

Geochemical haloes like "gossan" above concealed sulfide orebodies

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Geochemical prospecting for sulfide deposits of base metals are being carried out as a rule using haloes of the main elements Cu, Pb, Zn and accompanying ones Ba, As, Hg, Ag, Bi.

We have discovered a regularity not known before. Some stratiform subhorizontal orebodies of base metals concealed under the Paleozoic sediments are represented at the Earth surface by the aureoles of siderophile and lithophile elements such as Mn, V, Ti, Sc, Ni, Co, Cr, Mo.

These haloes can be considered as the peculiar "gossans" which cannot be seen visually during the field investigations, but can be revealed as the geochemical microconcentrations.

This regularity was understood during the process of compiling the prospecting geochemical models of the cupriferous sandstones of Zhaman Aibat type and polymetallic lodes in the volcano-sedimentary sequences (Altay, Artemievskoe deposit).

The sulfide orebodies of the above named deposits are located at the depth of 300 - 900 m from the surface. Their geochemical haloes ("gossans") were detected due to the lithochemical sampling of deluvium and the regular core sampling.

Now it is possible to recommend the re - interpretation of the geochemical data at the earlier investigated areas, taking into account our promising results. So it will be possible to find new sulfide deposits.