Deng, H., and McClay, K., 2020, Three-dimensional geometry and growth of a basement-involved fault network developed during multiphase extension, Enderby Terrace, North West Shelf of Australia: GSA Bulletin, <https://doi.org/10.1130/B35779.1>.

Supplemental Material

Figure S1. (A) Digital elevation model of Australia showing the location of the North West Shelf basin systems and the location of the research area. (B) Location of the North West Shelf of Australia in respect to the Eurasian plate and the Indian-Australian plate.

Figure S2. (A) Fault map at the Triassic horizon TR10.0 SB showing the location of seismic line in B; (B) Strike seismic section in the hangingwall of the F1A showing the stratigraphic architecture of the hangingwall basin. (C) Interpretation of the seismic line in (B). Note that the lowermost Upper Carboniferous to Upper Permian strata display three different depocentres (different segments) whereas the overlying Triassic units are continuous indicating segment linked was achieved by the Early to Middle Triassic.

Figure S3. Three-dimensional geometry of fault surface architecture. (A) Three-dimensional architecture of the central part of the F1 fault system (see Figure 7E for location); (B) Three-dimensional architecture of the F3–F4 fault systems (see Figure 7E for section). Note that the basement segments of the F1a, F3a, and F4a are linked to shallow segments F1f–i, F3b–F3e, and F4b–d through horizontal branch lines (HBLs). The shallow adjacent segments in the sedimentary cover are linked through vertical branch lines (VBLs).

TR10.0 SB (252.2 Ma)

Basement Upper Carboniferous–Upper Permian Lower–Upper Triassic Upper Triassic Lower Jurassic