

# **Basin Setting and Age of the late Palaeoproterozoic Capricorn Formation, Western Australia.**

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## **ABSTRACT**

The Palaeoproterozoic Capricorn Formation near Ashburton Downs in northwestern Australia formed during the latter stages of the convergence of the Pilbara and Yilgarn cratons. Palaeocurrent and facies analyses show that the southwesterly-derived sediments were deposited in terrestrial environments and in a lake or shallow sea with a shoreline trending southeast. Intraformational debris flows suggest instability during sedimentation. Zircon grains from an accretionary lapilli tuff, dated at  $1804 \pm 7$  Ma by the SHRIMP U-Pb method, show that the Capricorn Formation was deposited at the same time as granitic plutons were intruded in the Gascoyne Complex to the south and west. Although the Capricorn Formation was deposited with marked angular unconformity over the turbiditic Ashburton Formation, both formations could have been deposited in a foreland basin on the northeast flank of the growing Ashburton Fold Belt.

**Key words:** Ashburton, Capricorn, foreland basin, geochronology, palaeocurrents, Palaeoproterozoic, SHRIMP, Western Australia, zircon.