Interactive comment on "Mapping undercover: integrated geoscientific interpretation and 3D modelling of a Proterozoic basin" *by* Mark Lindsay et al.

Mark Lindsay et al.

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Dear Li Zhen,

Thank you for your insights and review of our manuscript.

We address your questions below:

1) Is the petrophysical model on Figure 11 derived from the 3D inversion? If yes, please add a few words to be clear.

No, this model was constrained by geological data obtained from the map and WAROX (the Geological Survey of Western Australia geological observation database) and

petrophysics obtained from the area of interest or generic values (where local samples were unavailable). We will make this clear in the revised manuscript.

2) If all the figures have the same orientation, it is easier to compare them and see the difference directly. Is there a special reason why Figures 12-14 show a different angle of view of 3D models?

We agree that these figure may be difficult to view. This is an inherent problem with displaying 3D models on a 2D medium, and in large part provoked us to provide the model as a supplementary dataset.

The other reviewers have made similar comments and suggestions as to better display of the model, and redrafting of these figures is being performed for the revision of this manuscript.

We thank you for your supportive comments and interest in the paper.