Processing studies and evaluation of economic potential of andalusite reserves from East Fariman

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Abstract: Extensive outcrops of metamorphic rocks is located in east of fariman (gandab) contain andalusite schiste has been evaluted their potential as mineral deposite in this study. For this purpose, after preliminary studies of petrography and geochemistry, were performed processing tests including gravity and magnetic separation with aim of evaluation ability of production andalusite used in refractories industry. Petrography study includs of thin sections, X-ray diffraction (XRD) and in order of identify the associated elements, chemical analysis of samples taken by XRF. The results show that processing operations using dry high intensity magnetic separation and heavy media method of gravity seperation, product %55 aluminum oxide, %1.5 iron oxide, %42 silicon oxide and less than %0.5 of potassium and sodium oxides, which is comparable to international standards and marketable andalusite.

Keywords: processing; Andalusite; gravity separation; magnetic separation.