

عنوان مقاله:

Useing of satellite image for exploration of Haji-Gak iron mine in Bamiyan, Afghanistan

محل انتشار:

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خلاصه مقاله:

The Haji-Gak mine is the largest iron ore mine in Afghanistan. Located in the center of Afghanistan, which has the geological life of Paliozavi and pirm .he rocks of mytasomatic-hydrothermal-sedimentary origin. types of iron minerals, including magnetite, hematite, magnasite, and amphibolite and qartz. The combination of remote sensing and Field operations data is a powerful tool for mapping and interpreting iron mineralization in some area with intensely rugged topography or a broad expanse area, where systematic sampling and conventional geological mapping has some limitation and time consuming. The ground data and Space borne There- mal Emission and Reflection Radiometer (ASTER) satellite data groun data magnetometer data were used for evaluating and map- ping different types of iron mineralization in the Hajigak mining region. Preprocessing of the datasets involved band ratio (BR), principal component analysis (PCA). spectral angle mapper (SAM) constrained energy minimization (CEM) and land surface temperature(LST) of the visible-near infrared and short wave infrared Tir ASTER data were used to map four types of iron minerals (magnetite, hematite, magnasite, and amphibolite and qartz). For preparing a lith- ological map of this region, an RGB image produced by combination of BR and PCA R:($\delta+\gamma$)/ ϵ G: PC γ , B: PC δ) LST Products .Implementing SAM and CEM technique were useful for mapping and detecting magnetite, Hematite, Magnesite

کلمات کلیدی:

Haji-Gak Mining Region. Aster Sateillte. Field Operations. Geological. Spectral angle mapper

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