
Tolerance of H...........: (+/−) 6.00 HCNT
Tolerance of Dip.........: (+/−) 0.45 degrees

----- Corrections ---------------------------
Magnetic dec (+E/W−).....:      11.03 degrees
Grid convergence (+E/W−).:      −1.17 degrees
Total az corr (+E/W−)....:      12.20 degrees
  (Total az corr = magnetic dec − grid conv)
Sag applied (Y/N)........: No    degree: 0.00
```

[(c)2001 Anadrill IDEAL ID6_1C_03]
ANADRILL SCHLUMBERGER Survey Report 8−Oct−2001 21:45:01 Page 2 of 2

Seq # −	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S− (m)	Displ +E/W− (m)	Total displ (m)	At Azim (deg)	DLS (deg/ 10m)	Srvy tool type	Tool qual type
1	561.00	0.50	0.00	0.00	561.00	0.00	0.00	0.00	0.00	0.00	0.00	TIP	−
2	582.93	0.14	140.00	21.93	582.93	0.08	0.08	0.02	0.08	12.91	0.28	MWD	6−axis
3	787.44	0.24	327.54	204.51	787.44	0.25	0.25	−0.05	0.25	348.01	0.02	MWD	6−axis
4	1045.27	1.06	176.39	257.83	1045.26	−1.68	−1.68	−0.19	1.69	186.51	0.05	MWD	6−axis
5	1134.01	1.32	323.02	88.74	1133.99	−1.68	−1.68	−0.75	1.84	204.17	0.26	MWD	6−axis
6	1221.07	1.31	340.49	87.06	1221.03	0.06	0.06	−1.69	1.69	271.93	0.05	MWD	6−axis
7	1308.98	1.44	340.75	87.91	1308.91	2.05	2.05	−2.39	3.15	310.58	0.01	MWD	6−axis
8	1395.89	1.46	335.28	86.91	1395.79	4.08	4.08	−3.21	5.20	321.80	0.02	MWD	6−axis

7	1308.98	1.44	340.75	87.91	1308.91	2.05	2.05	−2.39	3.15	310.58	0.01	MWD	6−axis
8	1395.89	1.46	335.28	86.91	1395.79	4.08	4.08	−3.21	5.20	321.80	0.02	MWD	6−axis
9	1510.17	1.39	334.24	114.28	1510.04	6.65	6.65	−4.42	7.99	326.38	0.01	MWD	6−axis
10	1568.32	1.65	336.38	58.15	1568.17	8.06	8.06	−5.07	9.52	327.84	0.05	MWD	6−axis
11	1656.23	1.91	353.24	87.91	1656.04	10.67	10.67	−5.75	12.12	331.70	0.07	MWD	6−axis
12	1713.58	1.95	1.23	57.35	1713.35	12.60	12.60	−5.84	13.88	335.13	0.05	MWD	6−axis
13	1762.43	1.84	357.96	48.85	1762.18	14.21	14.21	−5.85	15.37	337.63	0.03	MWD	6−axis
14	1810.16	1.94	4.62	47.73	1809.88	15.78	15.78	−5.81	16.82	339.79	0.05	MWD	6−axis
15	1984.85	0.73	44.27	174.69	1984.52	19.53	19.53	−4.79	20.11	346.20	0.08	MWD	6−axis
16	2142.68	0.66	64.11	157.83	2142.34	20.64	20.64	−3.28	20.90	350.98	0.02	MWD	6−axis
17	2170.70	0.65	64.11	157.83	2170.01	20.86	20.86	−3.26	20.98	351.01	0.02	projection	

Company: Woodside Energy Limited

Well: Geographe North−1 12 1/4 in. Hole

Field: Permit VIC/P43

Rig: Ocean Bounty

State: Victoria

IDEAL services from **Anadrill**

CDR − Resistivity
1:500 Measured Depth
Recorded Mode

Schlumberger