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C. T. G. Yule^a , J. Daniell^a , D. S. Edwards^b , N. Rollet^b  and E. M. Roberts^b 

^aJames Cook University, Townsville, QLD, Australia; ^bGeoscience Australia, Canberra, ACT, Australia

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Mory (2023) presents a discussion detailing biostratigraphic constraint for the lithological log of the Tappers Inlet 1 well in the Canning Basin. Biostratigraphy was used to support lithostratigraphic interpretations from when the well was drilled in 1971; however, Yule *et al.* (2023) presented an alternative perspective. The lead author of Yule *et al.* (2023) agrees that the data referenced by Mory (2023) remain the most appropriate interpretation of the well, and the phrasing used in Yule *et al.* (2023) (that Tappers Inlet 1 was ‘updated’) overstates the certainty of their interpretation. It would be more appropriate for Yule *et al.* (2023) to state that the stratigraphic revision of Tappers Inlet 1 (figure 10) is a model based on seismic interpretations within the presented framework, ground-truthed by five adjacent wells. During the process of seismic stratigraphic mapping for Yule *et al.* (2023), all wells in the Northern Fitzroy Trough area were found to be stratigraphically agreeable except Tappers Inlet 1. The lithological log for much of Tappers Inlet 1 could not be reconciled with adjacent wells and available seismic data. All efforts were made to honour every well as much as possible.

Mory (2023) suggests it is ‘almost certain’ the mafic igneous unit at the bottom of Tappers Inlet 1 is basement. Quantitative geochemical data from Yule and Spandler

(2022) indicate that the mafic igneous unit is related to mafic igneous samples from other wells (Minjin 1, Padilpa 1, SD 1, WAMAC 1) that are known to not be basement. Additionally, the SEEBASE basement dataset measures the basement underneath Tappers Inlet 1 as over 4000 m deep (Figure 1), ~1200 m deeper than the bottom of hole (B.O.H.). It is likely that more strata are present underneath the Tappers Inlet 1 mafic igneous unit that available seismic data cannot image, including Ordovician units such as the Caribuddy Group, Goldwyer Formation, Willara Formation and/or Nambheet Formation.

Ultimately, geological understanding of the Canning Basin is limited by its enormous size, remoteness and scarce, outdated data (most citations for ages are from the early 1970s, 1980s and 1990s). Additional quantitative geochronological data (*e.g.* U/Pb LA-ICP-MS of detrital zircons and zircons from volcanic ashes) would better constrain the depositional history of stratigraphic units and calibrate the biostratigraphic ages (especially for species that are endemic to the Northwest Shelf). Other recommendations include re-logging Tappers Inlet 1 or drilling a new well with solid core.

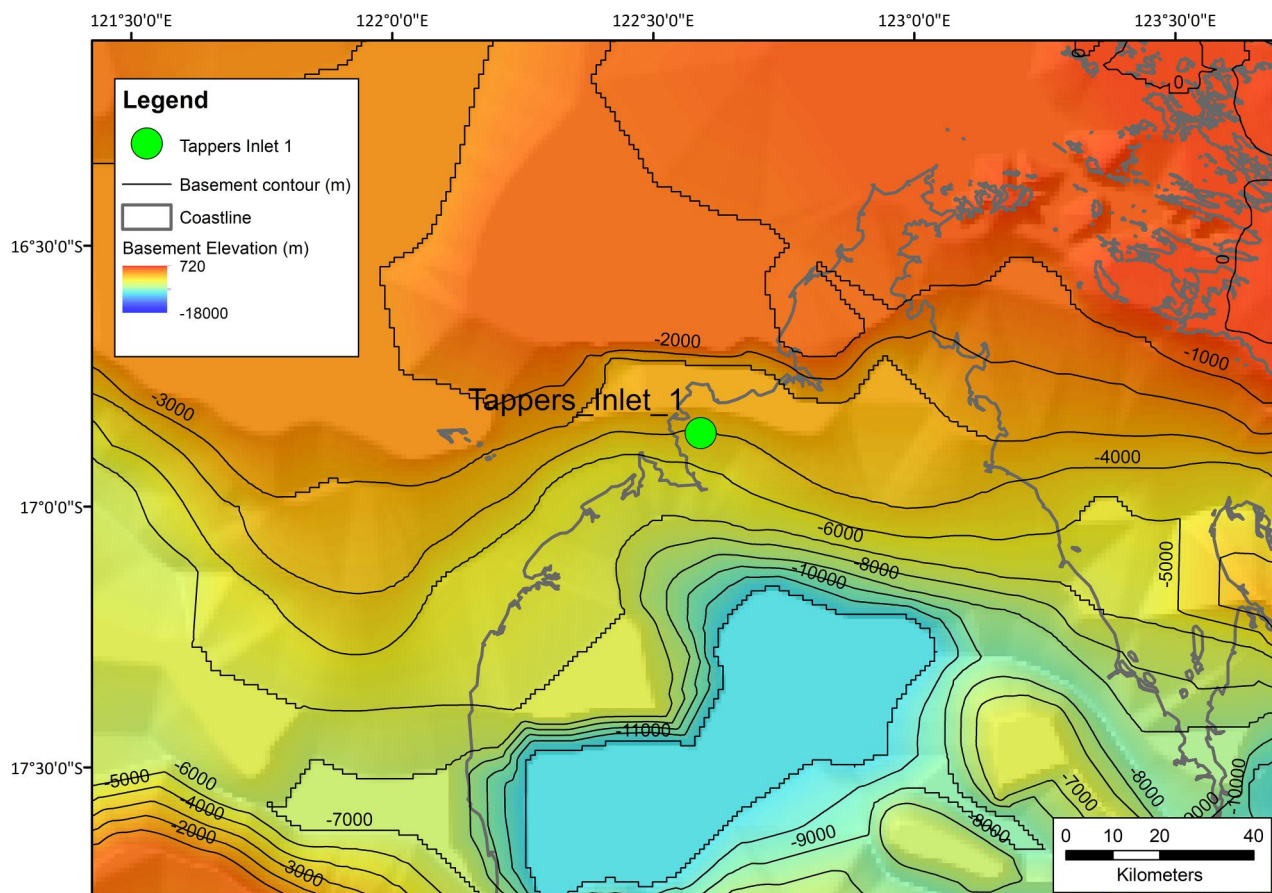


Figure 1. Basement map in the area of Trappers 1 Inlet well using the SEEBASE dataset (Frogtech, 2014) by combining geophysical and geological data (de Vries *et al.*, 2007).

Disclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

C. T. G. Yule <http://orcid.org/0000-0001-9030-5585>

J. Daniell <http://orcid.org/0000-0002-1463-7403>

D. S. Edwards <http://orcid.org/0000-0002-2710-2088>

N. Rollet <http://orcid.org/0000-0002-8392-1344>

E. M. Roberts <http://orcid.org/0000-0002-8583-7437>

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