



GEOLOGICAL MAP OF THE NORTHERN CONVOY RANGE VICTORIA LAND - ANTARCTICA

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LEGEND

- WATER (SEASONAL)
- ICE AND SNOW
- QUATERNARY
- SLOPE DEPOSIT
Deposits located along the flanks of the topographic reliefs made of clasts and blocks with different size and angular to sub-angular shape.
- GLACIAL DEPOSIT
Glacial deposits mainly consist in angular and sub-angular blocks, with a smaller portion of thin sediment, organized in ridges or floating moraines. Not organized glacial drift made by scattered boulders resting on bedrock or regolith is also present.

POST-ROSS MAGMATISM AND SEDIMENTATION

FERRAR GROUP

- KIRKPATRICK BASALT (Kb)
Pillow and subaerial lavas, associated with thin sedimentary volcanogenic layers. The Mesa Range basalts (Mt Murchison quadrangle) provided 178 Ma K/Ar ages.
- MAWSON FORMATION (Mf)
Volcanoclastic rocks, mainly represented by unsorted to poorly sorted lapilli tuff and breccia, often with clasts and riffs of Beacon sediment. Sandstone and siltstone with associated basaltic lavas also occur.
- FERRAR DOLERITE (Fd)
Tholeiitic dolerite sills and dykes, with typical columnar jointing. They are usually emplaced in the sedimentary sequence of the Beacon Supergroup, whose stratigraphic succession and continuity is disrupted. Though usually emplaced above the pre-Beacon peninsular, in places dykes are emplaced also in the granite basement. Minor m-thick dioritic dykes with big amphiboles locally occur. A K/Ar age of 174±10 Ma has been reported from the Mt Murchison quadrangle.
a) Ferrar sill too small to be mapped.

BEACON SUPERGROUP

- BEACON SANDSTONE (Bs)
Mainly fluvialite cross-bedded, coarse- to medium-grained sandstone with feldspathic to quartzose composition. Interstratifications of conglomerate, black shale, coal measures and layers with clay galls occur as well. In places beds are involved in syn-sedimentary deformation and slumping. No age-related fossils was found so far and these sandstones are attributed to an undifferentiated Beacon Sandstone, Permian to early Jurassic in age.
a) Beacon strata with organic material.
b) Beacon strata too small to be mapped. Permian - Triassic age.

TERRANES AND UNITS OF THE ROSS OROGEN

WILSON TERRANE

GRANITE HARBOUR IGNEOUS COMPLEX

- GRANITE HARBOUR GRANODIORITE AND GRANITE (Ghg)
Syn- to post-kinematic granite, granodiorite and tonalite (Local name: Larsen Granodiorite), unfoliated to weakly foliated. In the Mount Abbott area an age of 485±4 (U-Pb on Zrn) Ma has been obtained.
a) Post-kinematic, pink to reddish, K-feldspathic granite. Local name: Irizar Granite.
- GRANITE HARBOUR DIORITE AND GABBRO (Gh)
Diorite, gabbro and pyroxenite with weakly foliated fabric. A 513-526 U-Pb age on Zrn was obtained at Cape Confusion (Northern Foothills).

NON-METAMORPHOSED SUB-VOLCANIC UNIT

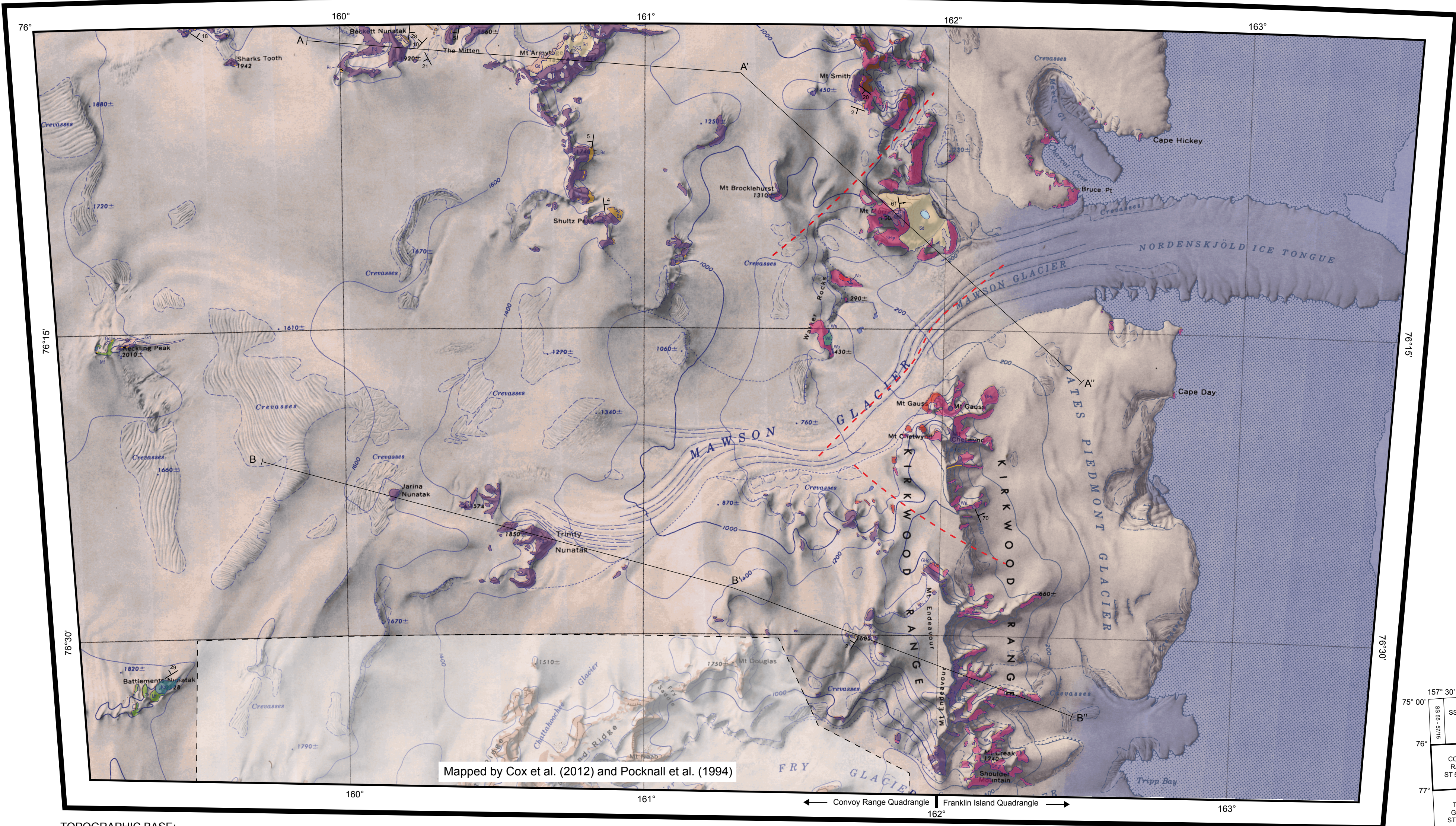
- JOHNNIE WALKER FORMATION (Wj)
Andesite, brecciated andesite, rhyolite and granophyre, non metamorphosed and intruded by the Granite Harbour Intrusives. Age is unknown.

WILSON METAMORPHIC COMPLEX

- GREENSCHIST FACIES METASEDIMENT (Wg)
Metasandstone, slate, phyllite and metaconglomerate, often contact metamorphosed. Age is unknown, but a Precambrian to Cambrian age is inferred. Local name: Priestley Formation.

SYMBOLS

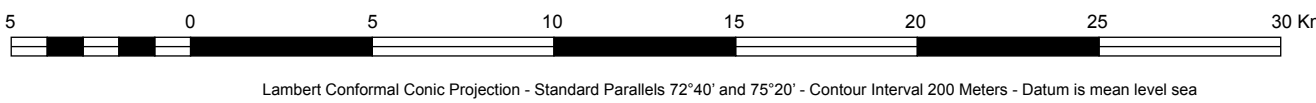
- Geological boundary
- Trace of geological cross-section
- Bedding
- Inferred fault
- Tectonic foliation



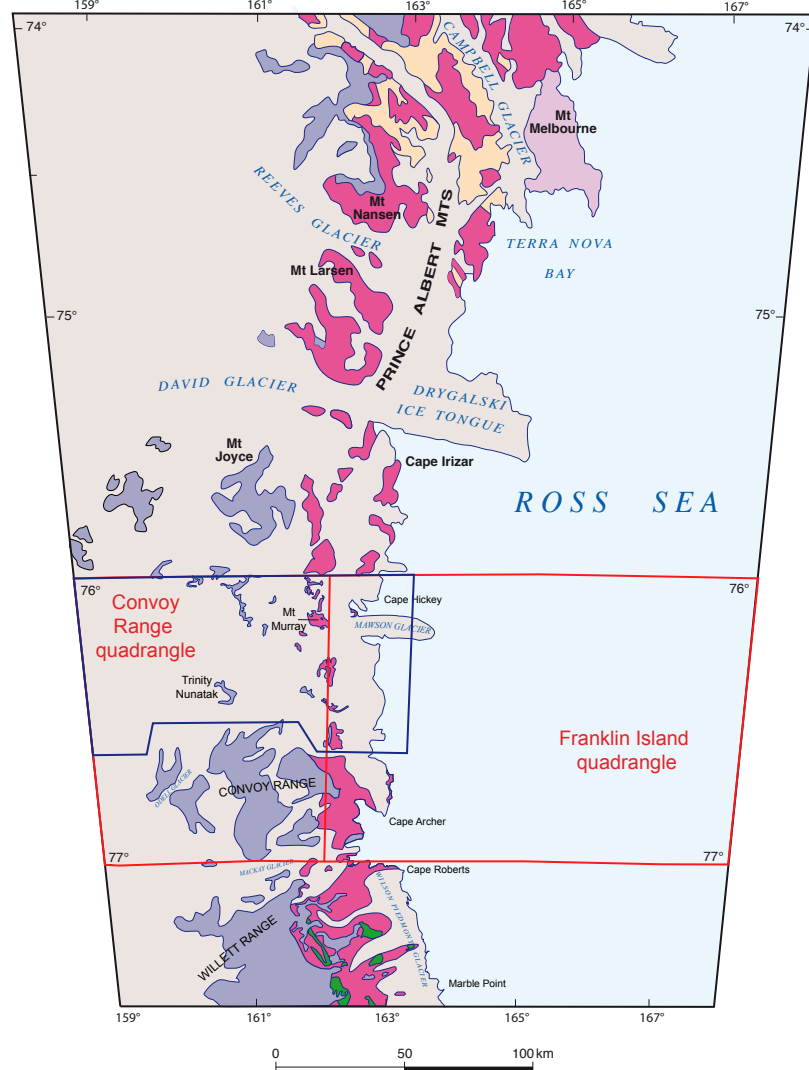
TOPOGRAPHIC BASE:
U.S. GEOLOGICAL SURVEY MAPS, ANTARCTICA
1:250,000 RECONNAISSANCE SERIE

1:250,000 SCALE

Field work during XXXIII ItaliAntartide Expedition (austral summer 2017-2018) and XXXIV ItaliAntartide Expedition (austral summer 2018-2019)



TECTONIC SKETCH MAP OF VICTORIA LAND



CENOZOIC MAGMATISM AT THE ROSS SEA MARGIN

McMurdo Igneous Complex

POST-ROSS MAGMATISM AND SEDIMENTATION

Ferrar Group and Beacon Supergroup

TERRANES AND UNITS OF THE ROSS OROGEN

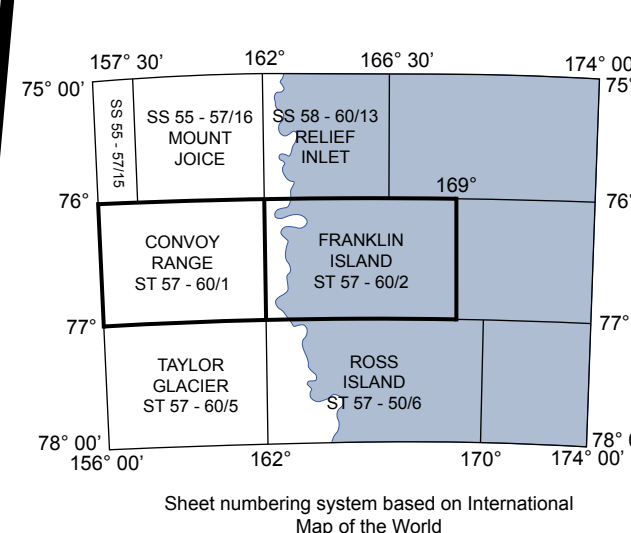
Granite Harbour Igneous Complex

Wilson Metamorphic Complex

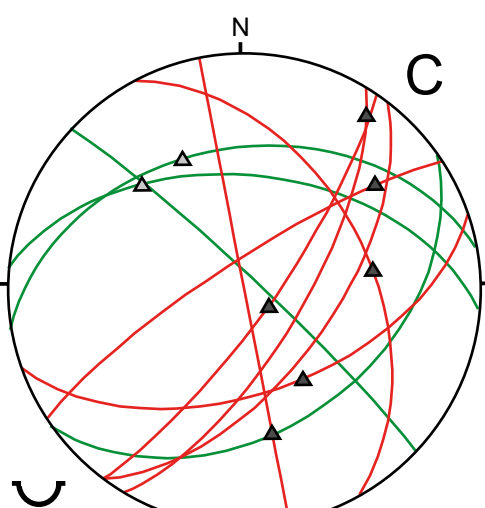
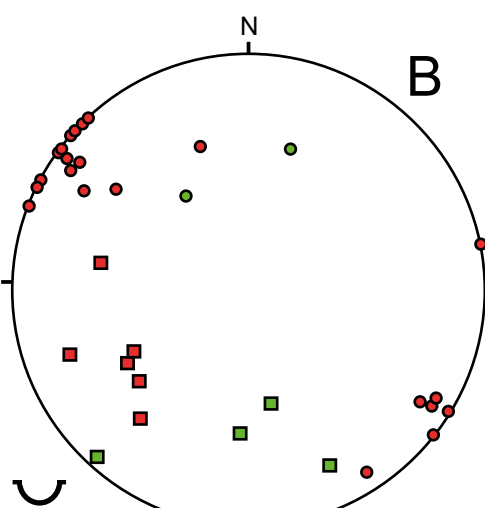
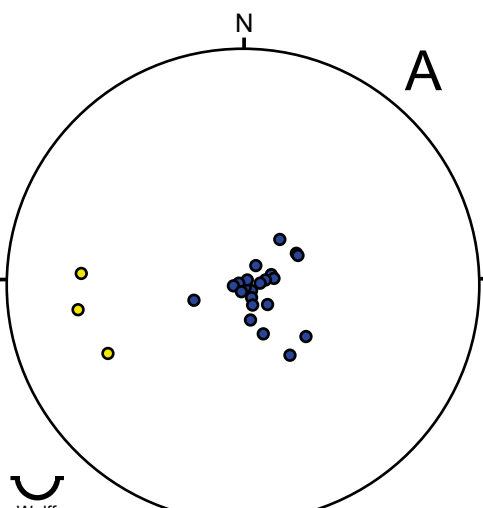
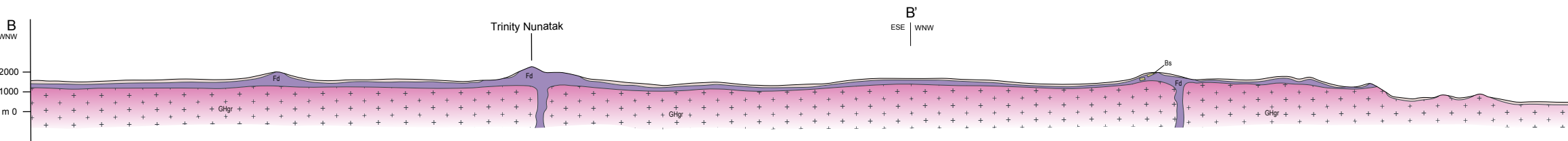
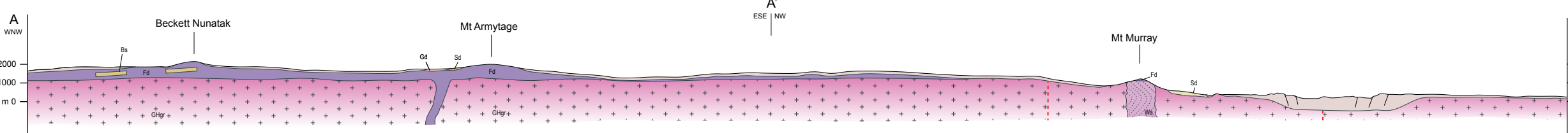
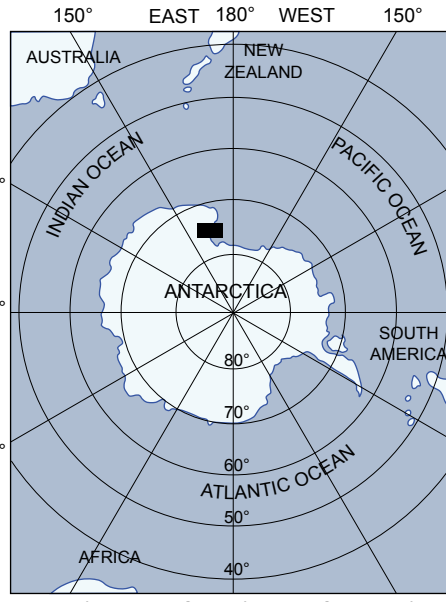
Skelton Group

Area of new mapping

INDEX TO ADJOINING SHEETS



LOCATION DIAGRAM



Kukri erosion surface separating the Ferrar Dolerite (above), from rocks of the Granite Harbour Igneous Complex (below); Ferrar Dolerite show the typical columnar jointing.
Eastern cliff of the Mt Endeavour



Reddish Irizar Granite in contact with darker granitoid of the Granite Harbour Igneous Complex. Northern side of Mt Gauss



Tabular body of Beacon Sandstone within the Ferrar Dolerite. Shultz Peak area