

APPRAISAL OF MAFIC-ULTRAMAFIC INTRUSIONS ORE POTENTIAL USING POLYMERIZATION RATE OF ROCK

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It is very important for the appraisal of ore potential to estimate the level of rock polymerization. NBO/T ratio is the number of non-bridging oxygen relative to cations with tetrahedral coordination, which was suggested by Mysen et al. (1980,1981). It is assumed, that main element partitioning took part at the pre-crystallization stage of magma evolution and that subsequent crystallization of rock didn't change significantly an initial element proportions. Those rocks which are less polymerized have the highest content of trace elements, what allows to determine the most potential parts of section for mineral prospecting. Super gravity of rock samples could be used also as the indicator of polymerization rate. The number of trace elements, which are of economical value, i.e. Cr, Ni, V, PGE (in unaltered, sulfur poor rocks) have linear regression trends vs. NBO/T, O, Si etc. Value of oxygen is also important for the appraisal of economic potential of initial magmas. Lowest contents of oxygen are related with the most enriched magmatic bodies, and probably indicate the capability of initial magmas to be enriched in incompatible elements. Some cautions should be seriously taken in account while using our method: Silicate analysis should not be average one, trace elements should be determined at the same bulk of material. The homogeneity of the sample should be controlled and trace element analysis should be done by method, which guarantee not more than 10% error. Given idea has been illustrated by data from well known complexes.