

The Geology of Large and Giant Deposits

BEKZHANOV G.R. Academy of Mineral Resources, Almaty, Republic of Kazakhstan.

Approximately 90% of ores in the world are produced from the 1500 large and giant fields (LGF) - less than 0,5 % from the total number of the ore objects. The problem of the formation of the LGF is worked out rather poorly despite of the great interest and attention paid to this problem. The theoretical substantiation of this geological (metallogenic) phenomenon in the process of evolution of geological surroundings, mechanism of the LGF formation and the main conditions of its allocation in space would allow to conduct searching of the latent LGF more effectively and efficiently.

Summarizing the basic characteristics taken from literature and obtained ourselves it is possible to make the conclusion that from the regional point the LGF are characterized by the:

- Increased orebearing of the rift cavities and "rigid" ledges of the basis of median massifs;
- Highgradiental zones of buckling above ledges of the actuated mantle;
- Coupling of plutonic faults to horizons of stratiformed ore, geological screens, borders of the structural stages, dome raisings, dome-ring structures;
- Areas with multi-leveled plutonic demultiplexings, and also the presence of the multi-leveled geophysical anomalies.

The local conditions of LGF (ore-prepared processes, biotite and carbon metasomatites, abnormal features of magmatism of the ore junctions and other) are also studied. The possibility of the international cooperation on the LGF problem within the frames of the project 345 IGCP is performed, taking into the consideration the unique geological features of Kazakhstan and the role of its mineral-raw material in the steady development of the Central-Asian region.