



**U-Pb Detrital Zircon, Geochemical and Nd isotope Constraints  
on Sedimentary Provenance of the Chewings Range Quartzite,  
Warumpi Province, Arunta Region, NT**

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## **Abstract**

The Chewings Range Quartzite is a meta-sedimentary cover sequence located in the Warumpi Province of the Arunta Region. U-Pb detrital Zircon analysis of the Chewings Range Quartzite indicates a minimum depositional age of ~ 1640Ma, with the main population of zircons residing within a range of 1700 – 1800Ma. Evidence from Sm-Nd isotopic data suggests that a series of Staurolite Garnet Schists, often grouped with the Chewings Range Quartzite, has a significantly more juvenile character. This suggests that it may represent a new unit with a significantly differing provenance to that of the Chewings Range Quartzite. Combined REE, geochemistry and detrital zircon dating suggests that the Chewings Range Quartzite was derived primarily off the Arunta Region and North Australian Craton, while the Staurolite Garnet Schists holds more affinity with juvenile Musgrave Province to the south.

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