

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

Well: **BMA A9B**Field: **Bream A**

Rig: ISDL 453

State: **Victoria**

Gamma Ray Service  
1:200 Measured Depth  
Real Time Log

Rig:		ISDL 453	
Field:		Bream A	
Location:		Bass Strait	
Well:		BMA A9B	
Company:		ESSO Australia Pty. Ltd.	
<div>Gamma Ray Service</div> <div>1:200 Measured Depth</div> <div>Real Time Log</div>			
Location			
Total depth:	2283.0 m		
Spud date:	26 Feb 2006		
Runs:	1 To 2	Elevation	K.B. Top Drive G.L. -59.40 m D.F. 32.82 m
Permanent datum:	Mean Sea Level	Elev.: 0.0 m	
Log measured from:	Drill Floor	32.82 m above Perm. datum	
Depth reference:	Driller's Depth		
Service Order no.	Y = 5738460.92 m	Longitude	Latitude
06ASQ0002	X = 567353.50 m	E147° 46' 20.685"	S38° 29' 58.800"

## Bit Run Summary

Run number		1	2							
Bit size	in	8.5	8.5							
Bit start depth	m	1756.0	1769.0							
Bit end depth	m	1769.0	2283.0							
Top interval logged	m	1736.4	1756.0							
Bottom interval logged	m	1749.4	2264.4							
Begin log: time		27-Feb-06	01-Mar-06							
Begin log: date		20:00	16:00							
End log: time		01-Mar-06	03-Mar-06							
End log: date		0:00	14:15							
<b>Mud data</b>										
Depth	m	1769.0	2283.0							
Type		KCl/PHPA/Gly.	KCl/PHPA/Gly.							
Mud weight	ppg	9.70	10.00							
Solids	%	4.6	7.1							
Chlorides	mg/L	45,000	43,000							
Rm		N/A	N/A							
Rmf		N/A	N/A							
Rmc		N/A	N/A							

Potassium	%	8.2	8.1								
<b>Environmental data</b>											
<b>GR</b>											
Mud weight	ppg	9.70	10.00								
Bit size	in	8.5	8.5								
<b>Resistivity</b>											
<b>Neutron porosity</b>											
Hole Size		N/A	N/A								
Mud weight		N/A	N/A								
Temperature		N/A	N/A								
Mud salinity		N/A	N/A								
Formation salinity		N/A	N/A								
Recording rate 1	SEC	3.83	3.83								
Recording rate 2	SEC	N/A	N/A								
Filtering GR		3 pt.	3 pt.								
Filtering density		N/A	N/A								
Filtering Neutron		N/A	N/A								
Company representative		G. Campbell	B. Davis	T. Bassett							
Schlumberger D&M Personnel		B. Pattarakorn	C. Skiba	C. Soper	B. Manjenic						

<p style="text-align: center;"><b>DISCLAIMER</b></p> <p>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.</p>		
<b>OTHER SERVICES FOR RUN1</b> Directional Survey	<b>OTHER SERVICES FOR RUN2</b> Directional Drilling Directional Survey	<b>OTHER SERVICES FOR RUN</b>
<b>REMARKS: RUN NUMBER 1</b> 8-1/2 in. hole was drilled from 1756.0m to 1769.0m MD  Depth is referenced to Driller's Depth  Mud type is KCl/PHPA/Glycol.  PowerPulse is used for orientation Whipstock.  Tool failed from 23:15 on 27 Feb 06 to 14:00 on 28 Feb 06 due to high shock level while milling window  Tool started working again at 14:00 on 28 Feb 06 till the end of Run1  POOH due to change BHA assembly	<b>REMARKS: RUN NUMBER 2</b> 8-1/2 in. hole was drilled from 1769.0m to 2283.0m MD  Depth is referenced to Driller's Depth  Mud type is KCl/PHPA/Glycol.  Gamma Ray not corrected for Potassium  Gamma Ray corrected for Tool Size, Bit Size and Mud Weight.  POOH due to TD of BMA A9B	<b>REMARKS: RUN NUMBER</b>

<b>EQUIPMENT DESCRIPTION</b>		
<b>RUN1</b>	<b>RUN2</b>	<b>RUN</b>
DOWNHOLE EQUIPMENT	DOWNHOLE EQUIPMENT	

# DOWNHOLE EQUIPMENT

# DOWNHOLE EQUIPMENT

6 3/4 in. PowerPulse  
MDC: Z411  
MEC: 1533  
MDI: 1565  
MGR: 565  
DHS: V8.0B96

D&I 20.29  
GR 19.64

5" HWDP  
OD 6 3/8 in.

8-1/2 in. WaterMelon Mill  
S/N: TSV6764

4-7/8 in. Flex Jt.  
S/N: TSV6727

8-1/2 in. WaterMelon Mill  
S/N: TSV6766

BOT Window Mill  
S/N: TSP52105  
OD: 8-1/2 in.

Maximum string diameter 8.50 in.  
All lengths in Meters

6 3/4 in. PowerPulse  
MDC: 401AB  
MEC: 1540  
MDI : 1556  
MGR: 146  
DHS: V8.0B96

D&I 19.21  
GR 18.56

6-5/8 in. NM Pony DC w/Float  
SN: 9612058

6-5/8 in. NM Pony DC  
SN: 97081023

8-3/8 in. NM Roller Reamer  
SN: GU2298

7 in. PowerPak\* Motor  
A700GT 7:8  
SN: N7310  
1.5 deg. Bent Housing  
8-3/8 in. Motor Sleeve

Smith PDC Bit  
S73PX S/N: JT6968A  
OD: 8-1/2 in.

Maximum string diameter 8.50 in.  
All lengths in Meters

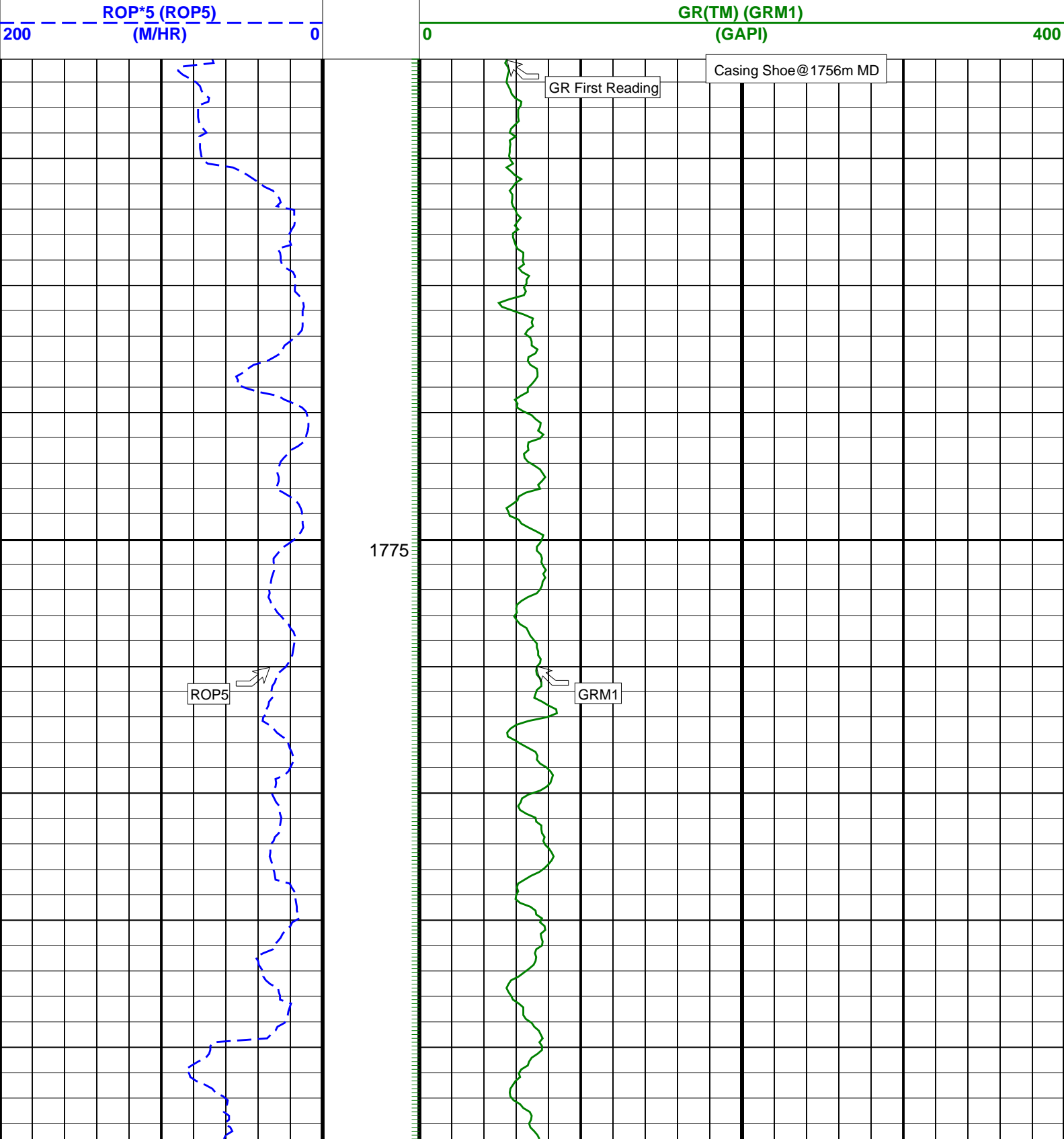
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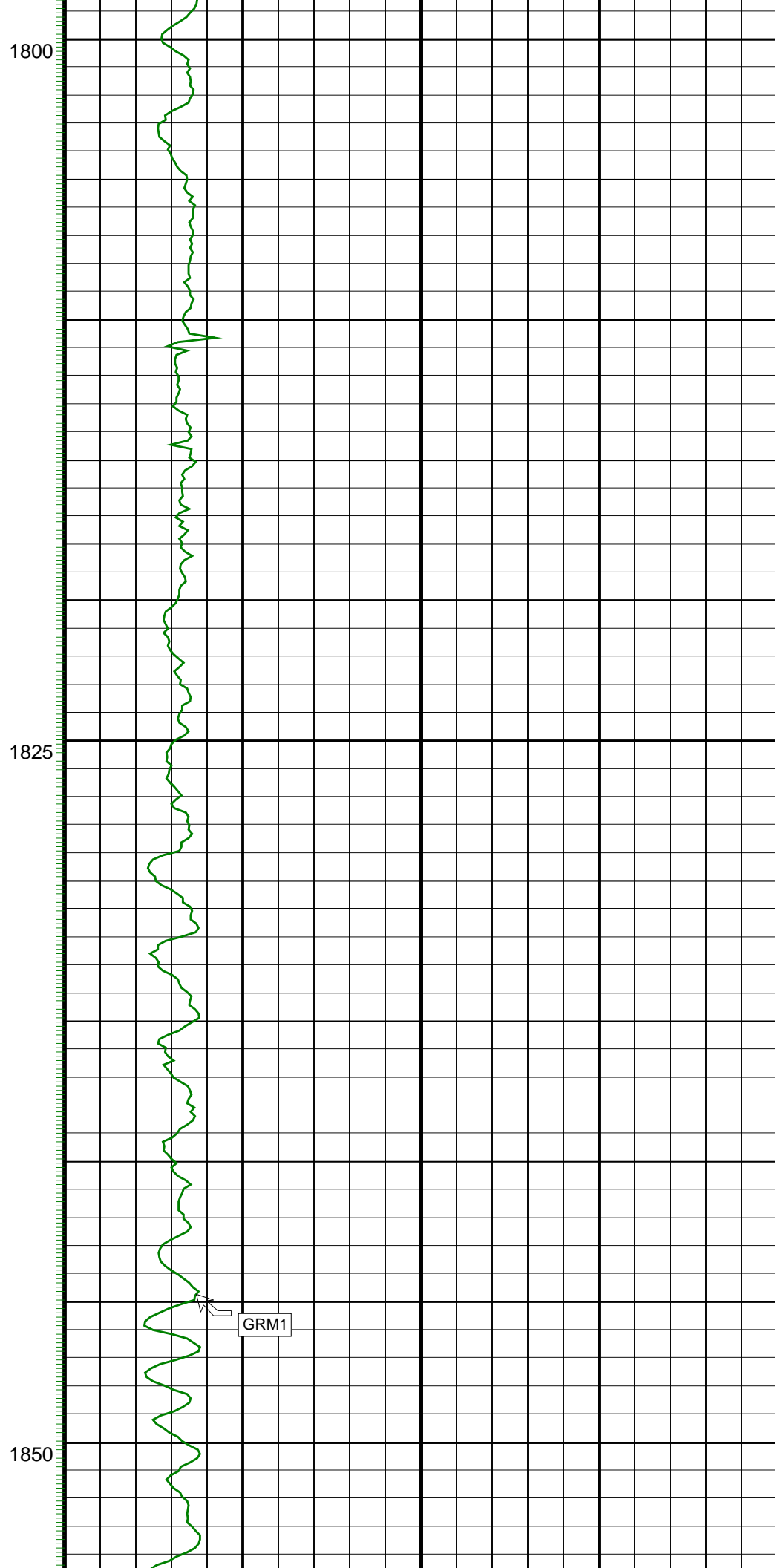
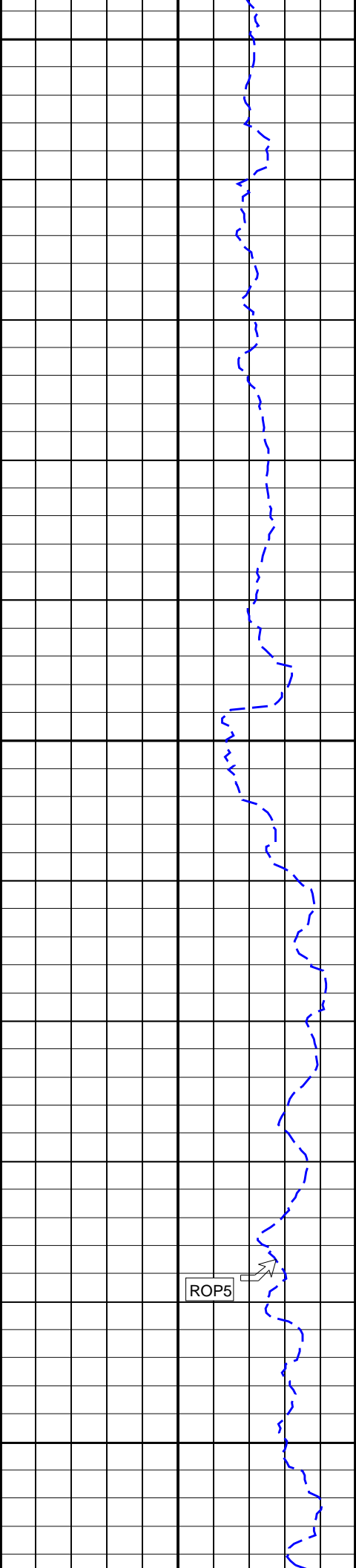
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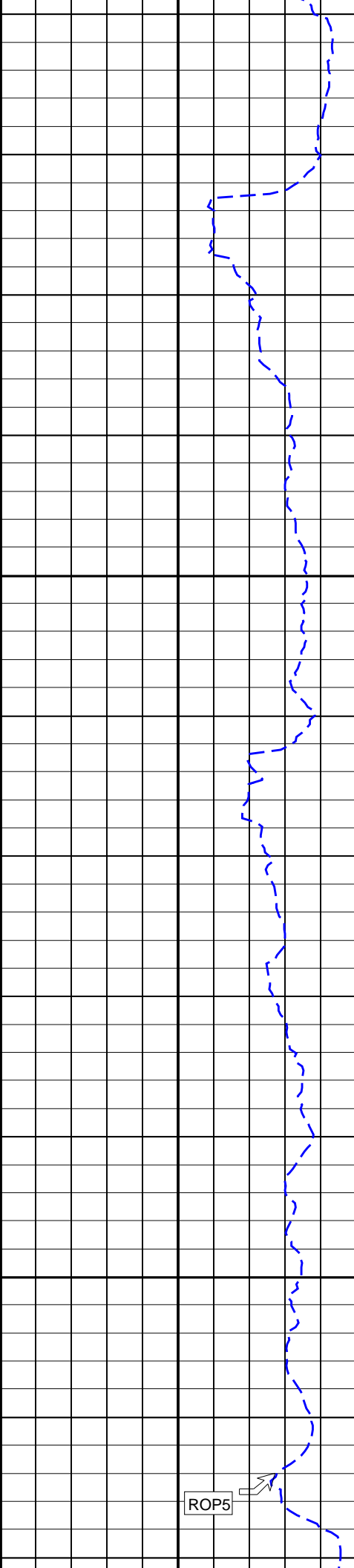
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## PIP SUMMARY

GR(TM) PIP

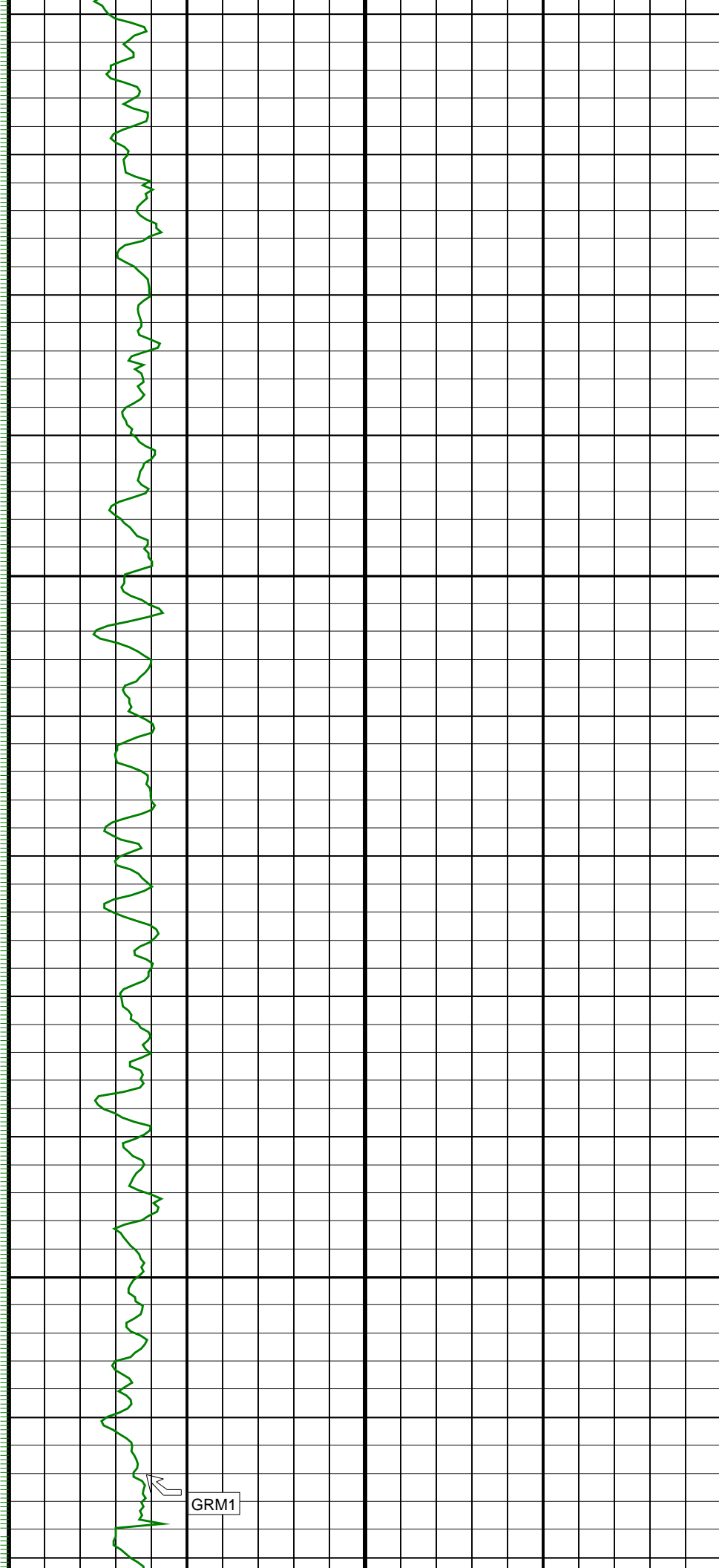


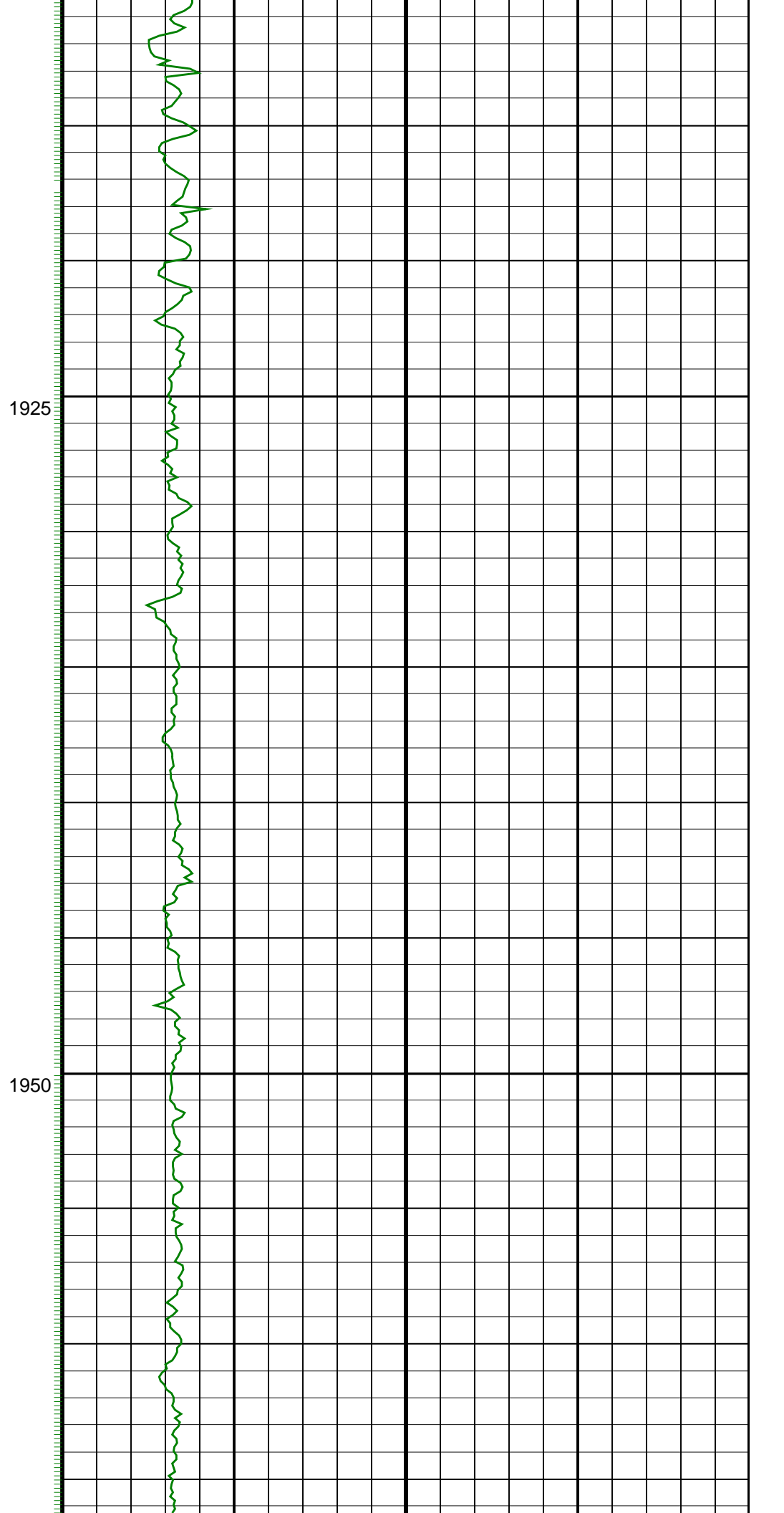
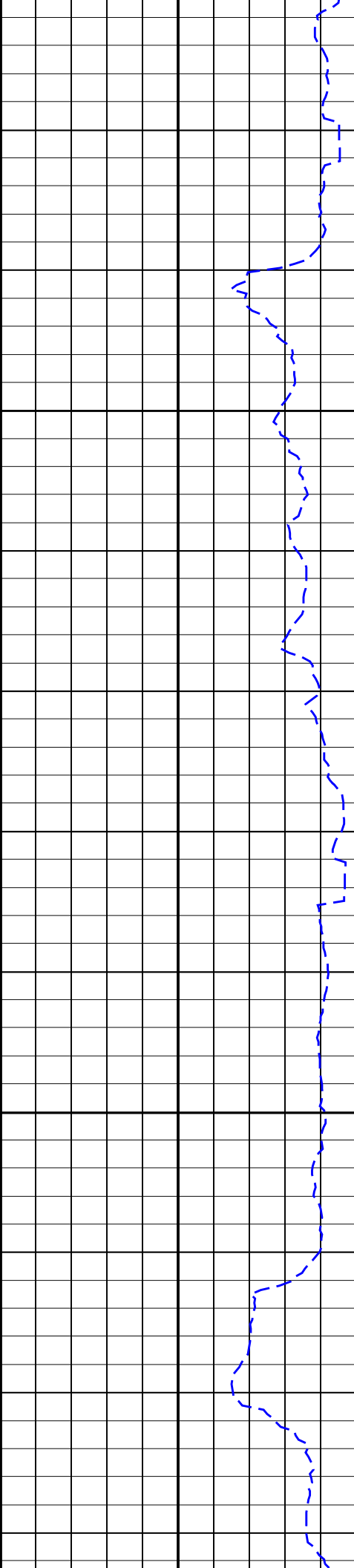




1875

1900



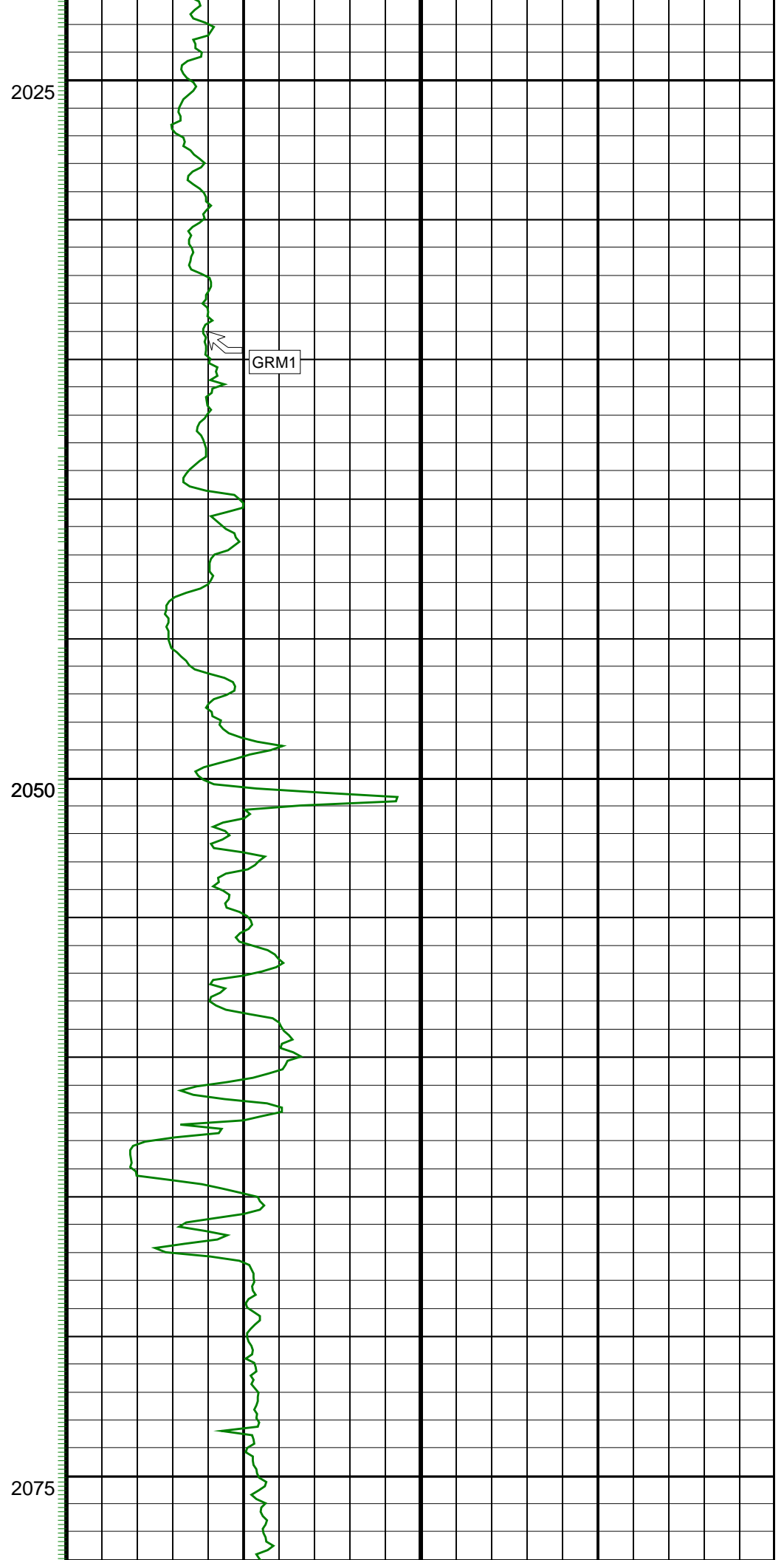
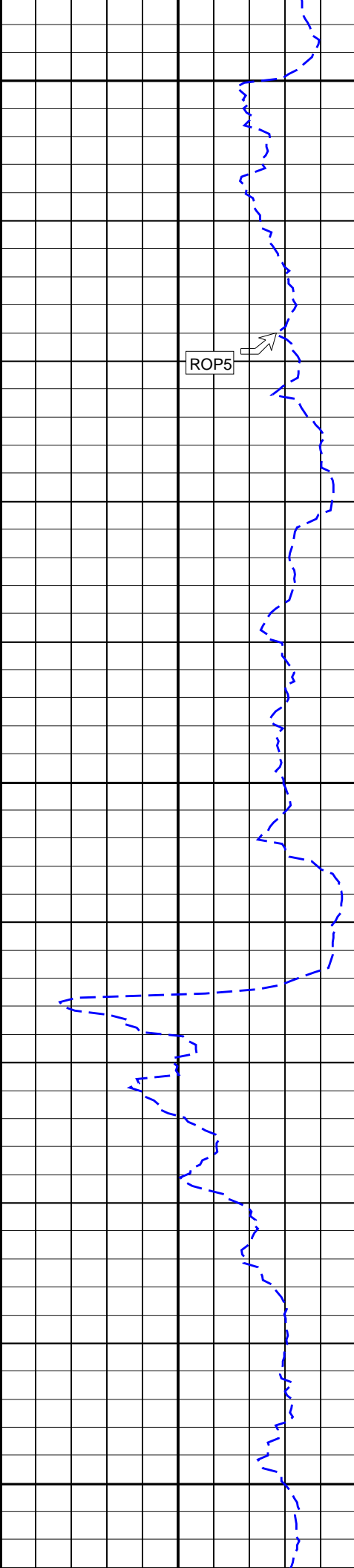




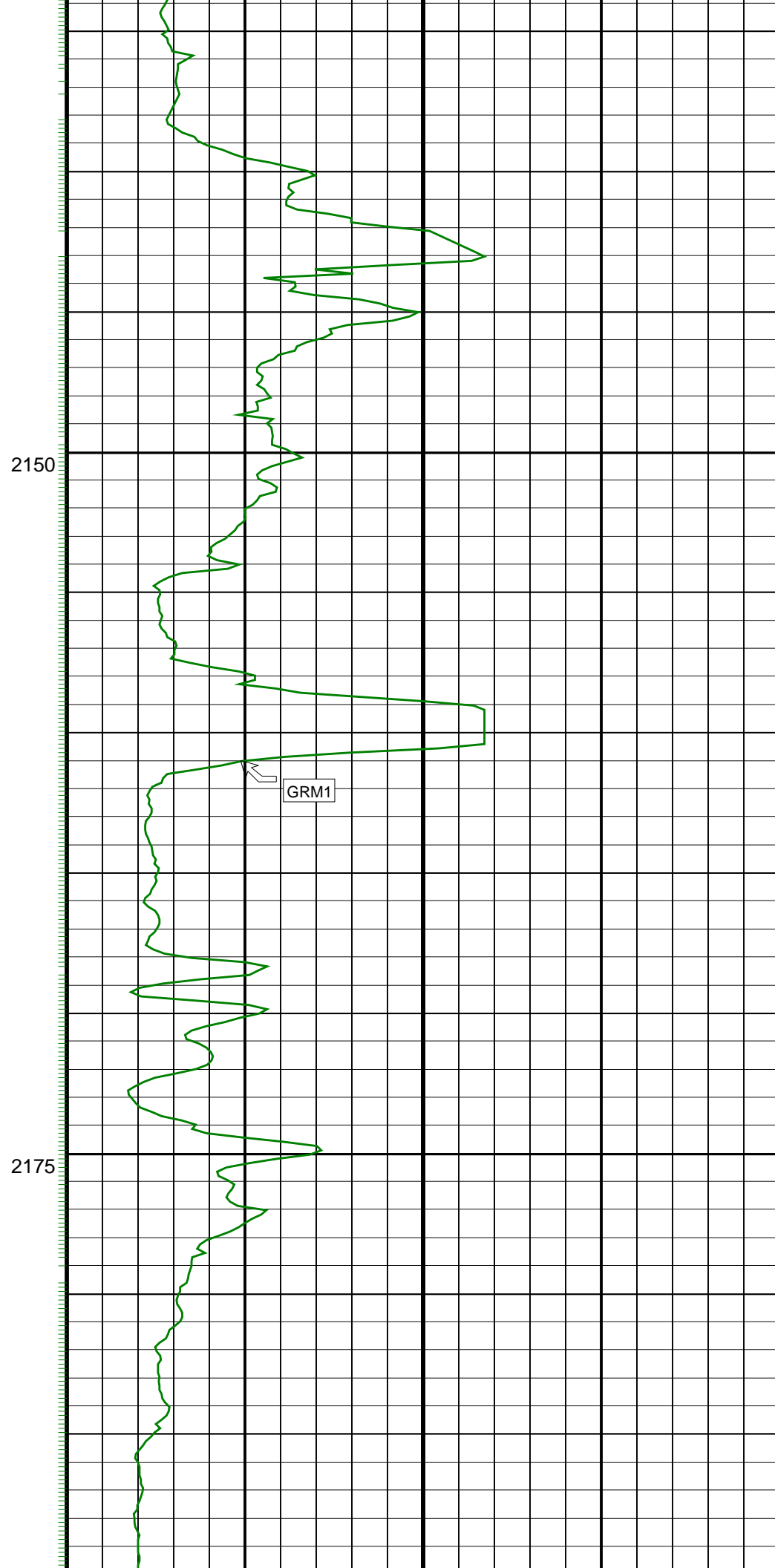
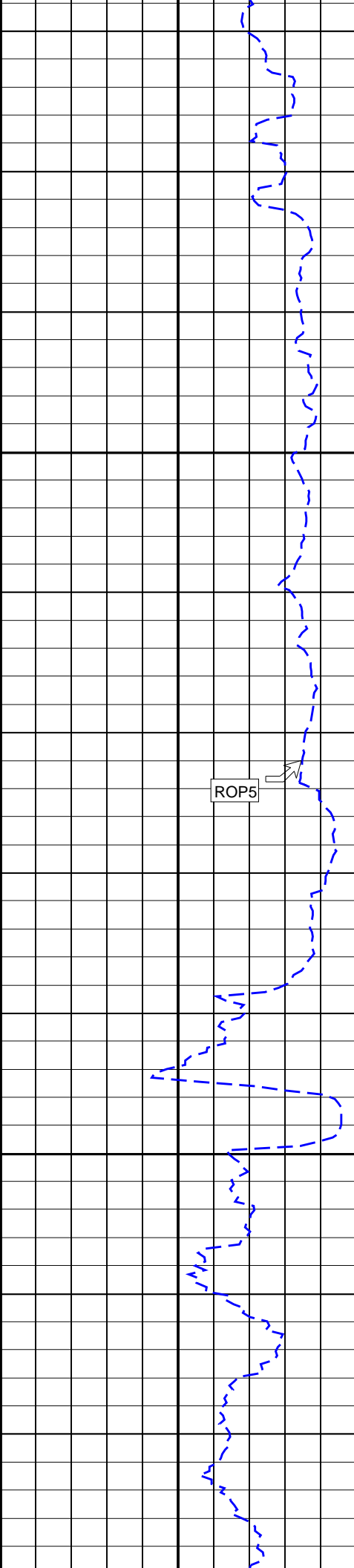
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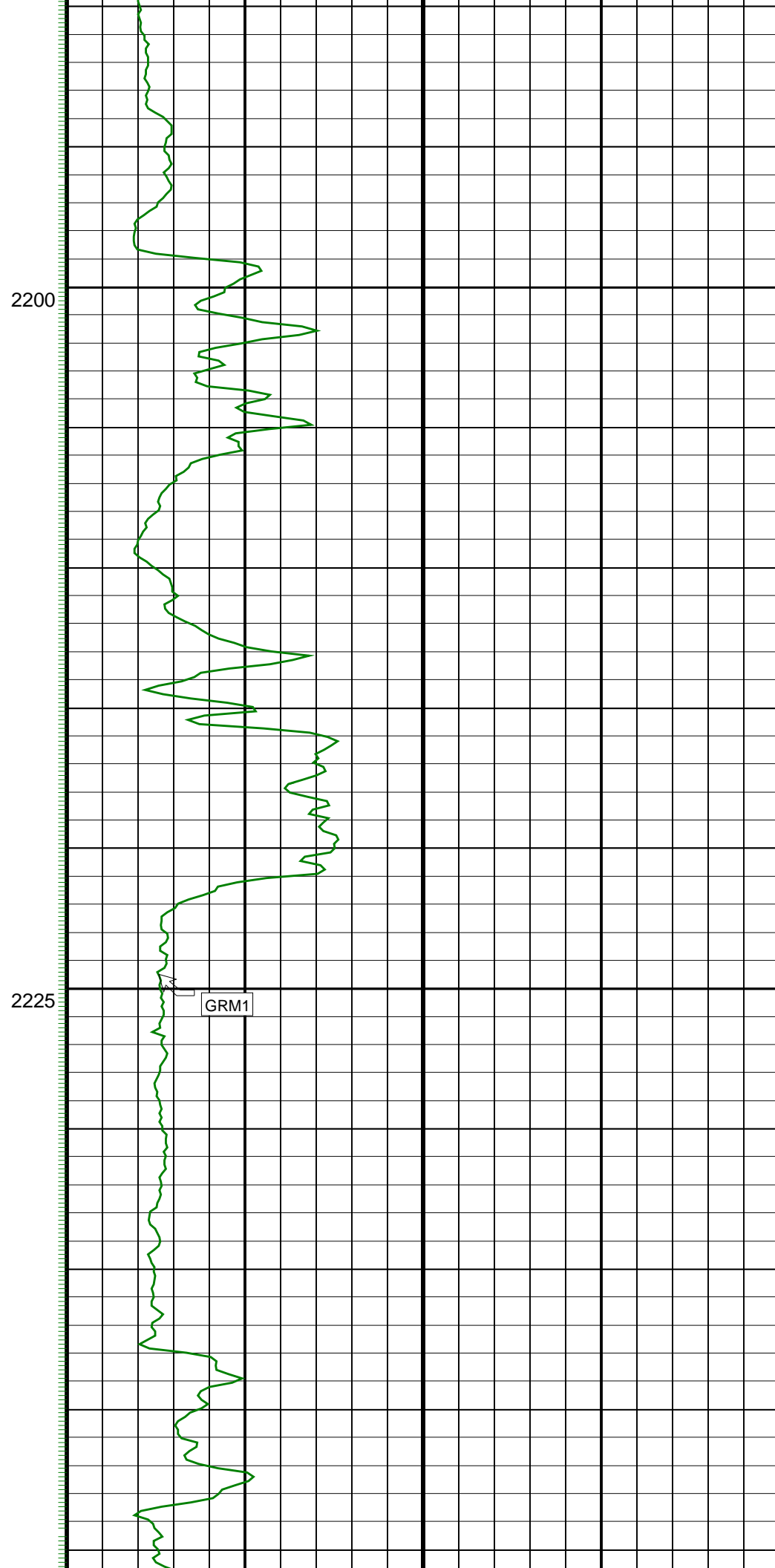
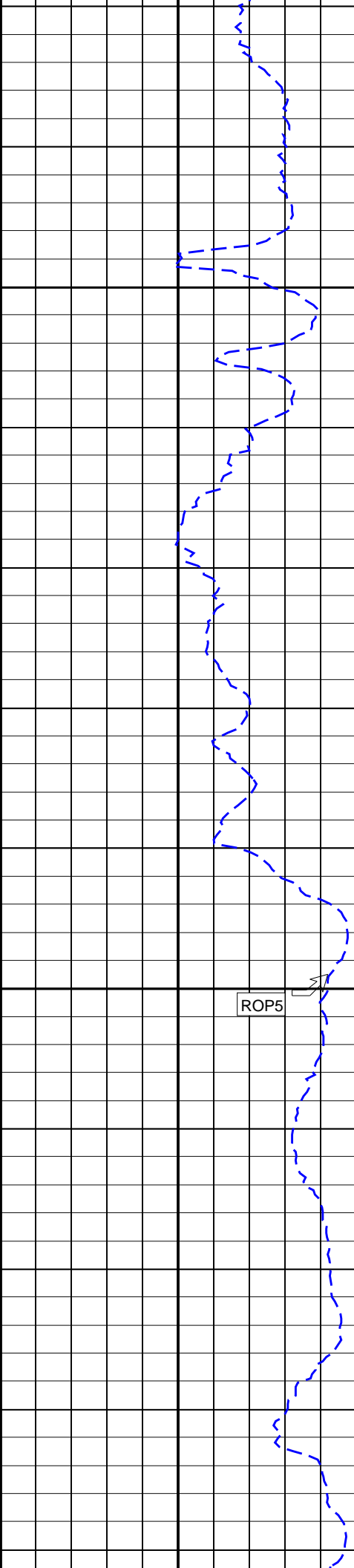


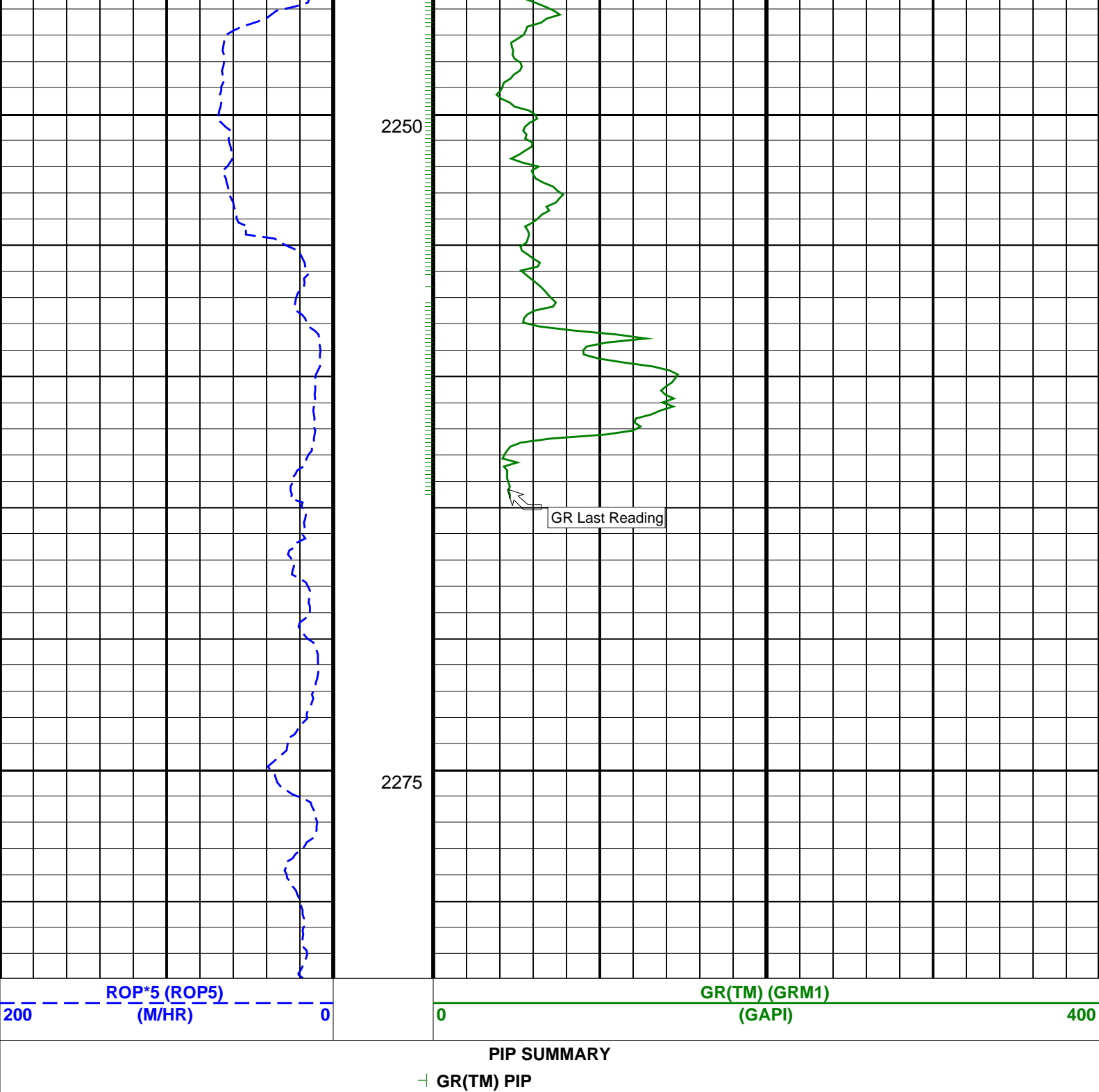












SCHLUMBERGER

Survey report

3-Mar-2006 17:21:45

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

Well..... BMA A9B  
API number.....  
Engineer..... B. Pattarakorn/ C. Skiba

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

Spud date..... 26-Feb-06  
Last survey date..... 03-Mar-06  
Total accepted surveys... 19  
MD of first survey..... 1750.00 m  
MD of last survey..... 2283.00 m

----- 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

----- Geomagnetic data -----  
Magnetic model..... BGM version 2005  
Magnetic date..... 27-Feb-2006  
Magnetic field strength... 1202.65 HCNT  
Magnetic dec (+E/W-)..... 13.07 degrees  
Magnetic dip..... -69.03 degrees

----- MWD survey Reference Criteria -----  
Reference G..... 1000.05 mG-l

RB above permanent..... 10p Drive  
DF above permanent..... 32.82 m

----- Vertical section origin-----

Latitude (+N/S-)..... 0.00 m  
Departure (+E/W-)..... 0.00 m

Azimuth from Vsect Origin to target: 118.48 degrees

Reference G..... 1000.05 mGal  
Reference H..... 1202.65 HCNT  
Reference Dip..... -69.03 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

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SCHLUMBERGER Survey Report

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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/ 100f)	Srvy tool type	Tool Corr (deg)
1	1750.00	47.90	131.86	0.00	1563.40	499.77	-320.04	394.95	508.34	129.02	0.00	TIP	None
2	1802.08	41.64	118.76	52.08	1600.44	535.98	-341.32	424.60	544.78	128.79	6.51	MWD	None
3	1830.98	40.06	118.17	28.90	1622.30	554.88	-350.34	441.22	563.39	128.45	1.72	MWD	None
4	1859.93	35.88	113.15	28.95	1645.12	572.66	-358.07	457.24	580.76	128.07	5.47	MWD	None
5	1888.74	35.29	112.55	28.81	1668.55	589.34	-364.58	472.69	596.96	127.64	0.73	MWD	None
6	1917.12	35.15	108.55	28.38	1691.74	605.54	-370.33	488.01	612.61	127.19	2.48	MWD	None
7	1945.54	35.56	102.97	28.42	1714.92	621.57	-374.79	503.82	627.93	126.65	3.49	MWD	None
8	1974.64	35.32	94.19	29.10	1738.64	637.40	-377.30	520.47	642.84	125.94	5.33	MWD	None
9	2002.88	35.08	86.13	28.24	1761.73	651.70	-377.35	536.71	656.09	125.11	5.02	MWD	None
10	2032.39	34.45	85.45	29.51	1785.98	665.87	-376.12	553.50	669.19	124.20	0.76	MWD	None
11	2061.28	34.02	84.79	28.89	1809.86	679.44	-374.73	569.69	681.89	123.34	0.60	MWD	None
12	2090.26	33.53	82.66	28.98	1833.95	692.68	-372.98	585.70	694.38	122.49	1.35	MWD	None
13	2119.28	33.52	82.38	29.02	1858.14	705.65	-370.89	601.59	706.73	121.65	0.16	MWD	None
14	2148.28	33.68	81.84	29.00	1882.30	718.57	-368.69	617.49	719.18	120.84	0.36	MWD	None
15	2177.09	33.73	81.36	28.81	1906.26	731.36	-366.35	633.31	731.63	120.05	0.29	MWD	None
16	2205.90	33.69	80.36	28.81	1930.23	744.02	-363.81	649.09	744.10	119.27	0.59	MWD	None
17	2234.50	33.78	81.17	28.60	1954.01	756.59	-361.26	664.77	756.59	118.52	0.49	MWD	None
18	2263.78	33.72	79.83	29.28	1978.36	769.41	-358.58	680.81	769.47	117.78	0.78	MWD	None
19	2283.00	33.70	79.80	19.22	1994.35	777.74	-356.69	691.31	777.91	117.29	0.04	Proj.	to TD

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

**Schlumberger**

Well: **BMA A9B**

Field: **Bream A**

Rig: **ISDL 453**

State: **Victoria**

**Gamma Ray Service**

**1:200 Measured Depth**

**Real Time Log**

