

THE GENESIS OF ESKİŐEHİR-BEYLİKAHİR COMPLEX FLUORITE DEPOSIT AND PRELIMINARY BENEFICIATION STUDIES

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ABSTRACT.— This paper describes beneficiation studies of a complex fluorite ore containing considerable amount of barite as well as rare earth minerals. The deposit is located at Eskişehir-Beylikahır district, West of Turkey. Genesis of the ore is thought to be hydrothermal. Following the characterization studies, the liberation size of relatively coarse fluorite was found to be minus 0.15 mm at which approximately 40 % of the total fluorite was liberated. Obtaining a higher degree of liberation does not seem to be possible owing to the micro and crypto crystalline form of the rest of fluorite. As accessory minerals, calcite, quartz, ironhydroxides, psilomelane, muscovite and some clay minerals have also been determined. The liberated fluorite was concentrated by gravity (shaking table) and flotation methods. Acceptable concentrates have been obtained for metallurgical, glass and ceramics industries.