

Response to the comments of reviewer #2

Manuscript esurf-2022-35, Mansouri et al.

"The Permian-Triassic transition in the Blue Nile Basin: insights from petrography and geochemistry of sandstones"

Dear Dr. William McMahon,

We would like to express our highest appreciations for your very constructive feedbacks, which helped us to significantly enhance the quality of our manuscript. Please find our response to your main comments in below. We are able to incorporate changes to reflect the provided suggestions during revision.

In the first comment you suggest to write in more detail about the sedimentary facies in which the samples have been taken. Our sampling was based on the work of Dawit (2010 and 2014), which contain detailed descriptions of lithofacies and lithofacies associations. He is co-author of our paper and guided us through the sections in the field. Overall, the depositional system develops from braided, over meandering to estuarine conditions which means that always riverine sediment has been sampled. We will address the sedimentary environment and the selection of sampling spots more thoroughly in the revised manuscript.

Concerning the second comment about writing the findings a little more succinctly in certain places and providing more guidance to the relevant figures, we agree with what you recommended and we will revise and adapt the text.

Considering the use of GSA geological timescale and adding an additional geological/stratigraphical setting section, indeed that is a very good point. We will apply it in the revised manuscript.

The all line-by-line comments will be added in the manuscript during the revision.

We do appreciate your time and efforts to revise our manuscript.

Sincerely yours,

Maryam Mansouri

Dawit, E.L.: Adigrat Sandstone in Northern and Central Ethiopia: Stratigraphy, Facies, Depositional Environments and Palynology, Ph.D. thesis, University of Berlin, Germany, 166 pp., 2010.

Dawit, E. L.: Permian and Triassic microfloral assemblages from the Blue Nile Basin, central Ethiopia, *J. African Earth Sci.*, 99, 408-426, <https://doi.org/10.1016/j.jafrearsci.2014.04.011>, 2014.