

Hanks & Webb. p. 122 "Fe & Mn oxides are the material primarily responsible for the adsorption of cations in natural surface environments" (1962)

G.S.C. 66-54

F. C. CANNEY - Proc. Symposium on Geochemical Prospecting, Ottawa, April 1966.
Hydrous Magnesian-Iron Oxide Sequestration: Its Effect on Stream Sediment Surveys.

Canney found that where coatings or encrustations of Fe-Mn oxides occurred on rocks in stream-beds that the following relationship held true

$$\text{ppm Fe} \times \text{Hm} = a (\text{ppm Mn})^b$$

(where a & b are constants)

In areas of significant mineralization however the Hm/ppm ratio is often considerably higher than that ~~expected~~ by the above equation. It is suggested that this provides an encouraging method for work in glaciolacustrine terranes.

Low pH in poorly drained terranes gives high solubility to Mn in sed. - the out as water table intersects surface or stream bed. (Mainly colloidal hydrated Mn oxides - Mn O₁₋₂)

In well drained areas the Mn is derived mainly from erosion and consists largely of tetravalent oxides MnO₂ which have reached a stable non reactive state.

Nickel, Harsanyi & Webb.

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