

# GEOLOGY OF CAPE TOWN





# Malmesbury Group

Rock type: Siltstone and limestone

Depositional environment: Deep sea sediments deposited by submarine slumping and turbidity currents from the continental slope.

Geological age: ~ 560 million years

Where to see it best: Dark grey siltstone underlies the Green Point Biodiversity Park and almost vertical beds are well exposed in Three Anchor Bay. The rocks have been used as a building stone throughout the park.

## **Cape Granite Suite**

Rock type: Granite

Depositional environment: Intrusive igneous rock

Geological age: ~ 540 million years

Where to see it best: Sea Point contact from Sunset Beach to south of Queens Beach.



# **Graafwater Formation**

Rock type: Reddish brown sandstone, laminated pink siltstone and dark maroon-coloured shale.

Depositional environment: River flood plain and marine tidal flats.

Geological age: ~ 485 million years

Where to see it best: Road cuttings along Tafelberg Road and Chapmans Peak Drive.

#### **Peninsula Formation**

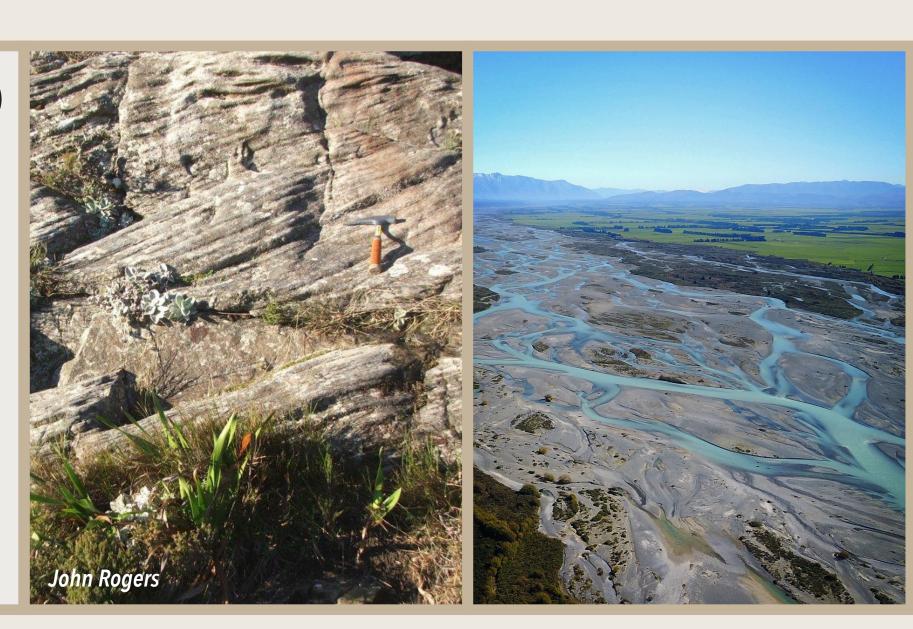
Rock type: Light grey, cross-bedded, coarse-grained pebbly sandstone.

Depositional environment: Braided river

Geological age: ~ 480 - 450 million years

Where to see it best: Hiking trails (e.g. Platteklip Gorge) and from Table Mountain cable car.

**Interesting fact:** The rivers that deposited these sands were huge! Vegetation was still absent on land so there were no stable river banks and the sands could easily be eroded. Underwater dunes up to 1 m high moved large volumes of sediment towards an ancient sea in the south-west.





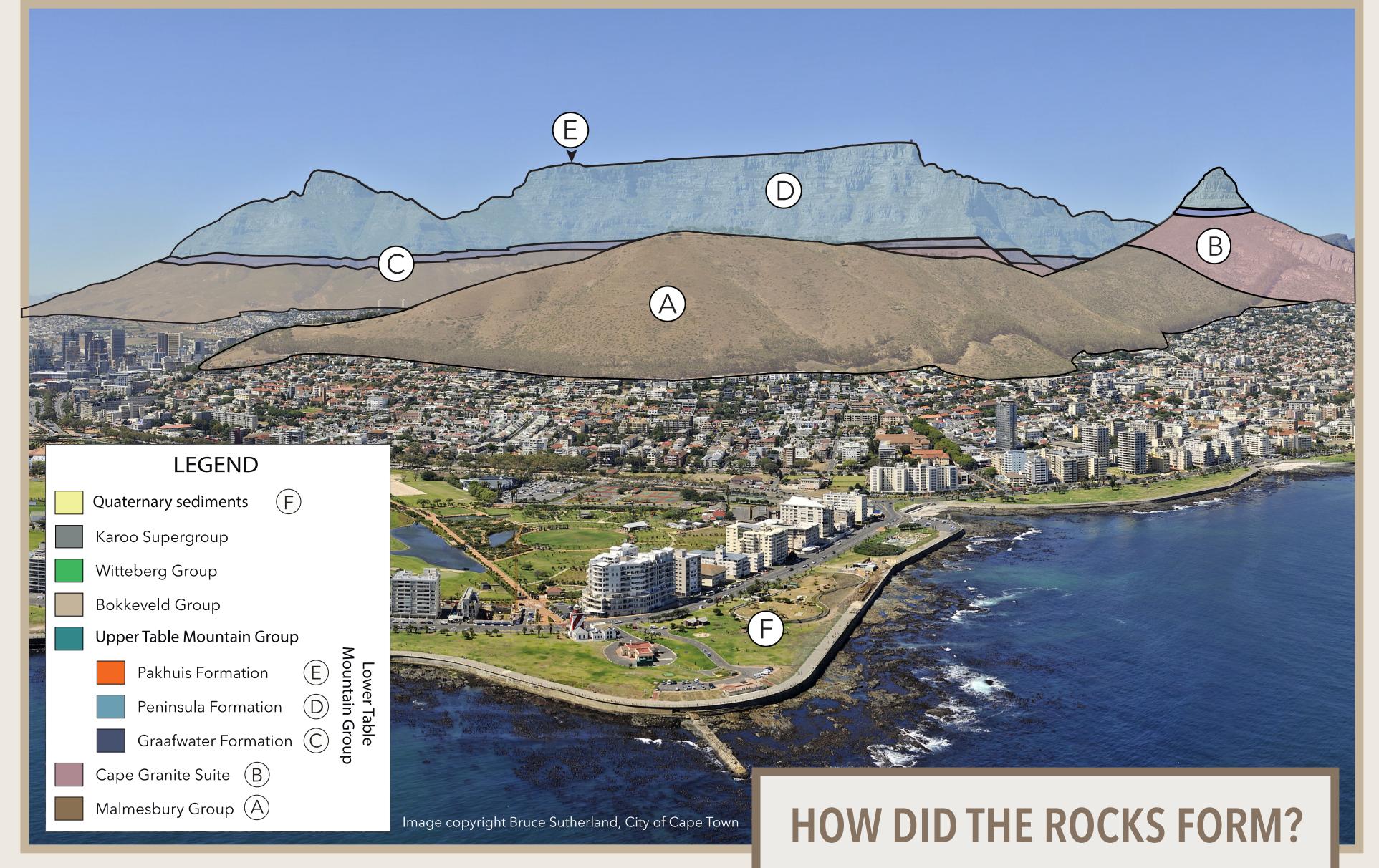
#### **Pakhuis Formation**

Rock type: Unbedded pebbly sandstone with faceted and scratched fragments of chert, quartz and quartzite.

**Depositional environment: Glacial** 

Geological age: ~ 440 million years Where to see it best: Maclear's Beacon on the top of Table Mountain.

Interesting fact: How do we know these rocks are glacial? There are striations and facets on the pebbles caused by the action of moving ice.





### Quaternary cover

Rock type: Sands and limestones (aeolianite).

 $(\mathsf{E})$ 

Depositional environment: Coastal Coastal plain: windblown sand (dunes), conglomerates and beach rocks.

Geological age: ~ A few thousands to millions of years old

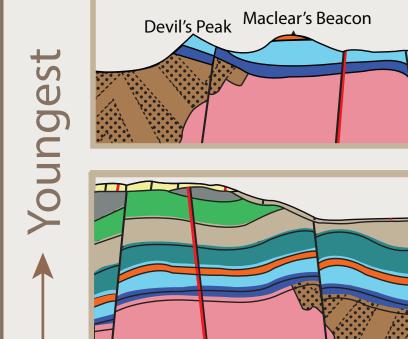
Where to see it best: Mostly covered by city developments but the undeveloped modern coastal environment is a good analogue.



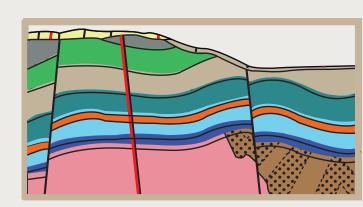
www.gssawc.org.za



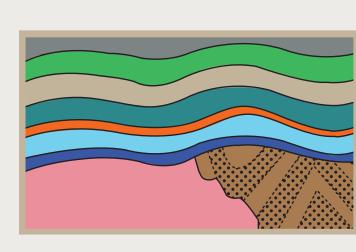
Poster content: Doug Cole, Wendy Taylor, John Rogers, Coenie de Beer, Leonard Gardner, Claire Browning Poster design: Claire Browning



120 - 0 million years Uplift, erosion continents drift apart Dyke / Fault



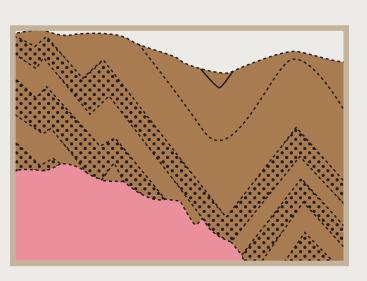
220 - 120 million years Uplift, faulting, dyke intrusion, erosion,



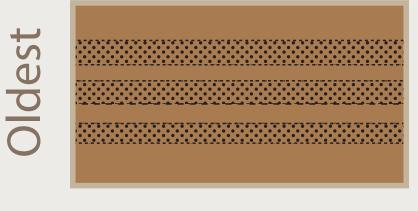
490 - 220 million years **Deposition of Cape and** Karoo Supergroups, folding during Cape Orogeny



540 - 490 million years Planation to sea level



560 - 540 million years **Deformation during** Saldanian Orogeny, intrusion of Cape **Granite Suite, erosion** 



580 - 560 million years Deposition of Malmesbury Group