Supplement of

A strontium isoscape of northern Australia

Patrice de Caritat et al.

1 Introduction

5   This Supplementary Material file contains several additional high-resolution maps to assist the reader of the main article:

• Figure SM1: Geological region groups

• Figure SM2: Geological region domains

• Figure SM3: Detailed surface geology map 1

• Figure SM4: Detailed surface geology map 2

10   • Figure SM5: Detailed surface geology map 3

• Figure SM6: Detailed surface geology map 4

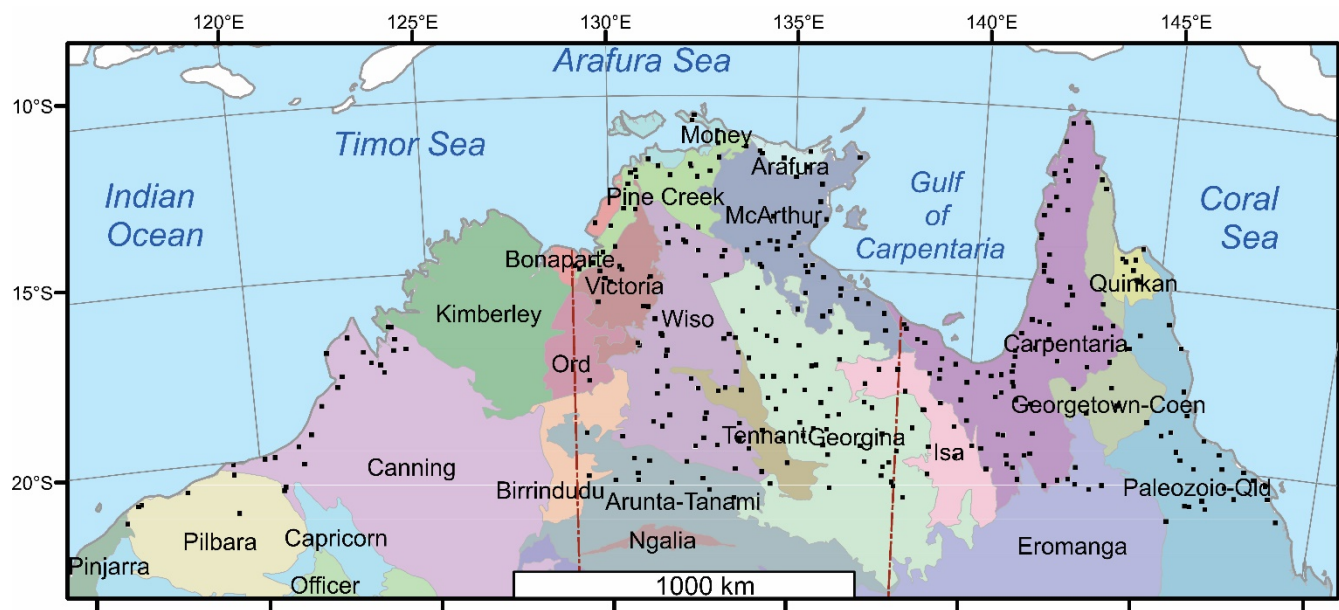
• Figure SM7: Detailed surface geology map 5

15   · 87Sr/86Sr

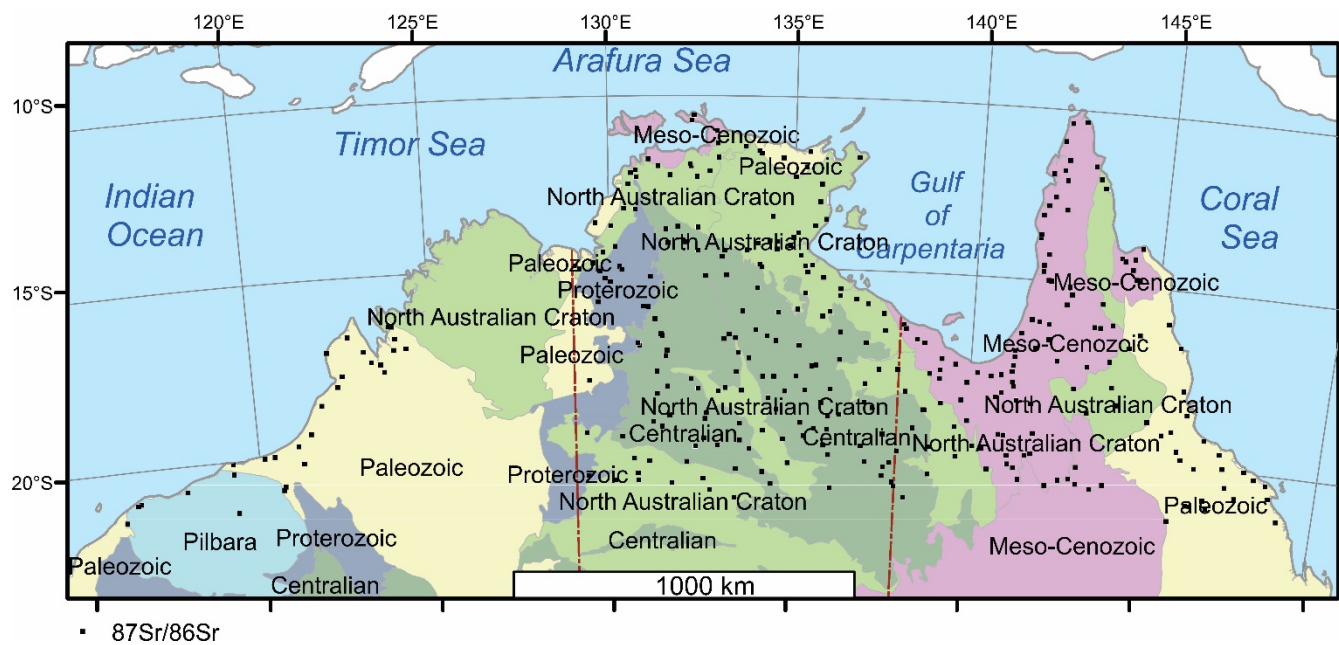
Figure SM1: Geological region groups (Blake and Kilgour, 1998) over the study area.

· 87Sr/86Sr

Figure SM2: Geological region domains (Blake and Kilgour, 1998) over the study area.

87Sr/86Sr NGSA/NAGS

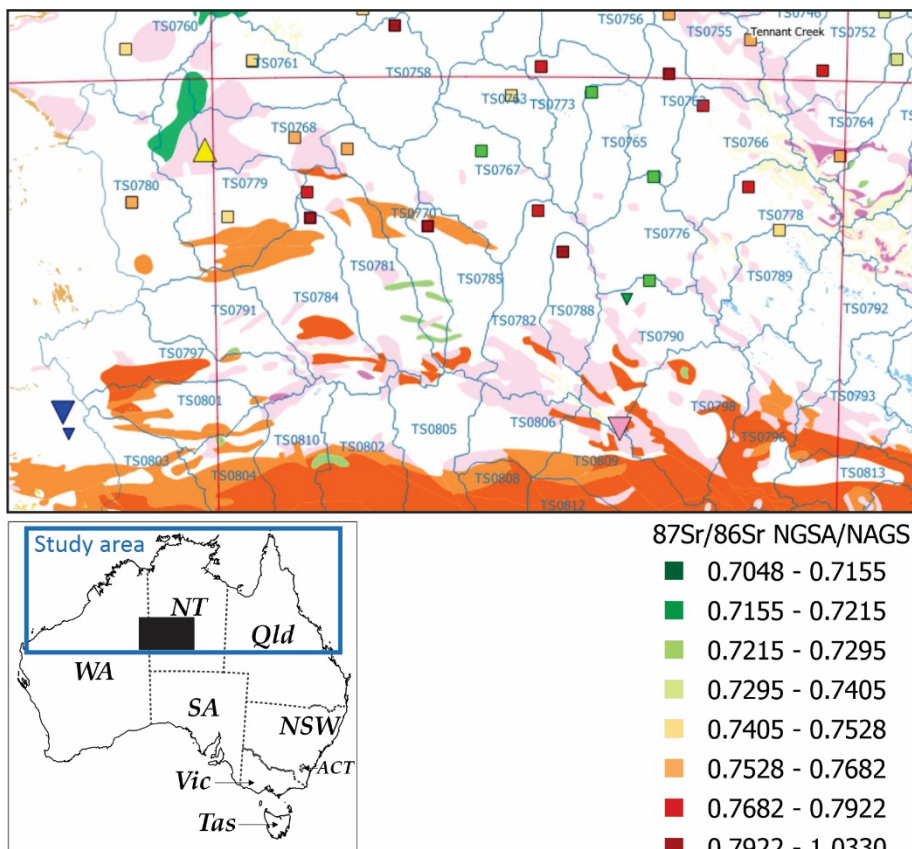
- ■ 0.7048 - 0.7155
- ■ 0.7155 - 0.7215
- ■ 0.7215 - 0.7295
- ■ 0.7295 - 0.7405
- ■ 0.7405 - 0.7528
- ■ 0.7528 - 0.7682
- ■ 0.7682 - 0.7922
- ■ 0.7922 - 1.0330

20   **Figure SM3: Detail of the surface geology (Raymond et al., 2012; see Fig. 2a for geology legend) and Sr isotope data (squares) for the south central part of the study area.**

Figure SM4: Detail of the surface geology (Raymond et al., 2012; see Fig. 2a for geology legend) and Sr isotope data (squares) for the northern part of the study area.

87Sr/86Sr NGSA/NAGS
- ■ 0.7048 - 0.7155
- ■ 0.7155 - 0.7215
- ■ 0.7215 - 0.7295
- ■ 0.7295 - 0.7405
- ■ 0.7405 - 0.7528
- ■ 0.7528 - 0.7682
- ■ 0.7682 - 0.7922
- ■ 0.7922 - 1.0330

25

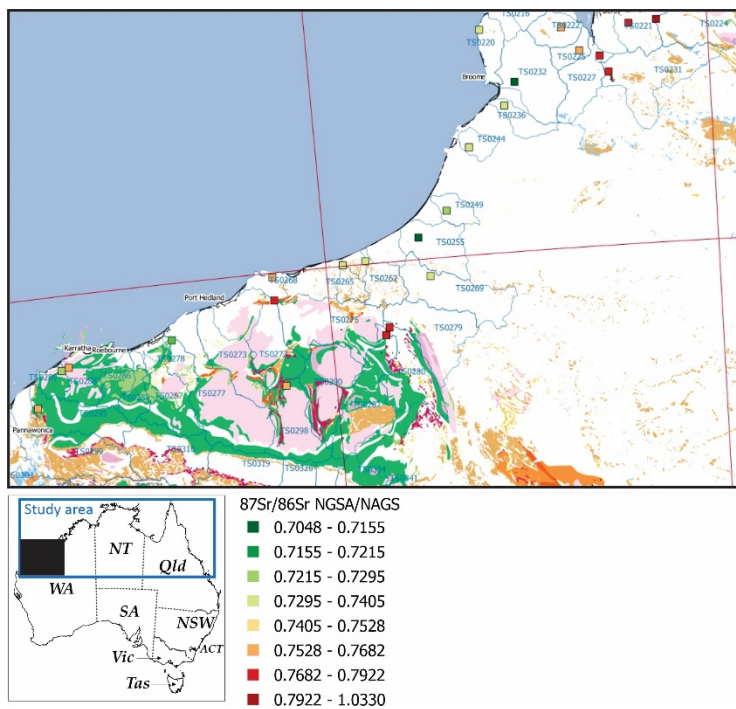



Figure SM5: Detail of the surface geology (Raymond et al., 2012; see Fig. 2a for geology legend) and Sr isotope data (squares) for the northwestern part of the study area.

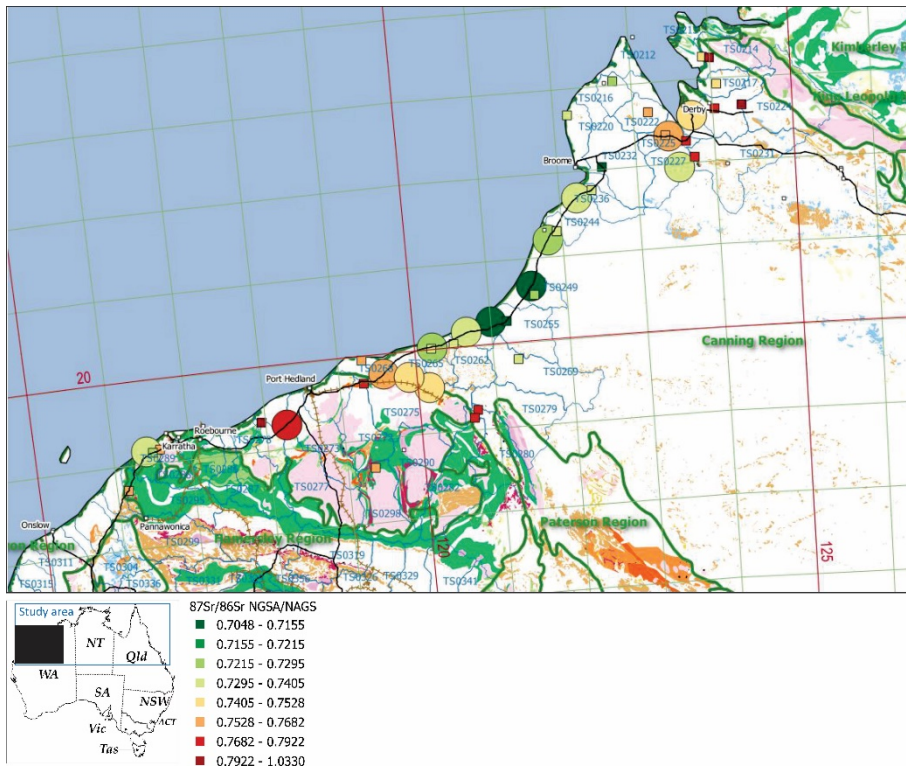



Figure SM6: Detail of the surface geology (Raymond et al., 2012; see Fig. 2a for geology legend) and Sr isotope data (squares) for the northwestern part of the study area, overlain on the airborne dust Sr isotope data (large circles) by De Deckker (2019).

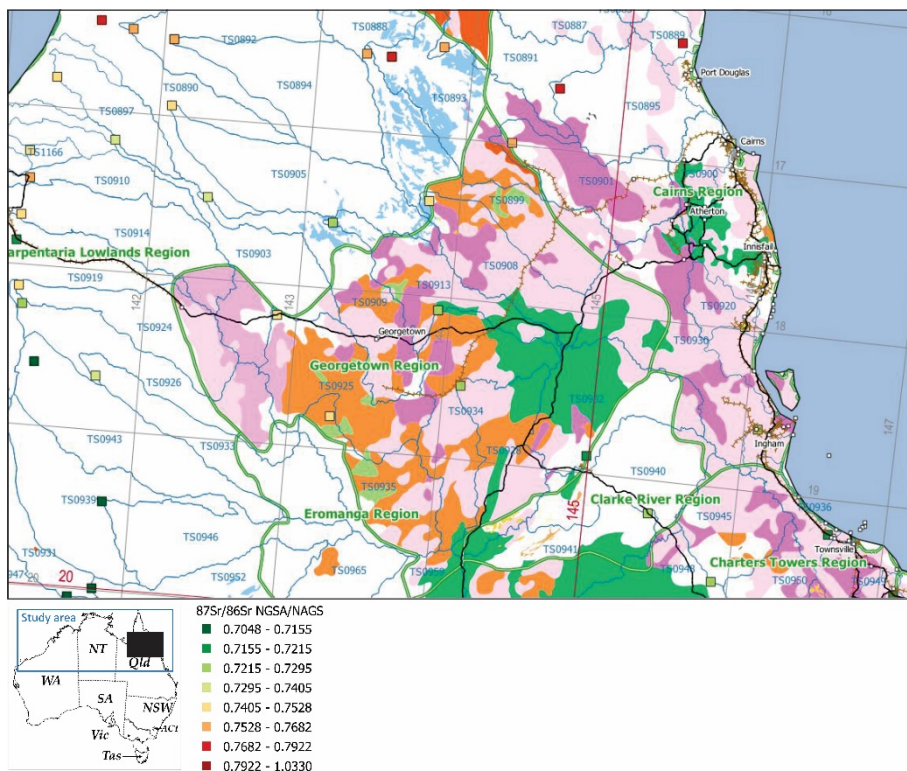



Figure SM7: Detail of the surface geology (Raymond et al., 2012; see Fig. 2a for geology legend) and Sr isotope data (squares) for the northeastern part of the study area.

References

Blake, D. H. and Kilgour, B.: Geological Regions of Australia 1 : 5000 000 scale, Geosci. Austral., Canberra [data set], http://pid.geoscience.gov.au/dataset/ga/32366 (last access: 15 December 2022), 1998.

De Deckker, P.: OZ-3 northern Western Australia sampling trip and analysis: strontium, rubidium and neodymium isotopes, Pangaea, https://doi.pangaea.de/10.1594/PANGAEA.907689 (last access: 15 December 2022), 2019.

Raymond, O. L. (Ed.), Gallagher, R. (Ed.), Shaw, R., Yeates, A. N., Doutch, H. F., Palfreyman, W. D., Blake, D. H., and Highet, L.: Surface Geology of Australia 1 : 2.5 million scale dataset 2012 edition, Geosci. Austral., Canberra [data set], https://doi.org/10.26186/5c636e559cbe1 (last access: 15 December 2022), 2012.