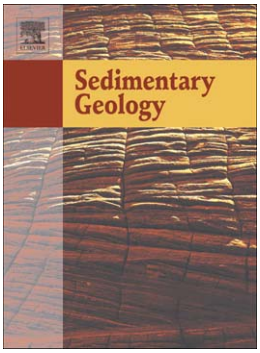

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PII: S0037-0738(17)30043-X
DOI: doi:10.1016/j.sedgeo.2017.02.007
Reference: SEDGEO 5165

To appear in: *Sedimentary Geology*

Received date: 2 December 2016
Revised date: 14 February 2017
Accepted date: 15 February 2017

Please cite this article as: Delpomdor, Franck R.A., Devleeschouwer, Xavier, Spassov, Simo, Préat, Alain R., Stratigraphic correlations in mid- to late-Proterozoic carbonates of the Democratic Republic of Congo using magnetic susceptibility, *Sedimentary Geology* (2017), doi:10.1016/j.sedgeo.2017.02.007

Stratigraphic correlations in mid- to late-Proterozoic carbonates of the Democratic Republic of Congo using magnetic susceptibility

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ABSTRACT

In this paper, we have tested the application of magnetic susceptibility measurements in Cu-Ag-Zn-Pb-(Fe)-mineralized carbonates of the BIe subgroup (Democratic Republic of Congo) as an efficient tool for regional and global high-resolution stratigraphic correlations in the Neoproterozoic marine carbonates. To achieve this goal, we integrate the low-field magnetic susceptibility (X_{LF}) data with facies analyses, geochemistry and isotope stratigraphy. The microfacies analyses of two cores, Tshinyama#S70 and Kafuku#15, drilled in the early Neoproterozoic carbonates of the Mbuji-Mayi Supergroup reveal a deep carbonate ramp setting associated with a microbial/stromatolitic mid-ramp environment. High-resolution stratigraphic correlations using magnetic susceptibility and C-isotope curves established for