

عنوان مقاله:

Geostatistical estimation to delineate oxide and sulfide zones using geophysical data; a case study of Chahar Bakhshi vein-type gold deposit, NE Iran

محل انتشار:

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خلاصه مقاله:

Delineation of oxide and sulfide zones in mineral deposits, especially in gold deposits, is one of the most essential steps in an exploration project that has been traditionally carried out using the drilling results. Since in most mineral exploration projects there is a limited drilling dataset, application of geophysical data can reduce the error in delineation of the sulfide and oxide zones. For this purpose, we produced a 3D model of Induced Polarization (IP) data using the ordinary kriging technique. Then the modelling results were compared with the drilling data. The results obtained showed that the 3D geophysical models would properly delineate the sulfide and oxides zones. This work presents a new application of the IP results for separation of these zones. In addition, the conducted variography in this work suggests reducing the profile spacing of dipole-dipole IP arrays down to 25 m. This would properly enrich the integration of geophysical and geological results in the modelling of gold deposits.

کلمات کلیدی:

Oxide and Sulfide Zones, Geophysical Model, Vein-Type Gold Deposit, Ordinary Kriging

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