

**Schlumberger**

Company: ESSO Australia Pty. Ltd.

Well: BMA A6A

Field: Bream A

Rig: ISDL 453

State: Victoria

**Gamma Ray Service**  
**1·500 Measured Depth**

**Real Time Log**

ISDL 453  
Bream A  
Bass Strait  
BMA A6A  
ESSO Australia Pty. Ltd.

Rig:	ISDL 453				
Field:	Bream A				
Location:	Bass Strait				
Well:	BMA A6A				
Company:	ESSO Australia Pty. Ltd.				
Location	Total depth:	3256.0 m	K.B.	Top Drive	
	Spud date:	1 February 2006	G.L.	-59.4 m	
Runs:	1	To 1	D.F.	32.82 m	
Permanent datum:	Mean Sea Level	Elev.:	0 m		
Log measured from:	Drill Floor		32.82 m above Perm. datum		
Depth reference:	Driller's Depth				

Service Order no.	Y = 5738461.49 m	Longitude	Latitude
06ASQ0001	X = 567347.12 m	E147° 46' 20.421"	S38° 29' 58.784"

**Casing record**

Hole size	from	to	Size	Density	from	to
8-1/2 in.	851.0 m	3256.0 m	10-3/4 in.	40.5 lbm/m	11.9 m	851.0 m

**Borehole deviation record**

Mud record	from	to	Min	Max	from	to
KCI/PHPA/Glycol	851.0 m	3256.0 m	18.78 deg	65.48 deg.	851.0 m	1500.0 m

**Software record**

Surface equipment	Unit	IDLU-FB-924	IDEAL WIS	ID11_0C_01
Depth system	DES-CA-ASQ04-01 SPM	HSPM11_0C_01	N/A	

## Bit Run Summary

Run number	1						
Bit size	in.	8.5					
Bit start depth	m	851.0					
Bit end depth	m	3256.0					
Top interval logged	m	851.0					
Bottom interval logged	m	3239.4					
Begin log: time		05:00					
Begin log: date		02-Feb-06					
End log: time		09:41					
End log: date		12-Feb-06					
<b>Mud data</b>							
Depth	m	3256.0					
Type		KCI/PHPA/Gly.					
Mud weight	ppg	10.05					
Solids	%	8.0					
Chlorides	mg/l	47,500					
Rm		N/A					
Rmf		N/A					
Rmc		N/A					

Potassium	%	8.6						
<b>Environmental data</b>								
<b>GR</b>								
Mud weight	ppg	10.05						
Bit size	in.	8.5						
<b>Resistivity</b>								
<b>Neutron porosity</b>								
Hole Size		N/A						
Mud weight		N/A						
Temperature		N/A						
Mud salinity		N/A						
Formation salinity		N/A						
Recording rate 1	SEC	3.83						
Recording rate 2	SEC	N/A						
Filtering GR		3 pt.						
Filtering density		N/A						
Filtering Neutron		N/A						
Company representative	G. Campbell	B. Davis	T. Bassett	B. Steel				
Schlumberger D&M Personnel	L. Johnston	B. Pattarakorr	C. Soper	L. Musket	C. Skiba			

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OTHER SERVICES FOR RUN1	OTHER SERVICES FOR RUN	OTHER SERVICES FOR RUN
Directional Drilling Directional Surveys D&I		
REMARKS: RUN NUMBER 1 Depth is referenced to driller's depth  Gamma Ray corrected for Tool Size, Bit Size and Mud weight  Gamma Ray not corrected for Potassium  Mud type is KCl/PHPA/Glycol.  8-1/2 in. hole was drilled from 851.0m to 3256.0 m  POOH due to TD of BMA A6A	REMARKS: RUN NUMBER	REMARKS: RUN NUMBER

#### EQUIPMENT DESCRIPTION

RUN1	RUN	RUN
------	-----	-----

## DOWNHOLE EQUIPMENT

6-3/4 in. PowerPulse MDC: Z408 MEC: 64 MDI: 738 MGR: 503 DHS: V8.0B96	
D&I	
GR	
6-5/8 in. NM Pony w/Float S/N: ANA98-007	
6-5/8 in. NM Roller Reamer S/N: GU2298	
6-3/4 in. NM Pony S/N: ASS15700	
7 in. PowerPak* Motor A700GT 7:8 S/N: N7311 1.5 deg. Bent Housing 8-3/8 in. Motor Sleeve	
Smith PDC Bit OD: 8-1/2 in. S73PX S/N: JT0016R1	

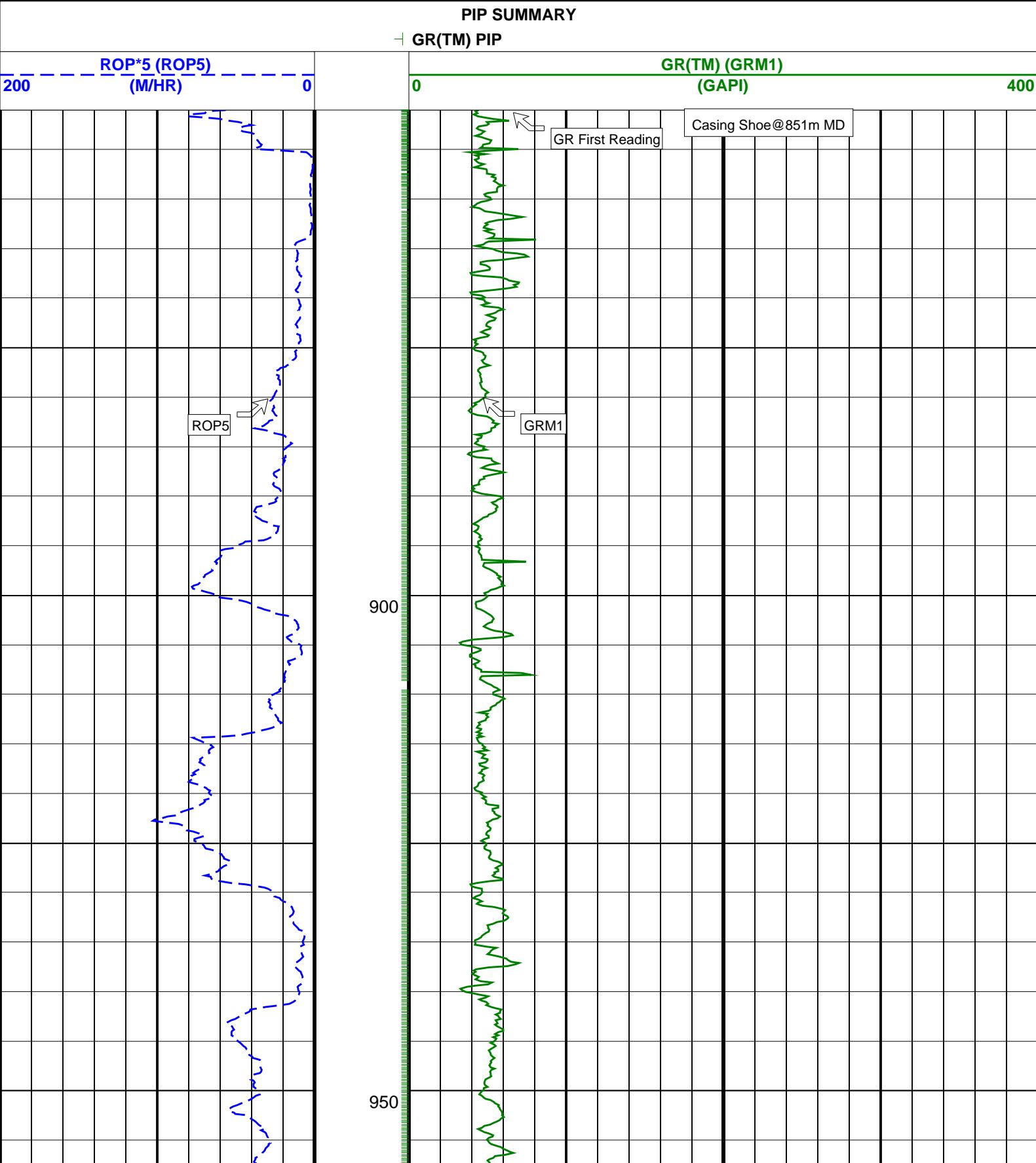
Maximum string diameter 8.50 in.

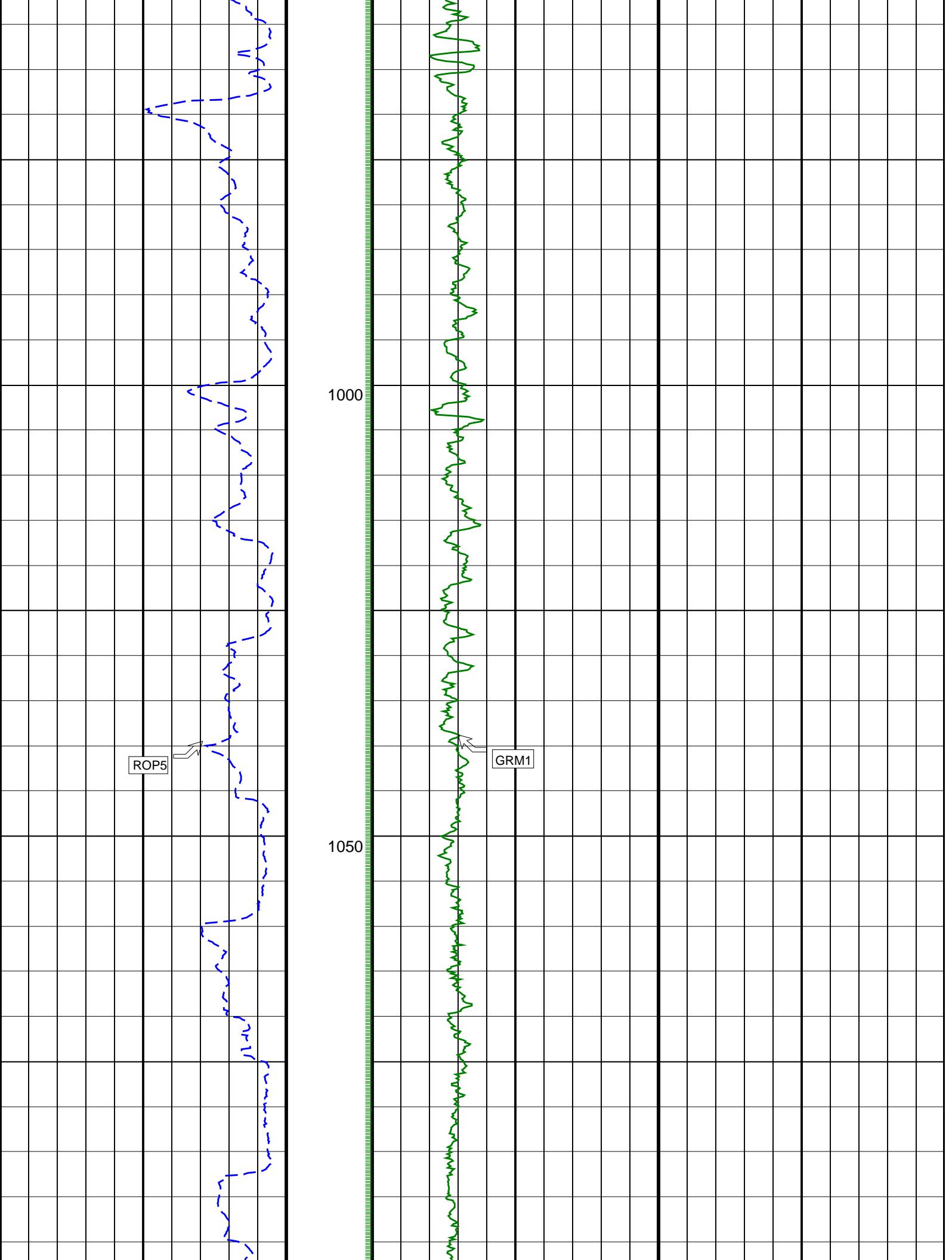
All lengths in Meters

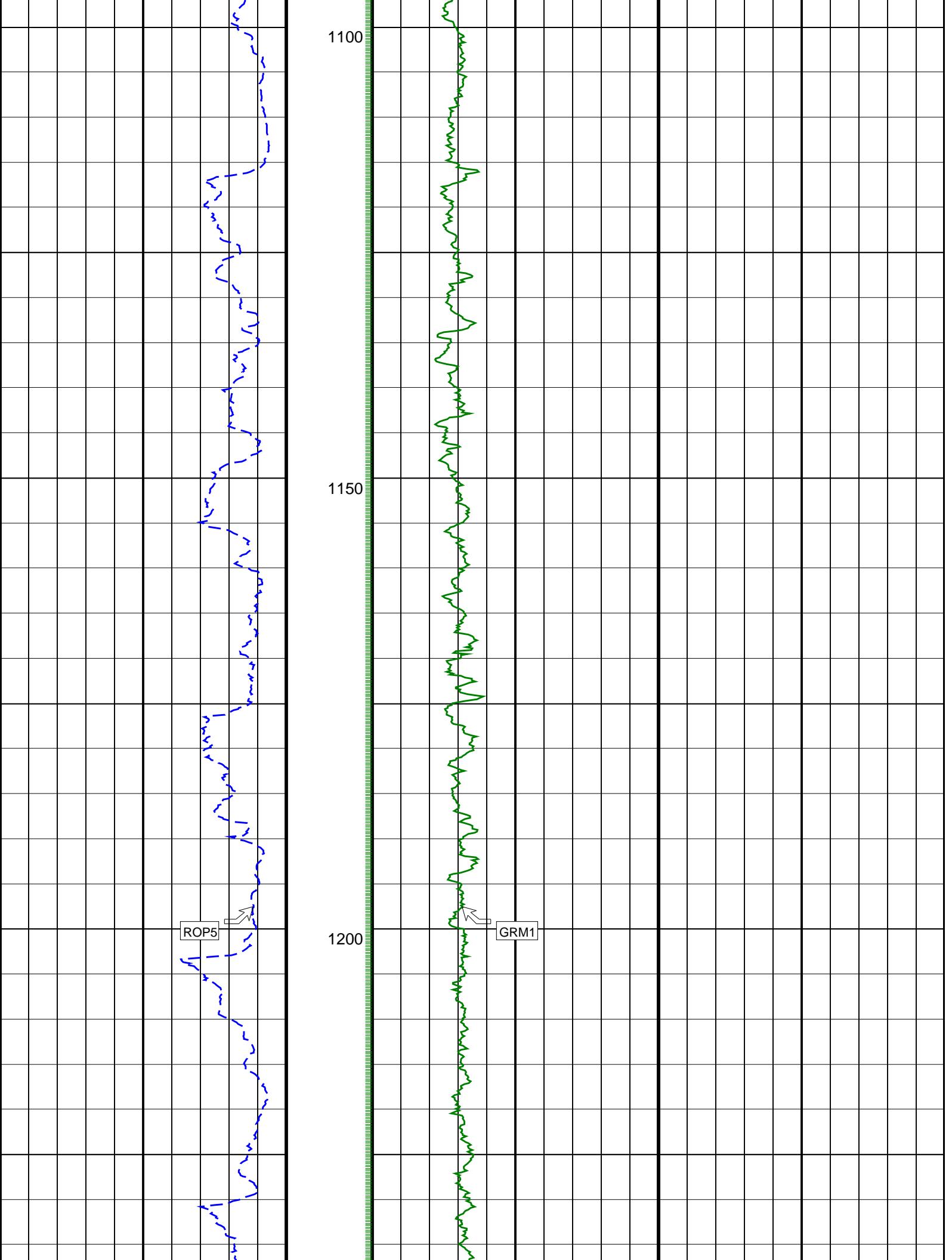
# BMA A6A RT 1:500 MD

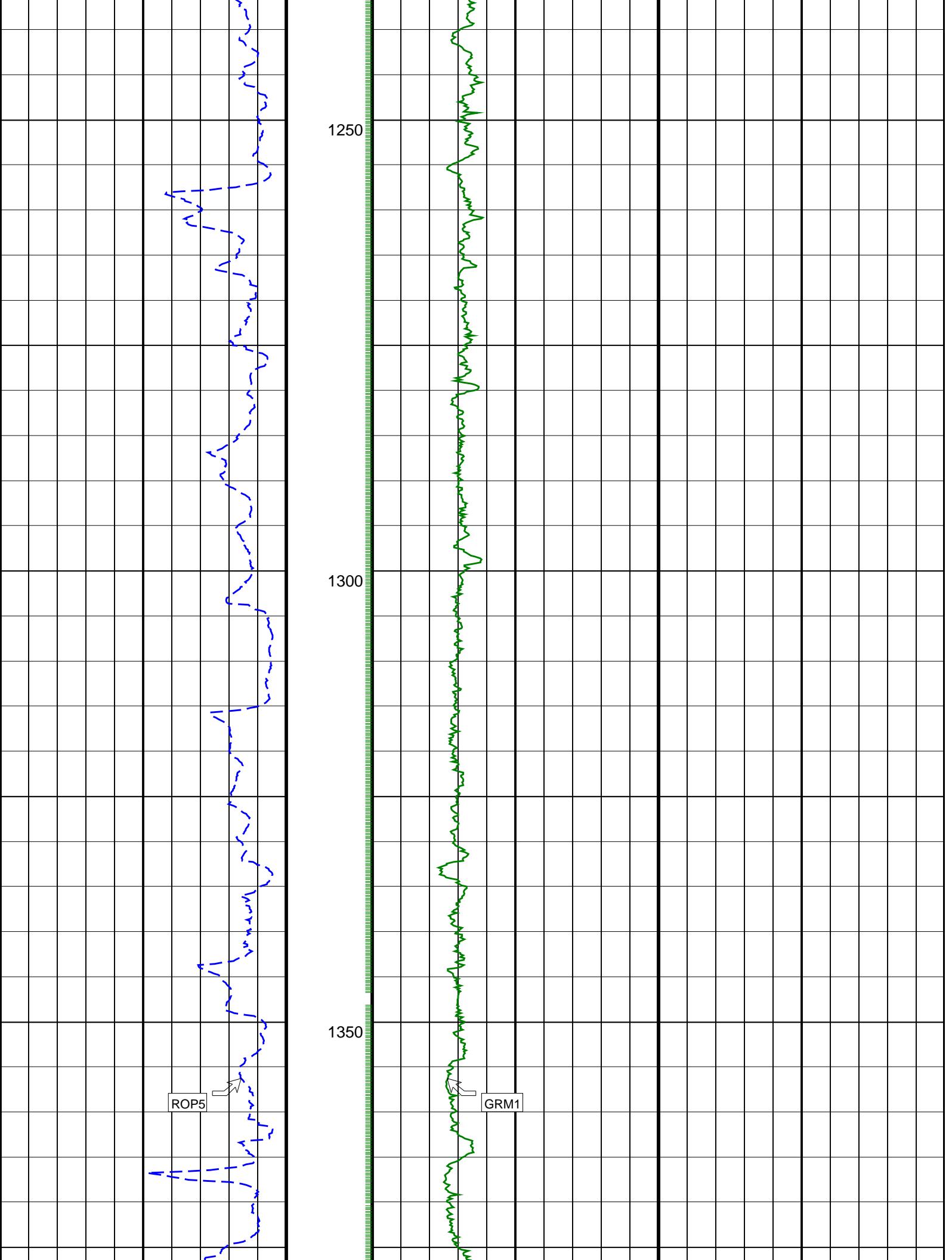
IDEAL Version: ID11\_0C\_01 <MD> Vertical Scale: 1:500

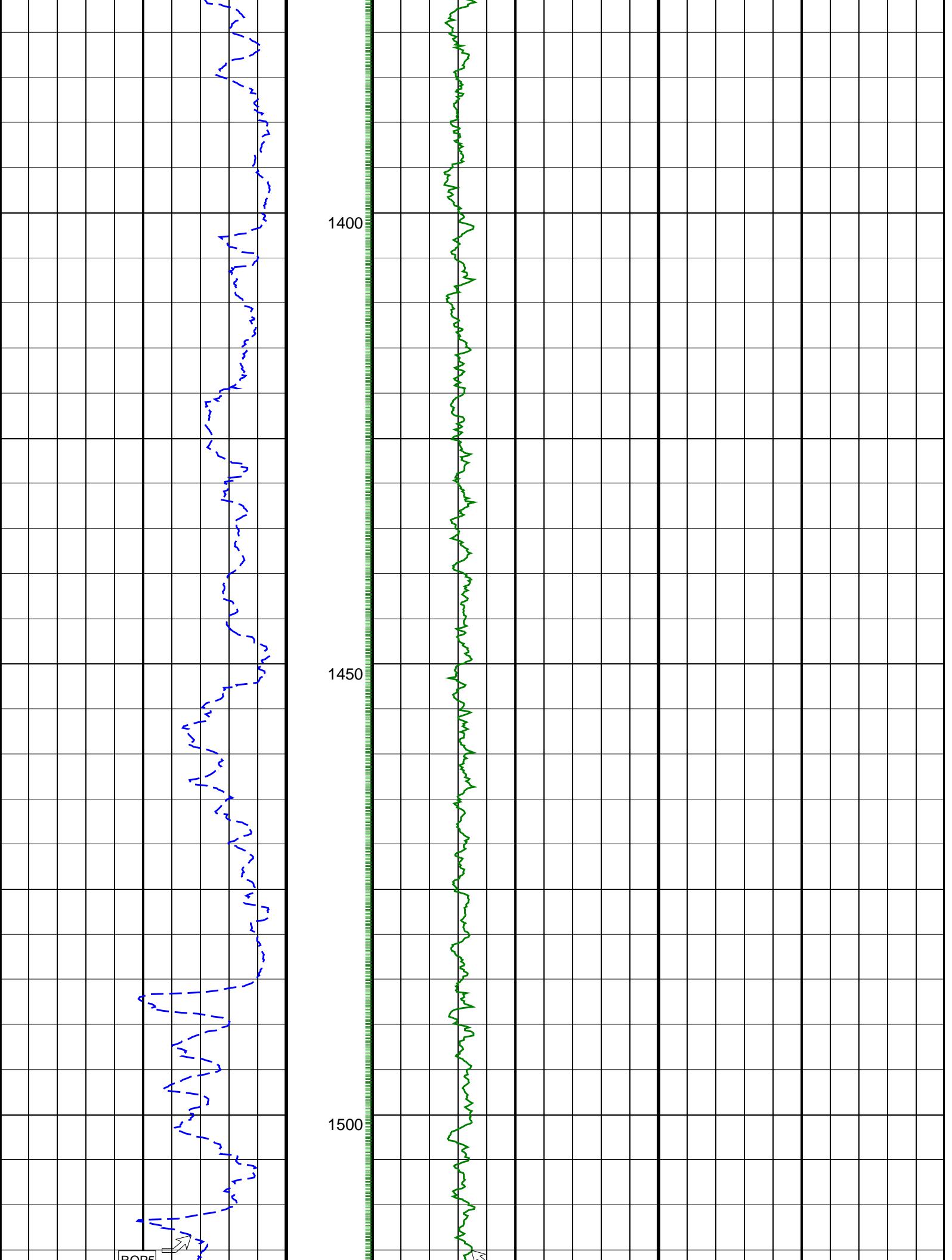
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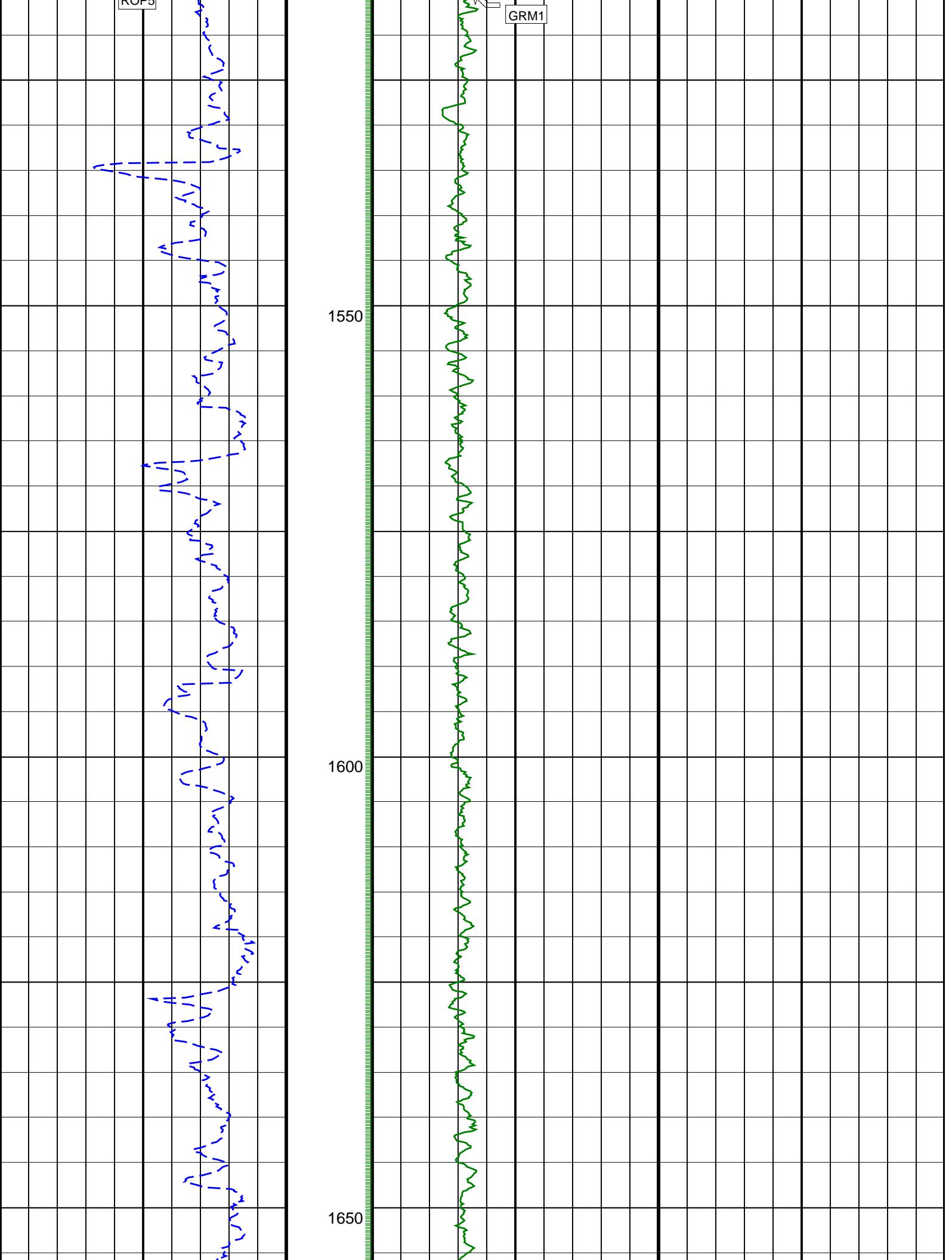


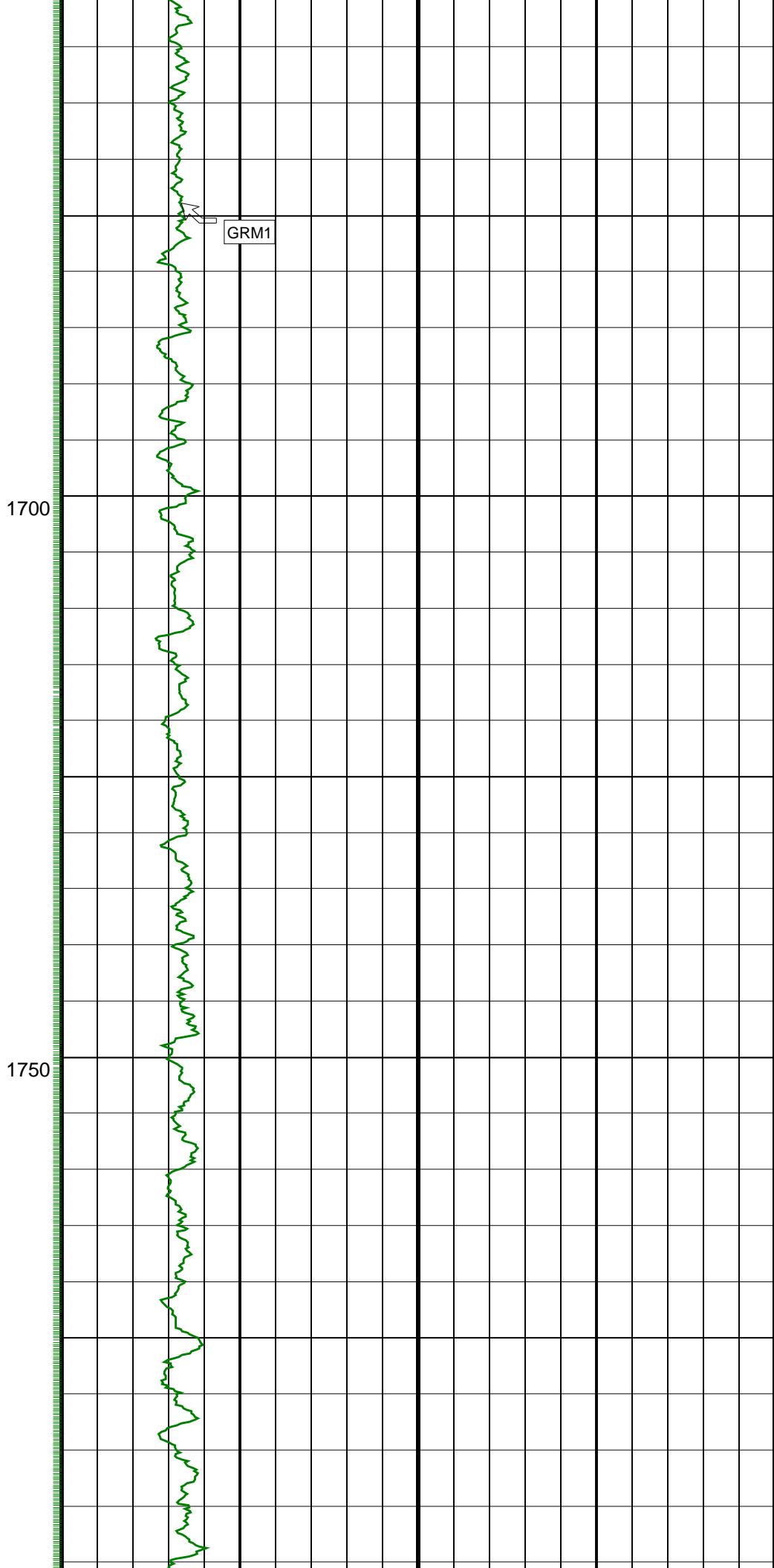
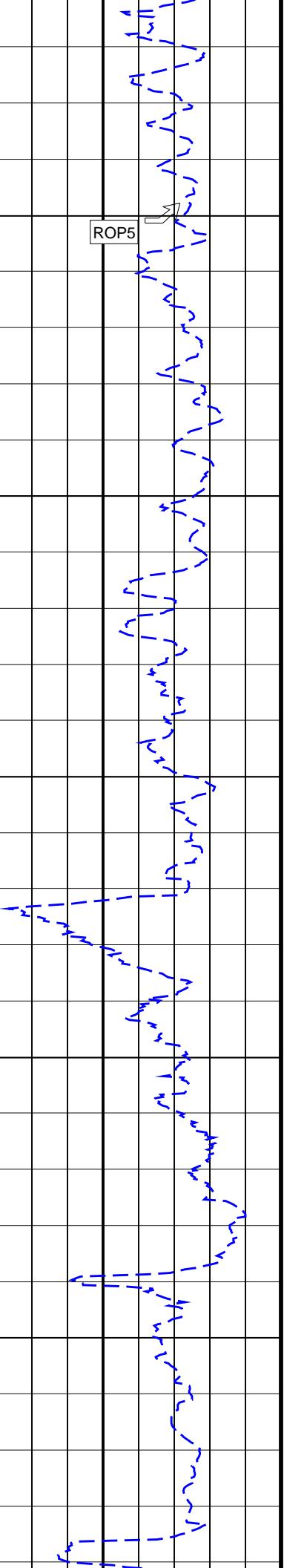


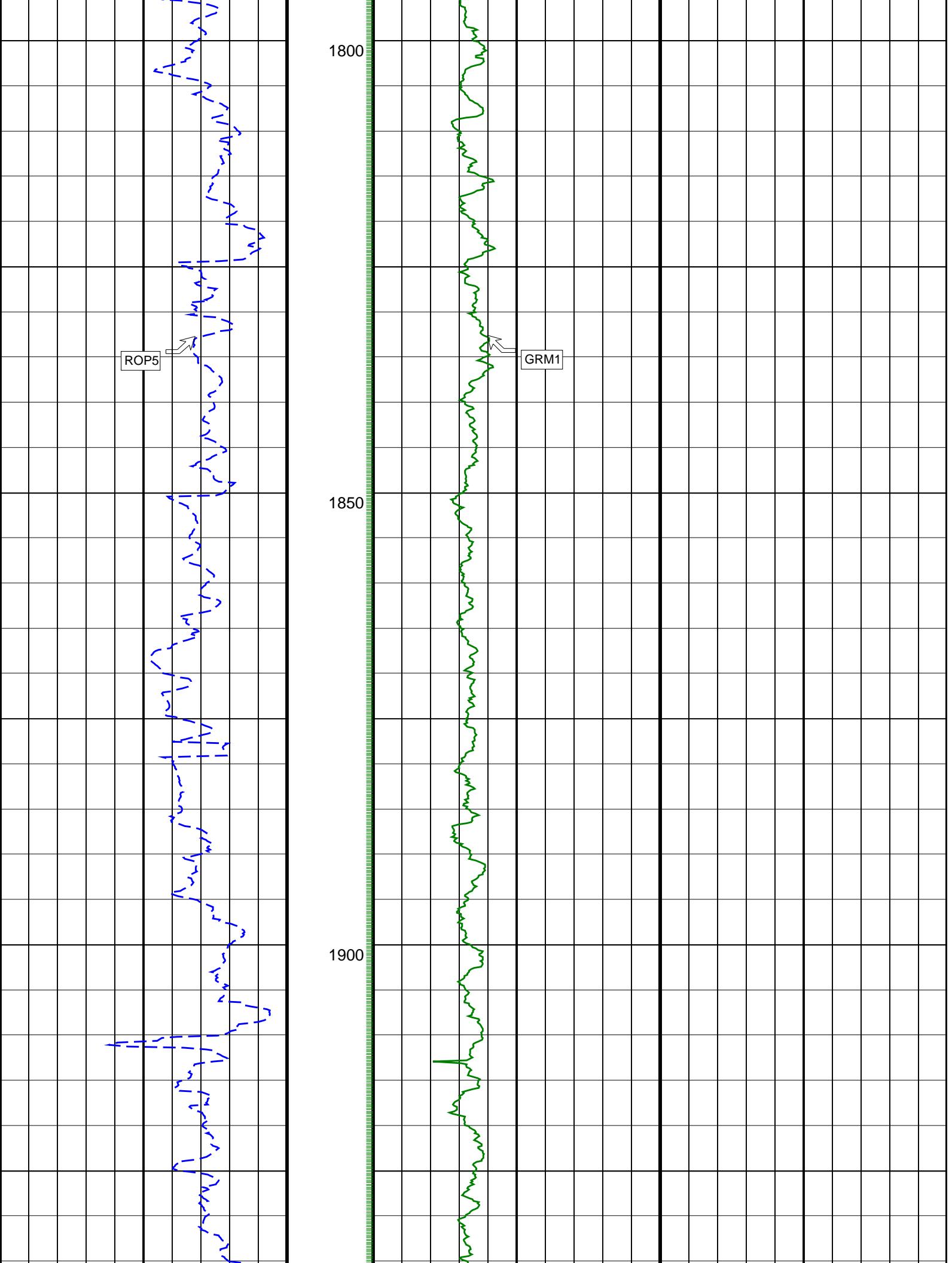


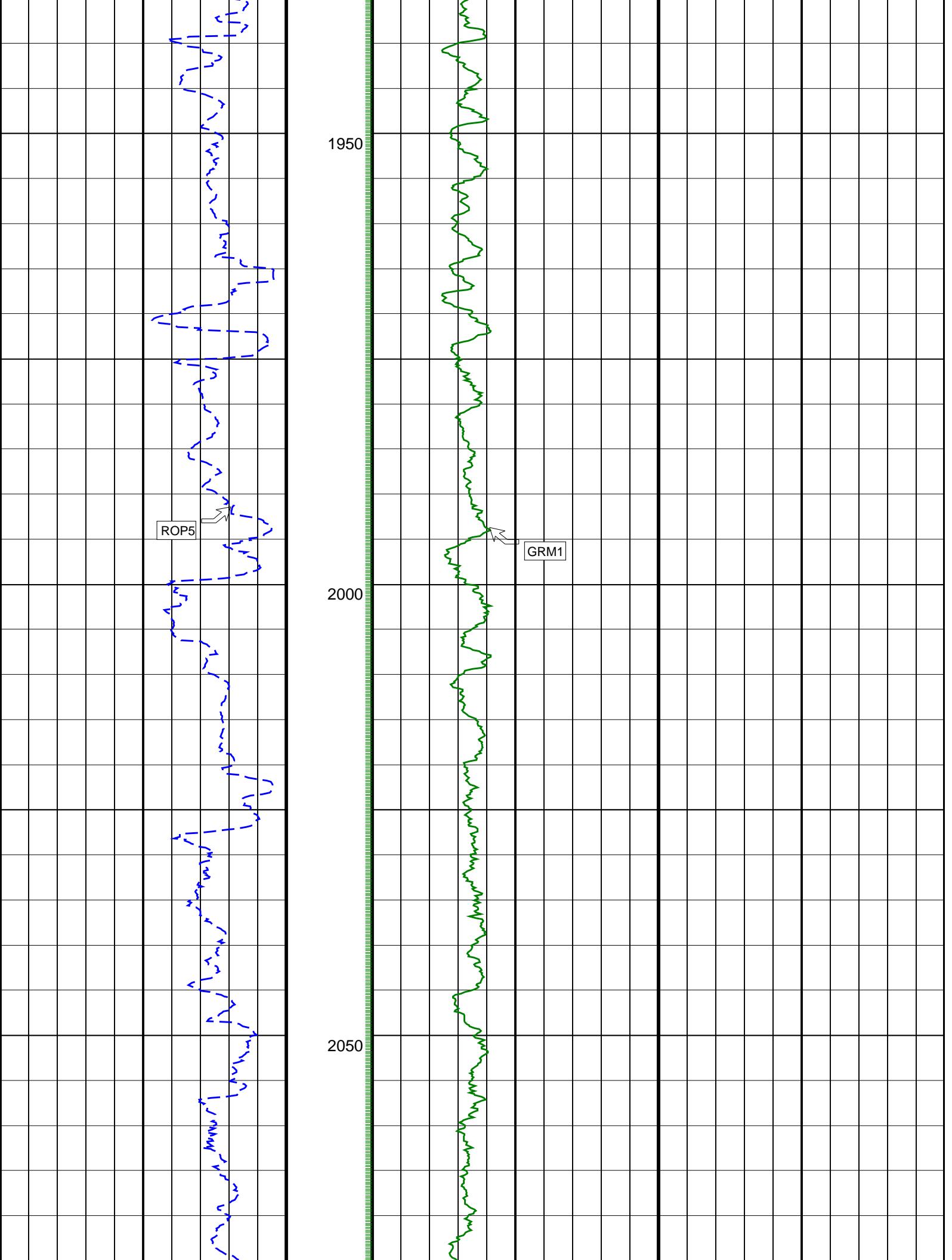


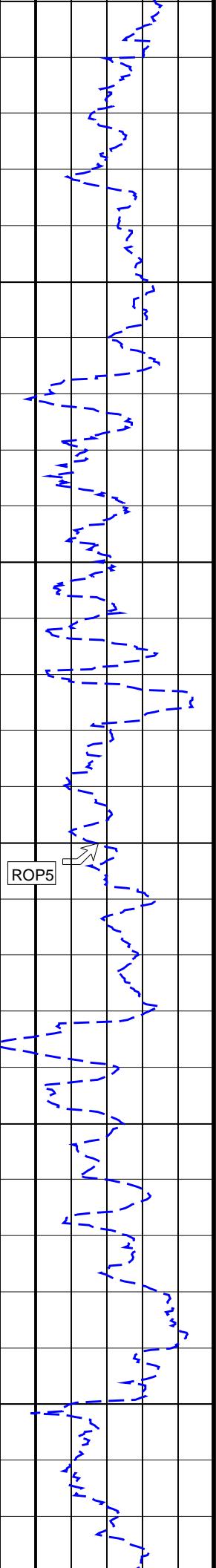




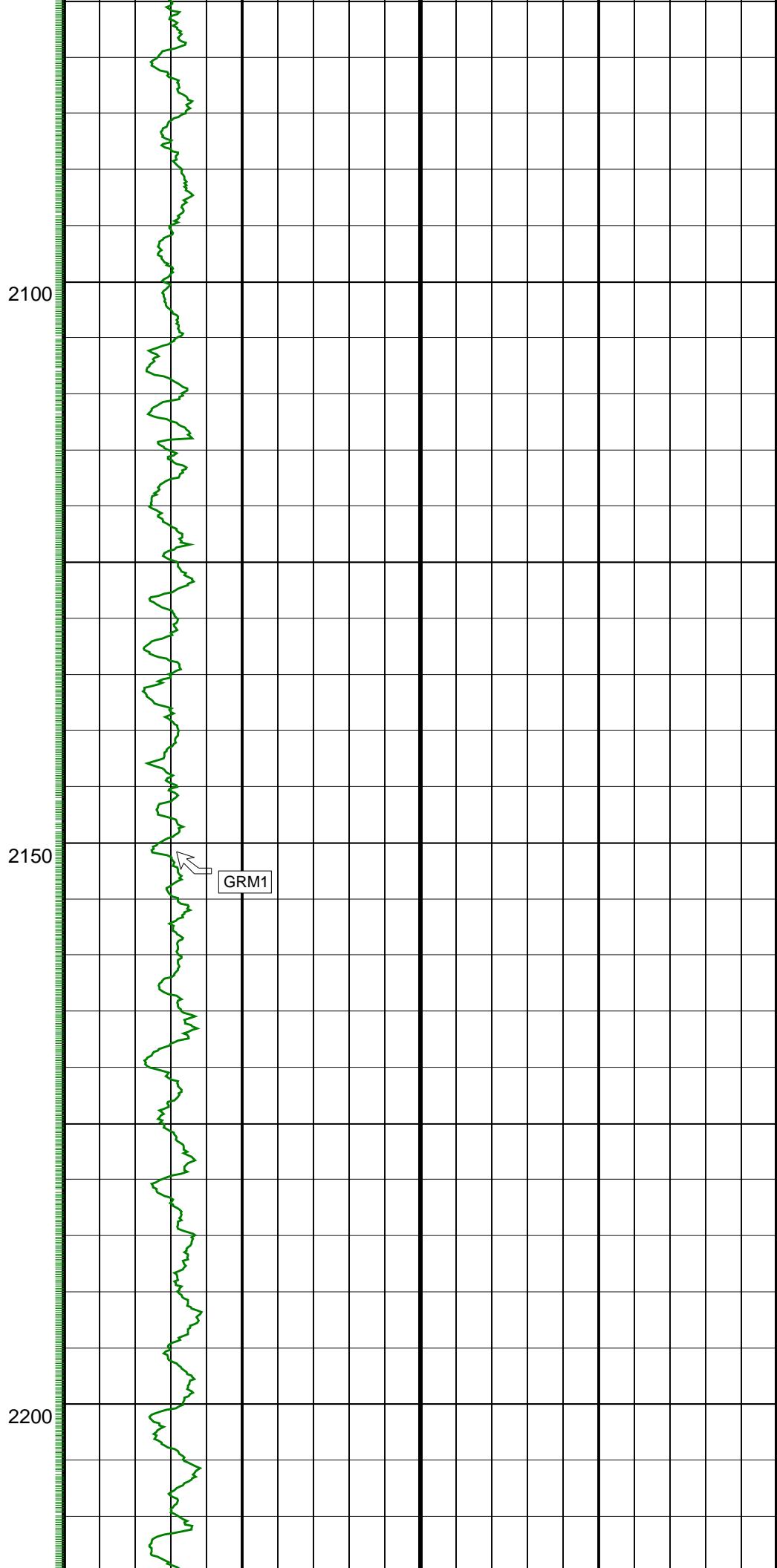




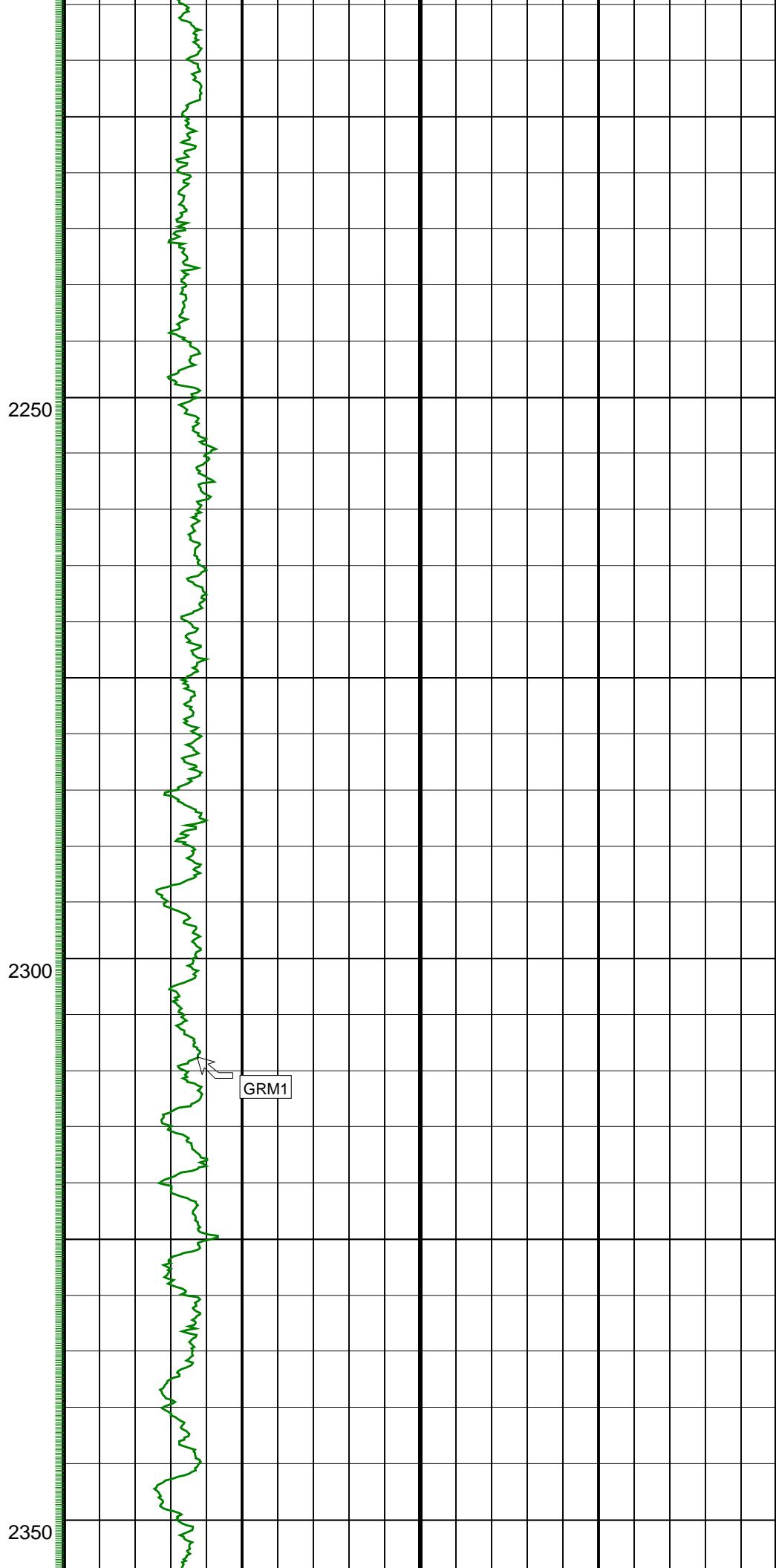
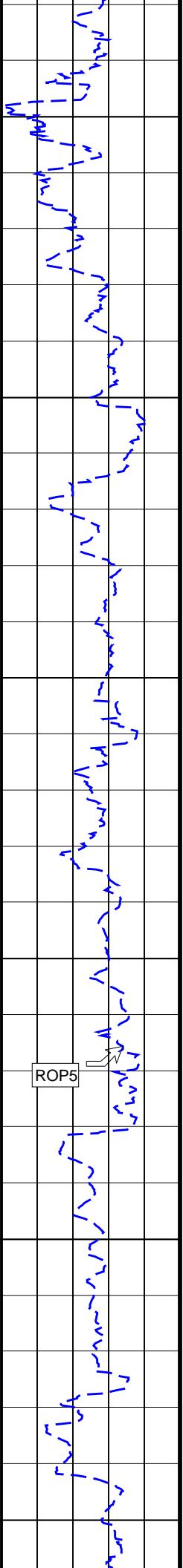


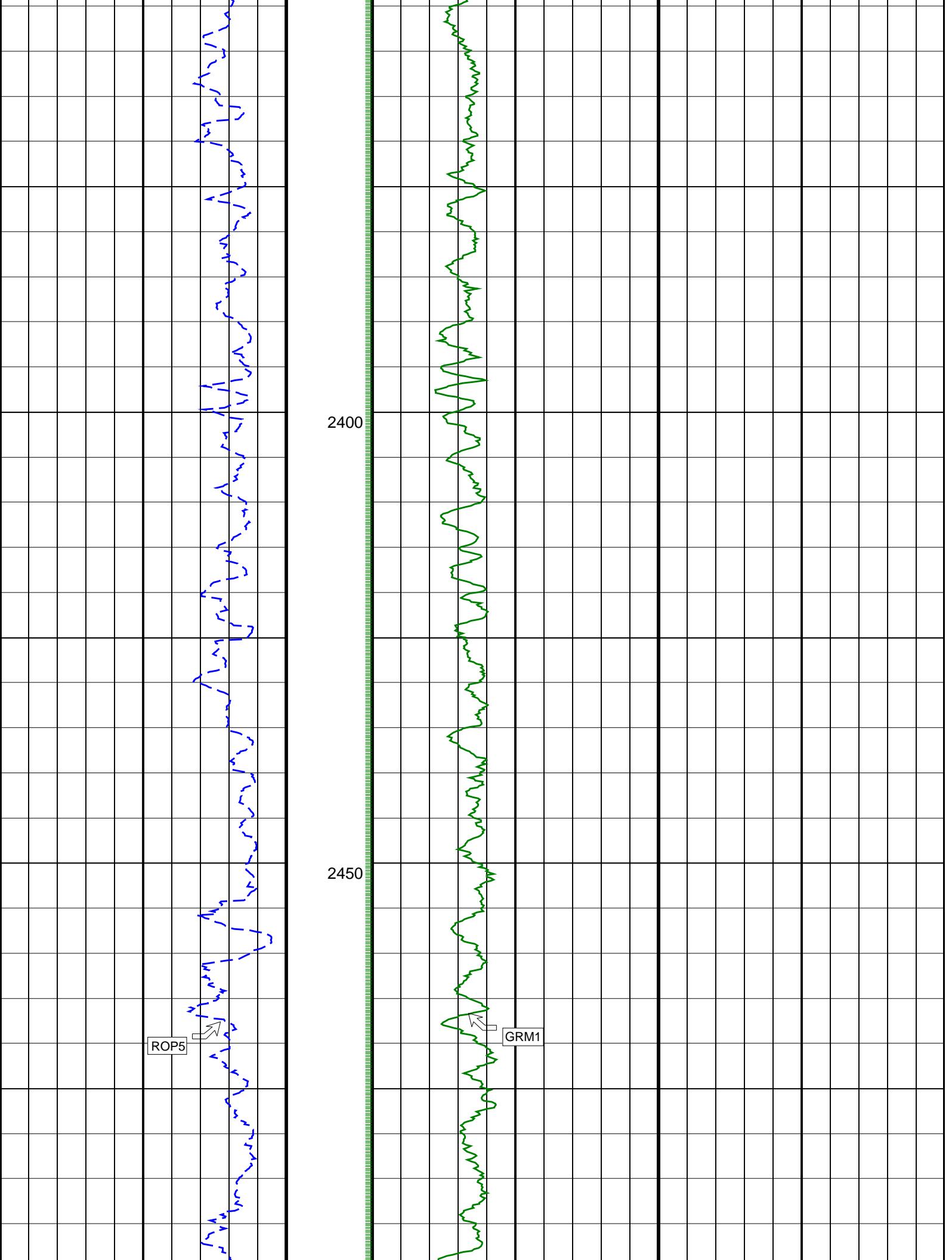


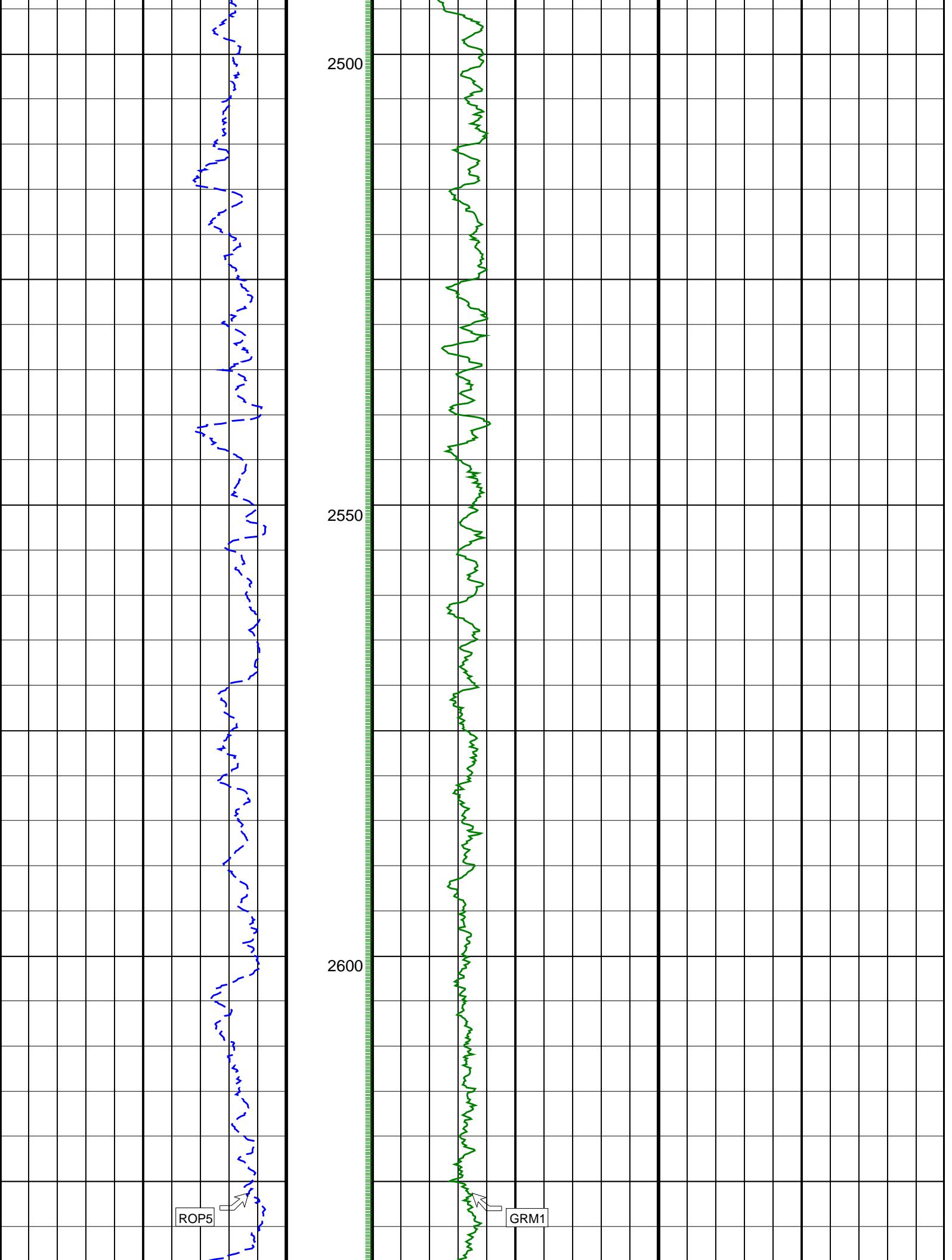
**ROP5**

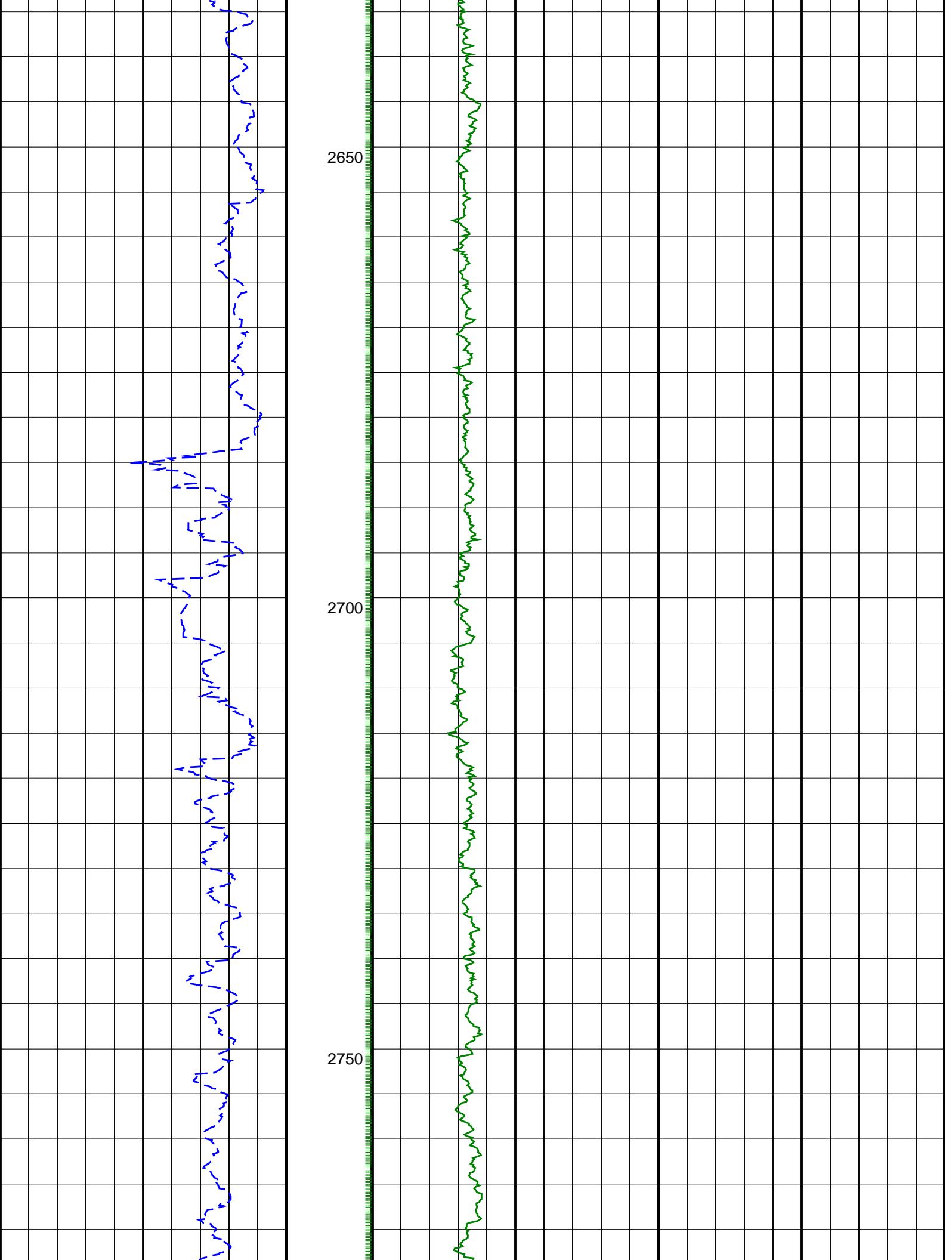


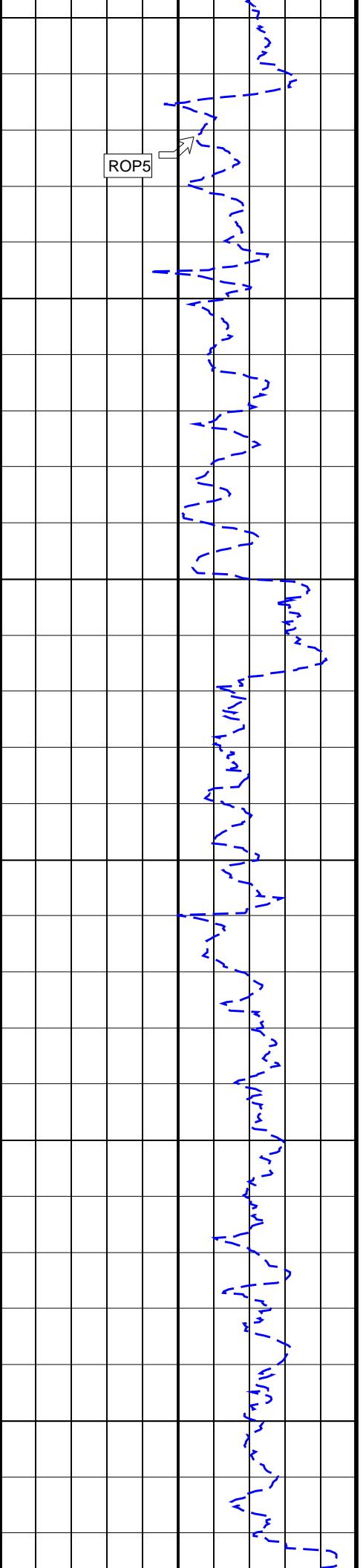
**GRM1**





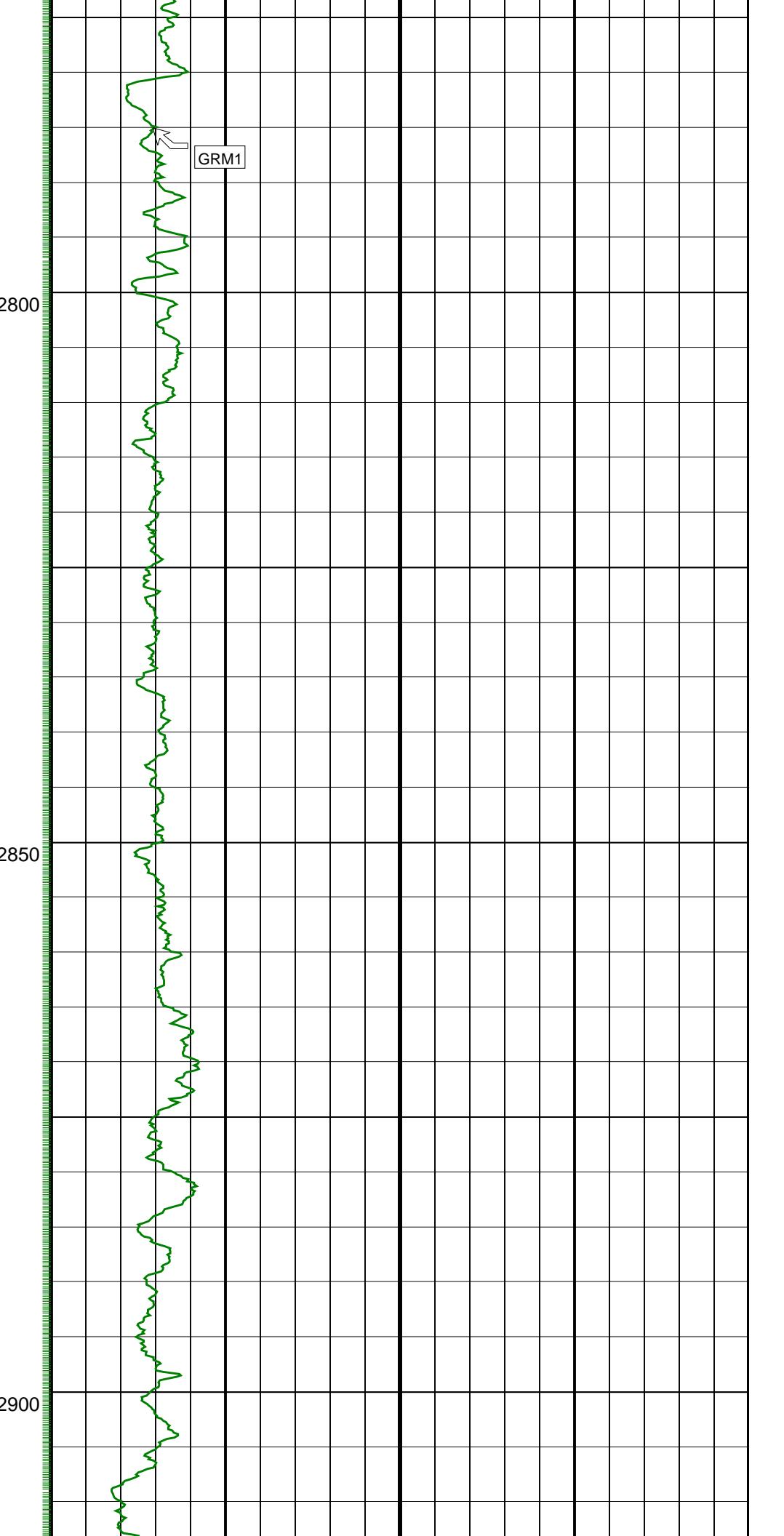






**ROP5**

This panel shows the genomic structure of the ROP5 gene. It features a large central blue dashed box representing the intron, flanked by several smaller black boxes representing exons. A white arrow points to the first exon.



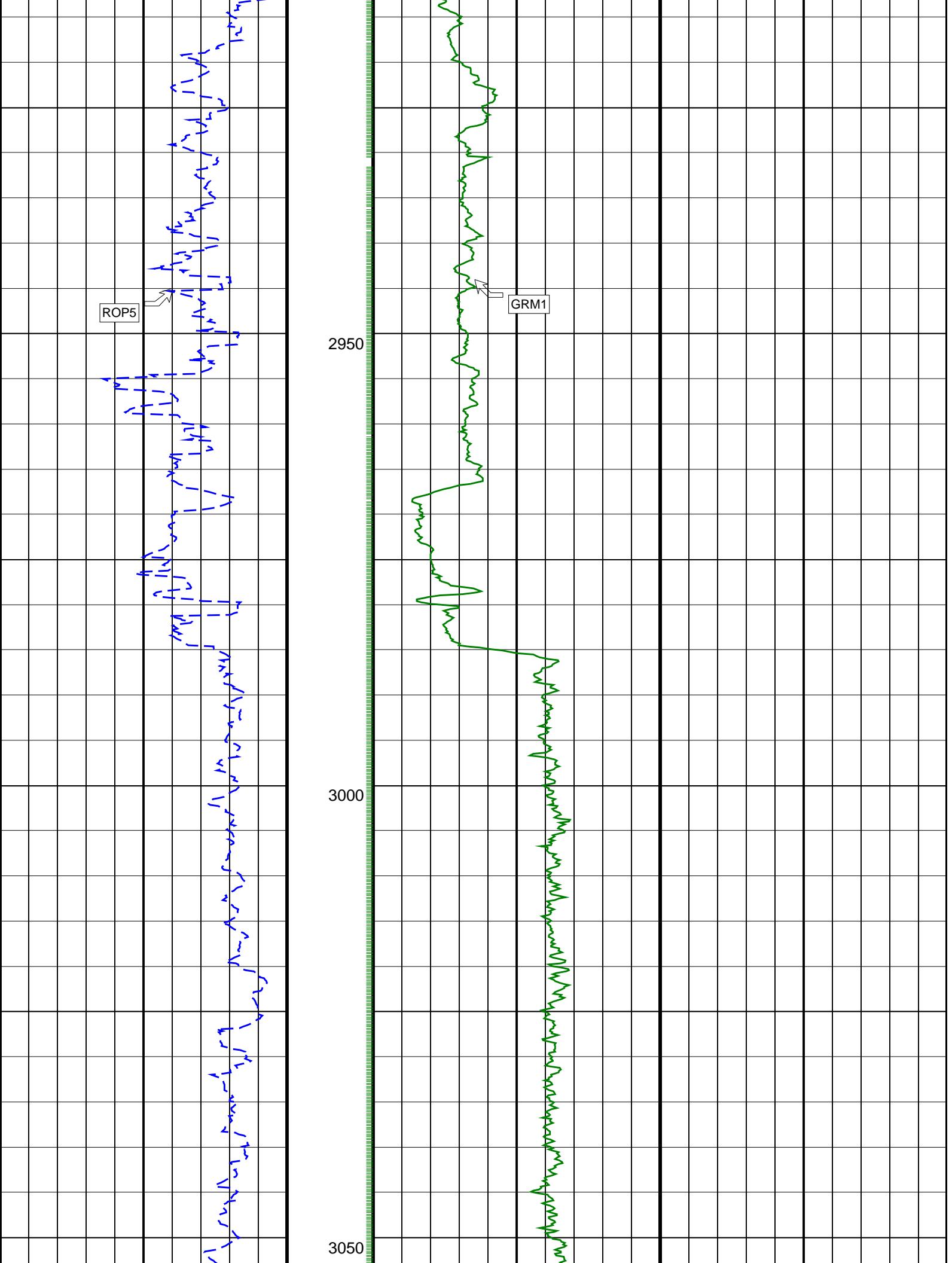
**GRM1**

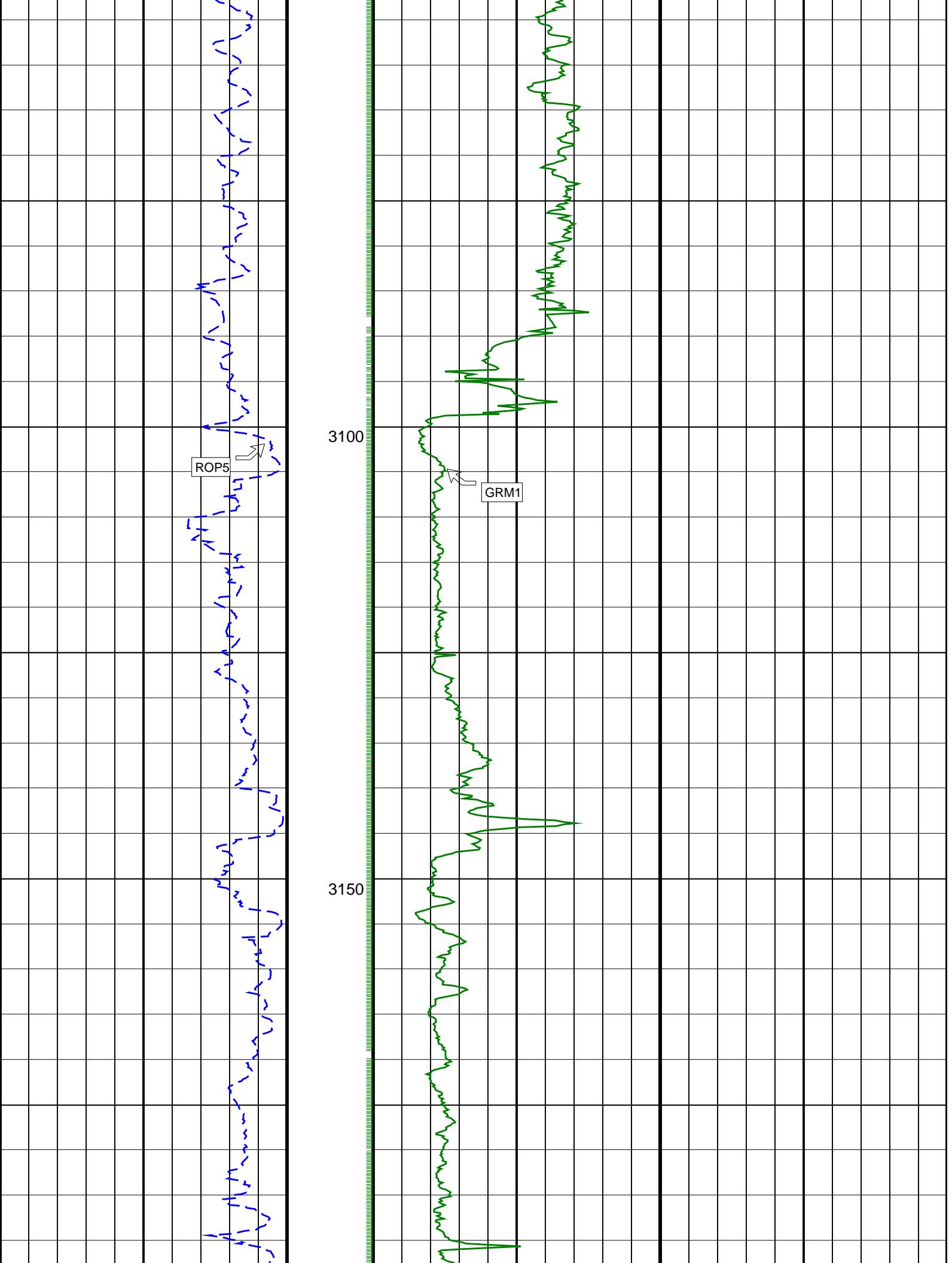
This panel shows the genomic structure of the GRM1 gene. It features a large central green dashed box representing the intron, flanked by several smaller black boxes representing exons. A white arrow points to the first exon.

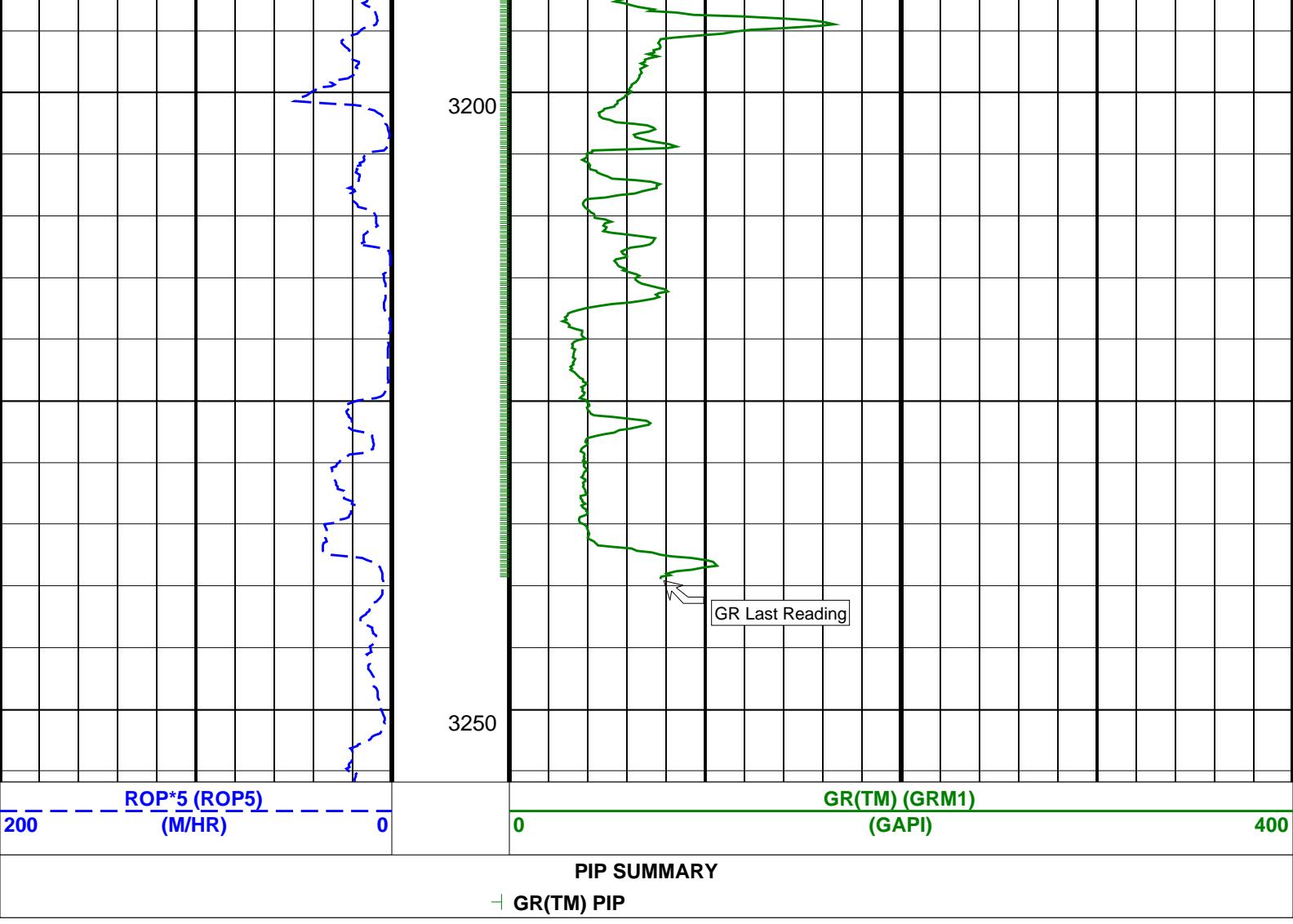
2800

2850

2900







SCHLUMBERGER

Survey report

12-Feb-2006 21:25:04

Page 1 of 4

Client.....: ESSO Australia Pty. Ltd.  
Field.....: Bream A

Well.....: BMA A6A  
API number.....:  
Engineer.....: L. Johnston/ B. Pattarakorn

Rig:.....: ISDL 453  
State:.....: Victoria

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

----- Depth reference -----  
Permanent datum.....: Mean Sea Level  
Depth reference.....: Driller's Depth  
GL above permanent.....: -59.40 m  
KB above permanent.....: Top Drive  
DF above permanent.....: 32.82 m

----- Vertical section origin-----  
Latitude (+N/S-). ....: -0.97 m  
Departure (+E/W-). ....: 10.62 m

Azimuth from Vsect Origin to target: 131.68 degrees

Spud date.....: 1-Feb-06  
Last survey date.....: 12-Feb-06  
Total accepted surveys....: 86  
MD of first survey.....: 852.58 m  
MD of last survey.....: 3256.00 m

----- Geomagnetic data -----  
Magnetic model.....: BGGM version 2005  
Magnetic date.....: 31-Jan-2006  
Magnetic field strength...: 1202.69 HCNT  
Magnetic dec (+E/W-). ....: 13.07 degrees  
Magnetic dip.....: -69.04 degrees

----- MWD survey Reference Criteria -----  
Reference G.....: 1000.05 mGal  
Reference H.....: 1202.69 HCNT  
Reference Dip.....: -69.04 degrees  
Tolerance of G.....: (+/-) 2.50 mGal  
Tolerance of H.....: (+/-) 6.00 HCNT  
Tolerance of Dip.....: (+/-) 0.45 degrees

----- Corrections -----  
Magnetic dec (+E/W-). ....: 13.07 degrees  
Grid convergence (+E/W-). ....: -0.48 degrees  
Total az corr (+E/W-). ....: 13.55 degrees  
(Total az corr = magnetic dec - grid conv)  
Survey Correction Type ...:  
I=Sag Corrected Inclination  
M=Schlumberger Magnetic Correction  
S=Shell Magnetic Correction  
F=Failed Axis Correction  
R=Magnetic Resonance Tool Correction  
D=Dmag Magnetic Correction



70	2832.94	66.35	142.38	28.60	1814.47	1538.71	-972.46	1205.87	1549.13	128.88	1.49	MWD	None
71	2861.63	65.67	142.19	28.69	1826.14	1564.48	-993.20	1221.91	1574.64	129.11	0.75	MWD	None
72	2890.41	65.13	142.02	28.78	1838.12	1590.21	-1013.85	1237.98	1600.15	129.32	0.59	MWD	None
73	2918.90	66.35	141.65	28.49	1849.82	1615.78	-1034.27	1254.03	1625.52	129.51	1.35	MWD	None
74	2947.54	66.26	141.88	28.64	1861.33	1641.60	-1054.87	1270.26	1651.15	129.71	0.24	MWD	None
75	2975.95	66.04	141.64	28.41	1872.82	1667.18	-1075.28	1286.34	1676.57	129.89	0.33	MWD	None
76	3004.70	65.63	141.74	28.75	1884.59	1693.01	-1095.86	1302.61	1702.26	130.07	0.45	MWD	None
77	3033.57	65.06	141.16	28.87	1896.63	1718.87	-1116.38	1318.96	1727.99	130.24	0.82	MWD	None
78	3062.00	64.59	141.98	28.43	1908.73	1744.22	-1136.53	1334.95	1753.22	130.41	0.94	MWD	None
79	3090.72	64.37	141.76	28.72	1921.10	1769.73	-1156.92	1350.95	1778.63	130.58	0.31	MWD	None
80	3119.45	64.04	141.80	28.73	1933.60	1795.19	-1177.24	1366.96	1804.01	130.74	0.35	MWD	None
81	3148.18	64.00	141.66	28.73	1946.19	1820.62	-1197.52	1382.95	1829.37	130.89	0.14	MWD	None
82	3176.79	63.78	141.55	28.61	1958.78	1845.93	-1217.65	1398.91	1854.62	131.04	0.26	MWD	None
83	3205.75	63.12	141.38	28.96	1971.72	1871.46	-1237.92	1415.05	1880.11	131.18	0.71	MWD	None
84	3234.70	62.78	140.68	28.95	1984.89	1896.90	-1257.96	1431.26	1905.51	131.31	0.75	MWD	None
85	3256.00	62.55	140.21	21.30	1994.67	1915.60	-1272.55	1443.31	1924.20	131.40	0.68	Proj.	to TD

[(c)2006 IDEAL TD11\_0C\_01]

Company: **ESSO Australia Pty. Ltd.**

**Schlumberger**

Well: **BMA A6A**

Field: **Bream A**

Rig: **ISDL 453**

State: **Victoria**

**Gamma Ray Service  
1:500 Measured Depth  
Real Time Log**