

I 91-92: "It is also worthy of note that the topography of the study area is very subdued, with contemporary draining systems being discordant with respect to their ancient precursors.": I had thought that the key to your work was the fact that the topography, while subdued, was concordant with the paleovalley systems.

Our modified text is: *It is worthy of note that the topography of the study area is very subdued, and whilst the contemporary draining channels are discordant with respect to their ancient precursors as defined by the thalweg or deepest part of the palaeovalley, these old valley systems are concordant with the subdued valley forms expressed in today's landscape.*

I 98: "Ma" alone -- "ago" not needed.

OK, remove the ago.

I 108: The existence of plays may bolster your counterargument to my last review: either sediment deposition or neotectonics must have split the valley into internally drained basins by this time.

Our modified text is as follows: *During the Late Miocene to Early Pliocene (about 10-3 Ma ago), evaporation of these sediments led to the deposition of a gypsum layer which was accompanied by intermittent fluvial deposition. A combination of active faulting and sedimentation may have encouraged the development of small, narrow internally draining basins during this period.*

I 135-139: You state that the geophysical data match geological reality, but what would really be good is to cite sources (e.g., with borehole logs) to indicate this.

Our modified text is as follows text: *The geophysical expression is well matched with the geological reality in that targeted drilling (described in Krapf et al 2019, and Munday et al. 2020), confirmed the presence of thick (>150m) alluvial sediment fill sequences associated with the interpreted palaeovalleys, which were also coincident with the more conductive linear features identified in the AEM data.*

I 252: I would suggest formatting this as a full reference to go in the reference list, especially considering that it is a doi. If it stays a link, the Copernicus staff will ask you to give the date of last access.

Cite as: Munday, Tim (2019): Musgrave Province Airborne Electromagnetic Conductivity Grids. v1. CSIRO. Data Collection. <https://doi.org/10.25919/5d0868d48591e>

I 384-385: Not sure if this sentence is needed; the prior sentence states the same, but more precisely.

OK – Remove this sentence: *However, the geologic/geomorphologic complexity of the Australian palaeovalley systems is therefore no less.*