

LEGEND

- FAULT CONCEALED
- U D FAULT WITH DOWNTHROWN SIDE INDICATED
- FAULT—POSITION APPROXIMATE
- FAULT INFERRED
- FORMATION BOUNDARY
- FORMATION BOUNDARY—POSITION APPROXIMATE
- Dolerite Boundaries
- CONCORDANT SILL
- DISCORDANT INTRUSIVE BOUNDARY
- 26° STRIKE AND DIP OF STRATA
- ROAD
- VEHICULAR TRACK
- FOOT TRACK
- RAILWAY LINE
- TRANSMISSION LINE
- NUMBERS ON FORMATION BOUNDARIES ARE TOPOGRAPHIC HEIGHTS

Quaternary System

RECENT SERIES

Qra ALLUVIUM

Qpr RIVER SEDIMENTS

Pleistocene Series

Triassic System

Tsk KNOCKLOFTY FORMATION

Permian System

Pf FERNTREE FORMATION

Pw WOODBRIDGE GLACIAL FORMATION

Pge GRANGE MUDSTONE

Pb BERRIDALE LIMESTONE

CASCADIA GROUP

IGNEOUS ROCKS

Tertiary System

Tb BASALT

Jdl JURASSIC System

Dolerite

MAPPED AND COMPILED BY D.WOOLLEY 1956

Compilation from Aerial Photographs
 Trigonometric Station Control by
 courtesy of the Department of
 Lands and Surveys Hobart and the
 Australian Army Survey Service
 Origin of co-ordinates 400,000 yds
 West and 1800,000 yds South of
 True Origin of Zone 7 of the
 International Grid

KEY MAP SHOWING MAGNETIC DECLINATIONS 1957
 SECULAR VARIATION 7 MINS. P.A.



GEOLOGY OF NEW NORFOLK SHEET 4973

PHYSIOGRAPHY

Drainage is dominated by the Derwent River which has eroded a wide flat valley, with extensive fluvial deposits in some places. Tertiary faulting has exerted some structural control on the course of the river. To the north and south, the country rises to high hills, which have been eroded from sill-like dolerite bodies by streams having steep gradients, and which are still in the mountain tract.

STRATIGRAPHY

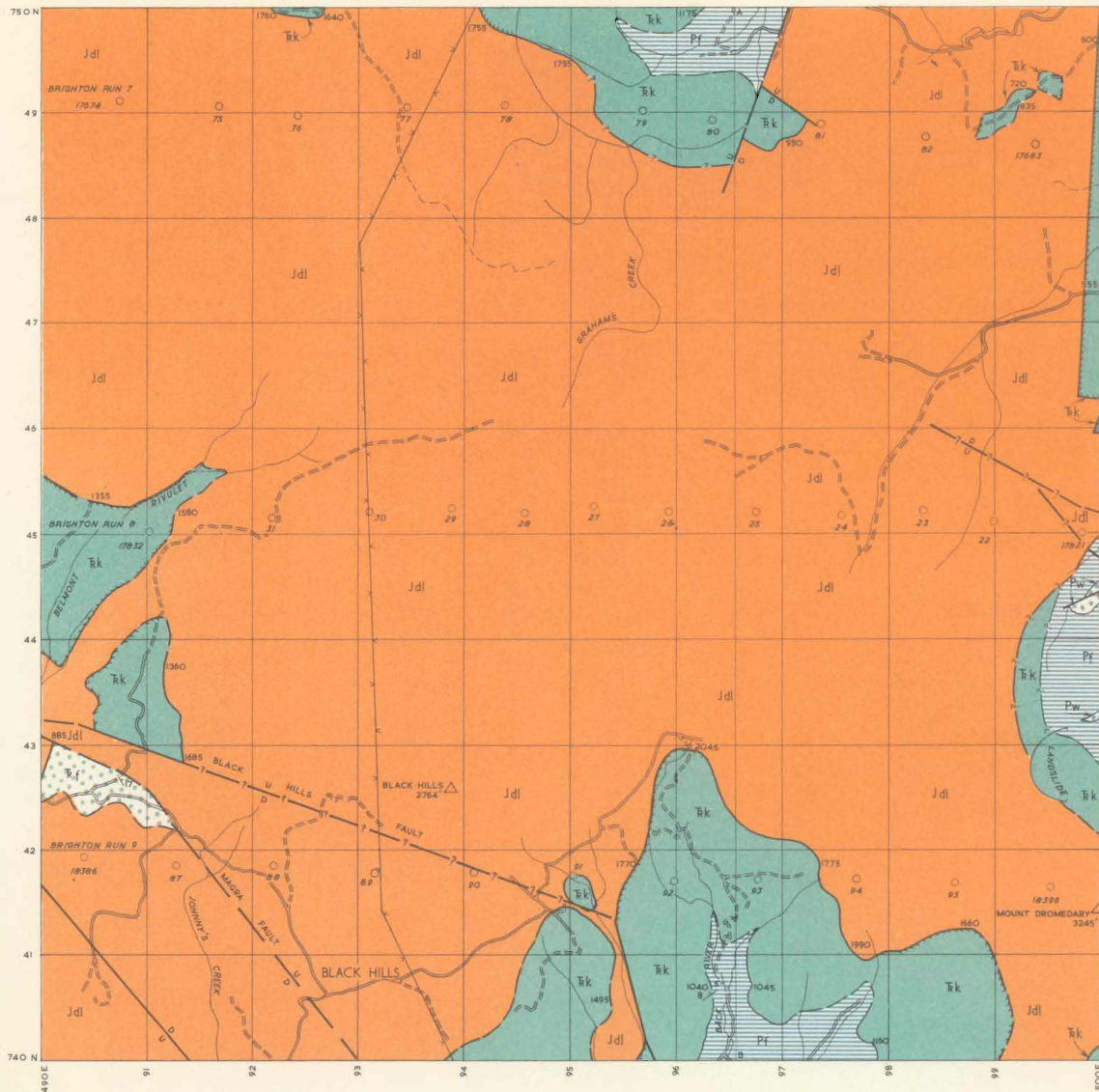
Age	Formation	Lithology	Thickness (in feet)
Recent		River deposits	?
Pleistocene		River sediments (sand and gravel)	?
Tertiary		Basalt flows	30+
Erosion Interval			
Triassic	Knocklofty Sandstone and Shale	Basal fine conglomerate. Sandstone.	1000+
Disconformity ?			
Permian	Ferntree Mudstone	Siltstone and sandstone.	600
	Risdon Sandstone	Sandstone	20+
	"Woodbridge Glacial" Formation	Sandstone and siltstone	260
	Grange Mudstone	Mudstone	100 approx.
	Berriedale Limestone	Foetid grey limestone, sometimes sandy	?

STRUCTURE

The main structural feature in this area is the system of Tertiary faults, most of which have a south-easterly trend, down the valley of the Derwent. Most of these have a throw of a few hundred feet, but one (Glen Fern Fault), has a throw of 1,200 feet. The dolerite intrusions are generally sill-like, but the contacts are often transgressive.

REFERENCES

- Banks, M. R., and Hale, G. E. A., 1957—Type Section of the Permian System in the Hobart Area. **Pap. Proc. Roy. Soc. Tasm.**, vol. 91, pp. 41-64.
- Lewis, A. N., 1945—Pleistocene Glaciation in Tasmania. **Pap. Proc. Roy. Soc. Tasm.** (1944), pp. 41-56.
- McDougall, I., 1959—The Geology of the Pontville-Dromedary Area. **Pap. Proc. Roy. Soc. Tasm.**, Vol. 93.
- Woolley, D. R., 1959—The Geology of New Norfolk-Black Hills District. **Pap. Proc. Roy. Soc. Tasm.**, Vol. 93.



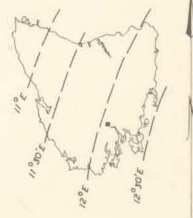
LEGEND

- D — FAULT WITH DOWNTOWN SIDE INDICATED
- U — FAULT — POSITION APPROXIMATE
- ? — FAULT INFERRED
- — — FORMATION BOUNDARY
- — — FORMATION BOUNDARY — POSITION APPROX.
- Dolerite Boundaries**
- — — CONCORDANT SILL
- — — DISCORDANT INTRUSIVE BOUNDARY
- — — STRIKE AND DIP OF STRATA
- — — ROADS
- — — VEHICULAR TRACK
- — — TRACK
- — — TRANSMISSION LINE

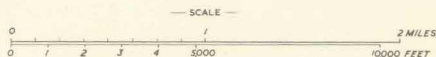
- Triassic System**
- Rk FELDSPATHIC SANDSTONE
- Rk KNOCKLOFTY FORMATION
- Permian System**
- Pf FERNTREE FORMATION
- Pw WOODBRIDGE GLACIAL FORMATION
- IGNEOUS ROCKS**
- Jdl JURASSIC (?) SYSTEM
- Jdl DOLERITE

Compilation from Aerial Photographs. Trigonometric Station Control by courtesy of the Department of Lands and Surveys, Hobart, and the Australian Army Survey Service. Origin of co-ordinates 400,000 yds. West and 1,800,000 yds. South of True Origin of Zone 7 of the International Grid.

KEY MAP SHOWING MAGNETIC DECLINATIONS
SECULAR VARIATION 7 MINS. PER ANNUM



MAPPED AND COMPILED BY D. WOOLLEY 1956



GEOLOGY OF THE BLACK HILLS AREA

SHEET 4974

PHYSIOGRAPHY

The main part of the area is covered by a high dolerite plateau, which is being dissected by streams in the mountain tract. The main drainage is to the south into the Derwent River, but some streams flow north into the Jordan River.

STRATIGRAPHY

System	Formation	Lithology	Thickness (in feet)
Triassic	"Feldspathic Sandstone"	Sandstone with feldspar and ferromagnesians	?
	Knocklofty Sandstone and Shale	Basal fine conglomerates Sandstone	1000'+
? Disconformity			
Permian	Ferntree Mudstone	Siltstones and sandstones.	600

STRUCTURE

There are a few small Tertiary faults in this area, most being on the northern fringe of the faults running down the Derwent Valley to the south. Most of the area is occupied by a dolerite body whose base varies from high in the Ferntree Formation to high in the Knocklofty Formation. The top of this body is not exposed.

REFERENCES

- Banks, M. R., and Hale, G. E. A., 1957—Type Section of the Permian System in the Hobart Area. **Pap. Proc. Roy. Soc. Tasm.**, Vol. 91, pp. 41-64.
- McDougall, I., 1959—The Geology of the Pontville-Dromedary Area. **Pap. Proc. Roy. Soc. Tasm.**, Vol. 93.
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