

عنوان مقاله:

Separation of ore mineralization by applying of C-N fractal method in Zoe bauxite deposit, NE Iran

محل انتشار:

دومین کنگره بین المللی زمین شناسی کاربردی (سال: 1394)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Peyman Afzal - Department of Mining Engineering, South Tehran branch, Islamic Azad University, Tehran, Iran

Masoud Farshidfard - Department of Mining Engineering, South Tehran branch, Islamic Azad University, Tehran, Iran

خلاصه مقاله:

Separation of ore mineralization from barren host rock is main aim in mineral exploration. Geological methods based on drill cores logging is not proper because ore element is not entered in this operation. Fractal methods are modern techniques for separating different geological and geochemical populations. These are suitable for separating data distribution due to their spatial distribution ore element and geometrical features. Concentration-number (C-N) method is useful and high level confidence for separating of geochemical and geological populations. In this paper, main goal is separation of different parts of bauxite mineralization from barren host rock in Zoe bauxite deposit is situated in Jajarm bauxite complex, NE Iran. First, based on subsurface information from cores logging of 37 boreholes, 3D geological model of deposit is constructed. The information concluded lithology, stratigraphy and chemical analysis of collected samples from cores. Next, Al_2O_3 distribution is modeled in bauxite layer by IDW (Inverse Distance Weighed) method based on 247 samples chemical analysis. Then, data are classified and concentration-number log-log plot is drawn. Different ore element population is separated on log-log plot. Based on this operation, Al_2O_3 grade between 33.11% to 50.12% shows low grade bauxite mineralization is occurred and Al_2O_3 higher than 50.12% shows that there is high intensity bauxite mineralization. Lower than 33% is background and could be introduced entitled host rock. Finally, high grade and low grade ore mineralizations are separated from barren host rock in this deposit and .comprised with geological data

کلمات کلیدی:

Fractal concentration-number method, Ore mineralization, Bauxite, Zoe, Iran

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/532254>

