

GEOLOGICAL MAP OF THE SULOGA PENINSULA AND SOUTHEAST OKIDUSE RANGE, WOODLARK ISLAND (MUYUW), EASTERN PAPUA

DESCRIPTION OF MAP UNITS

SURFICIAL DEPOSITS

HOLOCENE AND PLEISTOCENE DEPOSITS

- Qa** Alluvium silt, sand and gravel.
- Qpn** **Na'ku'iel Conglomerate** Poorly sorted conglomerate with distinctive clasts derived from Loluai Formation, Busai Hill Ignimbrite (Great Northern and Waiakum only) and minor granite.
- Qpk** **Kiriwina Formation** Marine claystone, carbonaceous shale, sandstone, coral limestone. C¹⁴ age of 31 500-39 500±800 a.

OKIDUSE VOLCANIC GROUP

MIOCENE ROCKS OF THE WATOU MOUNTAIN ERUPTIVE CENTRE

Vent association

- Tmow₆** **Boganuse Formation** Mostly lava flows with welded fall deposits and breccias.
- Tmow₁** **Kuikébeim Microdiorite** Rocks ranging from grey andesite to fine-grained diorite.

Cone-forming association

- Tmow₂** **Nikuben Formation** Mostly dark grey block and ash deposits with basaltic lava flows and red auto-clastic breccia.

Ring plain association

- Tmow₃** **Talpas Creek Formation** Grey heterolitho-logic lahar deposits, conglomerate and red-purple and yellow-brown sandstone with minor basalt flows, mafic ash layers and non-marine carbonaceous mudstone.

MIOCENE ROCKS OF THE UVARAKOI CALDERA

Outflow association

- Tmou₁** **Monasiy Tuff** Non-welded red-grey to yellow-brown tuff sheet with widespread occurrence. Typically homogenous unit with lithics and crystals set in an ash matrix. Lapilli-sized cognate lithics (basalt, porphyritic basalt, felsic rocks) are uniformly distributed throughout unit. The upper part of the unit is typically crystal rich.

MIOCENE ROCKS OF THE SULOGA HARBOUR TUFF CONE

- Tmos** **Suloga Harbour Tuff** Felsic volcanic rocks including crystal tuff, ashflow tuff and surge deposits.

LATE OLIGOCENE-MIDDLE MIOCENE FORMATIONS

- Tmn** **Nasai Limestone** Dark grey to black limestone. Thinly bedded to massive limestone. Talus breccia containing ash layers of Monasiy Tuff at Wa'beu Point. May grade into calcareous sandstone. Some karst.

?LATEST PALEOCENE-EOCENE FORMATIONS

- Tel** **Loluai Formation** Thermally metamorphosed classical turbidite rocks. Fine to very fine-grained sandstone and siltstone. Well sorted conglomerate.
- Telu** **Utavai Basalt Member** Mafic volcanic submarine deposits (pillow lavas) and subaerial deposits (block and ash, fall deposits, crystal lithic tuff).

CENOZOIC INTRUSIVE ROCKS AND REGIONAL DYKES

- Tme** **Auyed Dolerite** Dark grey to blue grey dolerite with occasionally well developed columnar jointing.
- Tg** Granite Coarse equigranular granite.

MIOCENE REGIONAL DYKES

- Tmd** Felsic dykes Felsic porphyritic dykes, 30-60 m wide in the Boniavat-Okiduse district, elsewhere 1-2 m, containing either idiomorphic phenocrysts or laths of plagioclase with lesser amounts of hornblende, set in a medium grained groundmass. Groundmass texturally resembles that of Monasiy Tuff and Busai Hill Ignimbrite. May include xenoliths of hornblende. K-Ar age of 11.4±0.1 Ma.
- Tmm** Mafic dykes Andesite and pyroxene bearing porphyritic basalt. Narrow 1-4 m wide dykes. Porphyritic dykes contain large (5-8 mm) phenocrysts set in a fine-grained basalt groundmass.

GEOLOGICAL MAP SYMBOLS

- Contact-dashed where approximate
- Fault-dashed where concealed
- ✂ + Strike and dip of beds: inclined and horizontal
- 5, S3a Location of photograph with text figure number
- 23 Location of petrological sample
- Hydrothermally altered rocks
- ✂ Alluvial mining: stacked stones, races
- Plant fossils
- Non-marine molluscan (pelecypod) fauna
- Ballistic bomb bed
- Lava flow with direction
- Creek, river
- Roads, foot tracks
- - - Walking, exploration tracks
- 84 m Spot height in metres
- Settlement

LITHOLOGICAL SYMBOLS

- Siltstone, mudstone
- Sandstone
- Conglomerate
- Limestone, massive or thinly bedded
- Coralline limestone, blue-grey claystone
- Ashflow tuff
- Block and ash or lahar; minor lava
- Basalt lava flows
- Fine-grained diorite
- Dolerite