



**Australian Government**

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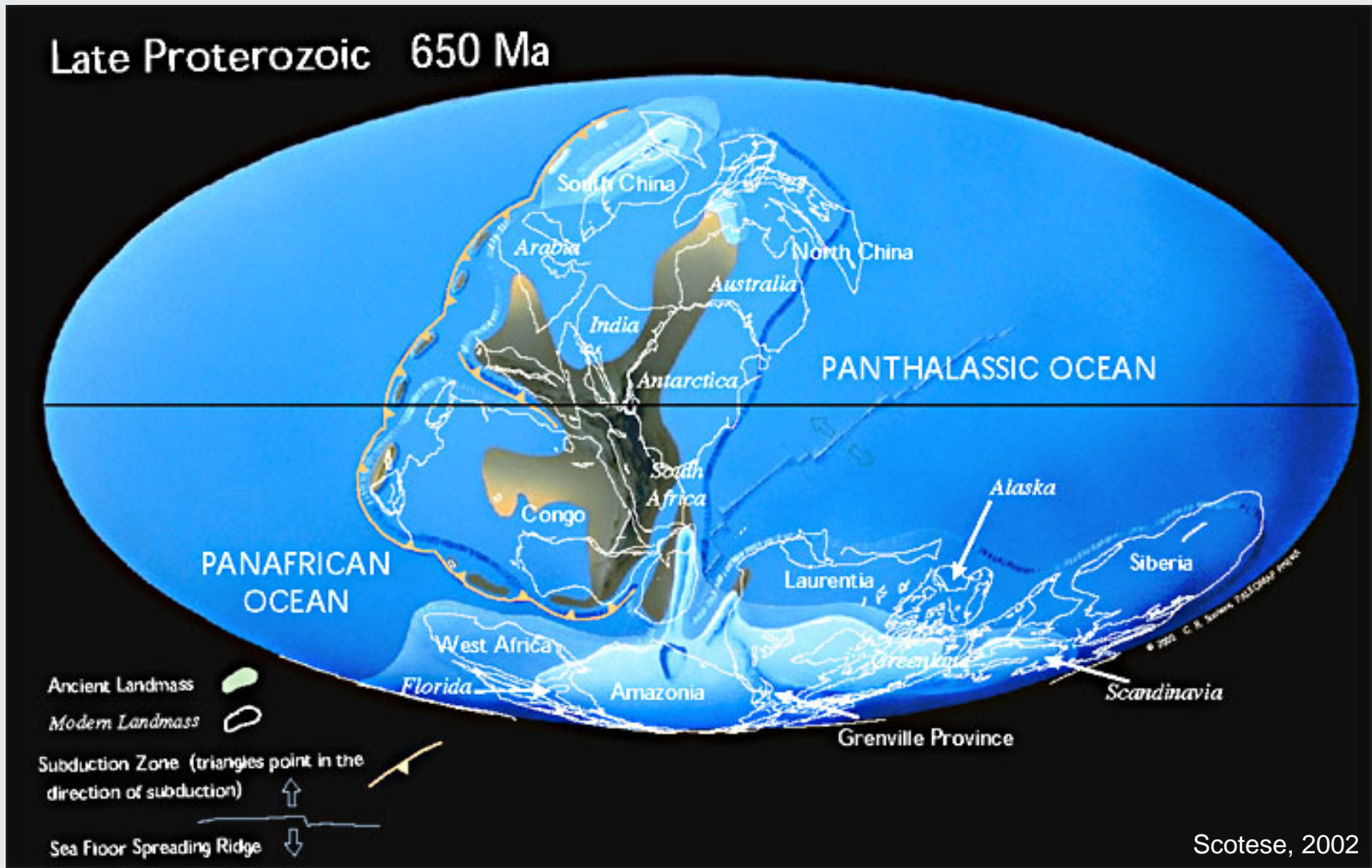
# **The Development of Australia**

A brief overview of the development of  
Australian sedimentary basins from the  
perspective of geological storage

# Disclaimer

- Australia- ancient and complex geological history
- This talk is intended to be a brief overview of the development of Australia's sedimentary basins to allow them to be seen in the context of their potential geological storage.
- So I apologise in advance to those experts in the audience who know a lot more about the development of the various basins than I do and who may shudder at the simplifications I am about to give.

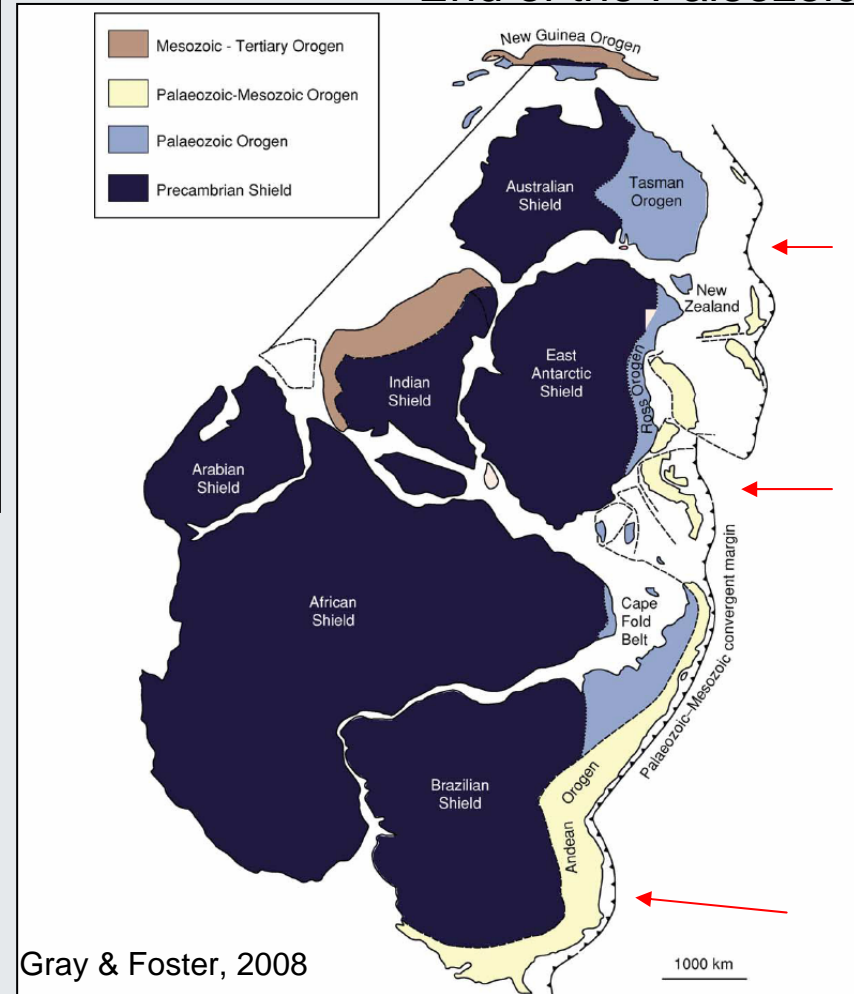
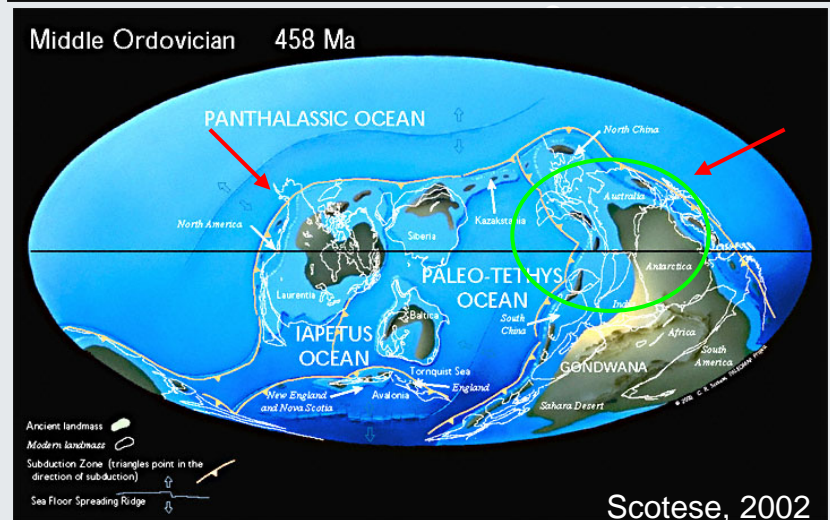
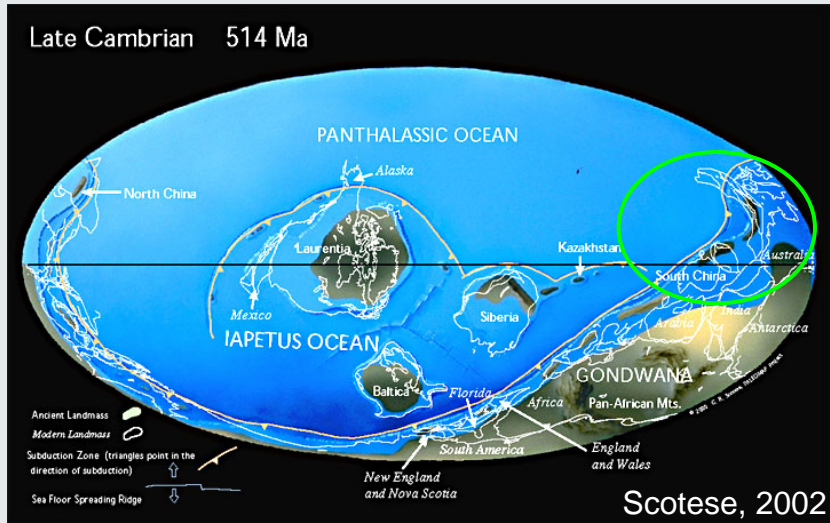
# Late Proterozoic 650 Ma





# Gondwana Supercontinent

End of the Paleozoic

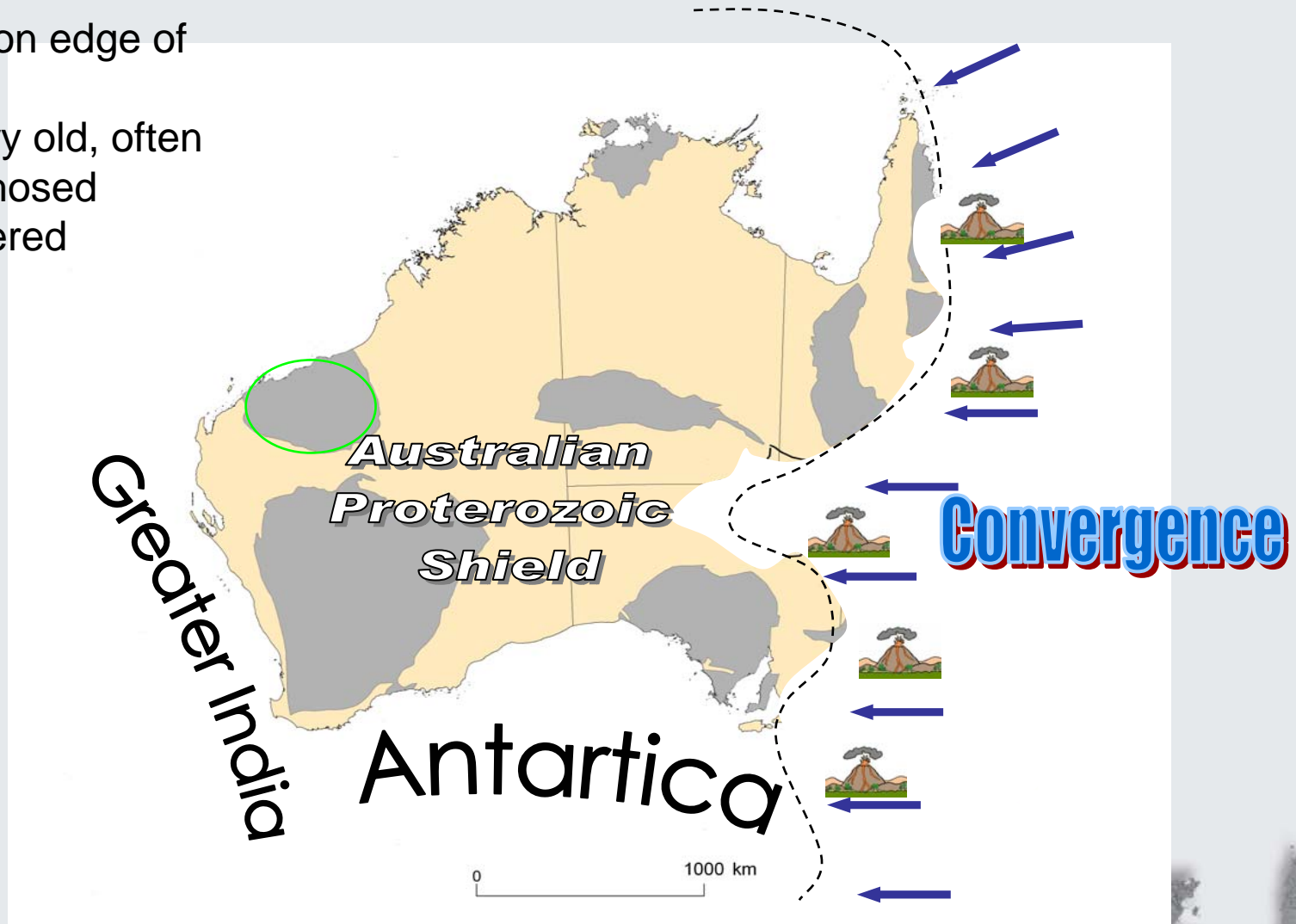


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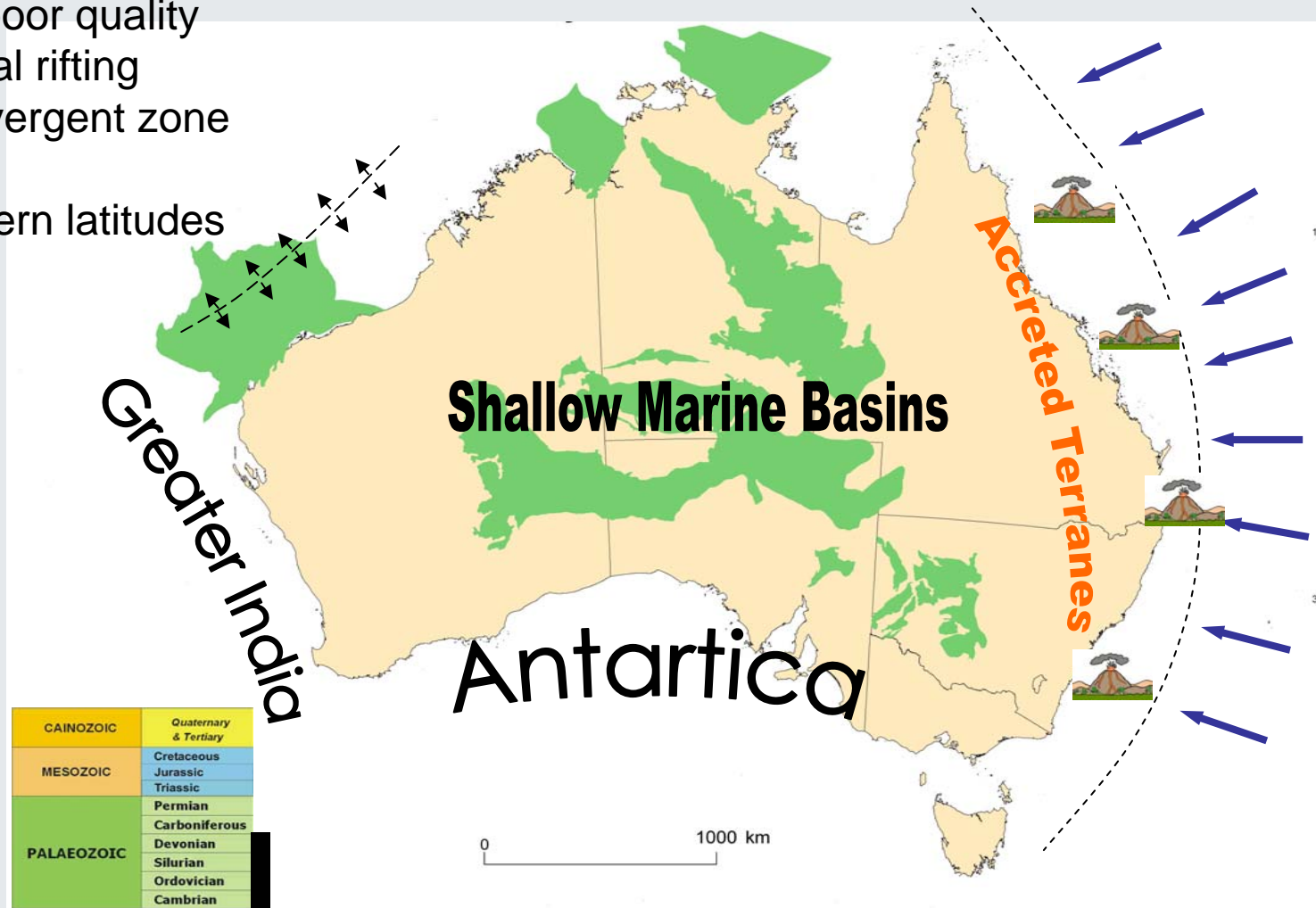
# Earliest Paleozoic

- Landmass on edge of Gondwana
- ‘Basins’ very old, often metamorphosed
- Not considered targets



# Early-mid Paleozoic

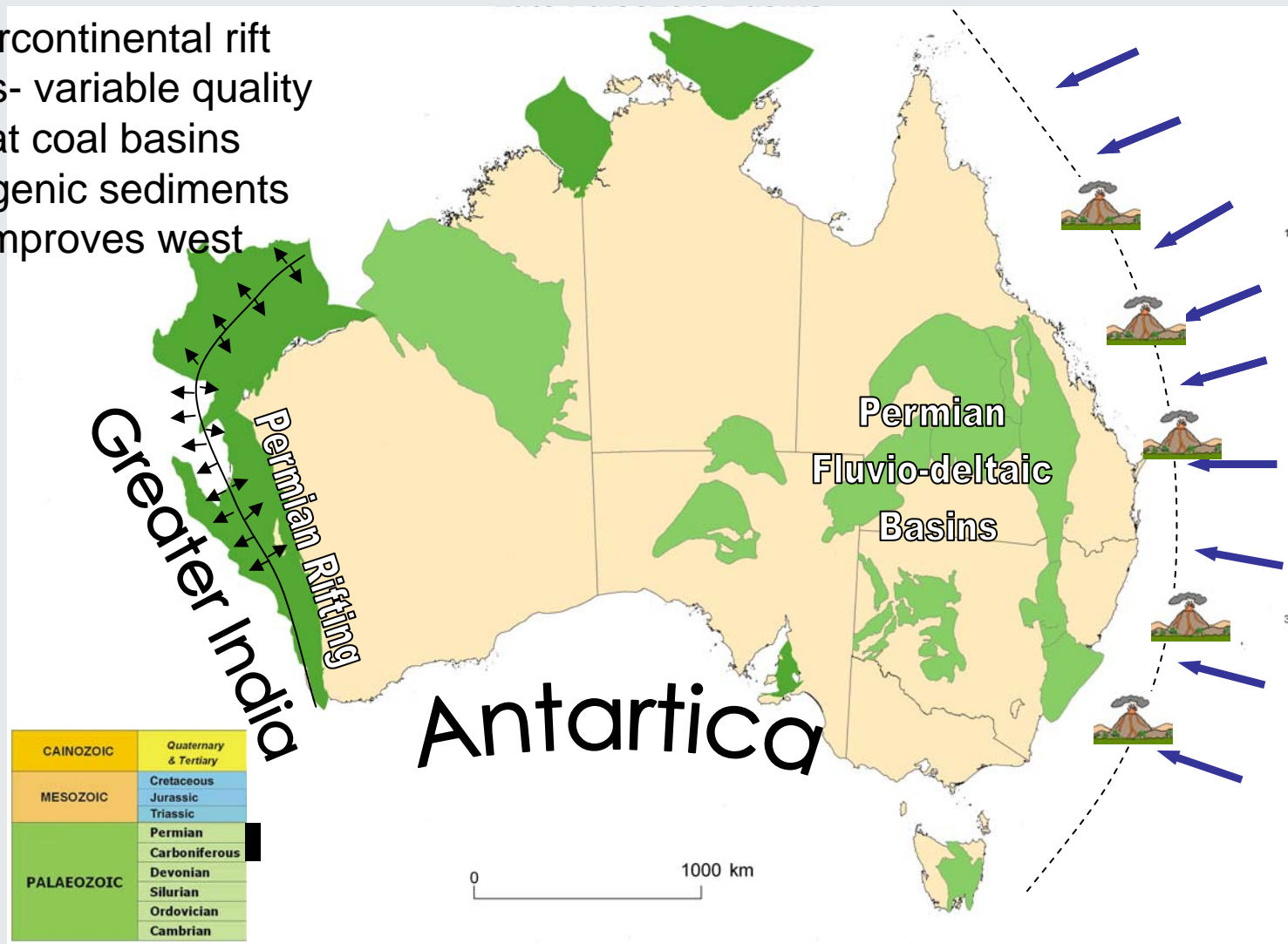
- First real basins, although poor quality
- West: initial rifting
- East: convergent zone still active
- Low northern latitudes



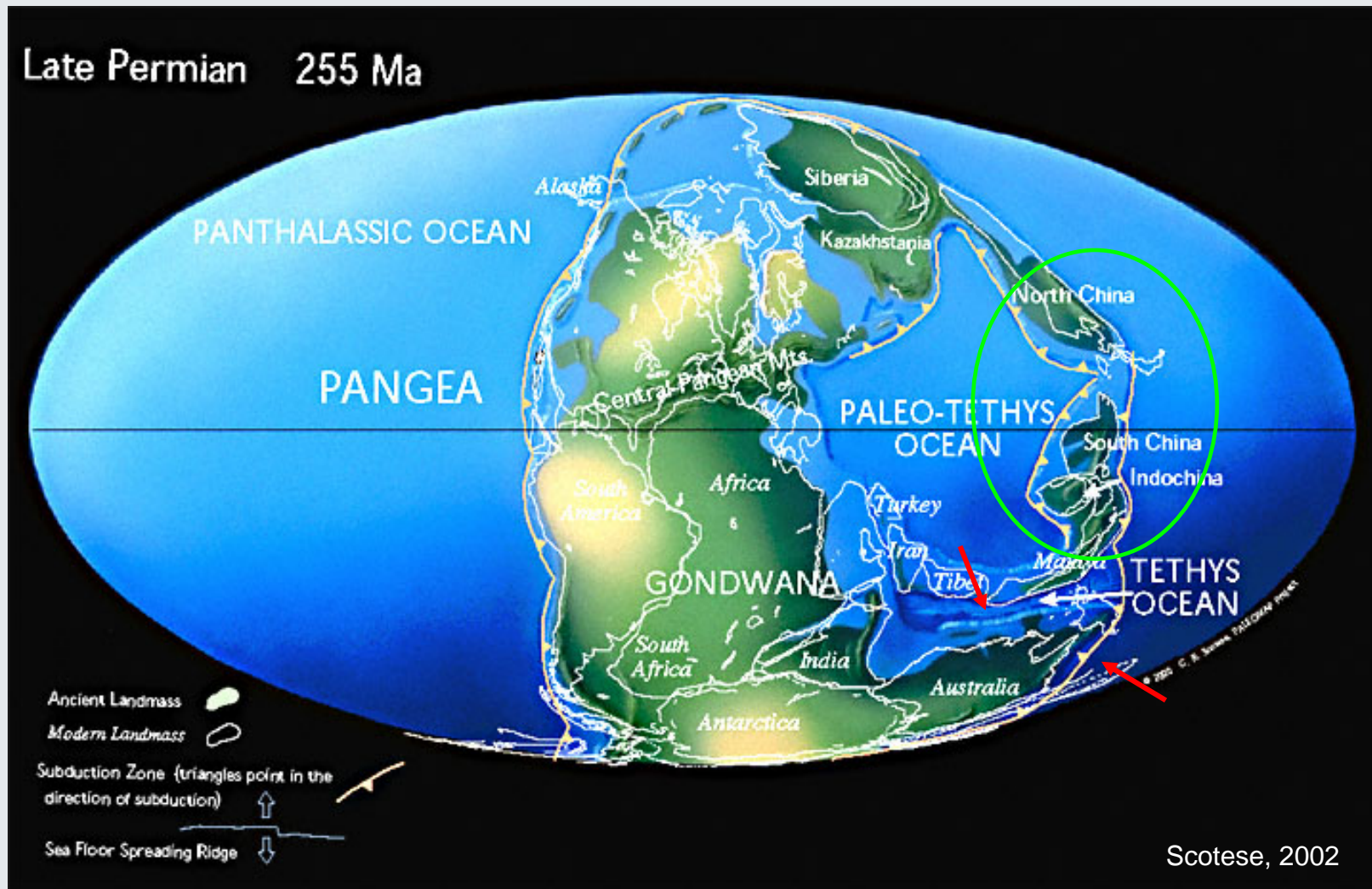


# Late Paleozoic

- West: Intercontinental rift sequences- variable quality
- East: Great coal basins
  - volcanogenic sediments
  - quality improves west



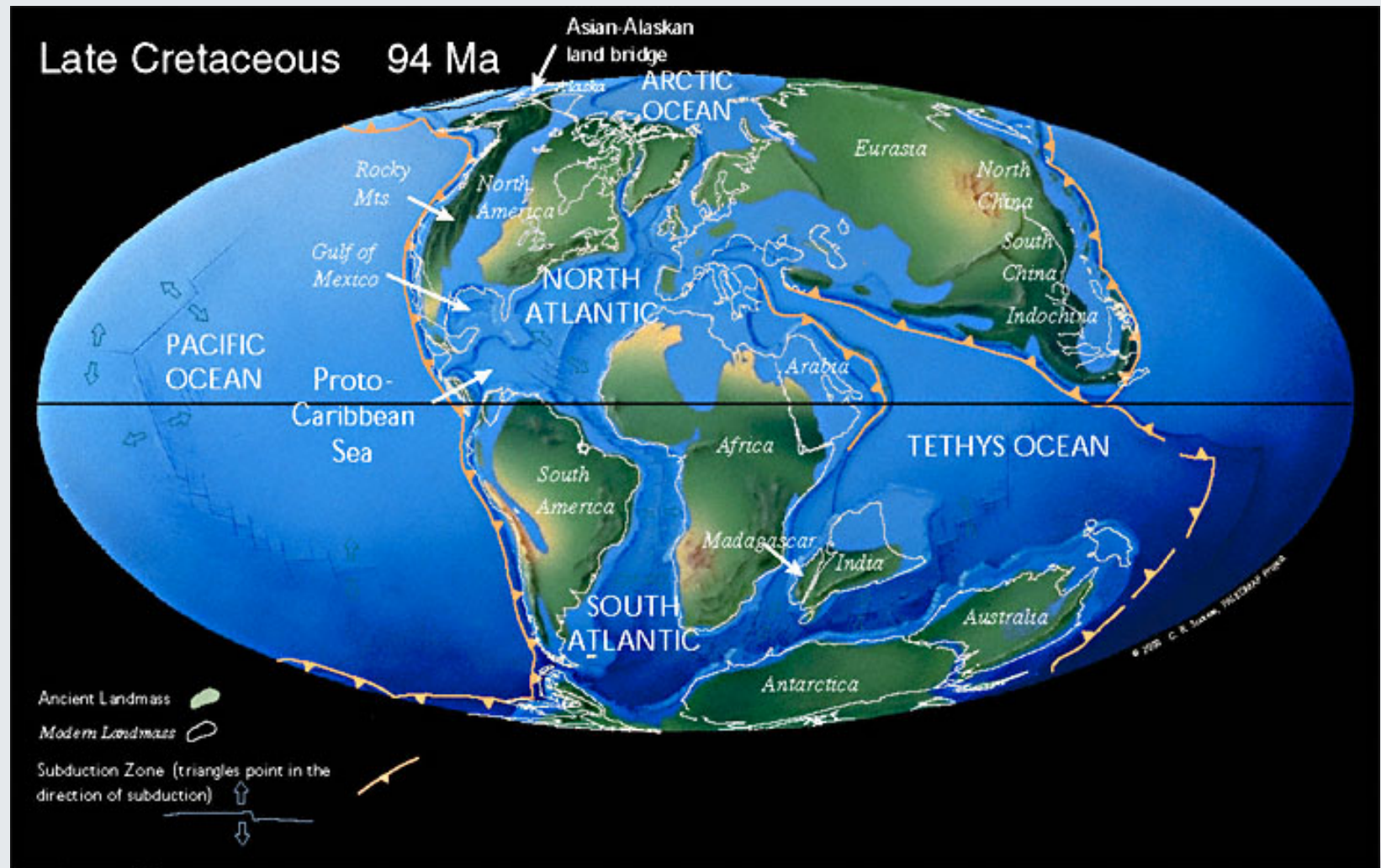
Late Permian 255 Ma



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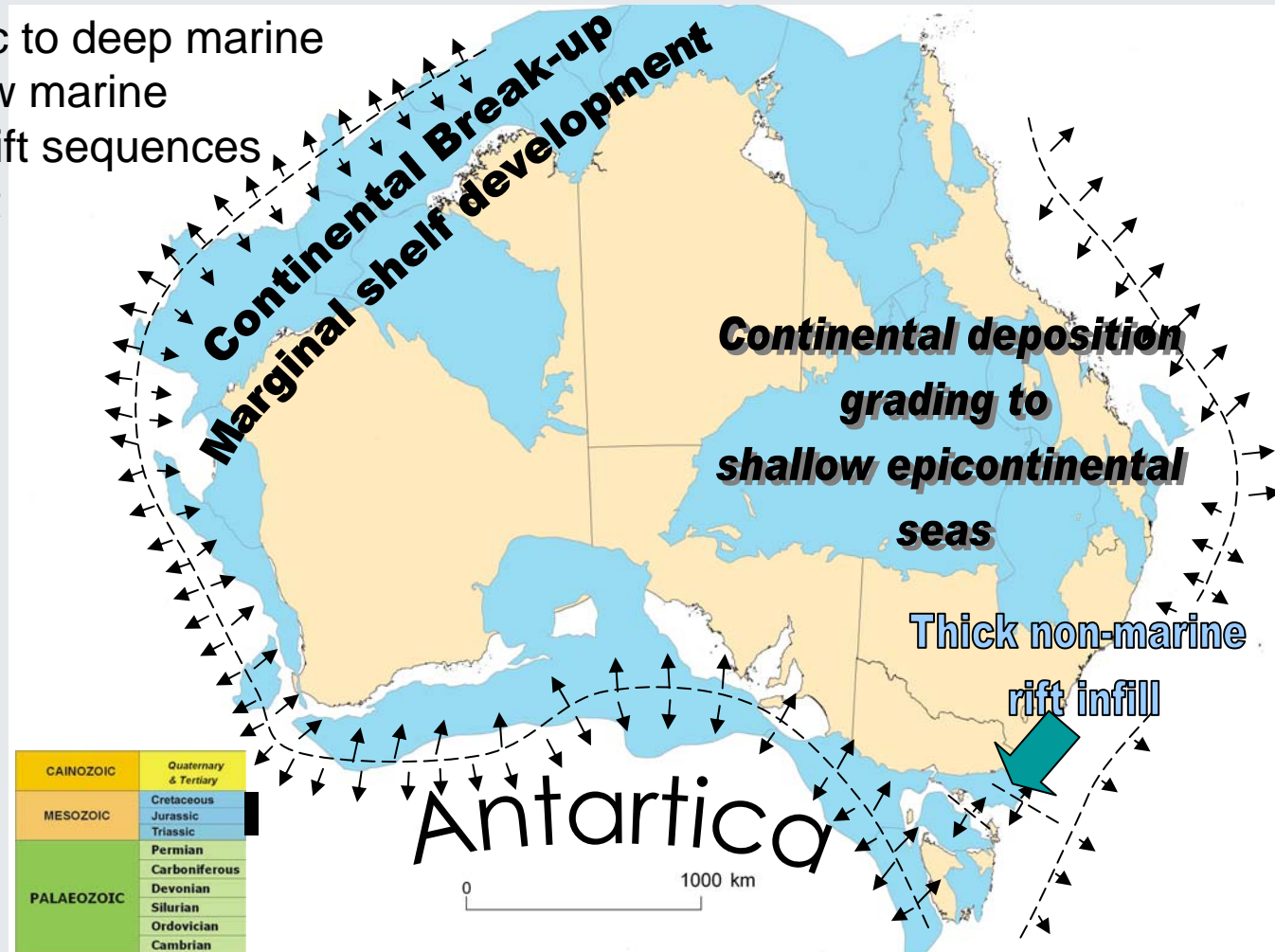




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# Mesozoic- Cretaceous

- Triassic- high and dry
- Jurassic-Cretaceous:
  - West: deltaic to deep marine
  - East: shallow marine
  - Southeast: rift sequences
- Good to great reservoirs





# Middle Miocene 14 Ma



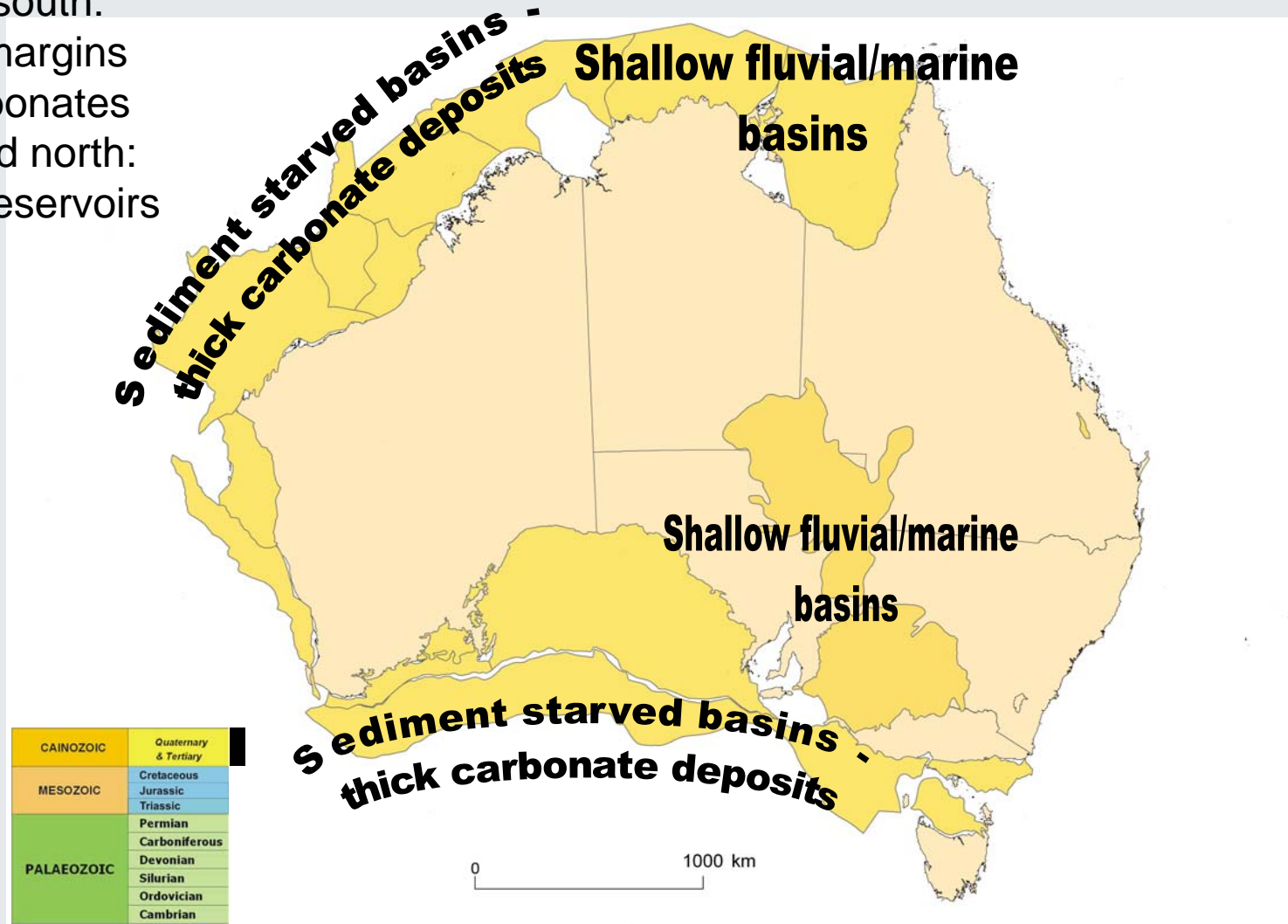
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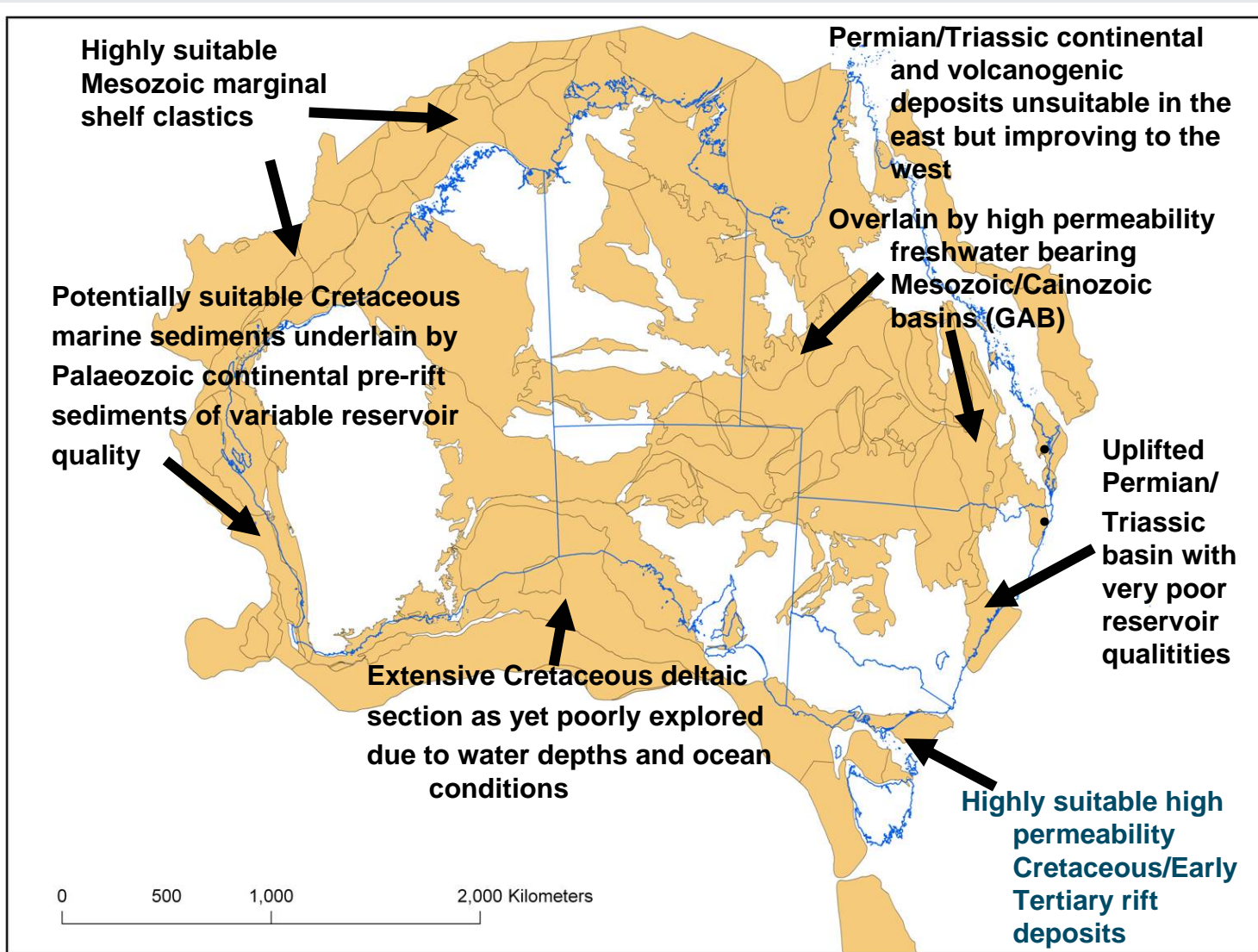


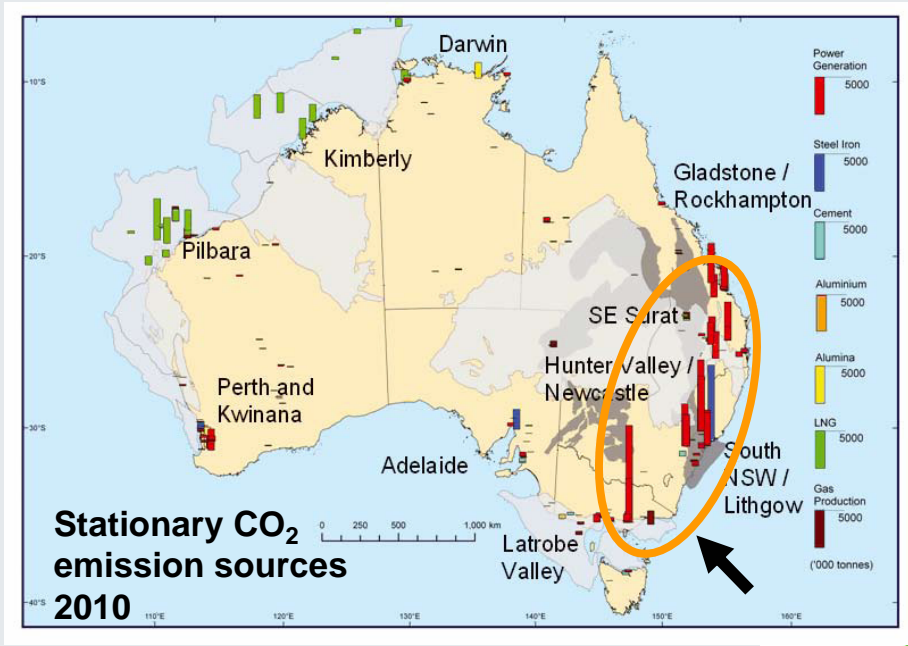
# Cenozoic

- West and south:
  - passive margins
  - thick carbonates
- Central and north:
  - shallow reservoirs

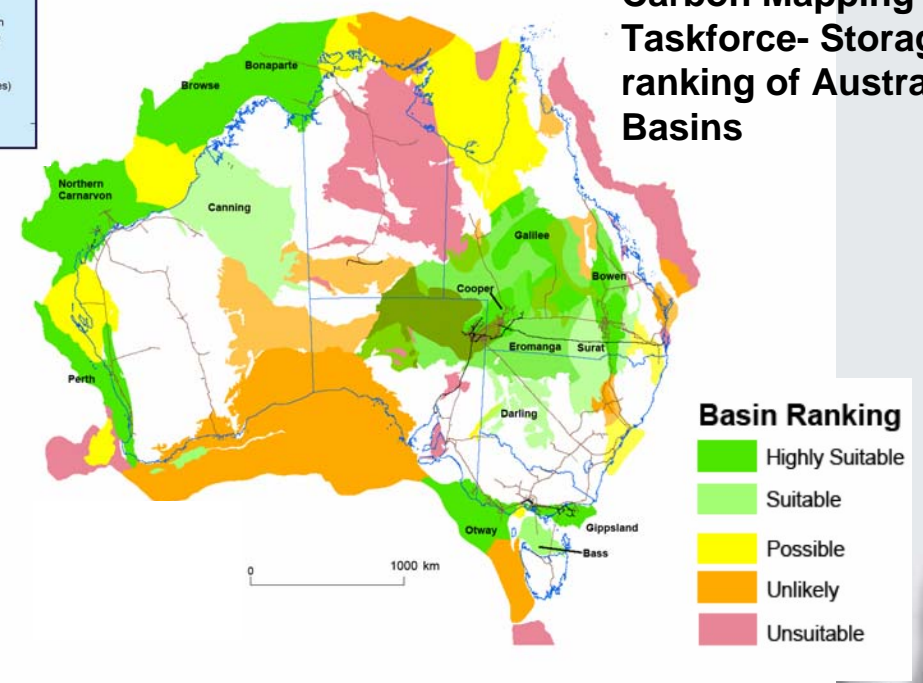


# CO<sub>2</sub> Storage Potential of Australian Basins





**Carbon Mapping Taskforce- Storage ranking of Australian Basins**



Carbon Storage Taskforce, 2009.  
*National Carbon Mapping and Infrastructure Plan – Australia: Concise Report.*  
 Department of Resources, Energy and Tourism, Canberra.

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