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NEW GOLD ORE INDICATION IN FORMATIONS OF THE DEEP-LEVEL ORE MINERALISATION IN RECSK

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ABSTRACT

In 1997 an analytical study on magnetite skarn formations of the deep ore mineralisation in Recsk was made to reveal new potential gold mineralisation. As a result of 34 gold analyses of 10 boreholes, it can be stated that gold accumulation observed in the studied magnetite skarn formations can be qualified as indication, and further study on gold mineralisation in skarn formations of the deep ore mineralisation can be proposed.

INTRODUCTION

Research and mining of precious metals has always played a significant role in ore mining of several centuries in the Parádfürdõ-Recsk region (KISVARSÁNYI G., 1955). Gold, silver and copper ores occurring in hydrothermal veins and stocks near the surface were mainly mined with varying success. To substitute for the exhausting reserves, a deep level prospecting was started in the late 50's (GAGYI P. A. et al., 1972), and new type porphyritic Cu-Mo, metasomatic displacing Pb-Zn and skarn Cu and Cu-Zn ore mineralisations were explored (FÖLDESSY J., 1984). Since economic and political changes in the last decade, however, exploitation of this relatively deep-seated ore reserve has not been begun. Exploration of accessory or even independent gold mineralisation of relatively high concentration would be favourable to the economic judgement of copper and zinc ores of high quantity.

In the expectation of exploration of a new potential gold ore mineralisation gold content of magnetite skarn formations of the deep level ore mineralisation in Recsk was studied in 1997 (TARNAI T. 1997) based on Spanish (A. MARTIN-IZARD et al., 1997) and American analogies as well as some previous Au analytical data from the deep level of Recsk. Northern part of the ore mineralisation explored by more than 130 boreholes was studied.

DESCRIPTION OF THE ANALYSES

Studies were performed in several steps. Analytical study of dominant part of the so-called Rm boreholes deepened in the northern part of the ore mineralisation (figure 1) represented the first step (table 1). After studying and partly revaluation of documentation of the previous boreholes, boreholes and parts of boreholes were

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identified in which magnetite skarns occurred. Then, 25 "long" (samples 1-25; 4-5 m) and 9 "short" (samples 26-34; 0.2-1.0 m) sections of 10 boreholes were pointed out for analyses.

TABLE I

The studied boreholes

Rm-9	Rm-29	Rm-40	Rm-49	Rm-59
Rm-10	Rm-30	Rm-41	Rm-50	Rm-60
Rm-15	Rm-31	Rm-42	Rm-51	Rm-62
Rm-16	Rm-34	Rm-43	Rm-52	Rm-63
Rm-17	Rm-35	Rm-44	Rm-53	Rm-64
Rm-19	Rm-36	Rm-45	Rm-54	Rm-65
Rm-21	Rm-37	Rm-46	Rm-56	Rm-87
Rm-22	Rm-38	Rm-47	Rm-57	
Rm-26	Rm-39	Rm-48	Rm-58	

In the following step, the selected sections were sampled in the sample depot of the Recsk Ore Mining Co. The selected samples were powder ones.

Finally, the prepared and weighed powder samples were analysed. Au concentration of the samples were measured by analytical laboratory of the Analabs Pty. Ltd. in Australia under exact technological requirements and standard deviation. Results of the analyses are listed in table 2.

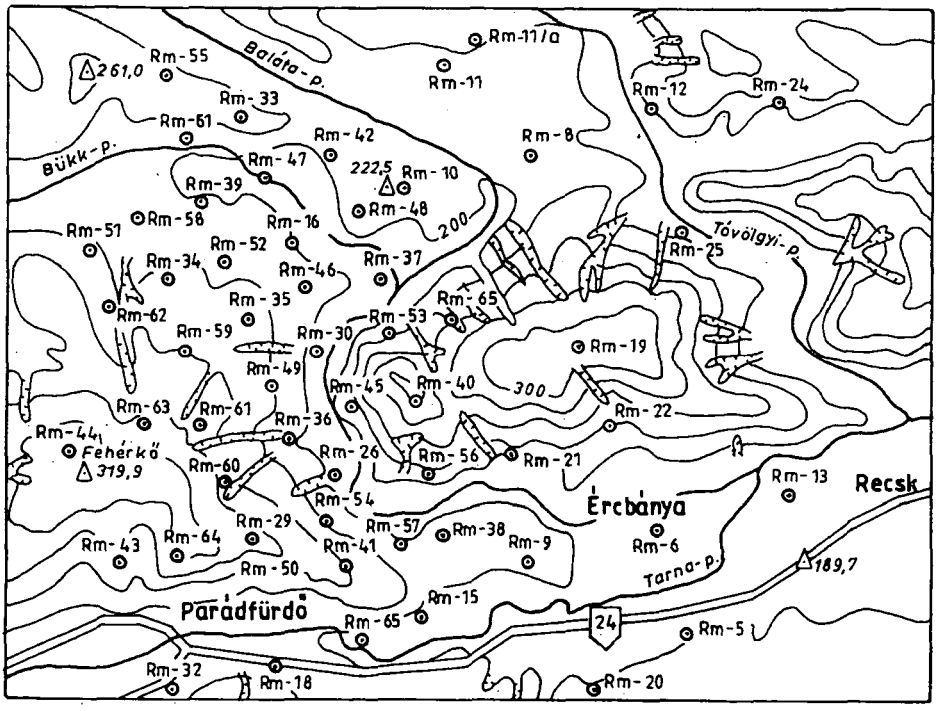

Fig. 1. Sketch map of boreholes deepened in the area of the deep-level ore mineralisation of Recsk.

TABLE 2

Au concentration in the analysed samples

Number of the sample	Symbol of the borehole	Section (m)	Type of the formation	Au (ppm)
1.	Rm-29	1115-1120	? Magnetit skarn ?	0.67
2.	Rm-29	1120-1125	? Magnetit skarn ?	0.25
3.	Rm-29	1125-1130	? Magnetit skarn ?	0.19
4.	Rm-38	790-795	Limestone skarn with magnetite	0.04
5.	Rm-38	795-800	Limestone skarn with magnetite	0.09
6.	Rm-38	800-805	Limestone skarn with magnetite	0.05
7.	Rm-42	900-905	Hematite-magnetite-krokidolite skarn	0.07
8.	Rm-42	905-910	Hematite-magnetite-krokidolite skarn	0.04
9.	Rm-42	910-915	Hematite-magnetite-krokidolite skarn	0.05
10.	Rm-45	825-830	Pyrite deposit with magnetite	0.27
11.	Rm-45	830-835	Pyrite deposit with magnetite	0.13
12.	Rm-45	835-840	Pyrite deposit with magnetite	0.04
13.	Rm-47	1010-1015	Granet-epidote skarn with disseminated magnetite	0.06
14.	Rm-50	1176-1181	Magnetite-krokidolite skarn	0.01
15.	Rm-50	1181-1186	Magnetite-krokidolite skarn	0.01
16.	Rm-52	968-972	Magnetite skarn deposit	0.17
17.	Rm-52	972-976	Magnetite skarn deposit	0.07
18.	Rm-53	570-575	Granet-serpentinite-magnetite exoskarn	0.21
19.	Rm-53	575-580	Granet-serpentinite-magnetite exoskarn	0.25
20.	Rm-53	580-585	Granet-serpentinite-magnetite exoskarn	0.17
21.	Rm-53	585-590	Granet-serpentinite-magnetite exoskarn	0.16
22.	Rm-57	607-612	?	0.04
23.	Rm-59	1105-1110	Serpentine-anhydrite-chlorite-magnetite aposkarn	0.21
24.	Rm-59	1110-1115	Serpentine-anhydrite-chlorite-magnetite aposkarn	0.15
25.	Rm-59	1115-1120	Serpentine-anhydrite-chlorite-magnetite aposkarn	0.18
26.	Rm-59	1113.5-1114.5	Serpentine-anhydrite-chlorite-magnetite aposkarn	0.09
27.	Rm-45	826.0-827.0	Pyrite deposit with magnetite	0.15
28.	Rm-45	827.0-828.0	Pyrite deposit with magnetite (particulary rich ore deposit)	DTF
29.	Rm-29	1123.0-1124.0	? Magnetite skarn ?	0.12
30.	Rm-29	1124.0-1125.0	? Magnetite skarn ?	0.15
31.	Rm-48	935.0-935.5	? Magnetite-hematite skarn ?	0.06
32.	Rm-38	909.7-909.9	? Limestone skarn with magnetite ?	0.14
33.	Rm-56	1108.5-1109.0	Magnetite skarn	0.02
34.	Rm-56	1124.0-1124.5	Magnetite skarn	0.01

CONCLUSIONS

Our study unambiguously proved gold ore indication in skarn zones of the deep level ore mineralisation of Recsk formed in the intrusive series of Recsk Andesite Formation. The highest concentration was 0.67 ppm.

It is interesting that average concentration in samples of the so-called "long" sections was higher (0.14 ppm) than that of the short ones (0.09 ppm). Since short sections came from magnetite or magnetite skarn sections, and the longer ones came from not only or less magnetite skarn sections, it can be concluded that less magnetite and magnetite skarn sections might be more productive. However, a final conclusion can not be drawn because of low amount of the samples. Real facts will only be stated by analysis of more samples, and detailed ore and rock microscopic studies on samples analysed for Au concentration.

Nevertheless, the above analysis suggest that further study of this gold ore indication is reasonable by detailed re-analysis of mining boreholes and revaluation of the geological data.

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