

**The Fit of Africa  
and South America  
(105 Ma - 145 Ma)**

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## The Fit of South America and Africa (105 Ma - 145 Ma)

### Legend

- Bold red and blue lines are my estimates of where oceanic crust begins.
- Purple lines mark the edge of younger volcanic edifices, or extremely stretched continental/transitional crust.
- Thin red lines are Precambrian tectonic fabric which should match across rift.
- Yellow polygons are marginal sedimentary basins.
- Black lines are major faults.
- Dark gray dots are the locus to the Karoo-Walvis Ridge-Tristan da Cunha hotspot.
- Light gray lines are latitude/longitude graticule.

### Chronology

#### 105Ma (Albian)

- deep water, oceanic break-through between NE Brazil/Ghana and tip of Falkland Plateau/southernmost Africa
- Walvis Ridge - Sao Paulo plateau are continuous barrier to deep water.

#### 115 Ma (Aptian)

- Series of African rift-like basins along NE Brazil-Ivory coast margins.
- Narrow salty ocean basins between eastern Brazil and WC Africa.

#### 125 Ma (Barremian)

- Lock and key fit of Guinea Plateau and Damara Rise.
- Overlap of red and blue boundaries indicate beginning of ocean floor formation along much of margin.
- Falkland plateau slides into Agulhas "pocket".

#### 135 Ma (Valangian)

- Beginnings of Seafloor spreading in far South Atlantic

#### 145Ma (Tithonian)

- Pre-rift fit of South America and Africa.
- Slight overlap of red and blue lines represents extension that took place during rift phase.

Note: SC Africa is fixed in all reconstructions.

Source: Scotese and Danforth (2007). Also see Moulin et al., (2010).

Please cite as:

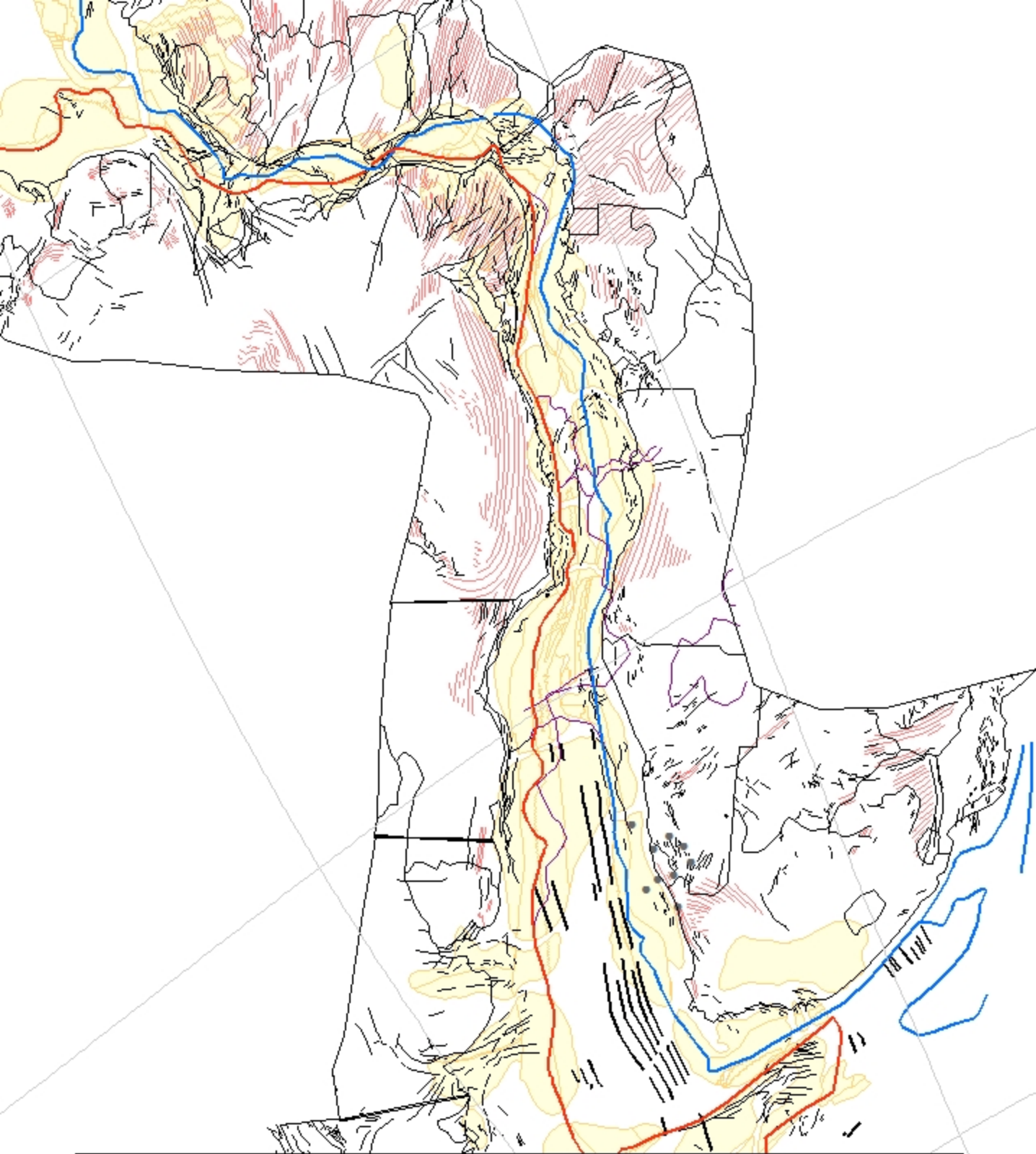
Scotese, C.R., 2008. The Fit of South America and Africa (105 Ma - 145 Ma), PALEOMAP Project, Arlington, Texas (unpublished research).

References Cited:

Scotese, C.R., and Danforth, A., 2007. Plate Tectonic Evolution of the Circum-African Margins, in "Africa: Path to Discovery", 4th HGS/PESGB International Conference on African Exploration and Production, September 7-8, Houston, Texas.

Moulin, M., Aslanian, D., and Unternehr, P., 2010. A New starting Point for the South and Equatorial Atlantic Ocean, *Earth-Science Reviews*, 98:1-27.  
(attached)



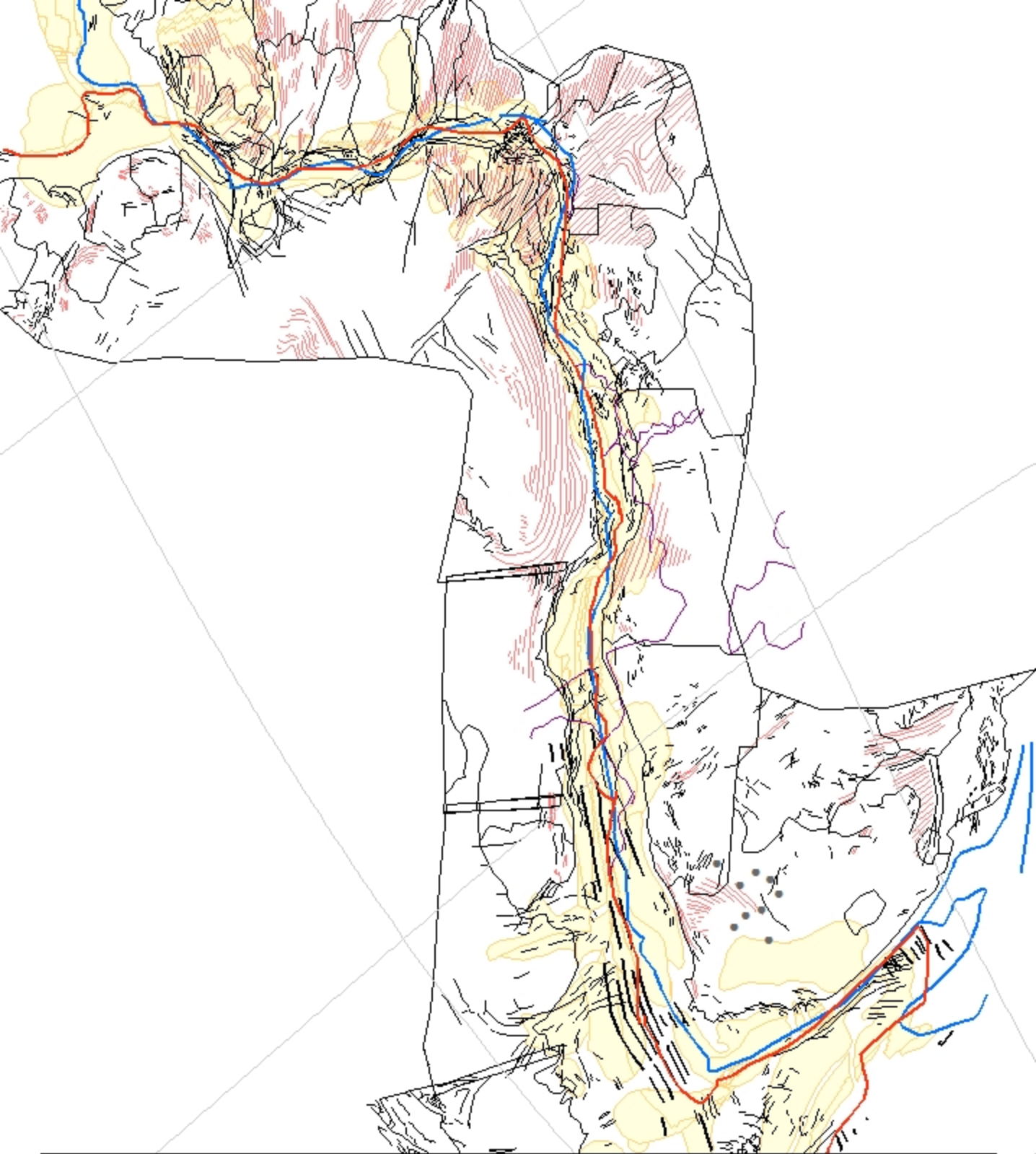


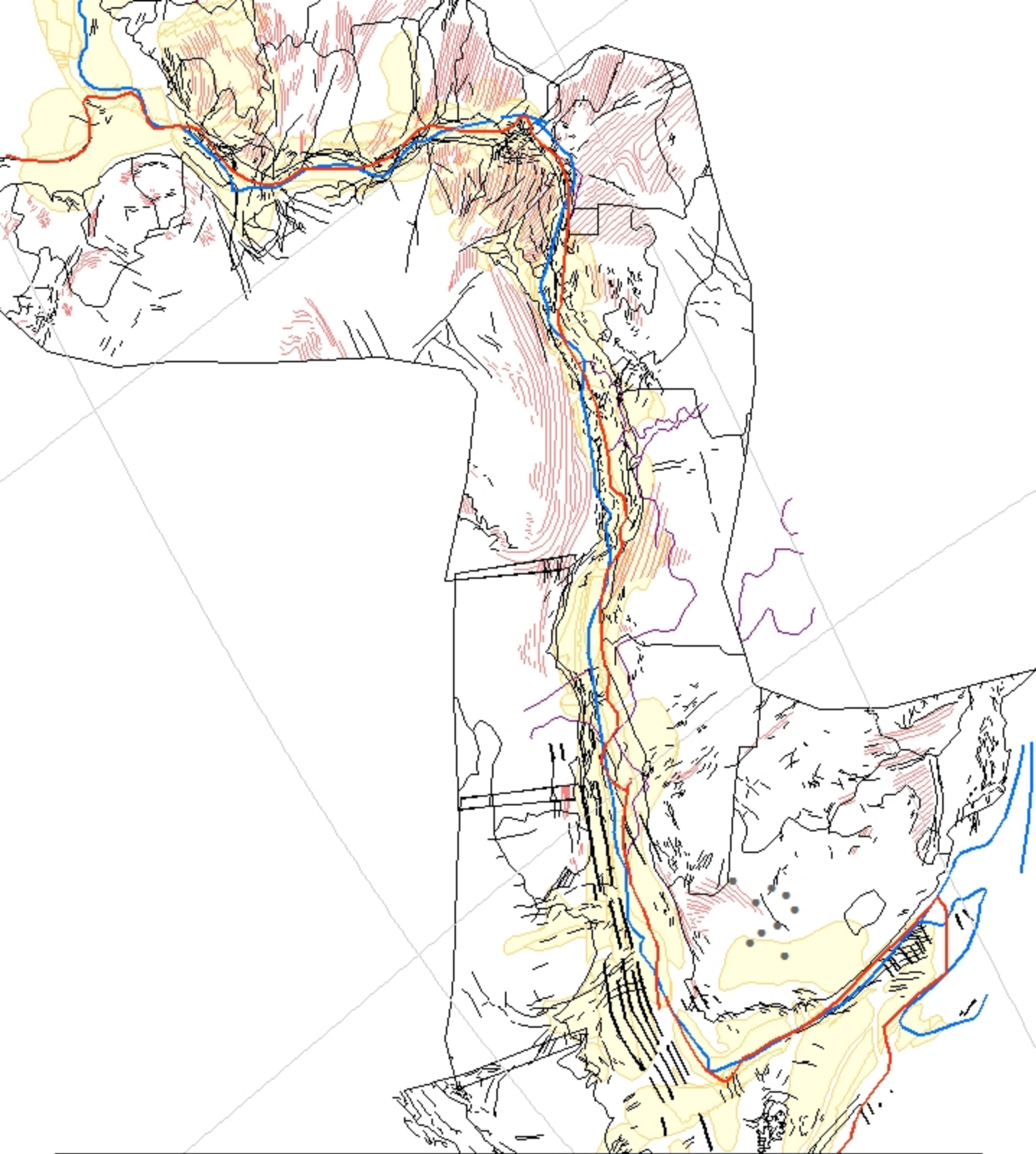
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125Ma (Barremian); SATlanticFit; C. R. Scotese, © 2008, PALEOMAP Project





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