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The Ticunzal Formation in central Brazil: Record of Rhyacian sedimentation and metamorphism in the western border of the São Francisco Craton

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12

13 Abstract

14

15 The Ticunzal Formation is exposed in the northern portion basement of the external zone of  
16 the Brasília Fold Belt and corresponds to a sequence of biotite-garnet paragneisses and mica-  
17 graphite schists with mineral assemblages indicating retrograde metamorphism under  
18 greenschist facies conditions. The formation displays local mylonitic structures and is  
19 intruded syn- to post-tectonically by 2.11-2.16 Ga peraluminous plutons of the Aurumina  
20 Suite. Detrital zircon U-Pb ages, Nd model ages between 2.23 and 2.88 Ga and geochemical  
21 data reflect a provenance probably represented by the 2.20 and 2.46 Ga tonalitic/granodioritic  
22 rocks of the Almas-Dianópolis terrane, exposed northwards of the study area. Zircon U-Pb  
23 geochronology and field observations suggest an age interval for the deposition of the  
24 precursor sediments of the Ticunzal Formation between 2.16 and 2.19 Ga. Raman  
25 spectroscopy analyses on graphite indicate high-crystallinity internal structures consistent

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