

GEOSTATISTICAL STUDY OF THE GOLD-BEARING HYDROTHERMAL HALO, SUROZH GOLD DEPOSIT, EASTERN UKRAINE

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Archean gold-bearing hydrothermal systems are commonly characterized by wall-rock pervasive alteration. Its magnitude depends on the level of ore-forming fluids discharge. The higher this level the wider is mineralized hydrothermal halo and, respectively, higher is the probability of the additional ore bodies can be found outside the main ore zones. At the Surozh gold deposit evaluation of the spatial patterns of the hydrothermal halo was performed by means of kriging the numerous low-precision spectrometry data from nine drill-holes of a single profile. The cloudy, blot or spot-like gold grade distribution patterns were established that correspond to the medium level of the hydrothermal system discharge (between meso- and epithermal ones). To cover the areas in between drill-holes the kriging estimates have been selected by the slightly erratic kriging variance value that is little bit higher than the mean one. Despite this, however, the raw mean value has been diluted as compared to the kriged one due to incorporation of the kriging estimates from unsampled areas.