

Schlumberger

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

Well: **WKF W18A**

Field: **West Kingfish**

Rig: **ISDL 453**

State: **Victoria**

Gamma Ray Service
1·200 Measured Depth

Real Time Log

Rig:	ISDL 453				
Field:	West Kingfish				
Location:	Bass Strait				
Well:	WKF W18A				
Company:	ESSO Australia Pty. Ltd.				
Total depth:	2710.0 m		K.B.	Top Drive	
Spud date:	23-Apr-06		G.L.	-76.13 m	
Runs:	1		D.F.	33.43 m	
Location	Permanent datum: Mean Sea Level				
Log measured from:	Drill Floor		Elev.:	0 m	
Depth reference:	Drillers Depth				

API serial no.

5727808.151

596279.965

Longitude
E143°6'20.025"

Latitude
S38°35'34.782"

Depth logged:

651.0 m To 2690.5 m

24-Apr-06 To 29-Apr-06

Mag decl:

13.287 deg.

Other services:
Directional Drilling, D&l

Date logged:

651.0 m To 2710.0 m

24-Apr-06 To 29-Apr-06

Mag dip:

-69.045 deg.

Bore hole record

Hole size

from 651.0 m

to 2710.0 m

Size 10 3/4 in.

Density 40.5 lb/ft

from 13.0 m

to 651.0 m

Casing record

Mud record

from 651.0 m

to 2710.0 m

Min 27.15 deg.

Max 35.88 deg.

from 651.0 m

to 2710.0 m

Borehole deviation record

Type

KCL/PHPA/Glycol

from 651.0 m

to 2710.0 m

Min 27.15 deg.

Max 35.88 deg.

from 651.0 m

to 2710.0 m

Surface equipment

Software record

Unit	OLU-JA-9602	IDEAL Wis	ID11_0C_01		
Depth system	DES-CA-ASQ04-01SPM	LWD	N/A		

Bit Run Summary

Run number	1				
Bit size	in	8.5			
Bit start depth	m	651.0			
Bit end depth	m	2710.0			
Top interval logged	m	651.0			
Bottom interval logged	m	2690.5			
Begin log: time		0:30			
Begin log: date		23-Apr-06			
End log: time		10:19			
End log: date		29-Apr-06			
Mud data					
Depth	m	2710.0			
Type		KCL/PHPA/Gly			
Mud weight	ppg	10.05			
Solids	%	8.0			
Chlorides	mg/l	41,000			
Rm		N/A			
Rmf		N/A			
Rmc		N/A			

Potassium	%	4.2						
Environmental data								
GR								
Mud weight	ppg	10.05						
Bit size	in	8.5						
Resistivity								
Neutron porosity								
Hole Size		N/A						
Mud weight		10.05						
Temperature		N/A						
Mud salinity		N/A						
Formation salinity		N/A						
Recording rate 1	SEC	2.97						
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.Basset					
Schlumberger D&M Personnel	L.Johnston	R.Burns	C.Soper	A.Tovar				

DISCLAIMER

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OTHER SERVICES FOR RUN1 Directional Drilling Directional Surveys	OTHER SERVICES FOR RUN	OTHER SERVICES FOR RUN
REMARKS: RUN NUMBER 1 Depth is referenced to Drillers Depth. All data presented is from Real-Time Transmission. Enviromental Corrections: – Gamma Ray was Corrected for Mud Weight, Tool and Bit Size. Gamma Ray is not corrected for Potassium. 8–1/2 in. hole was drilled from 651.0 m to 2710.0 m MD. Gamma Ray Data loss between 1530.0 and 1571.0 m MD and ROP data loss between 1549.0 and 1590.0 m MD due to Hookload Sensor failure.	REMARKS: RUN NUMBER	REMARKS: RUN NUMBER

EQUIPMENT DESCRIPTION

RUN1	RUN	RUN
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DOWNHOLE EQUIPMENT

6-3/4 in. PowerPulse*		23.48
MDC: V875		
MEC: BA 064		
MDI: BC 738		
MGR: AA 503		
DHS: V8.0B96		
D&I	—	19.12
GR	—	18.47
6-1/2 in. NM Pony		14.98
S/N: 97081023		
8-3/8 in. NM Roller Reamer		13.74
S/N: GU2317R		
6-1/2 in. NM Pony		11.75
S/N: ANA98-007		
7 in. PowerPak* Motor		9.14
A700GT 7:8		
S/N: N7413		
1.5 deg. Bent Housing		
8-3/8 in. Motor Sleeve		
Smith PDC Bit	—	0.00
OD: 8-1/2 in.		
S73PX S/N: JT6967 R3		

Maximum string diameter 8.50 in.

All lengths in Metres

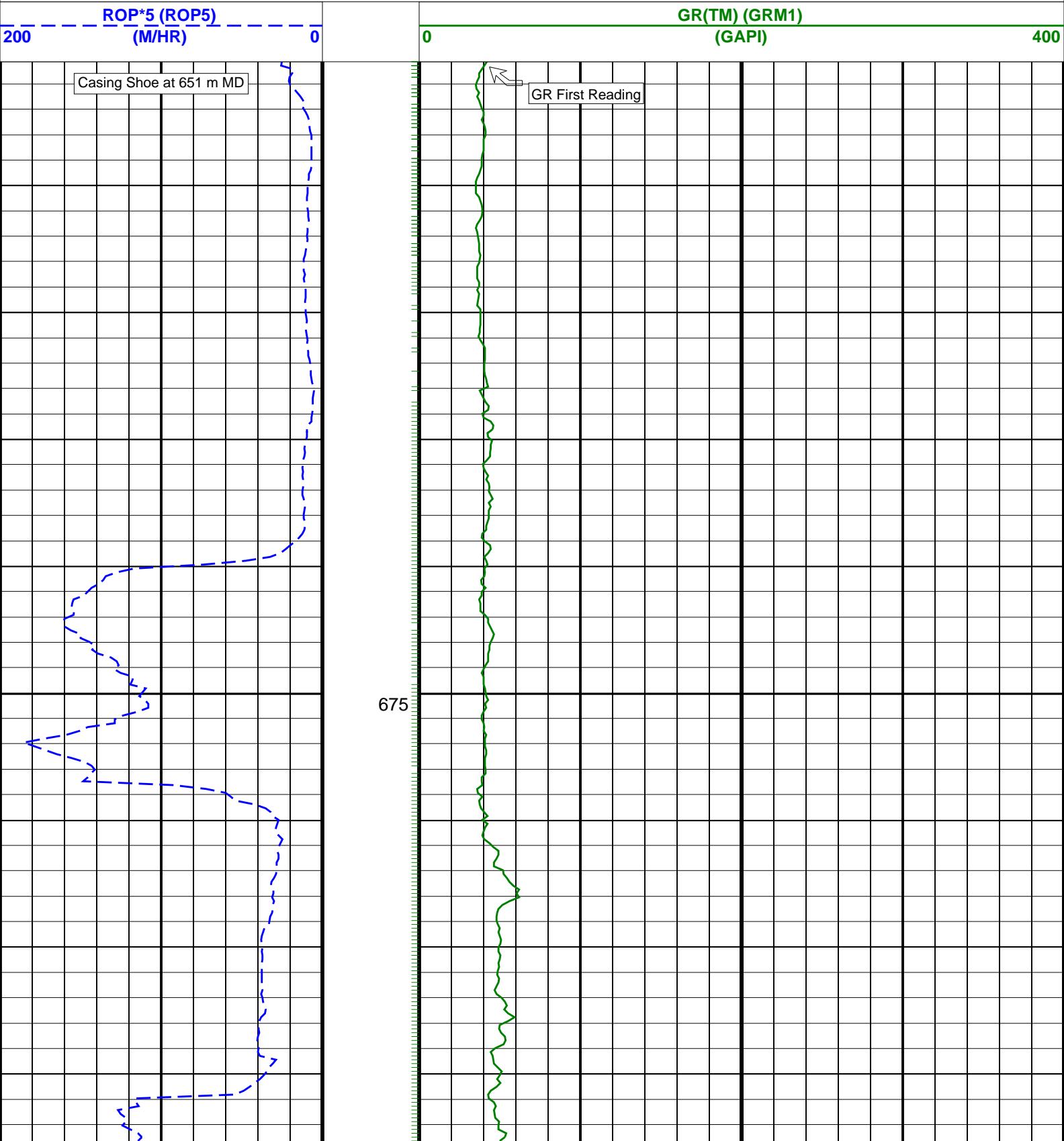
WKF W18A RT 1:200 MD

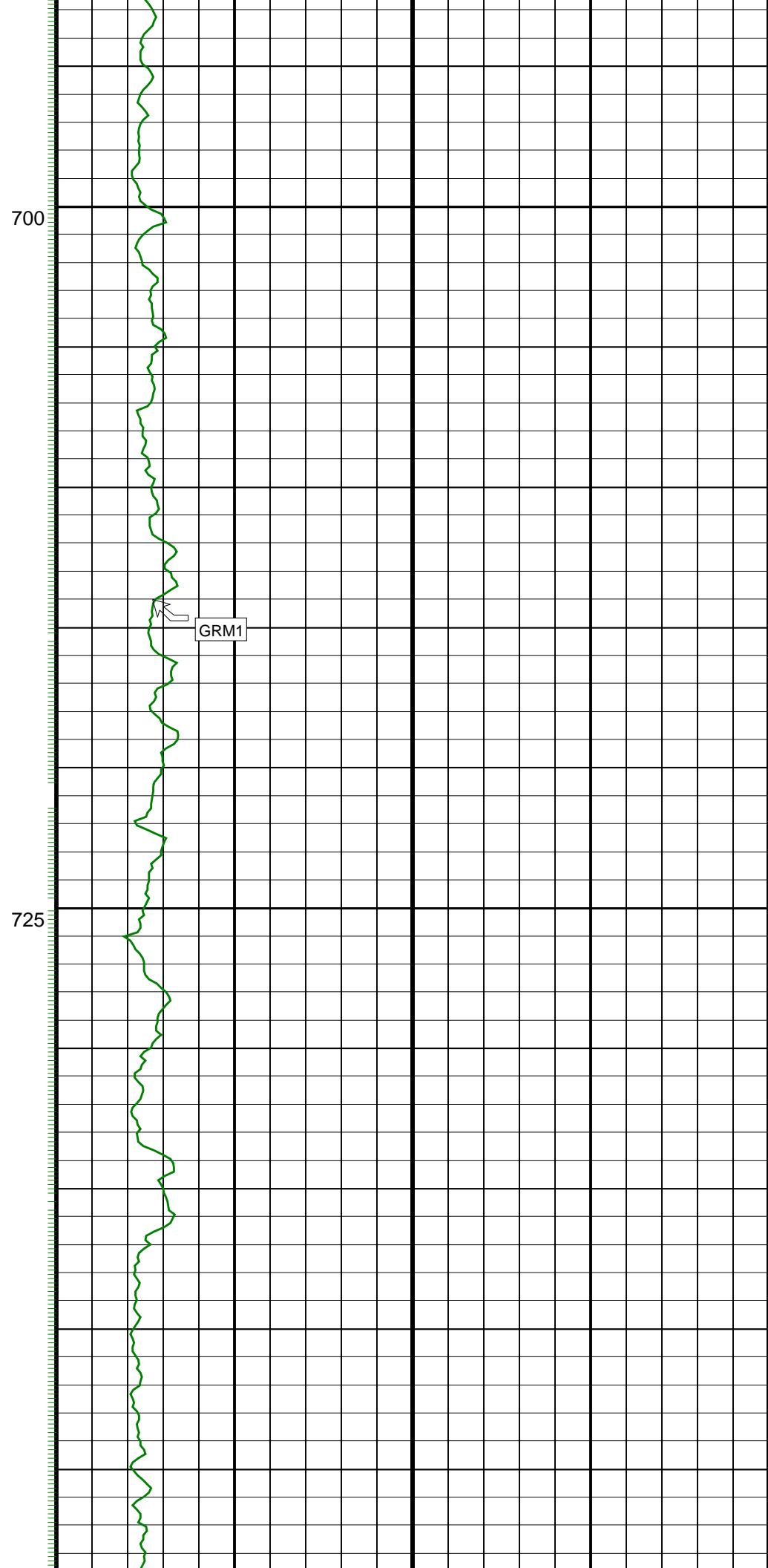
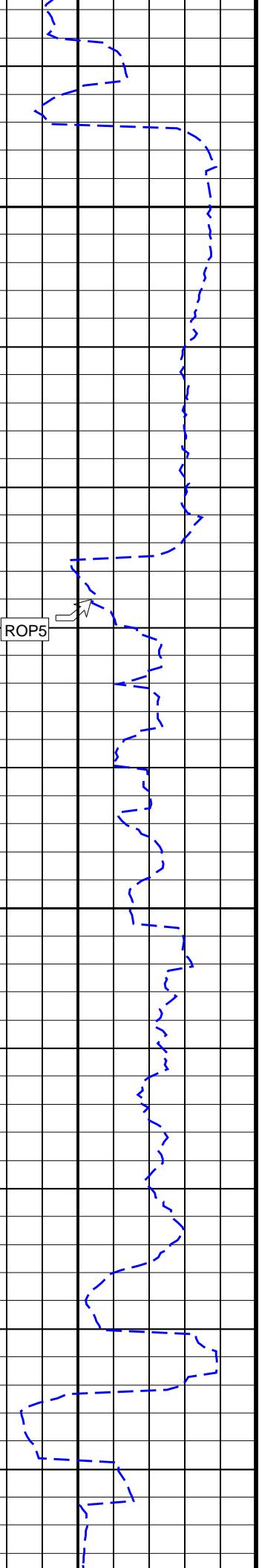
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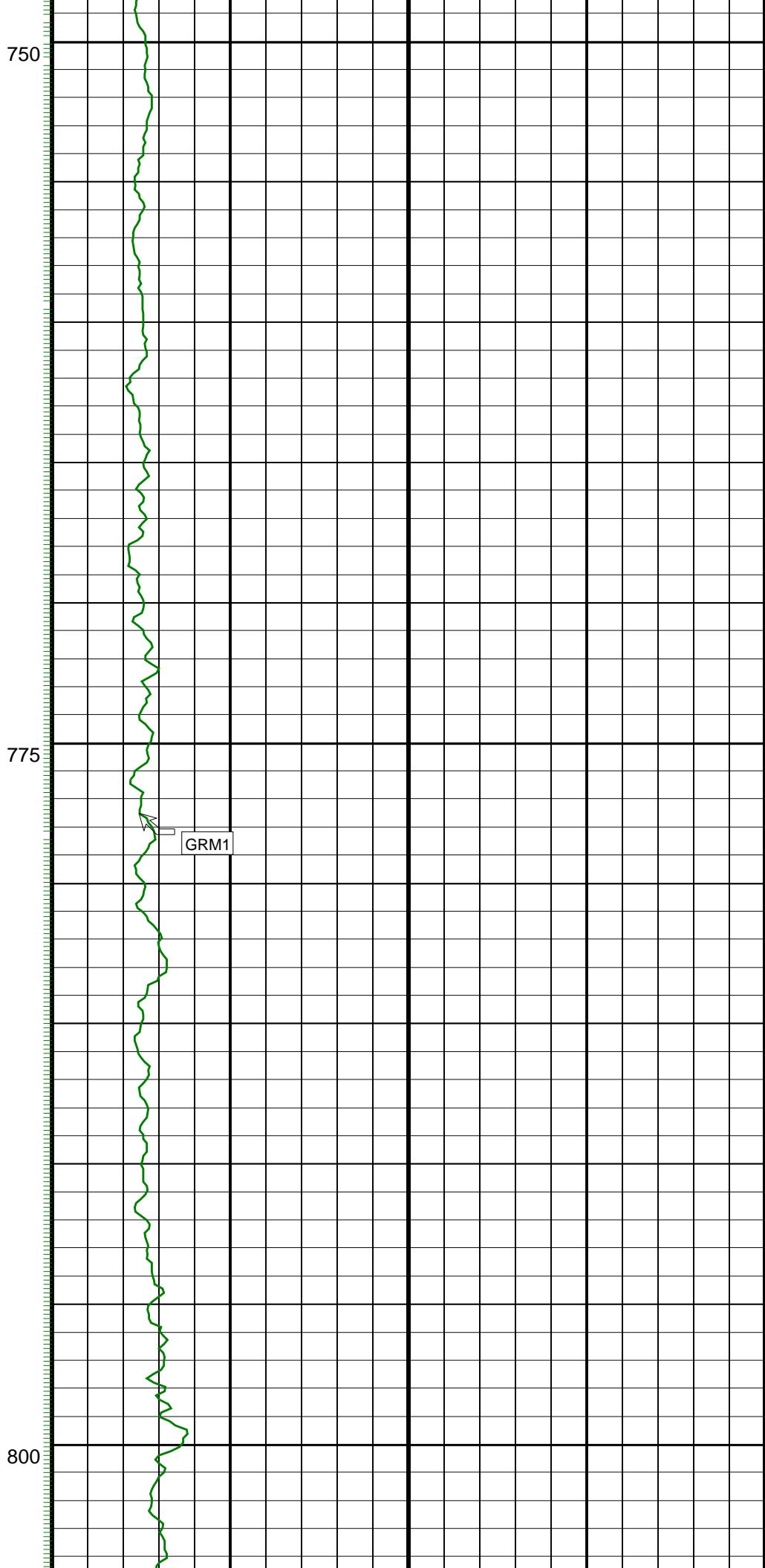
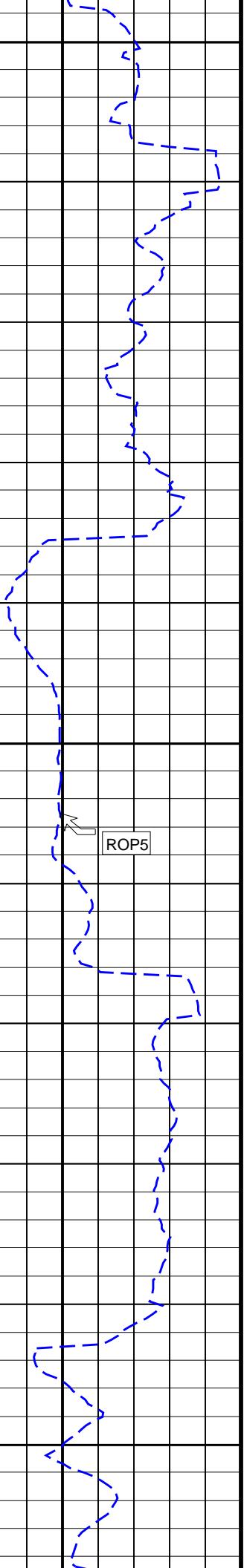
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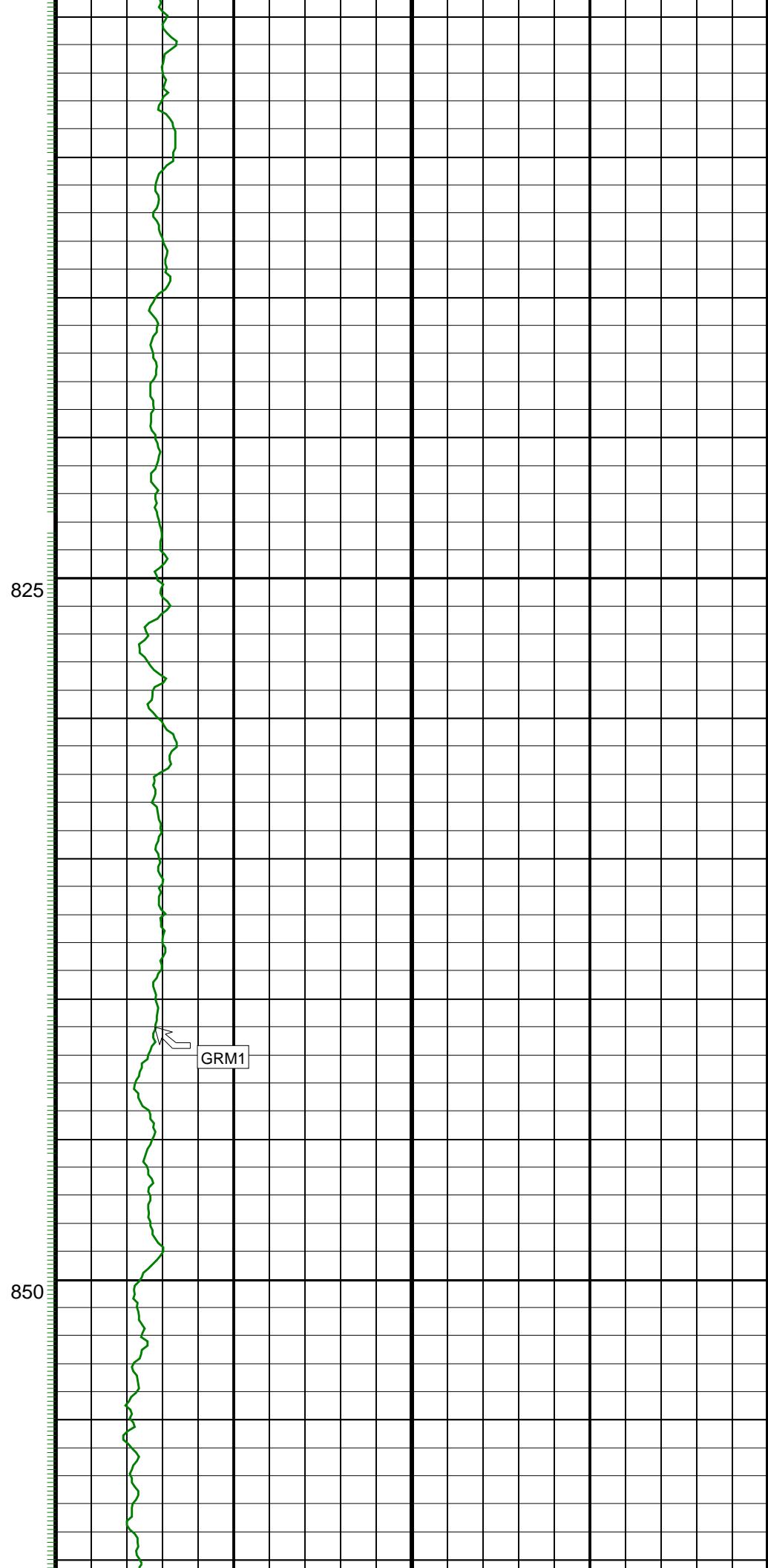
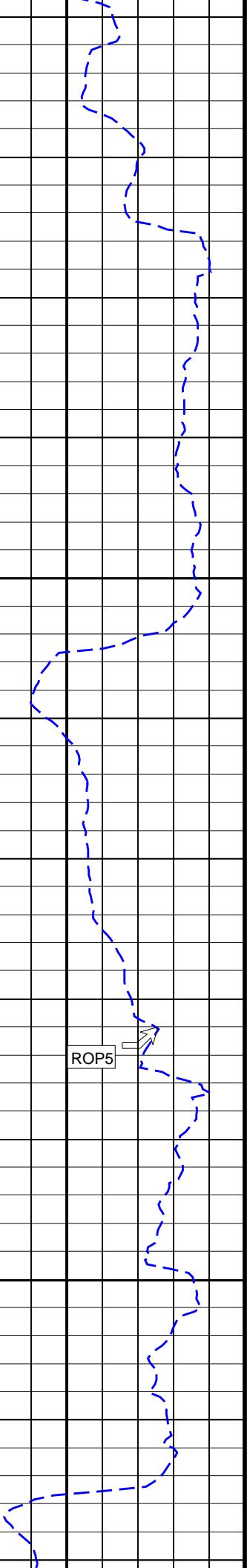
PIP SUMMARY

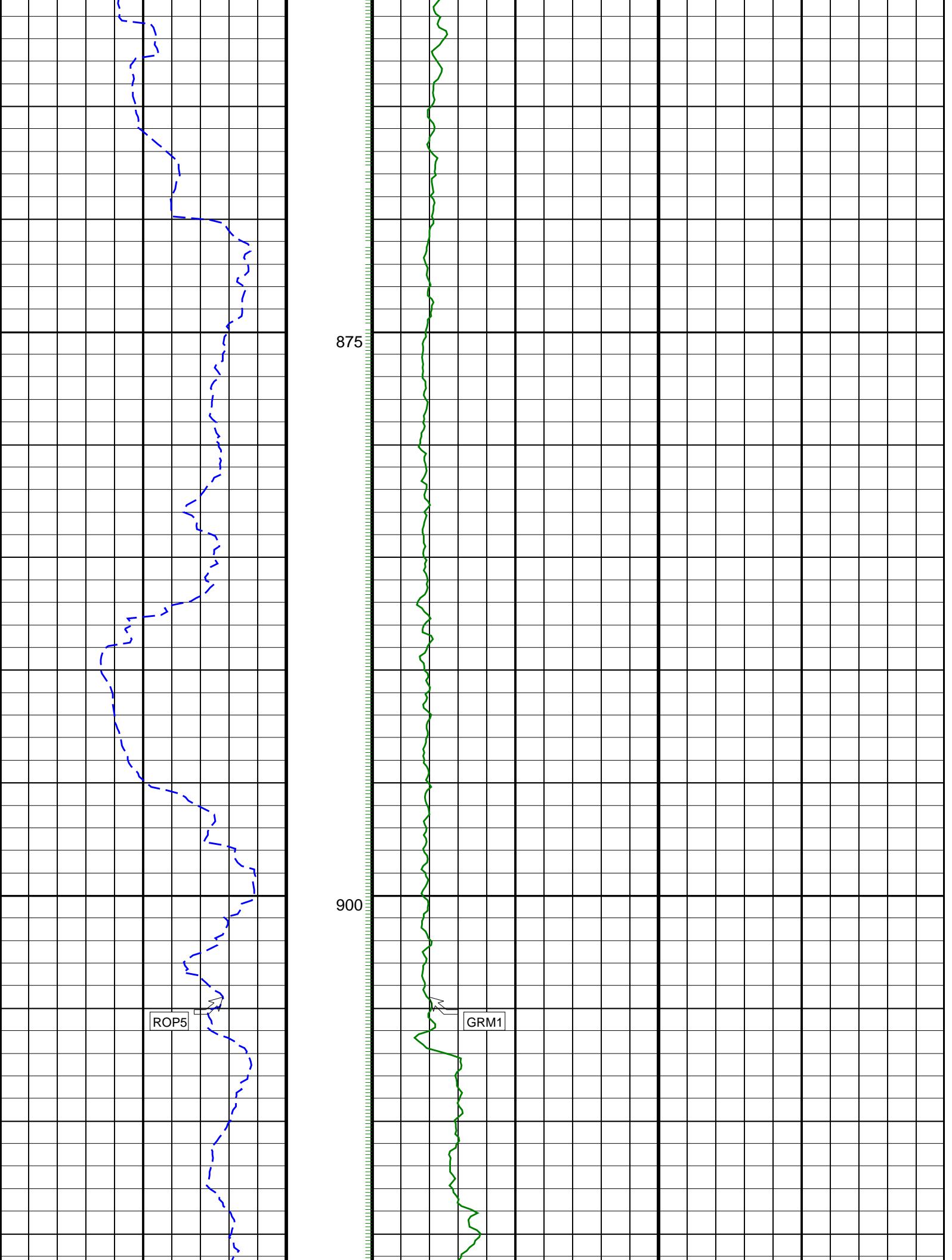
GR(TM) PIP

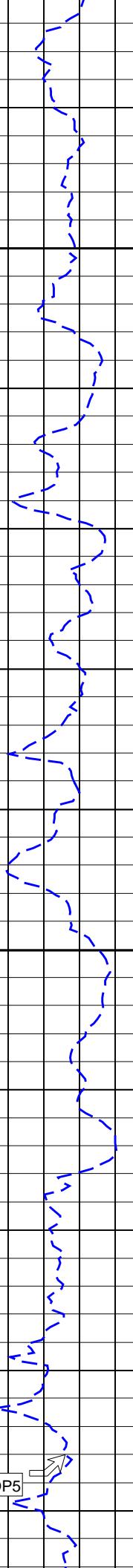




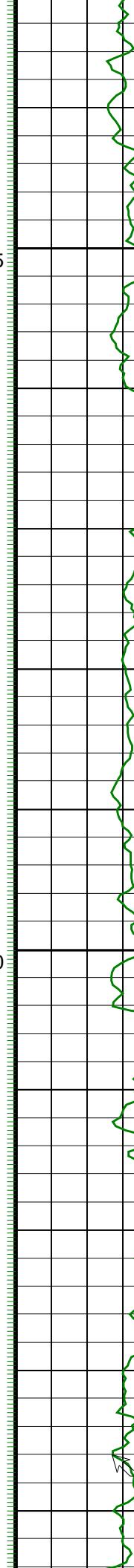








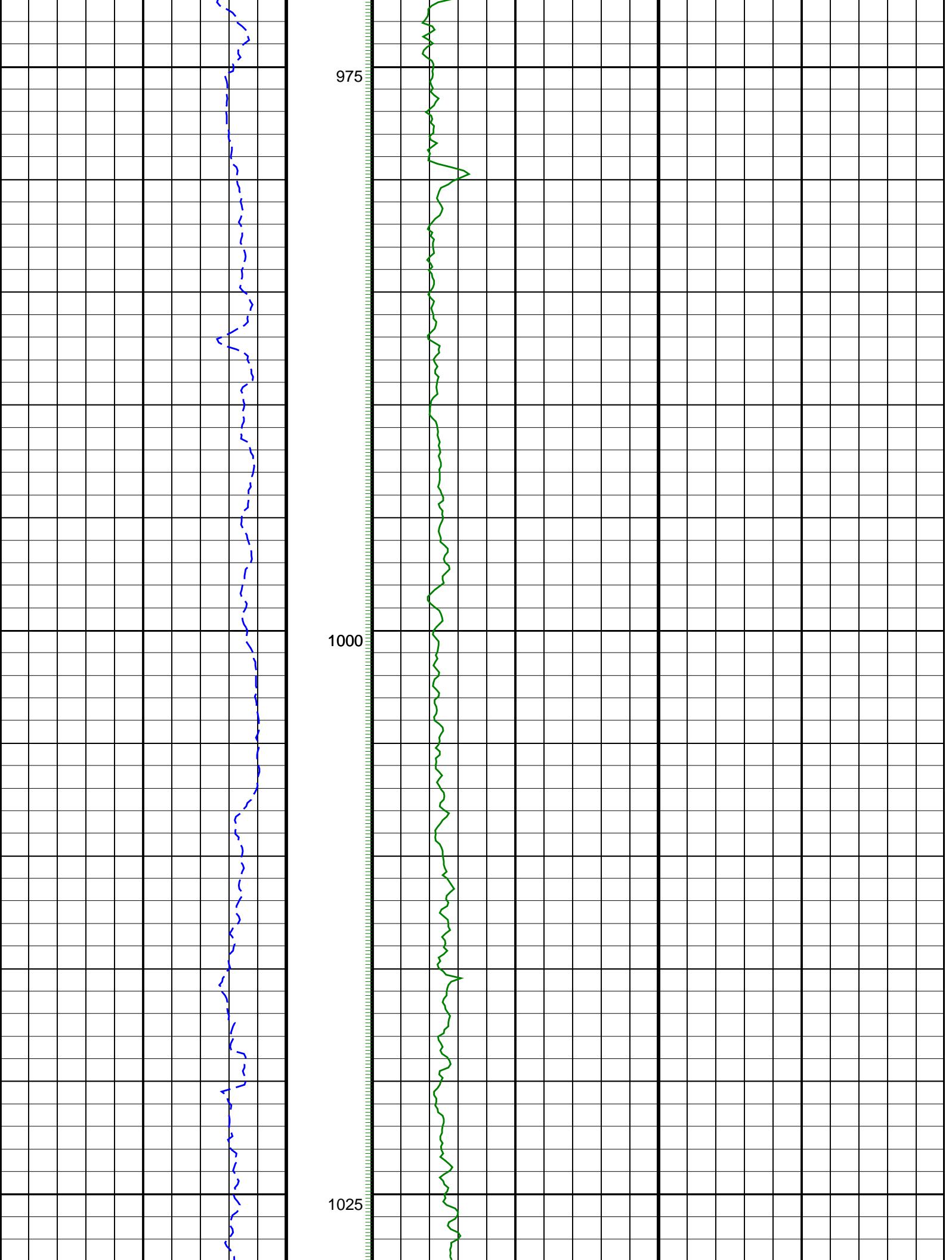
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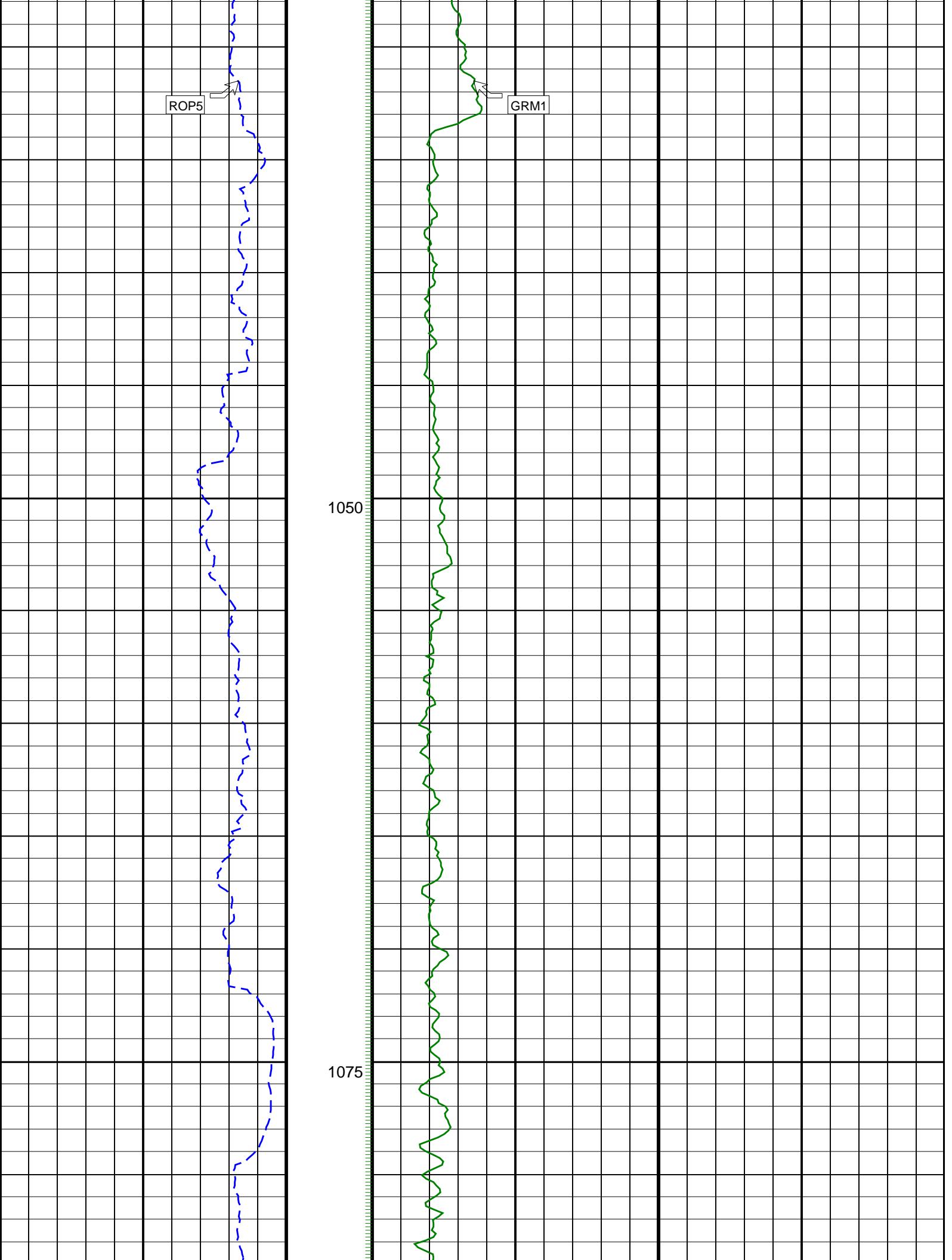


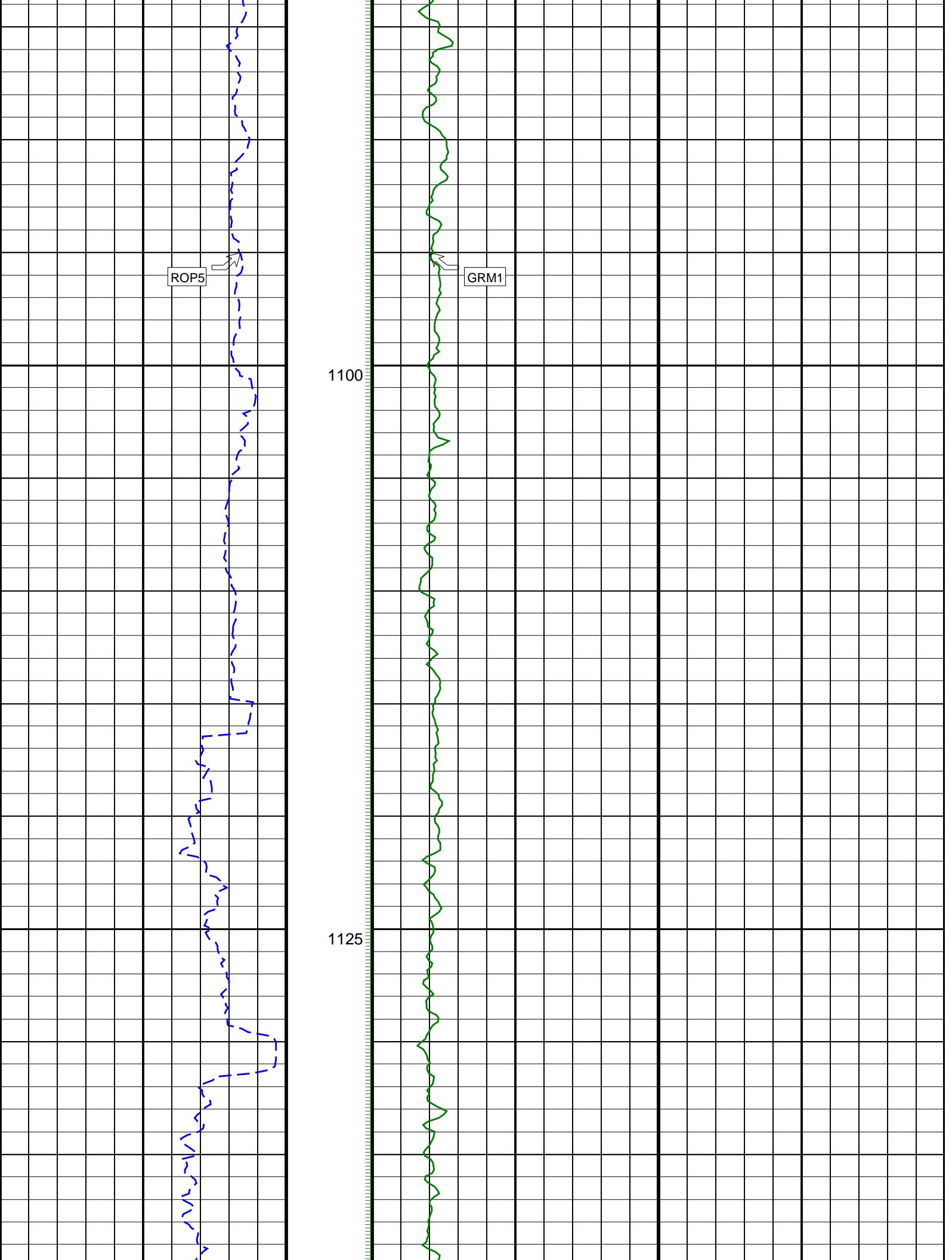
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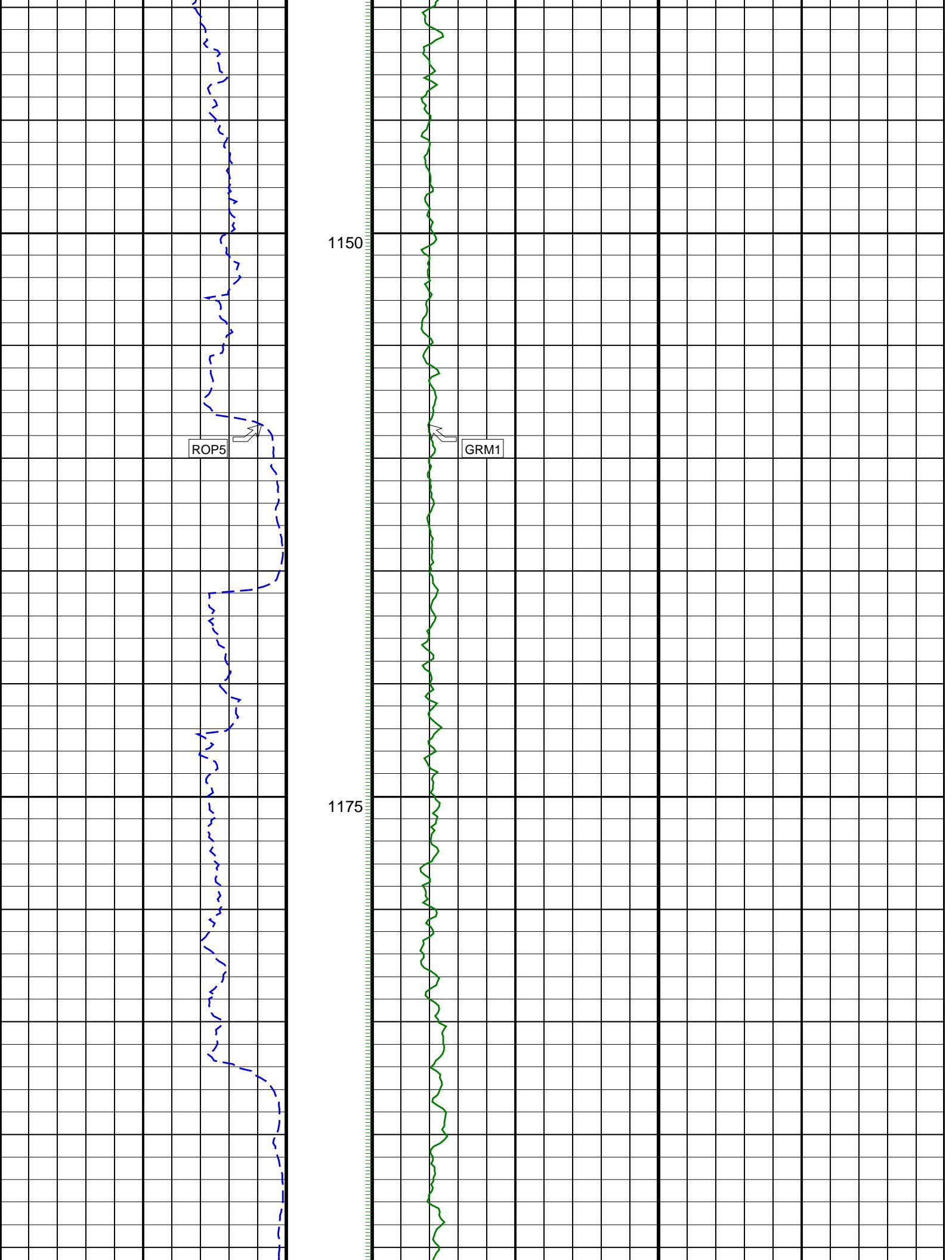
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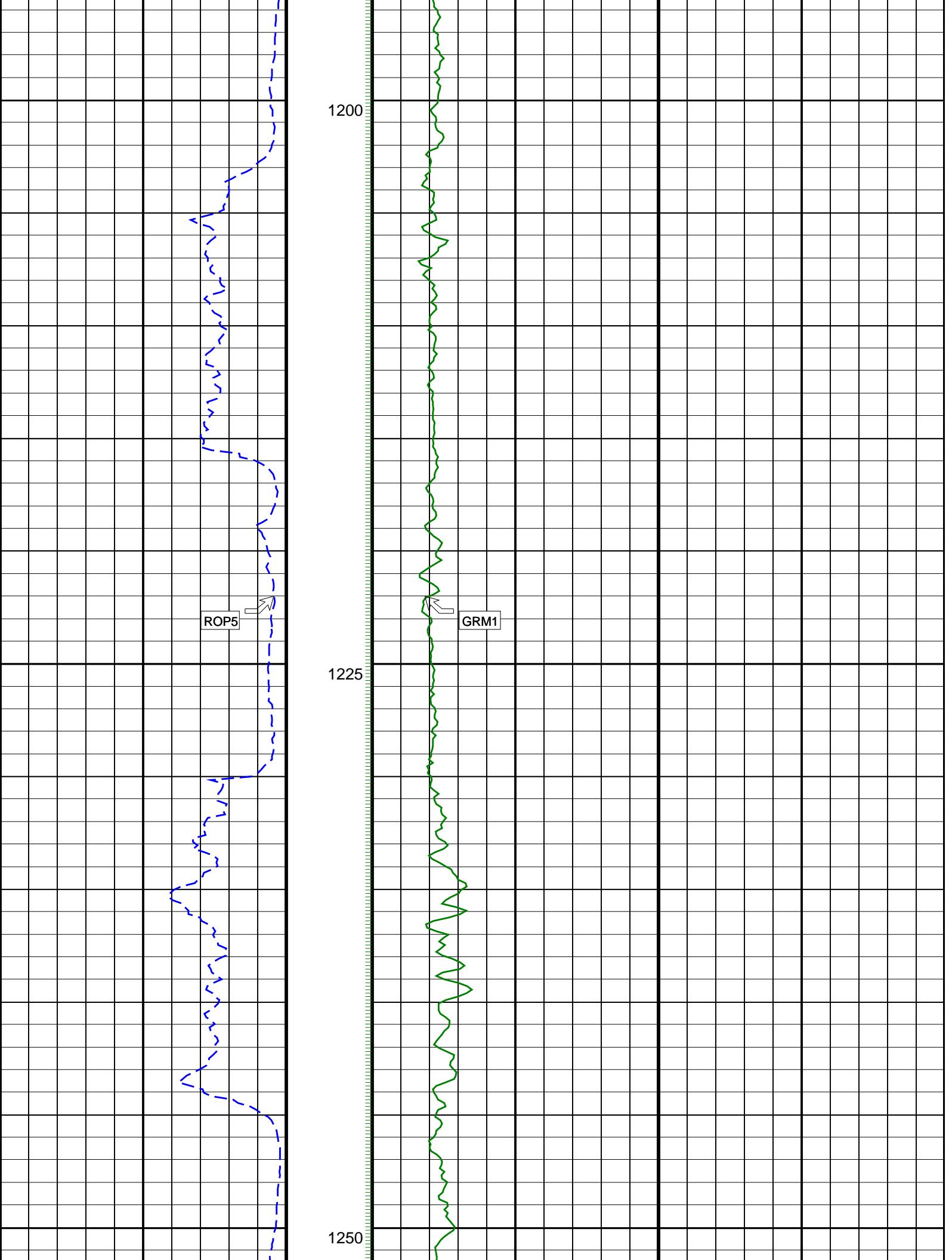
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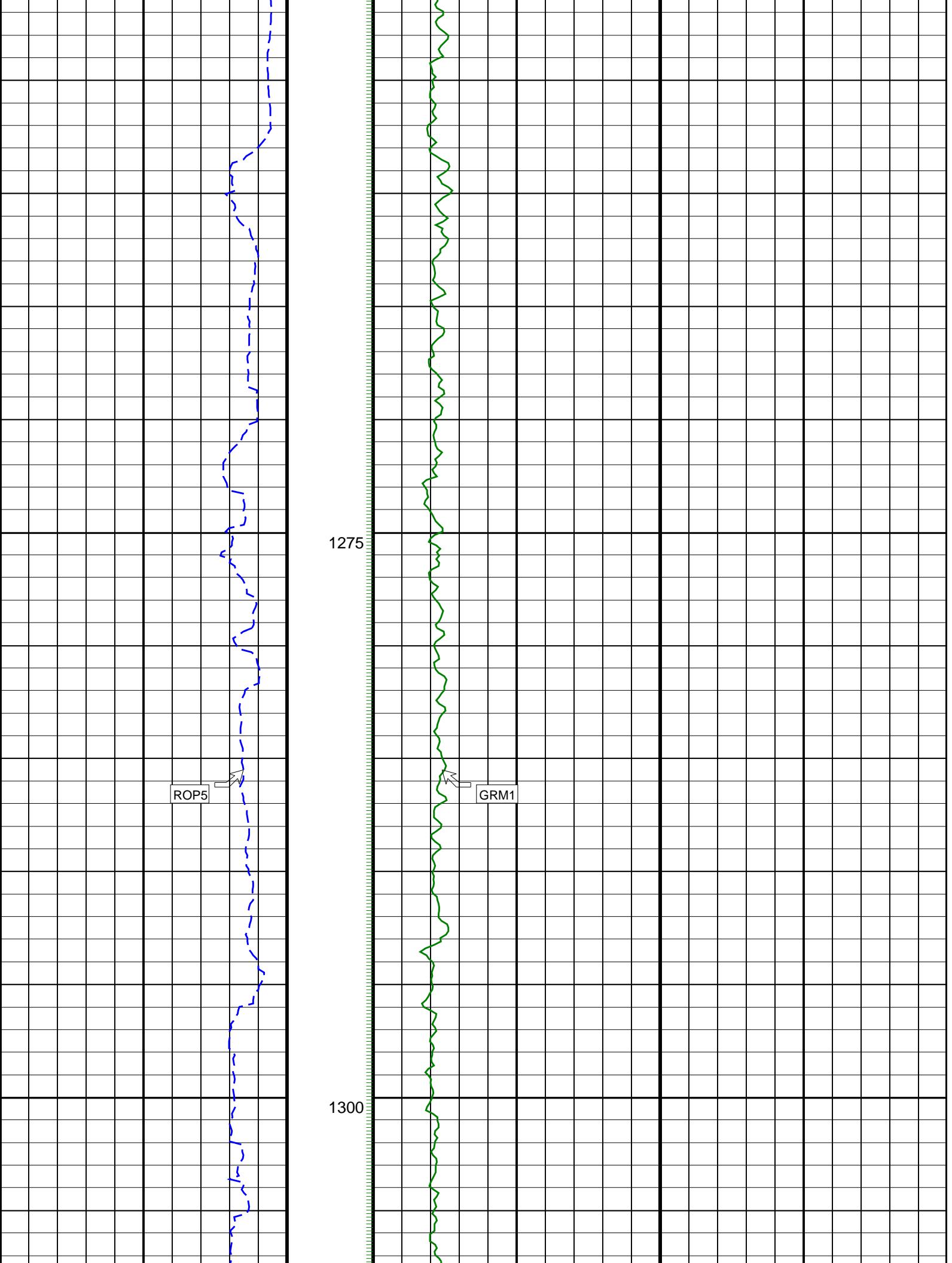


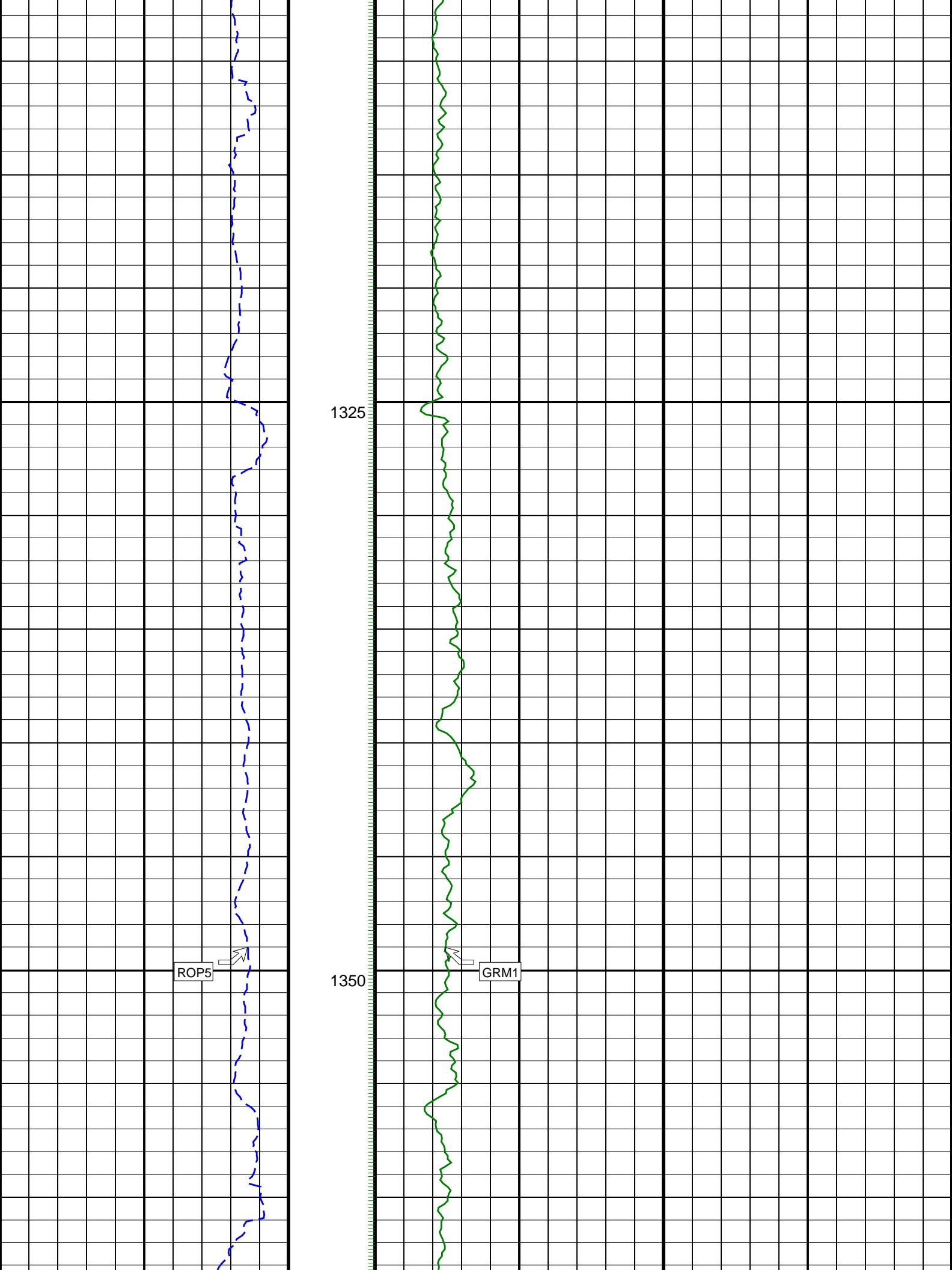


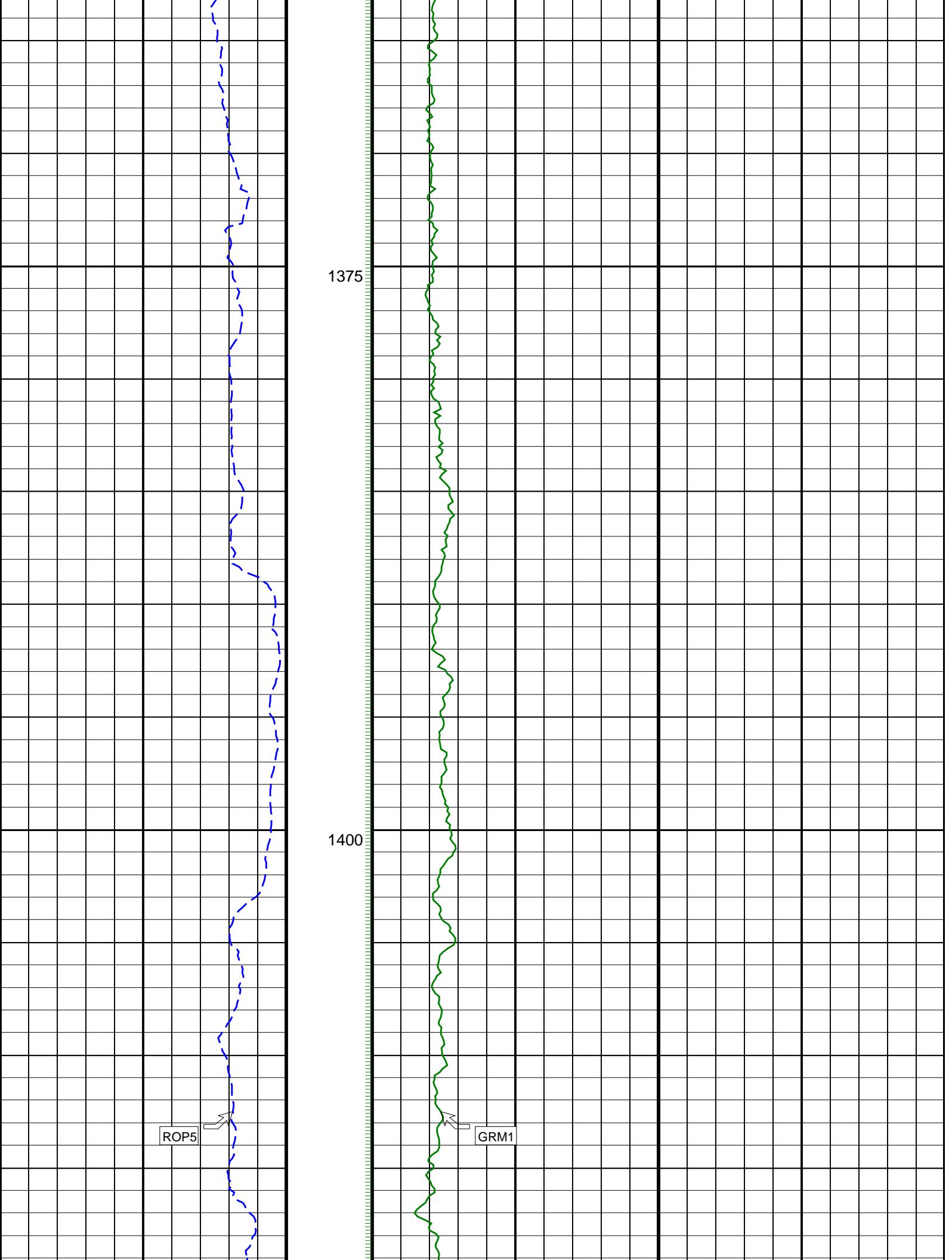


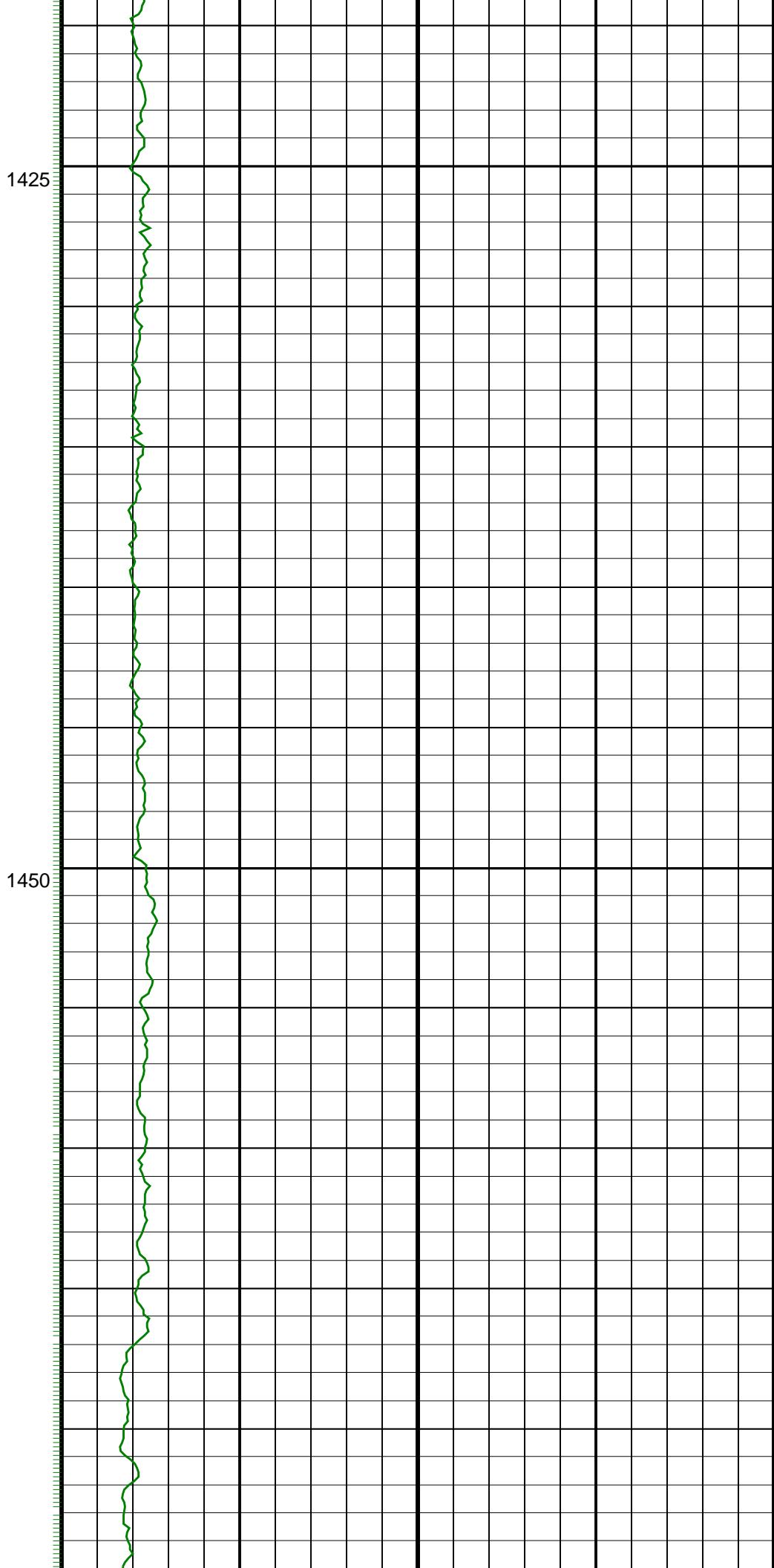
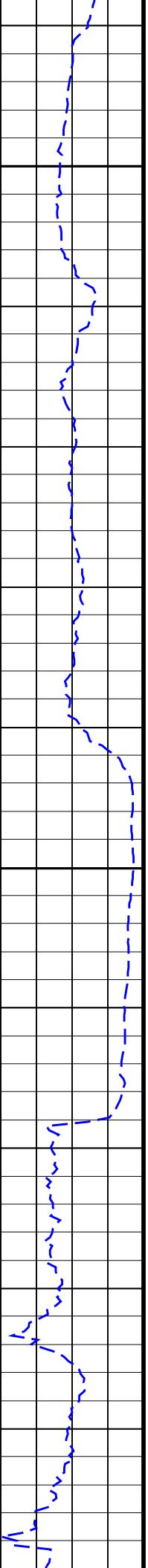


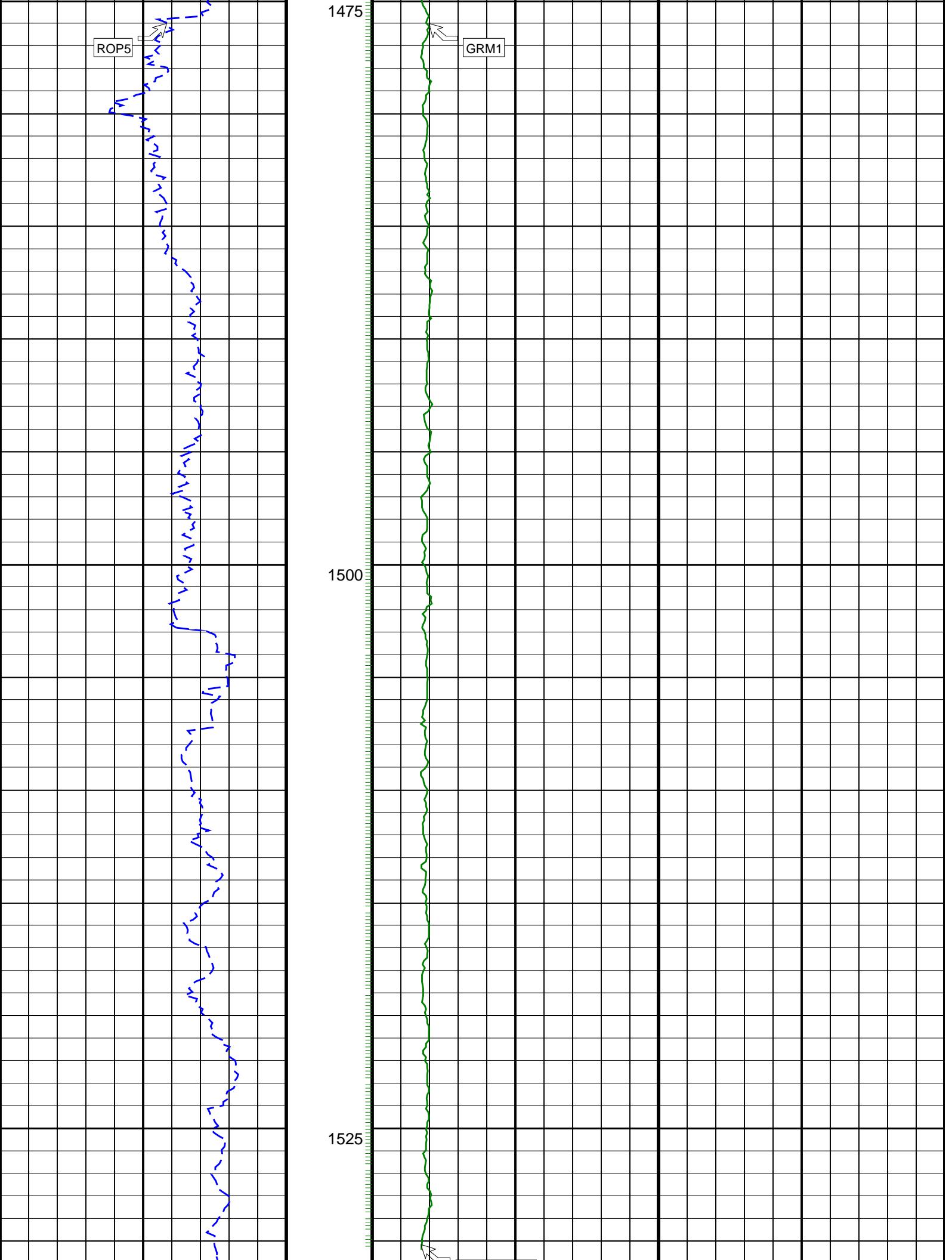


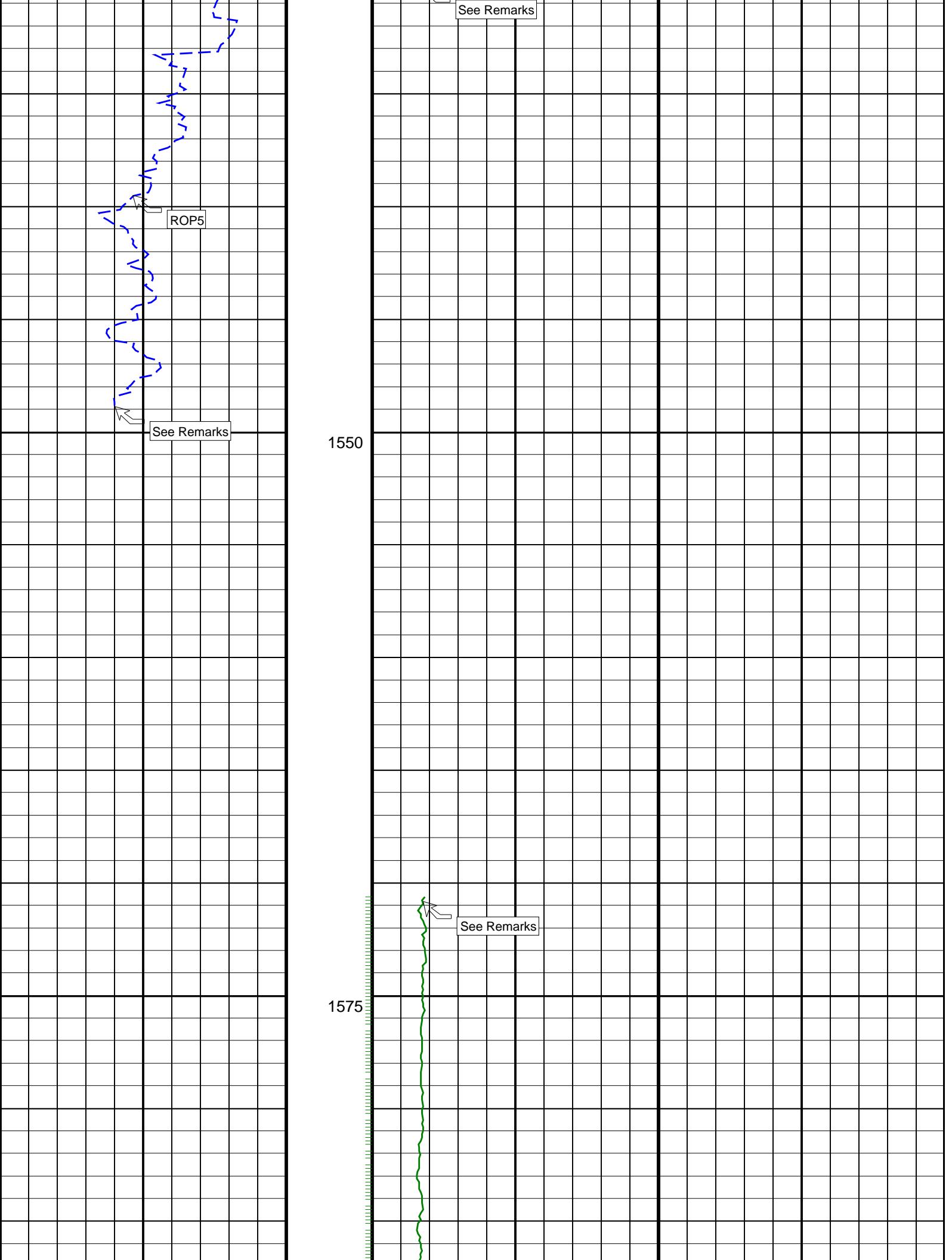


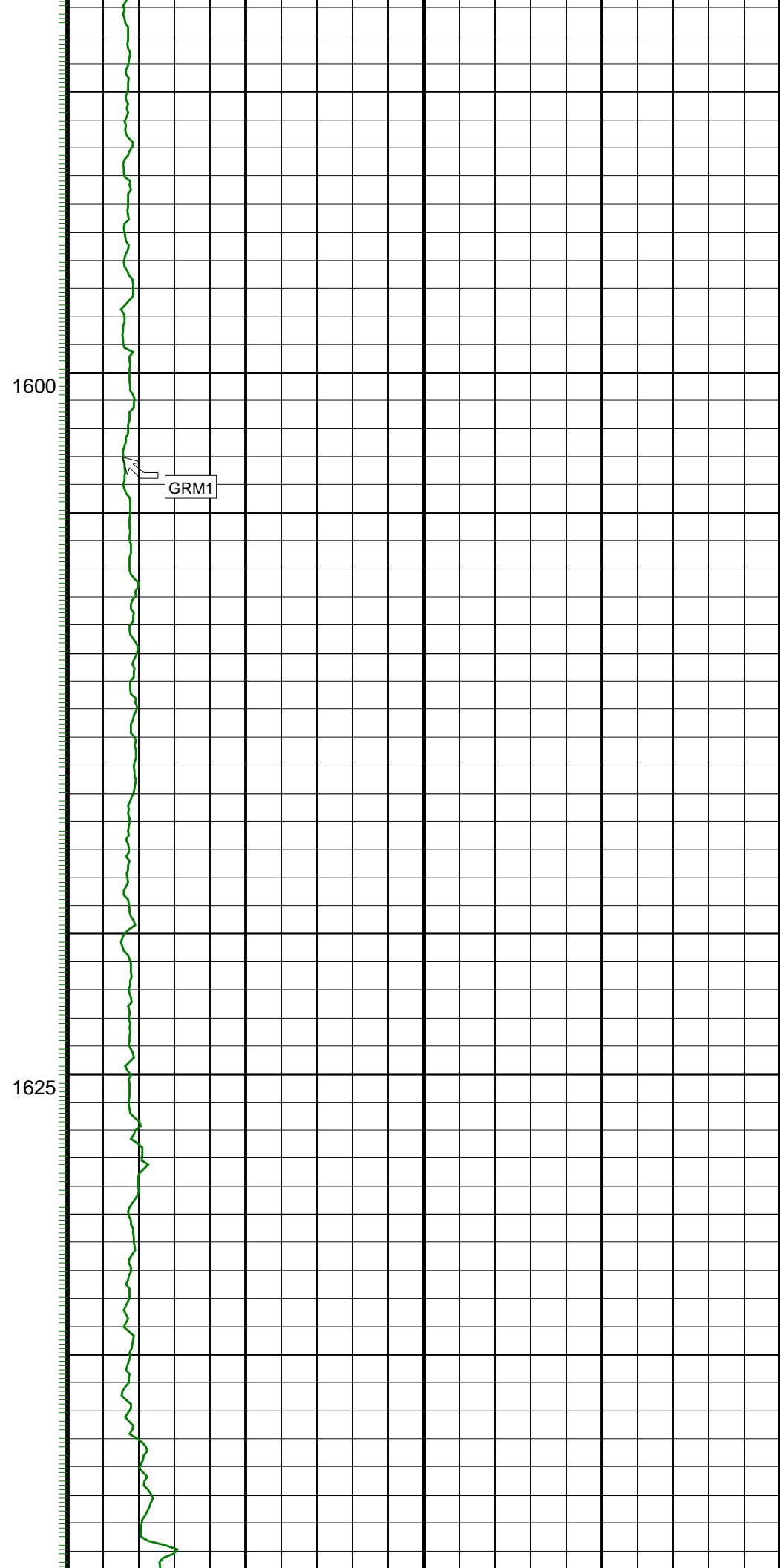
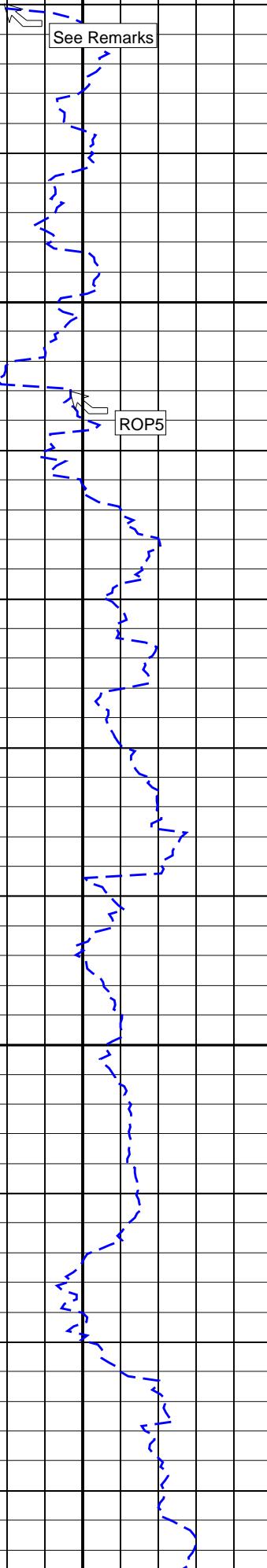


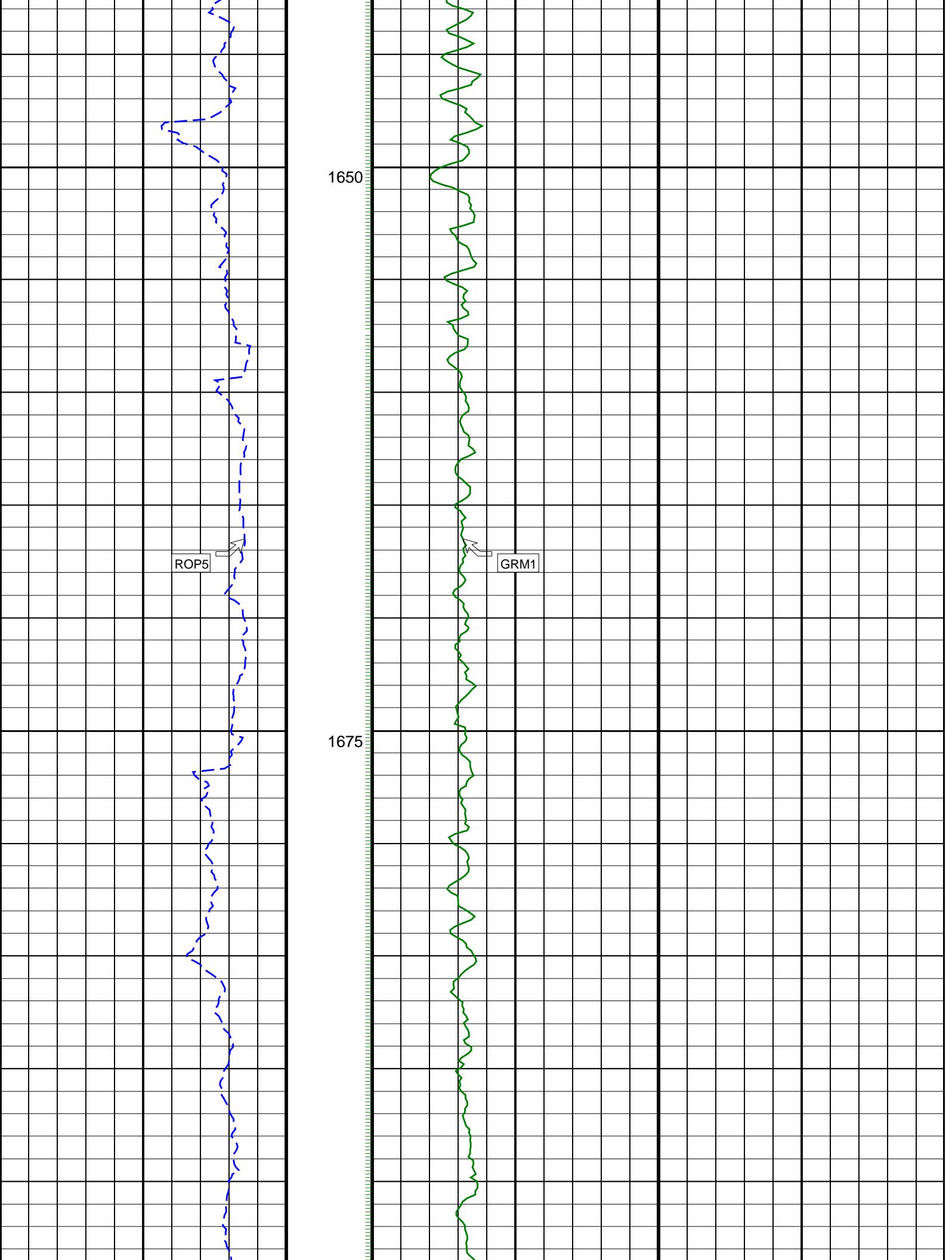


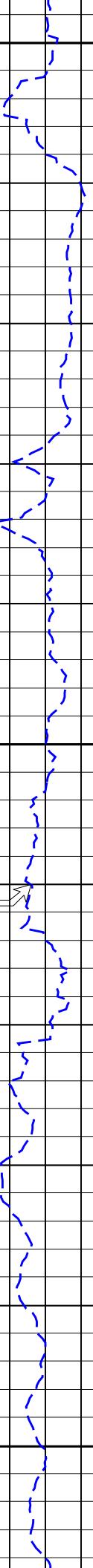




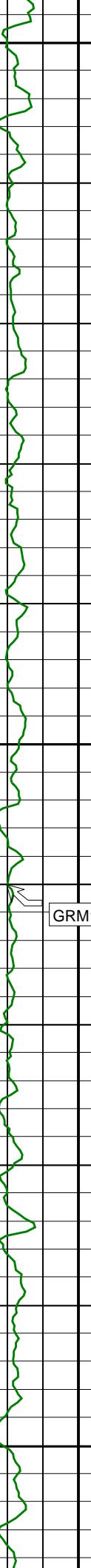








ROP5

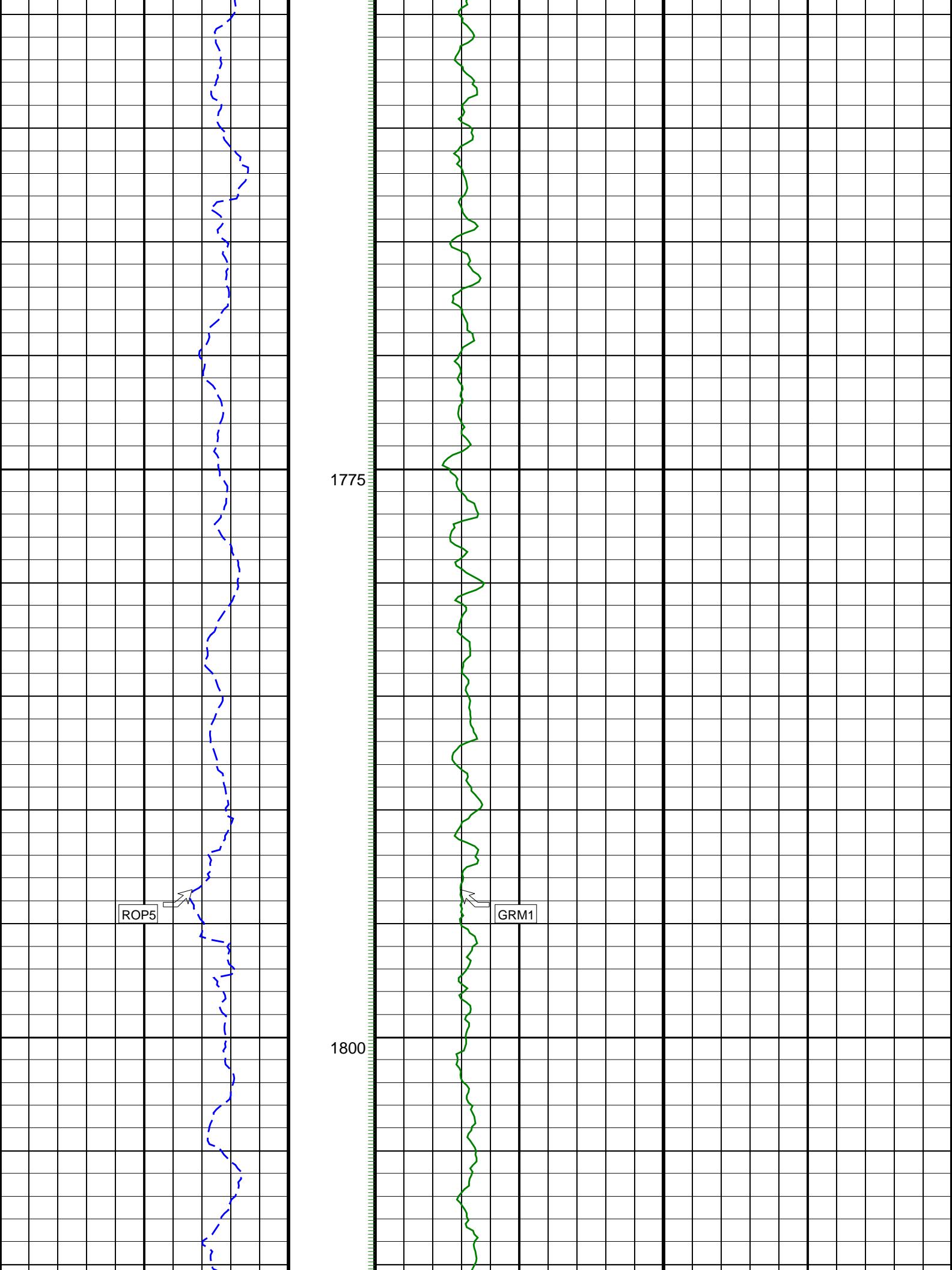


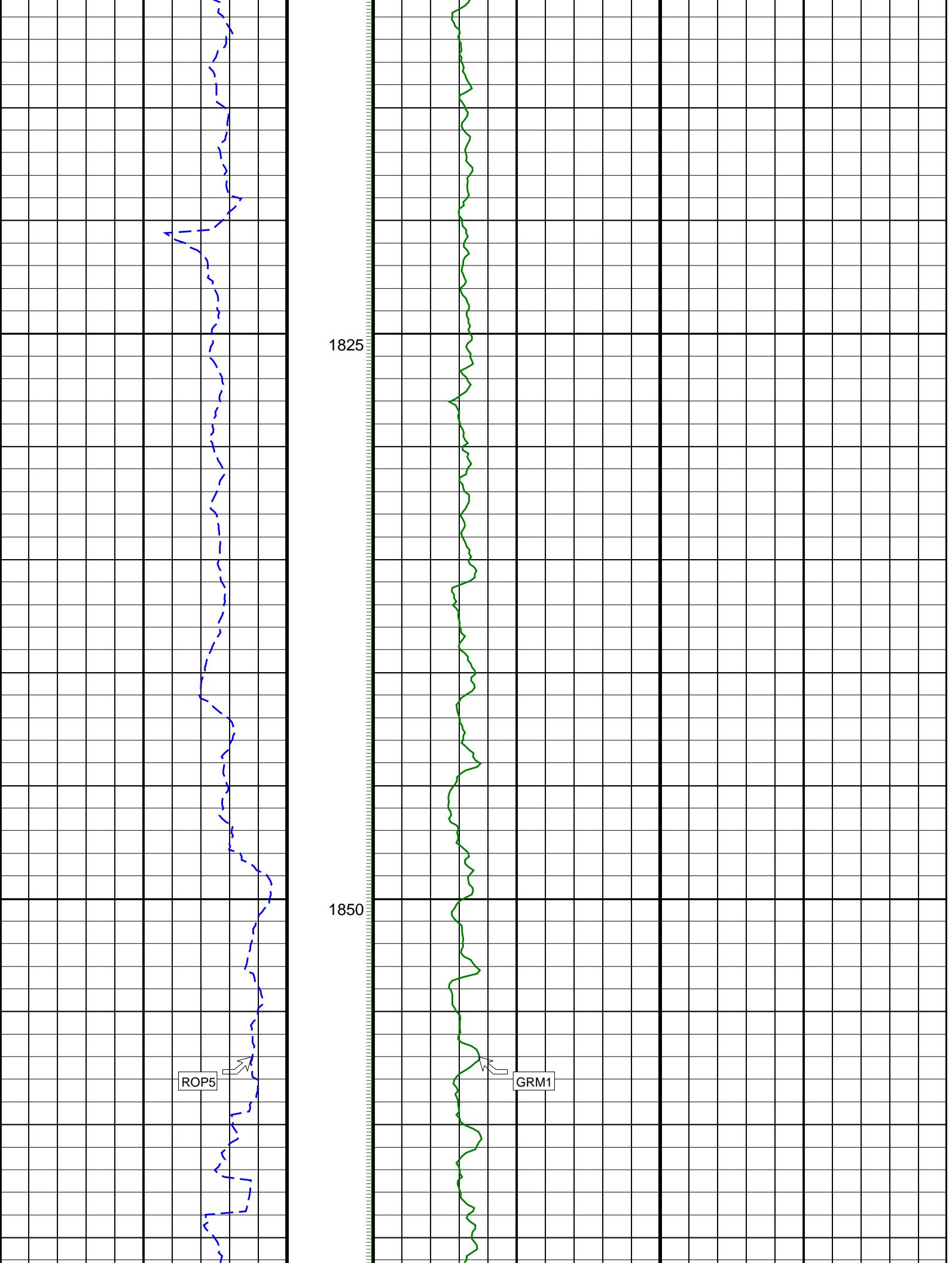
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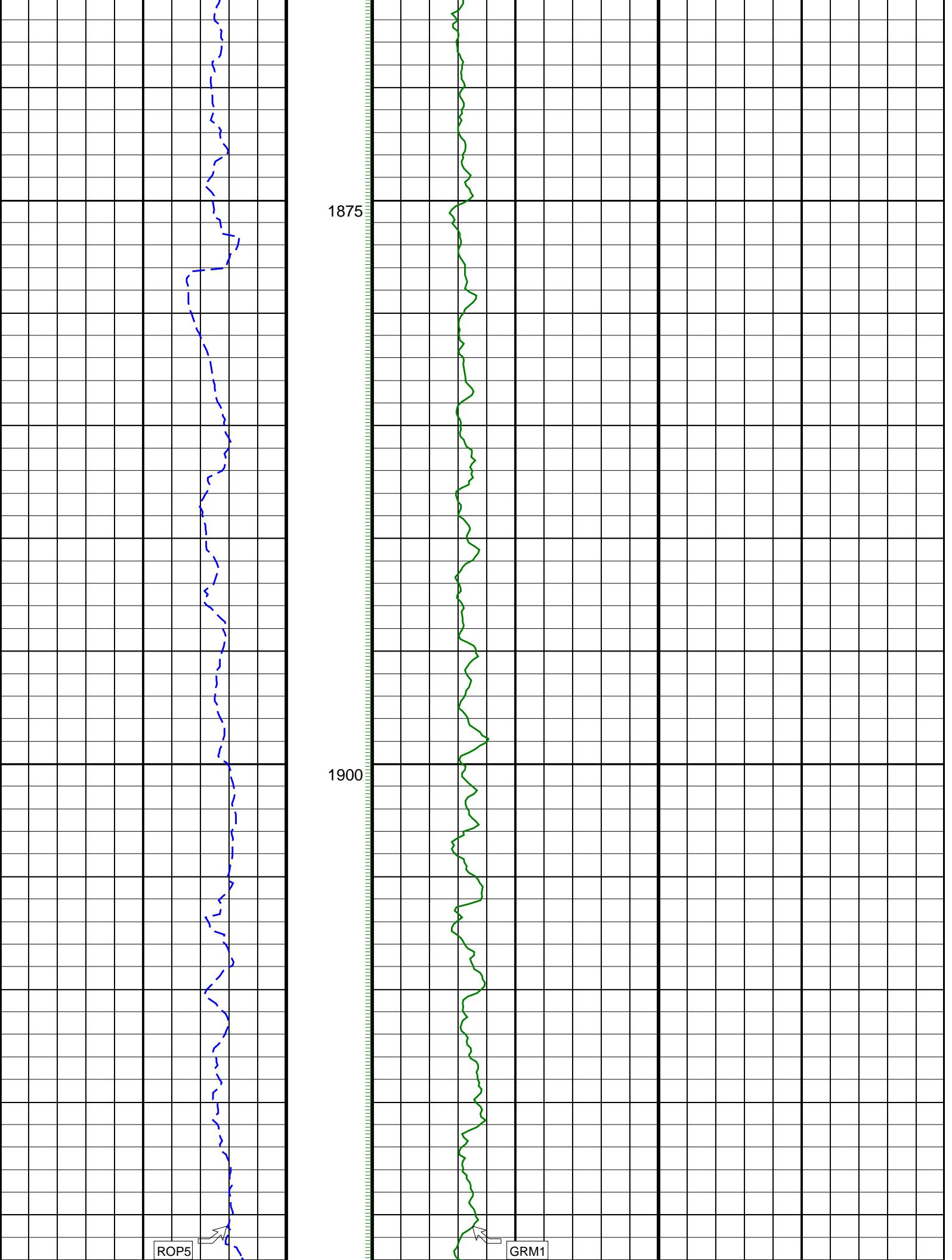
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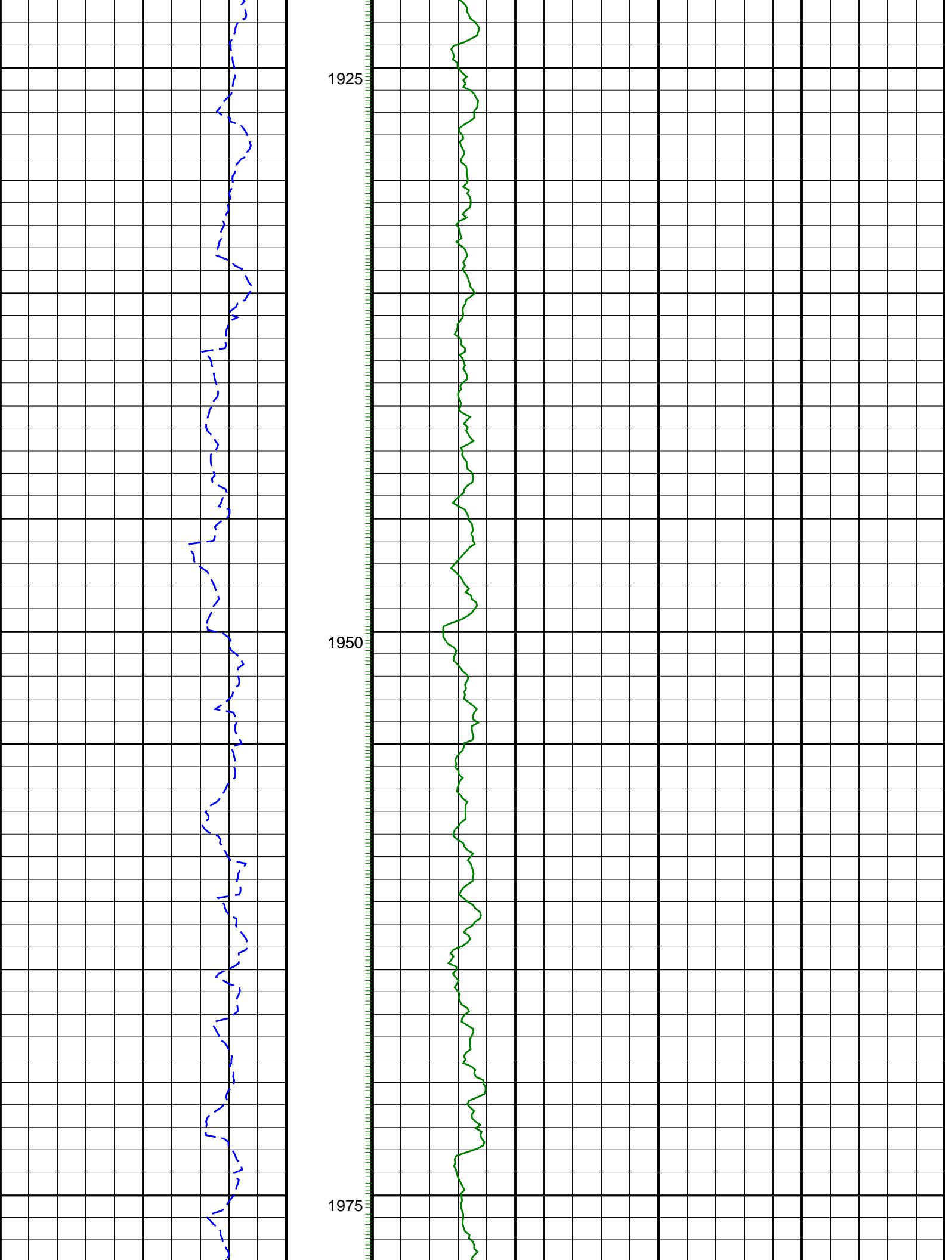
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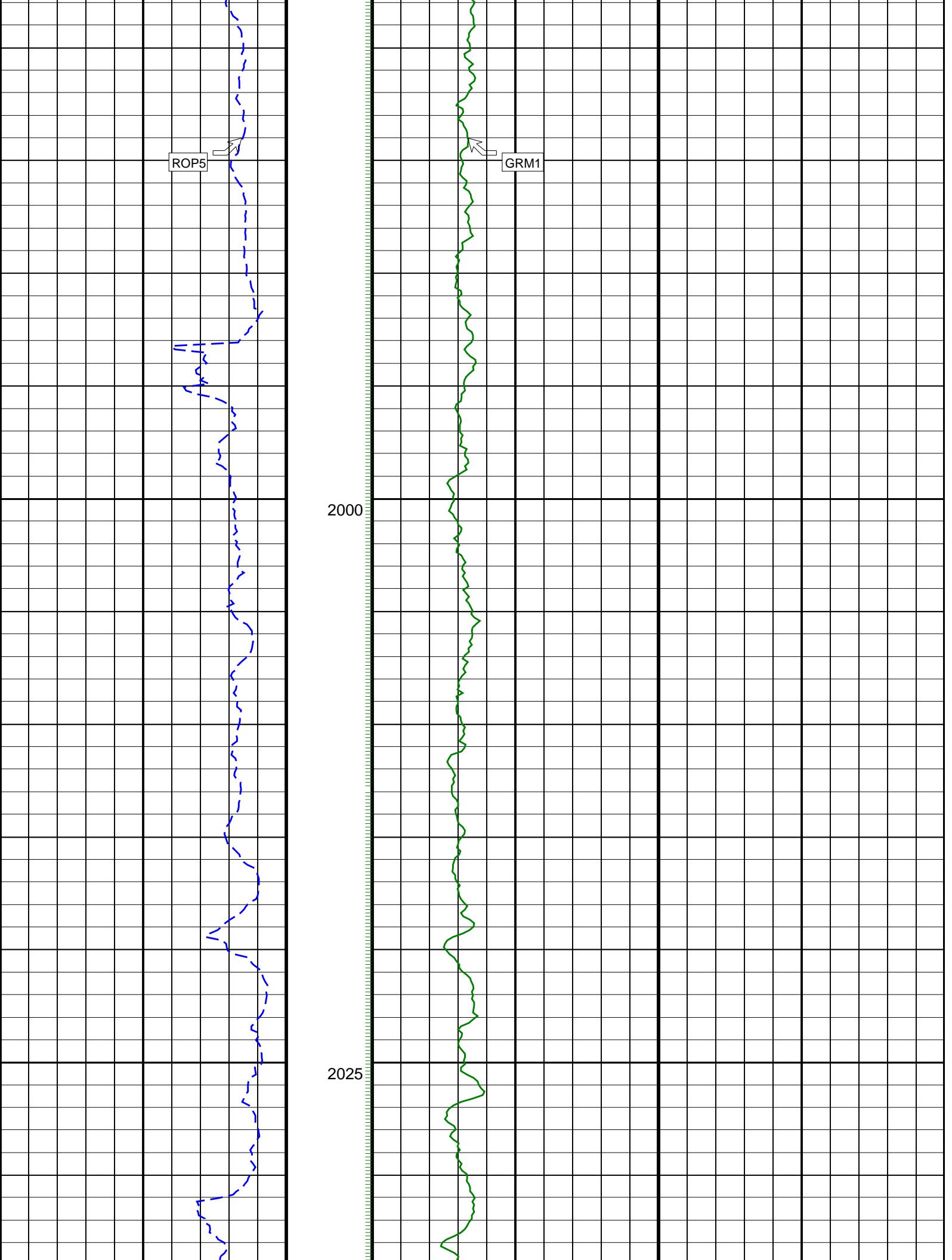
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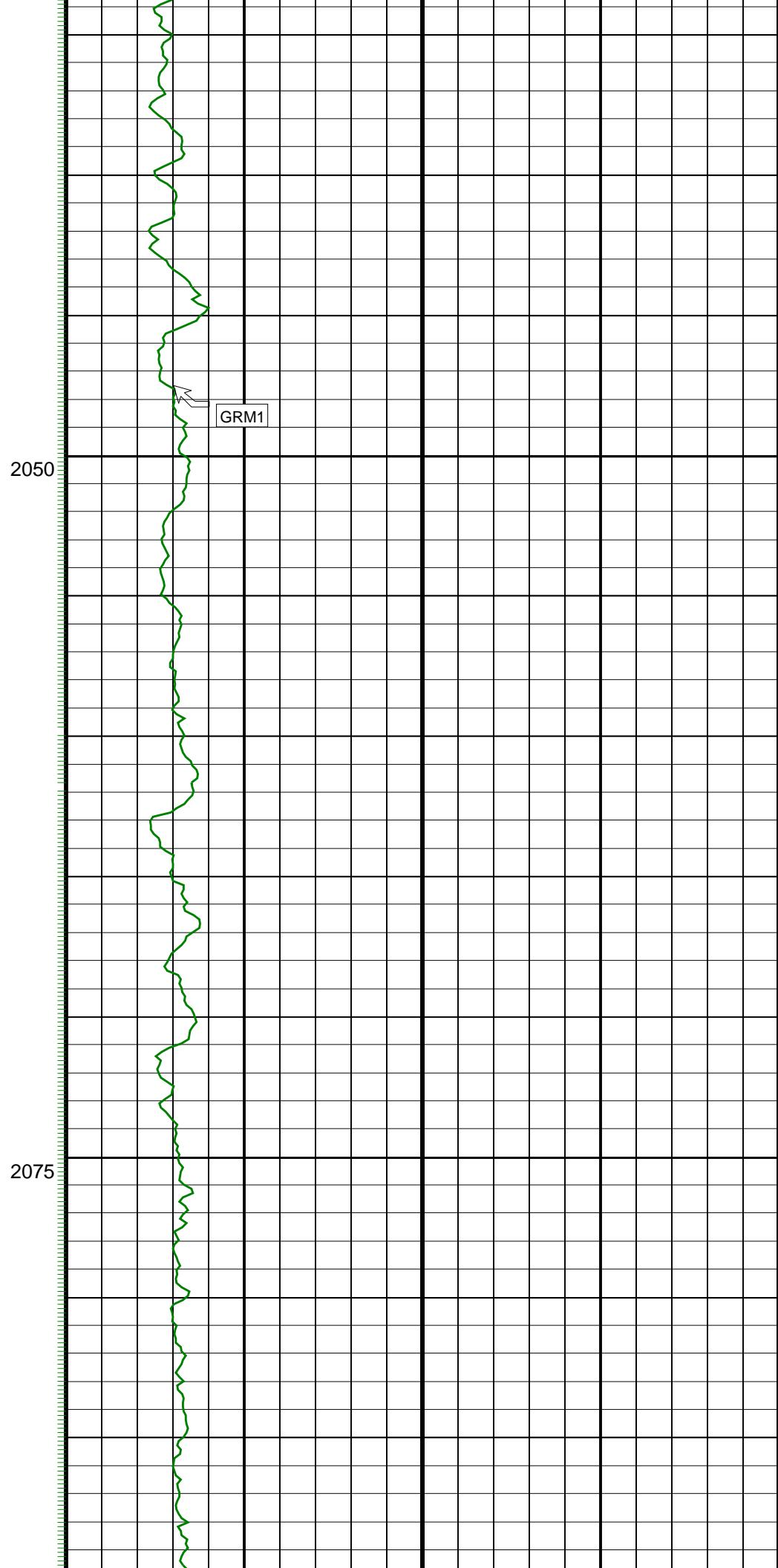
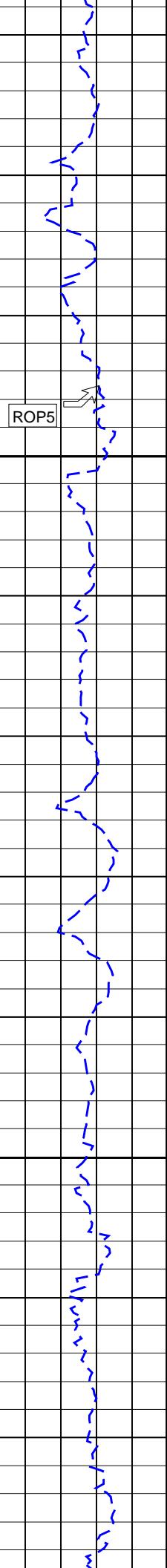


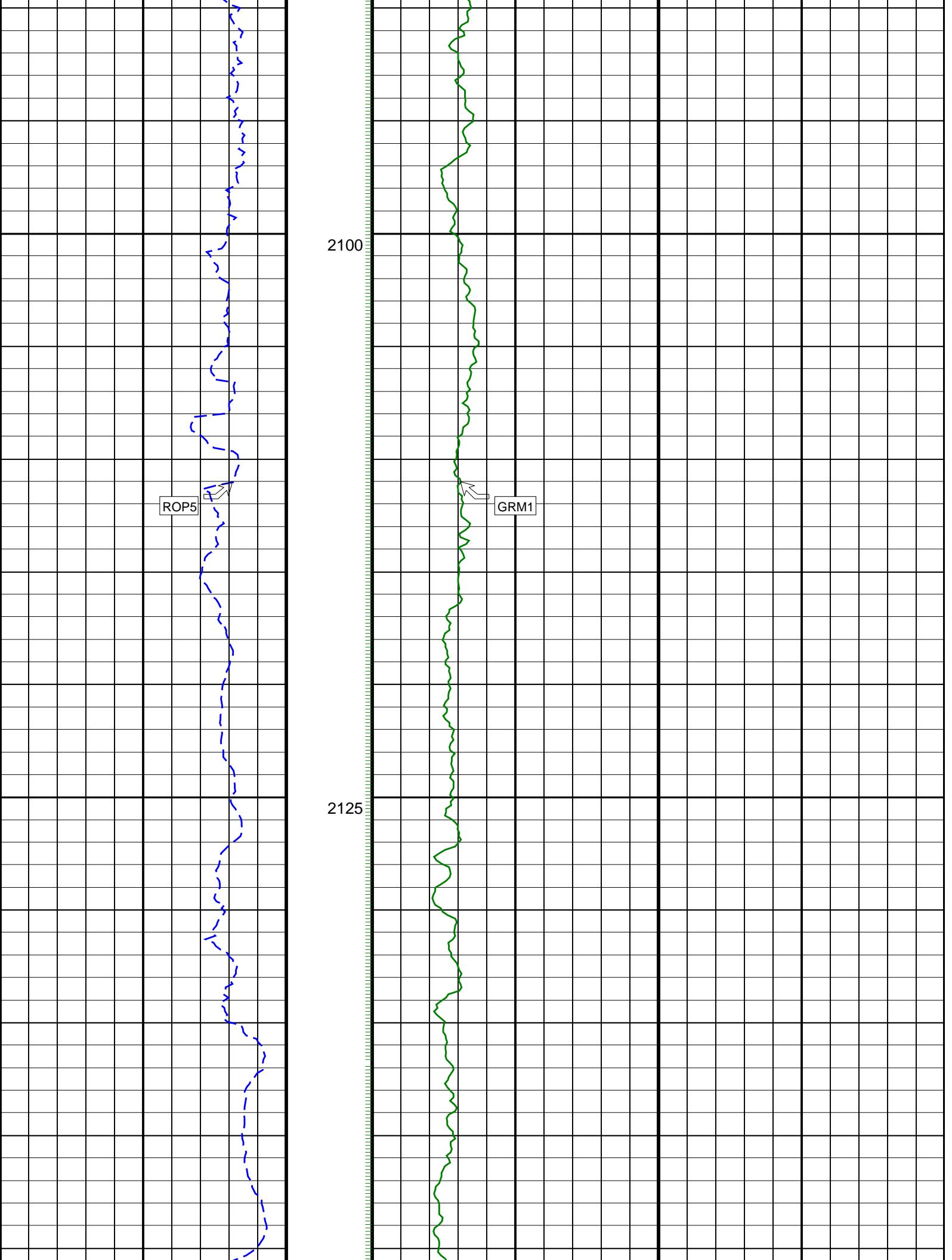


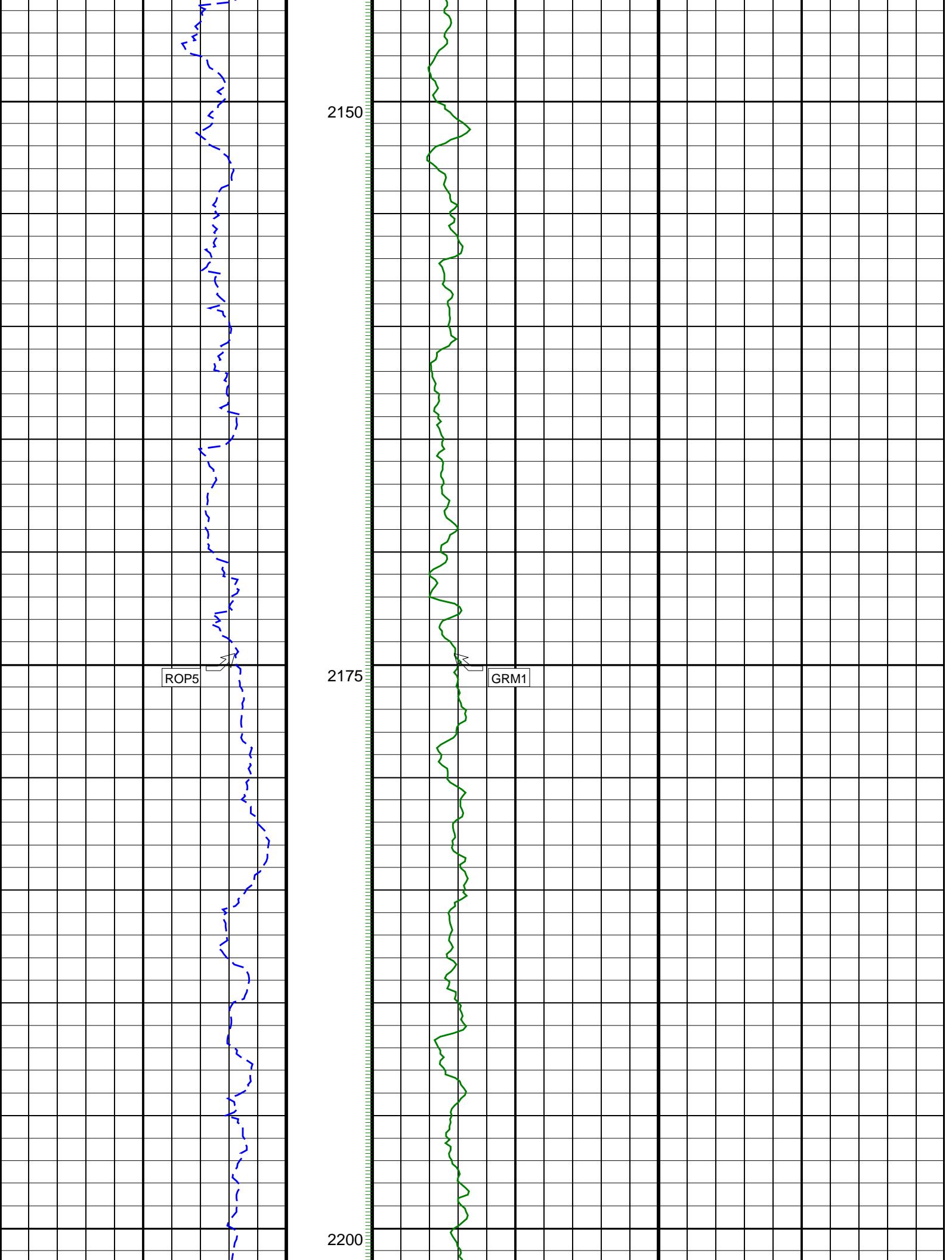


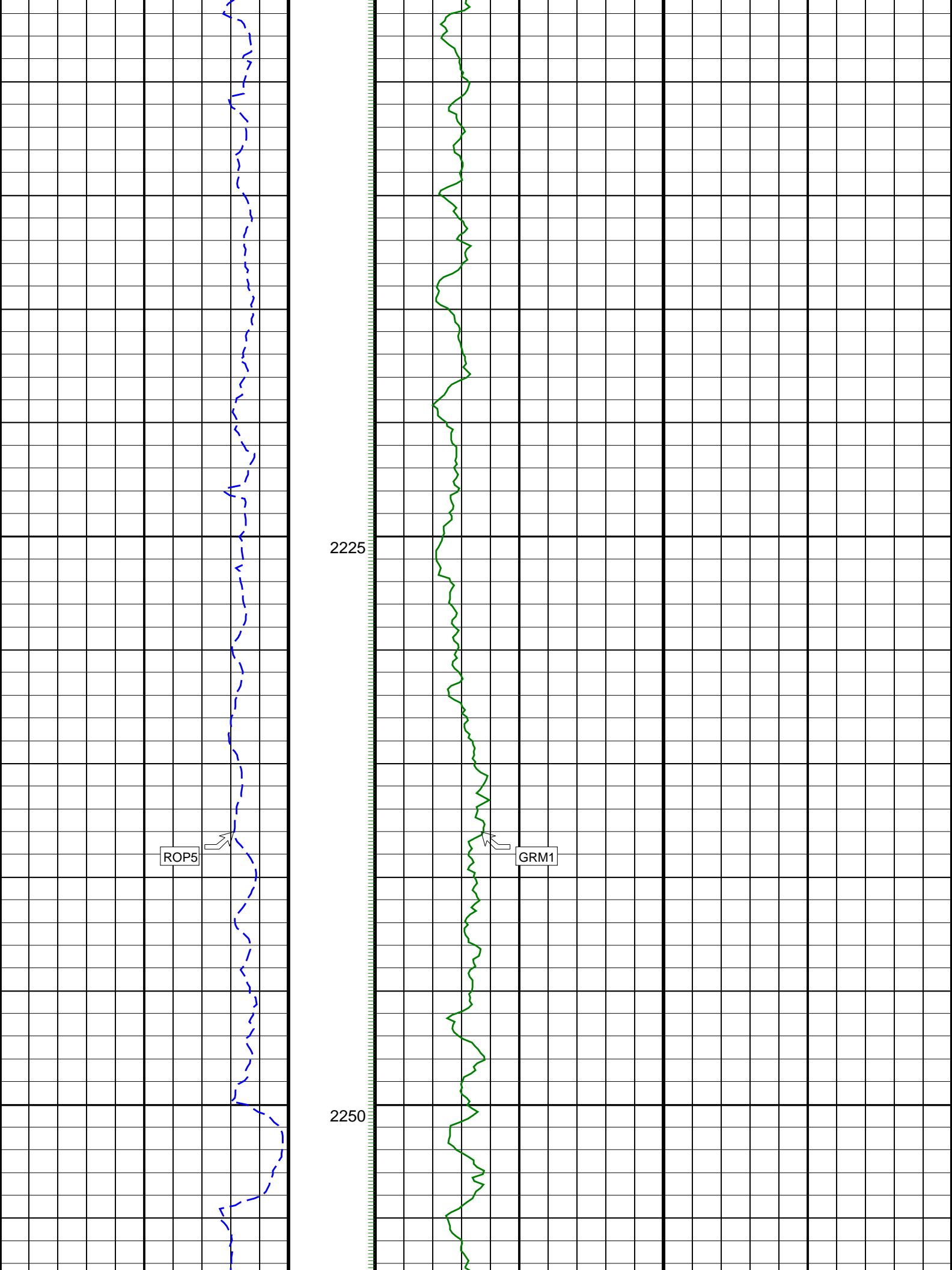


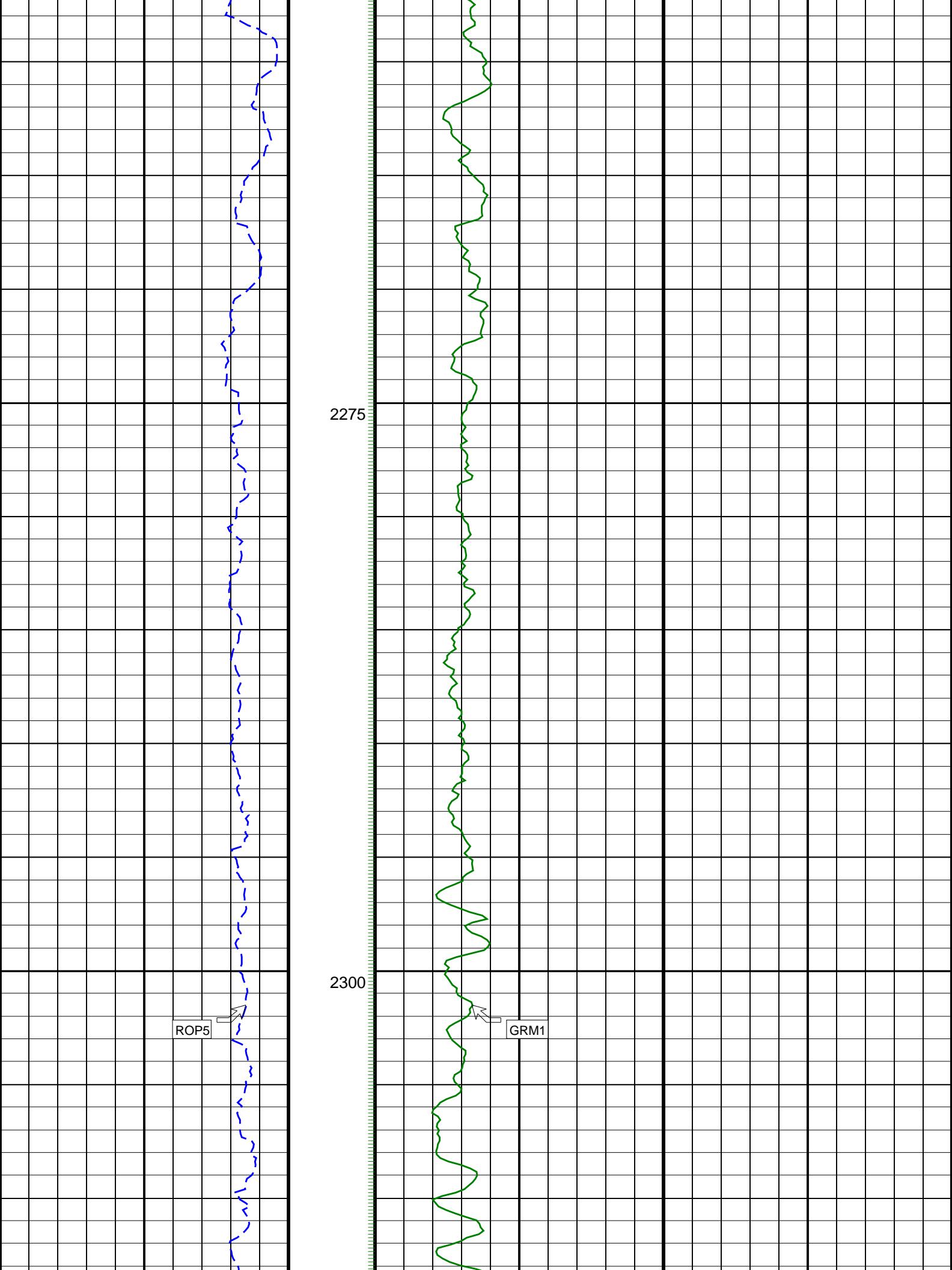


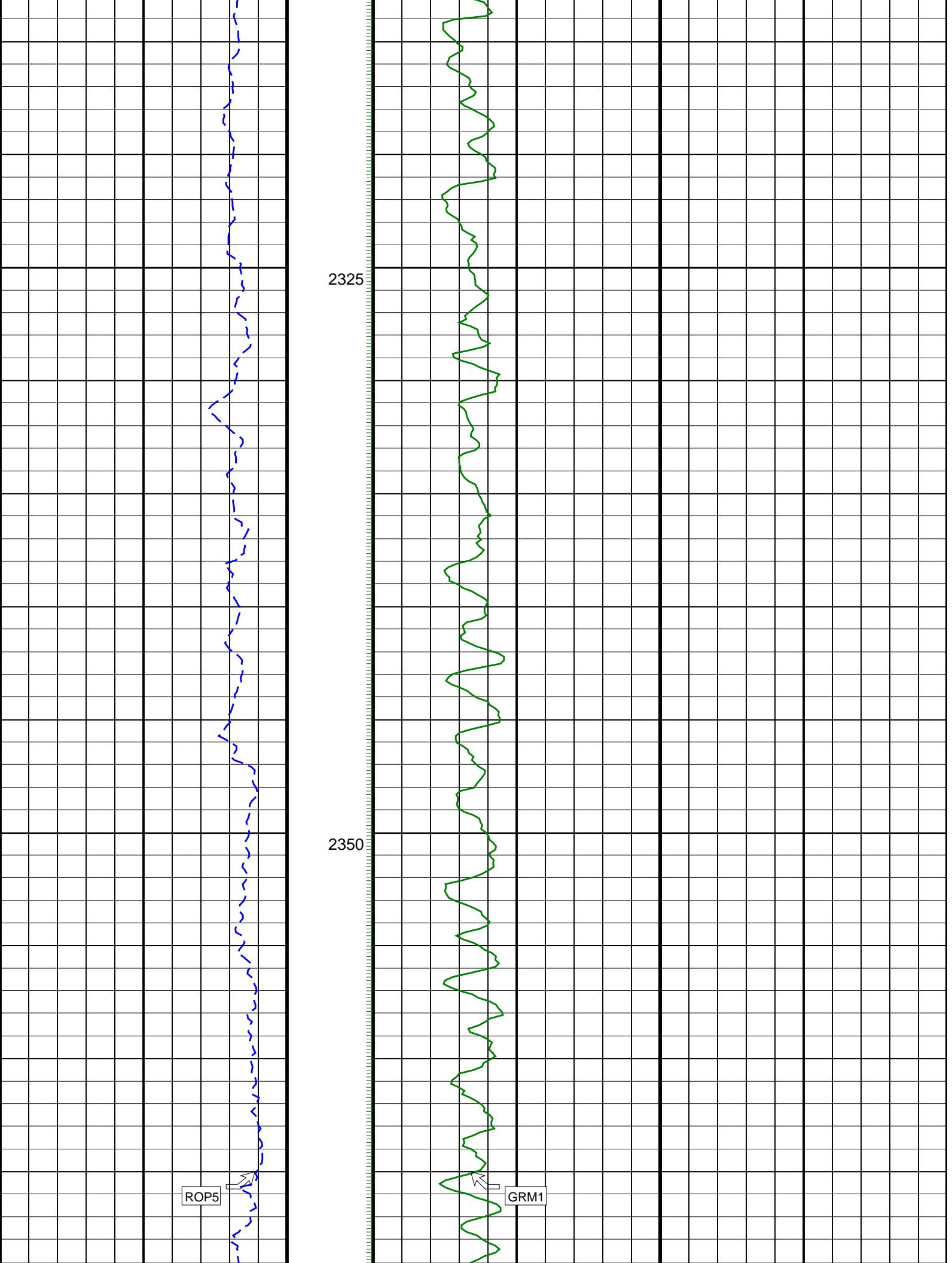


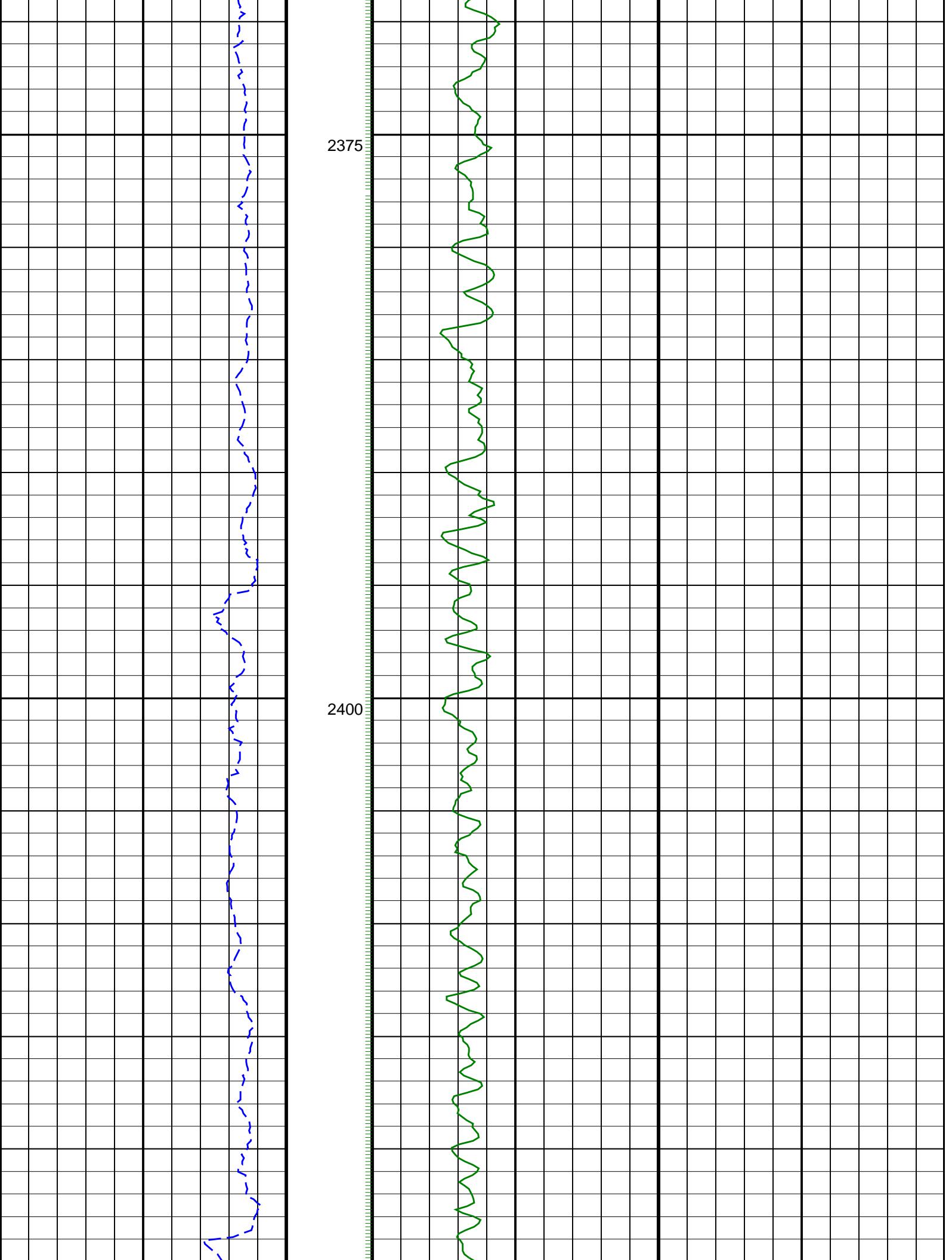


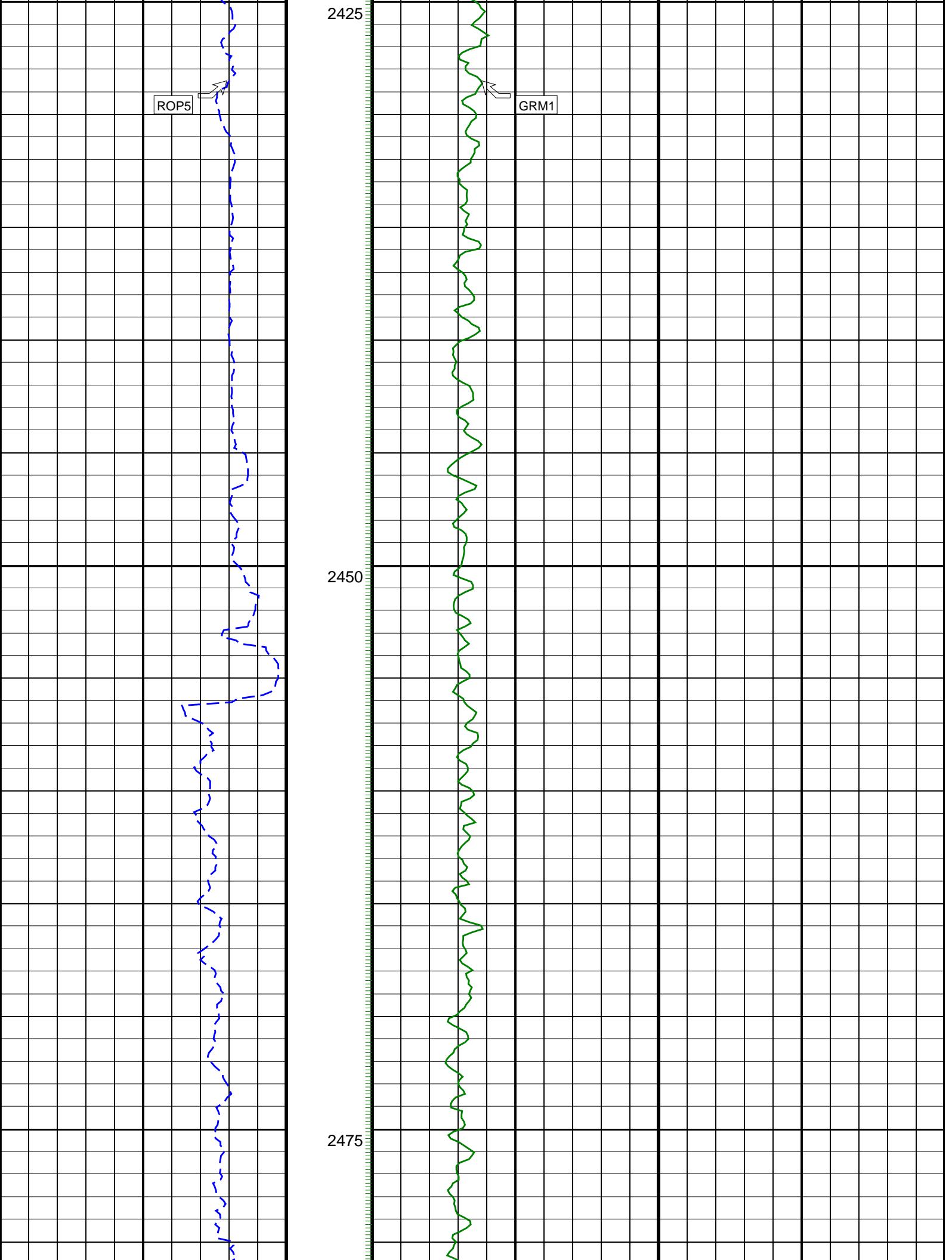


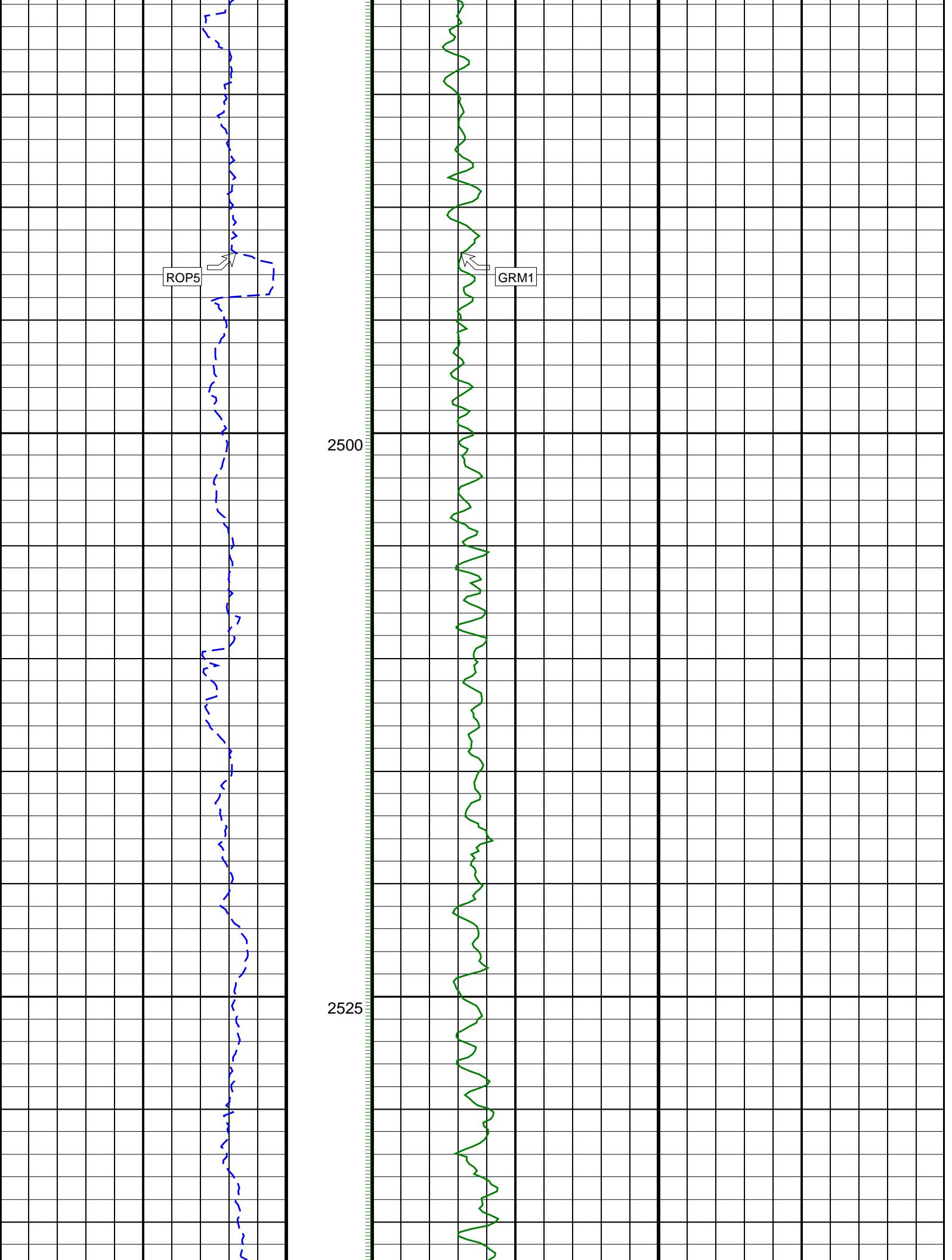


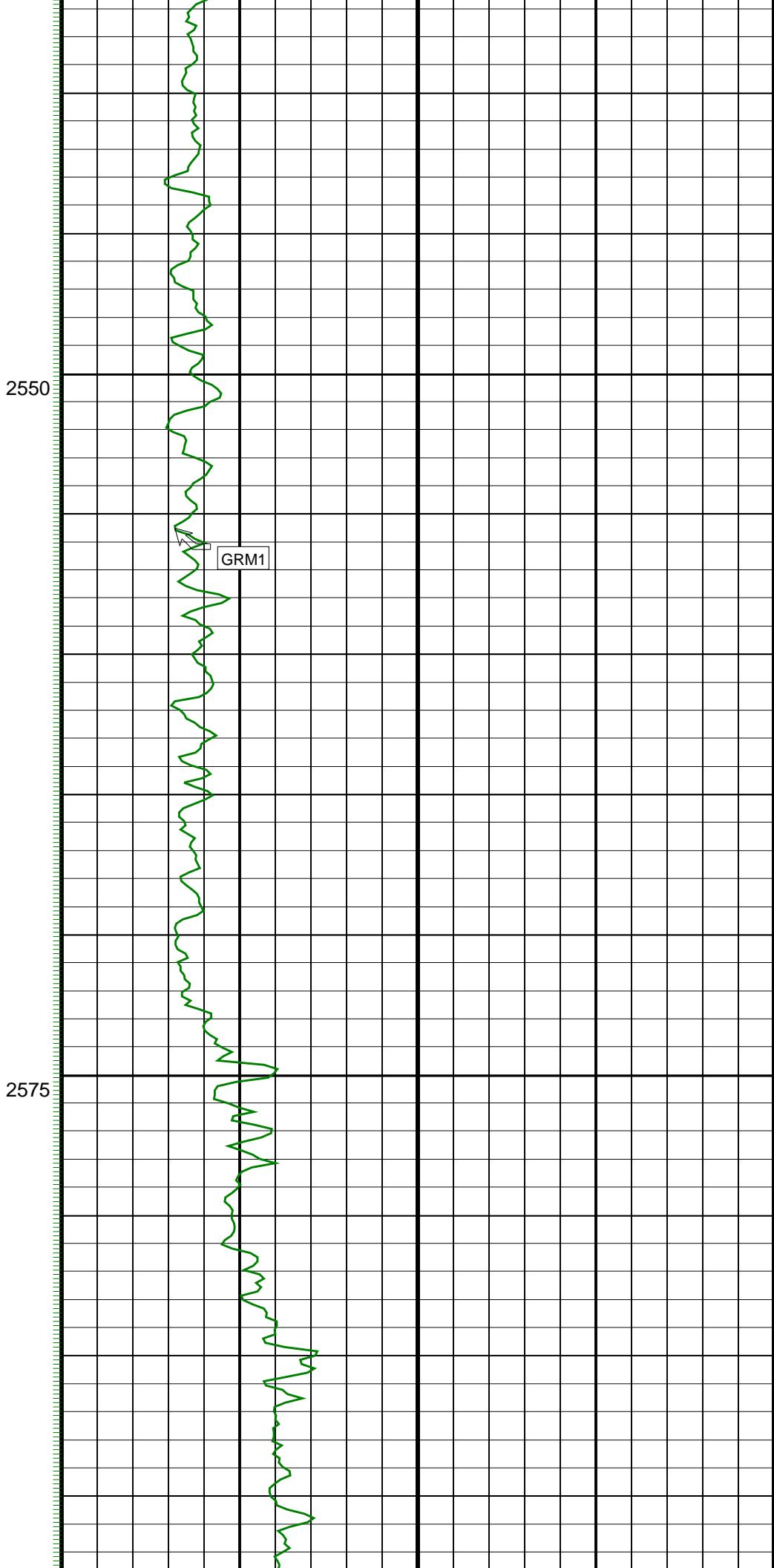
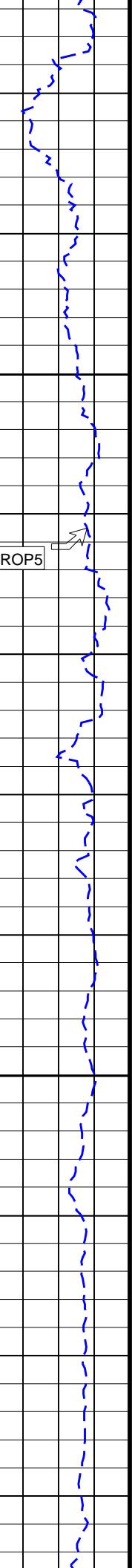


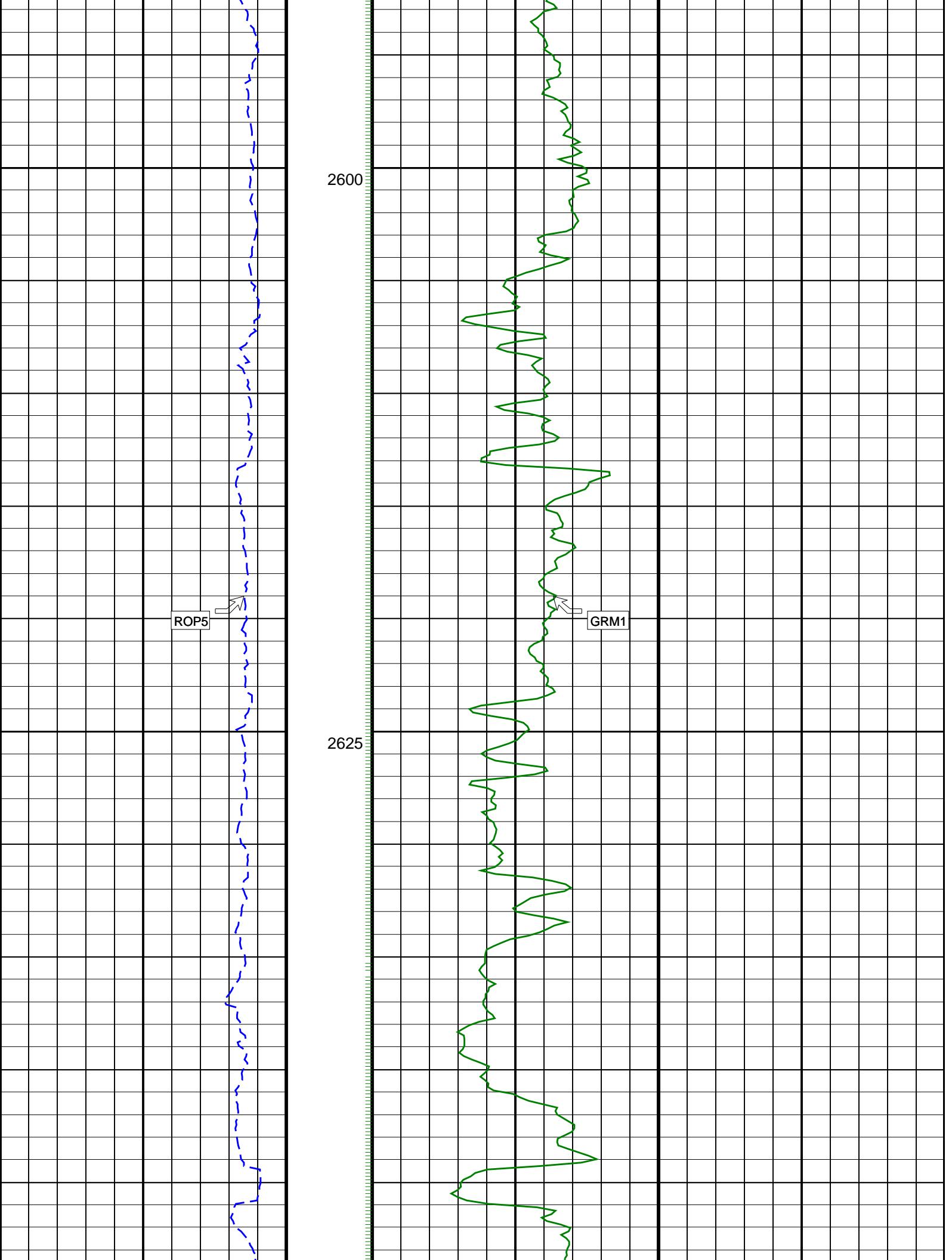


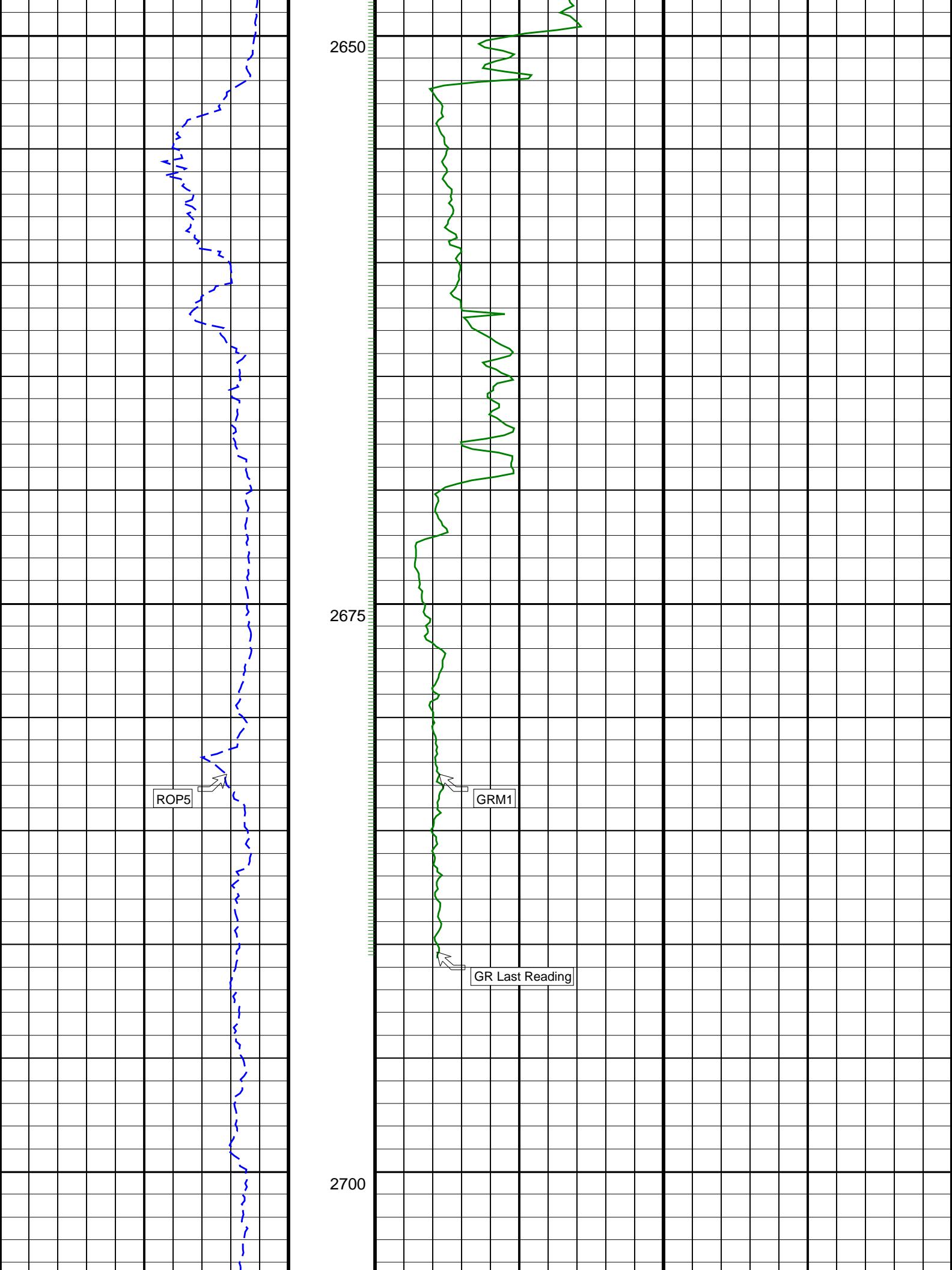


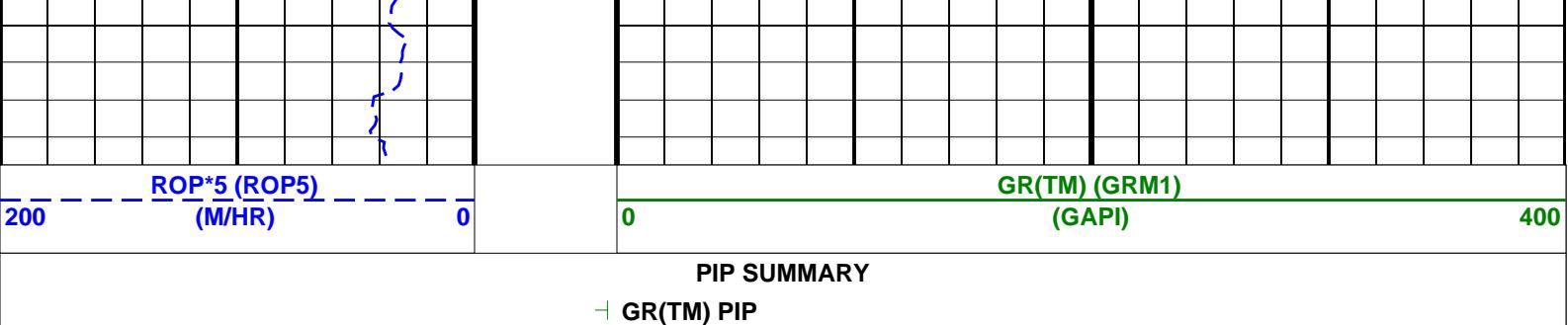












PIP SUMMARY

GR(TM) PIP

SCHLUMBERGER

Survey report

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Client.....: ESSO Australia Pty. Ltd.
Field.....: West Kingfish

Well.....: WKF W18A
API number.....:
Engineer.....: L. Johnston, R. Burns
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.....: Drill Floor
GL above permanent.....: -77.10 m
KB above permanent.....: Top Drive
DF above permanent.....: 33.43 m

----- Vertical section origin -----
Latitude (+N/S-).: -2.90 m
Departure (+E/W-).: 16.93 m

----- Platform reference point -----
Latitude (+N/S-).: 5,727,453 m
Departure (+E/W-).: 597,265 m

Azimuth from Vsect Origin to target: 111.18 degrees

Spud date.....: 23-Apr-06
Last survey date.....: 29-Apr-06
Total accepted surveys....: 73
MD of first survey.....: 650.00 m
MD of last survey.....: 2710.00 m

----- Geomagnetic data -----
Magnetic model.....: BGGM version 2005
Magnetic date.....: 21-Apr-2006
Magnetic field strength...: 1202.79 HCNT
Magnetic dec (+E/W-).: 13.21 degrees
Magnetic dip.....: -69.08 degrees

----- MWD survey Reference Criteria -----
Reference G.....: 1000.06 mGal
Reference H.....: 1202.79 HCNT
Reference Dip.....: -69.08 degrees
Tolerance of G.....: (+/-) 2.50 mGal
Tolerance of H.....: (+/-) 6.00 HCNT
Tolerance of Dip.....: (+/-) 0.45 degrees

----- Corrections -----
Magnetic dec (+E/W-).: 13.21 degrees
Grid convergence (+E/W-).: -0.69 degrees
Total az corr (+E/W-).: 13.90 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/10m)	DLS tool type	Srvy tool Corr
1	650.00	27.15	38.90	0.00	624.82	38.49	94.55	95.97	134.72	45.43	0.00	TIP None
2	677.29	25.84	48.83	27.29	649.26	43.15	103.32	104.36	146.85	45.29	1.69	MWD None
3	705.79	27.20	58.34	28.50	674.77	49.97	110.83	114.59	159.41	45.96	1.56	MWD None
4	734.66	27.59	67.73	28.87	700.41	58.81	116.83	126.39	172.12	47.25	1.50	MWD None
5	763.55	28.48	75.57	28.89	725.92	69.27	121.08	139.26	184.54	48.99	1.31	MWD None
6	792.17	28.76	81.91	28.62	751.05	80.83	123.75	152.69	196.54	50.98	1.07	MWD None
7	821.38	29.17	88.53	29.21	776.61	93.53	124.92	166.77	208.37	53.16	1.11	MWD None
8	850.14	29.30	96.36	28.76	801.72	106.81	124.32	180.77	219.40	55.48	1.33	MWD None
9	878.90	29.76	104.87	28.76	826.75	120.71	121.71	194.67	229.59	57.99	1.47	MWD None
10	907.77	30.16	113.67	28.87	851.78	135.09	116.96	208.25	238.84	60.68	1.53	MWD None
11	936.66	30.99	121.86	28.89	876.66	149.65	110.11	221.22	247.11	63.54	1.47	MWD None
12	965.20	31.13	122.65	28.54	901.11	164.10	102.26	233.67	255.06	66.37	0.15	MWD None
13	993.85	31.07	122.35	28.65	925.64	178.62	94.30	246.15	263.60	69.04	0.06	MWD None
14	1022.99	30.87	121.85	29.14	950.63	193.34	86.34	258.85	272.87	71.55	0.11	MWD None
15	1051.47	30.81	122.33	28.48	975.08	207.67	78.58	271.22	282.37	73.84	0.09	MWD None
16	1080.78	31.64	124.00	29.31	1000.15	222.54	70.27	283.94	292.50	76.10	0.41	MWD None
17	1109.53	30.58	124.33	28.75	1024.76	237.01	61.92	296.23	302.63	78.19	0.37	MWD None
18	1138.38	29.11	125.26	28.85	1049.78	250.96	53.73	308.02	312.67	80.10	0.53	MWD None
19	1166.92	29.16	126.00	28.54	1074.71	264.42	45.64	319.31	322.56	81.87	0.13	MWD None
20	1196.01	30.28	123.05	29.09	1099.98	278.45	37.47	331.19	333.31	83.54	0.63	MWD None
21	1224.46	32.85	120.89	28.45	1124.22	293.08	29.60	343.83	345.10	85.08	0.99	MWD None
22	1253.01	35.93	120.35	28.56	1147.78	308.99	21.39	357.71	358.35	86.58	1.08	MWD None
23	1281.83	36.00	120.26	28.81	1171.10	325.69	12.85	372.32	372.54	88.02	0.03	MWD None
24	1310.73	35.08	120.09	28.90	1194.62	342.29	4.40	386.84	386.87	89.35	0.32	MWD None
25	1339.46	34.07	120.22	28.73	1218.27	358.39	-3.79	400.94	400.96	90.54	0.35	MWD None
26	1368.30	32.82	120.02	28.84	1242.34	374.09	-11.76	414.69	414.85	91.62	0.44	MWD None
27	1397.13	34.56	121.68	28.83	1266.32	389.85	-19.97	428.41	428.88	92.67	0.68	MWD None
28	1425.68	34.08	122.48	28.55	1289.90	405.66	-28.51	442.05	442.97	93.69	0.23	MWD None
29	1454.41	35.88	120.92	28.73	1313.44	421.85	-37.16	456.07	457.58	94.66	0.70	MWD None
30	1483.17	35.52	120.82	28.76	1336.80	438.40	-45.77	470.47	472.69	95.56	0.13	MWD None

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 Corr (deg)
31	1511.94	34.40	121.12	28.77	1360.38	454.64	-54.26	484.61	487.63	96.39	0.39	MWD	None
32	1540.48	33.96	121.23	28.54	1383.99	470.43	-62.56	498.33	502.24	97.16	0.16	MWD	None
33	1568.16	33.89	121.31	27.68	1406.95	485.64	-70.58	511.53	516.38	97.86	0.03	MWD	None
34	1597.84	34.00	121.74	29.68	1431.58	501.94	-79.24	525.66	531.60	98.57	0.09	MWD	None
35	1626.44	34.06	122.94	28.60	1455.28	517.65	-87.80	539.18	546.28	99.25	0.24	MWD	None
36	1655.47	33.35	122.81	29.03	1479.43	533.42	-96.55	552.71	561.08	99.91	0.25	MWD	None
37	1684.29	32.57	122.88	28.82	1503.61	548.78	-105.05	565.88	575.55	100.52	0.27	MWD	None
38	1712.75	34.62	121.14	28.46	1527.32	564.24	-113.39	579.24	590.23	101.08	0.80	MWD	None
39	1741.58	34.03	121.10	28.83	1551.12	580.26	-121.79	593.15	605.53	101.60	0.20	MWD	None
40	1770.37	33.37	121.00	28.79	1575.08	595.99	-130.03	606.84	620.61	102.09	0.23	MWD	None
41	1799.19	32.91	121.02	28.82	1599.21	611.52	-138.15	620.34	635.54	102.55	0.16	MWD	None
42	1828.02	32.25	121.30	28.83	1623.50	626.81	-146.18	633.63	650.27	102.99	0.23	MWD	None
43	1856.41	34.79	121.14	28.39	1647.17	642.24	-154.31	647.03	665.18	103.41	0.90	MWD	None
44	1885.36	34.24	121.38	28.95	1671.02	658.39	-162.82	661.05	680.81	103.84	0.20	MWD	None
45	1914.08	33.79	121.20	28.72	1694.83	674.21	-171.16	674.78	696.15	104.23	0.16	MWD	None
46	1942.95	33.31	121.21	28.87	1718.89	689.92	-179.43	688.43	711.43	104.61	0.17	MWD	None
47	1971.76	32.72	121.72	28.81	1743.05	705.37	-187.62	701.82	726.47	104.97	0.23	MWD	None
48	2000.39	32.20	121.75	28.63	1767.20	720.47	-195.71	714.89	741.19	105.31	0.18	MWD	None
49	2029.14	34.24	120.51	28.75	1791.25	735.99	-203.84	728.37	756.36	105.63	0.75	MWD	None
50	2057.81	33.64	120.70	28.67	1815.04	751.78	-211.99	742.15	771.83	105.94	0.21	MWD	None
51	2086.42	32.72	120.69	28.61	1838.98	767.22	-219.99	755.61	786.99	106.23	0.32	MWD	None
52	2115.23	32.16	120.83	28.81	1863.30	782.46	-227.89	768.89	801.95	106.51	0.20	MWD	None
53	2143.94	34.19	120.20	28.71	1887.33	797.96	-235.86	782.43	817.21	106.78	0.72	MWD	None
54	2172.45	33.69	119.96	28.51	1910.98	813.68	-243.84	796.20	832.70	107.03	0.18	MWD	None
55	2201.40	33.24	119.91	28.95	1935.13	829.46	-251.81	810.04	848.27	107.27	0.16	MWD	None
56	2230.08	32.77	119.88	28.68	1959.18	844.90	-259.59	823.58	863.52	107.50	0.16	MWD	None
57	2258.89	33.48	120.39	28.81	1983.31	860.46	-267.50	837.20	878.89	107.72	0.26	MWD	None
58	2287.54	35.00	121.92	28.65	2006.99	876.33	-275.84	850.99	894.58	107.96	0.61	MWD	None
59	2316.43	34.51	121.50	28.89	2030.73	892.52	-284.50	865.00	910.58	108.21	0.19	MWD	None
60	2345.03	33.90	121.65	28.60	2054.38	908.34	-292.92	878.69	926.23	108.44	0.22	MWD	None

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 Corr (deg)
61	2373.72	33.24	121.13	28.69	2078.29	923.95	-301.18	892.24	941.70	108.65	0.25	MWD	None
62	2402.58	32.75	121.01	28.86	2102.49	939.43	-309.29	905.70	957.05	108.85	0.17	MWD	None
63	2431.16	32.06	120.84	28.58	2126.62	954.53	-317.16	918.84	972.04	109.04	0.24	MWD	None
64	2459.55	31.85	120.84	28.39	2150.71	969.34	-324.87	931.74	986.75	109.22	0.07	MWD	None
65	2488.57	30.77	120.37	29.02	2175.50	984.21	-332.54	944.72	1001.54	109.39	0.38	MWD	None
66	2517.22	29.85	120.29	28.65	2200.24	998.49	-339.85	957.20	1015.74	109.55	0.32	MWD	None
67	2546.10	29.24	120.43	28.88	2225.36	1012.55	-347.04	969.48	1029.73	109.70	0.21	MWD	None
68	2574.89	28.84	120.81	28.79	2250.53	1026.33	-354.16	981.51	1043.45	109.84	0.15	MWD	None
69	2603.37	28.65	120.13	28.48	2275.50	1039.85	-361.11	993.32	1056.92	109.98	0.13	MWD	None
70	2631.41	28.65	119.73	28.04	2300.11	1053.14	-367.81	1004.97	1070.16	110.10	0.07	MWD	None
71	2660.35	28.43	119.53	28.94	2325.53	1066.81	-374.65	1016.99	1083.80	110.22	0.08	MWD	None
72	2689.80	28.64	119.18	29.45	2351.41	1080.74	-381.55	1029.25	1097.69	110.34	0.09	MWD	None
73	2710.00	28.78	118.95	20.20	2369.12	1090.35	-386.26	1037.73	1107.28	110.42	0.09	Projection to TD	

Company: **ESSO Australia Pty. Ltd.**
Well: **WKF W18A**
Field: **West Kingfish**
Rig: **ISDL 453**
State: **Victoria**
Gamma Ray Service
1:200 Measured Depth
Real Time Log

Schlumberger

