

عنوان مقاله:

Anomaly delineation of porphyry copper deposits of Hanza Region through geochemical data analyses and multispectral remote sensing

محل انتشار:

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خلاصه مقاله:

Hanza region is located in the southern part of Urumieh–Dokhtar Metallogenic belt in southeastern Iran. This region includes six known porphyry copper deposits and it is considered as an ore-bearing region from geochemical point of view. The aim of this research is to examine effective processing techniques in the analysis of stream sediment geochemical datasets and ASTER satellite images. The processing methods have led to identification of eight new prospective areas. These methods are aimed at providing univariate geochemical maps. The stream sediment geochemical mapping for Cu and Mo was performed by the sample catchment basin approach. The results derived from this approach have been mapped in four classes associated with the first quartile, third quartile and threshold values obtained from Median Absolute Deviation method. False-colour composite and band ratio techniques were adopted as two well-known methods for the processing of an ASTER scene spanning the study area. Eight new targets for possible mineralization have been resulted from geochemical data analyses. Image processing techniques on the ASTER multispectral data have also revealed widespread hydrothermal alterations associated with the known porphyry copper deposits and the new prospects.

کلمات کلیدی:

Median Absolute Deviation method, Geochemical Mapping, Porphyry Copper Deposits, ASTER

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