5. CONGRESO DE MINERALOGIA Y METALOGENIA, OCTUBRE 2000
(Eds: I. Schalamuk, M. Brodtkorb y R. Etcheverry) INREMI, La Plata, Publicación 6, 25-31

MINERALOGÍA DEL HIERRO EN LAS PELITAS ILLÍTICAS PRECÁMBRICAS DE LA FM. VILLA MÓNICA, BARKER, PROVINCIA DE BUENOS AIRES.

Wanda Alló, Eduardo Dominguez y Fernanda Cravero
CONICET - UNS Depto. de Geologfa. San Juan 670. (UNS). E-mail: wallo@criba.edu.ar

Abstract

In spite of the high iron content of the Precambrian sedimentary sequences in Buenos Aires Province, there are not detailed studies about the origin and classification of the iron. The aim of this study is to characterize the iron in the pelites of Villa Mónica Formation in Barker area. The iron content as oxides and oxohydroxides in the yellow illitic pelites is 13,7% while the red kaolinitic veins in the pelite have 12,9%. The difference in the color of the sediment is not related to the iron content but to the oxidation state.
The iron, which occurs as hematite and goethite, covers the surfaces of all the mineral particles that composed the pelite as thin films or clusters of small crystals. The hematite should be the primary iron mineral formed in the sediments in the Proterozoic time and the goethite seems to be a secondary oxidation product.
There are not iron ions absorbed in the illite surface and the iron content in the structure of the clay particles is lower than 4%.
The deposition of the iron could have been related to the flocculation of the clay minerals evidenced by their "card house" structure.