

## ***Interactive comment on “Vivianite formation in ferruginous sediments from Lake Towuti, Indonesia” by Aurèle Vuillemin et al.***

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We thank the reviewer for his/her review of our manuscript, which highly helped us improving the new version of the manuscript presently submitted. We have addressed all of the Reviewer's concerns with additional data, namely:

- Pore water  $\text{SO}_4^{2-}$ ,  $\text{Mn}^{2+}$ ,  $\text{Ca}^{2+}$  and  $\text{Mg}^{2+}$  concentrations were added to Figure 2a and are discussed in the revised manuscript.
- Downcore profiles for both highly reactive and total iron in bulk sediment are provided in Figure 2a.
- Based on geochemical modeling of pore water major ions, we calculated saturation indices for specific minerals (e.g. vivianite, siderite). These indices are listed in a new table (Table 1) now included in the revised manuscript.

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We did our best to fulfill all the remarks and suggestions brought by the Reviewer. Each comment has been addressed in separate answers, and all the corresponding changes in the text are listed after them. Please, find our point by point answers to Reviewer no. 2 in the pdf presently uploaded as supplement. Following Copernicus' guidelines, we will upload the revised manuscript with track-changes highlighted in red at a later stage.

Yours sincerely,

Aurèle Vuillemin First/corresponding author

Please also note the supplement to this comment:

<https://www.biogeosciences-discuss.net/bg-2019-426/bg-2019-426-AC2-supplement.pdf>

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Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2019-426>, 2019.

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