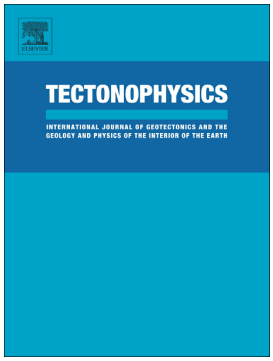

On thrusting, regional unconformities and exhumation of high-grade greenstones in Neoarchean orogens. The case of the Waroonga Shear Zone, Yilgarn Craton

I. Zibra, F.J. Korhonen, M. Peternell, R.F. Weinberg, S.S. Romano, R. Braga, M.C. De Paoli, M. Roberts

PII: S0040-1951(17)30200-7
DOI: doi: 10.1016/j.tecto.2017.05.017
Reference: TECTO 127493

To appear in: *Tectonophysics*

Received date: 8 May 2015
Revised date: 10 May 2017
Accepted date: 19 May 2017

Please cite this article as: I. Zibra, F.J. Korhonen, M. Peternell, R.F. Weinberg, S.S. Romano, R. Braga, M.C. De Paoli, M. Roberts , On thrusting, regional unconformities and exhumation of high-grade greenstones in Neoarchean orogens. The case of the Waroonga Shear Zone, Yilgarn Craton, *Tectonophysics* (2017), doi: 10.1016/j.tecto.2017.05.017

On thrusting, regional unconformities and exhumation of high-grade greenstones in Neoarchean orogens.

The case of the Waroonga Shear Zone, Yilgarn Craton.

Zibra I, Korhonen FJ, Peternell M, Weinberg RF, Romano SS, Braga R, De Paoli MC, Roberts M.

Corresponding author:

Ivan Zibra

Geological Survey of Western Australia

Department of Mines and Petroleum

100 Plain Street East Perth WA 6004

Tel: +61 8 9222 3082 | ivan.zibra@dmp.wa.gov.au

Abstract

During the Neoarchean, the dominant tectonic style progressively changed from an episodic-overturn/stagnant-lid regime to modern-style plate tectonics. The Neoarchean strengthening of continental lithosphere changed the style of deformation of orogenic belts. The case study presented here provides insights into how such transition in tectonic style occurred, a matter that is generally controversial.

We present structural and metamorphic data from the c. 2660 Ma Waroonga Shear Zone (WSZ) in the Neoarchean Yilgarn orogen (Western Australia). The WSZ contains a