

THE UNIVERSITY OF ADELAIDE

GEOLOGY OF PART OF BASEMENT INLIER
NORTH-EAST OF MT. COMPASS.

BY. S.P. WICKS.

1972.

Copy 1

Handwritten notes:
"Hampden" is a type
of associated rocks
found in the
Southwest of Adelaide
1972

RL OLIVER

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**GEOLOGY OF PART OF BASEMENT
INLIER N.E. OF MT. COMPASS**

by

S. P. WICKS

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The rocks are
found in the
Southwest of Adelaide
1972

October, 1972

**Submitted as partial fulfilment for the Honours
degree in Geology at the University of Adelaide**

ERRATA

The sub section 'Metamorphism' has been erroneously placed in the section 'Geochemistry'. It should have been included in the section 'Petrology'.

The following reference has been omitted from the bibliography.

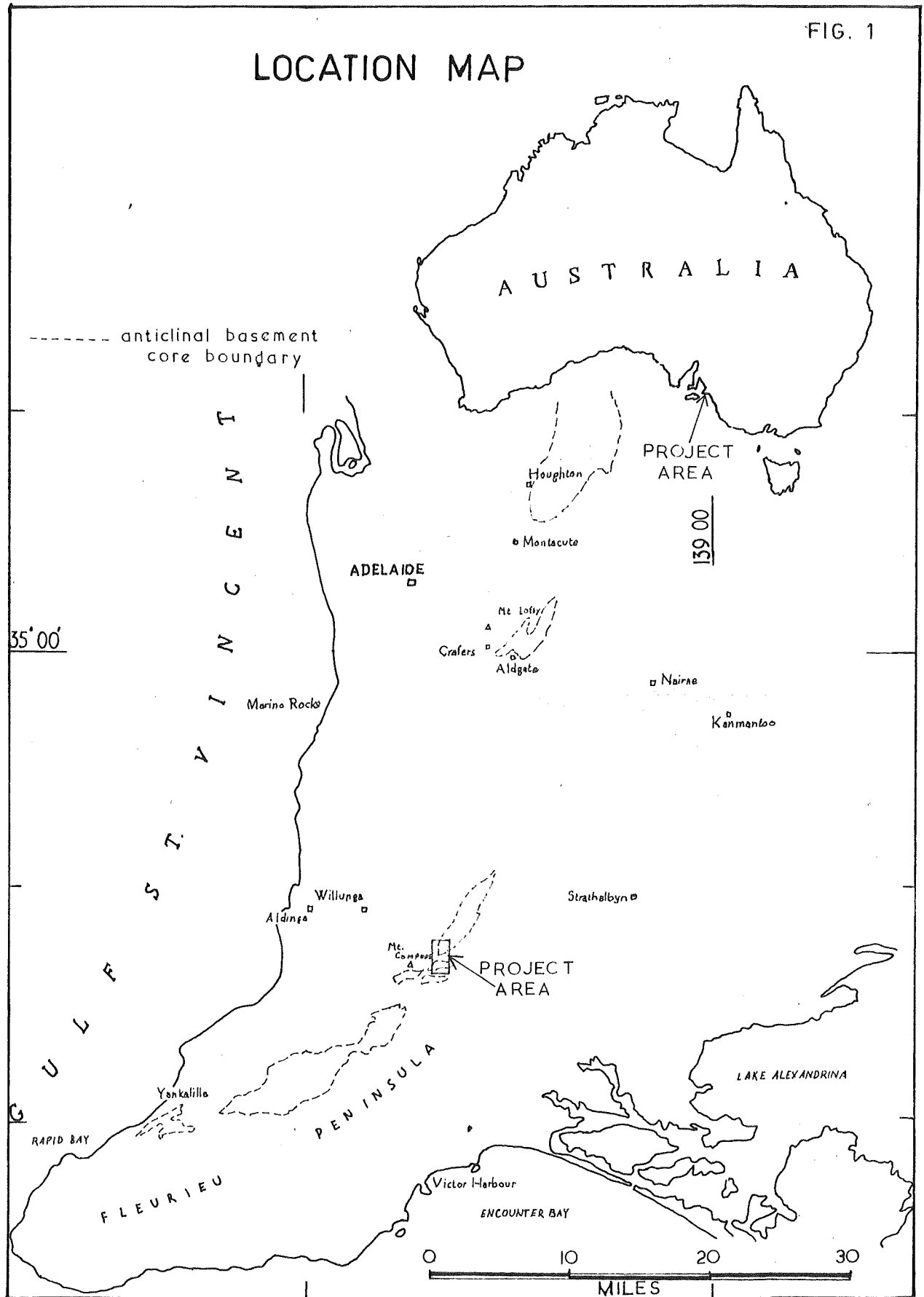
ALDENMAN, 1938: Augen-gneisses in the Rumbag Scrub Area, South Australia.
Trans. Roy. Soc. S. Aust., 62 (1).

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APPENDIX I (Thin section descriptions).	
II (Xray powder photograph data).	
III (Digestion and analysis of samples).	
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V (Use of two dimensional diagrams).	

LOCATION MAP



STATION POSITIONS

FIG. 2.

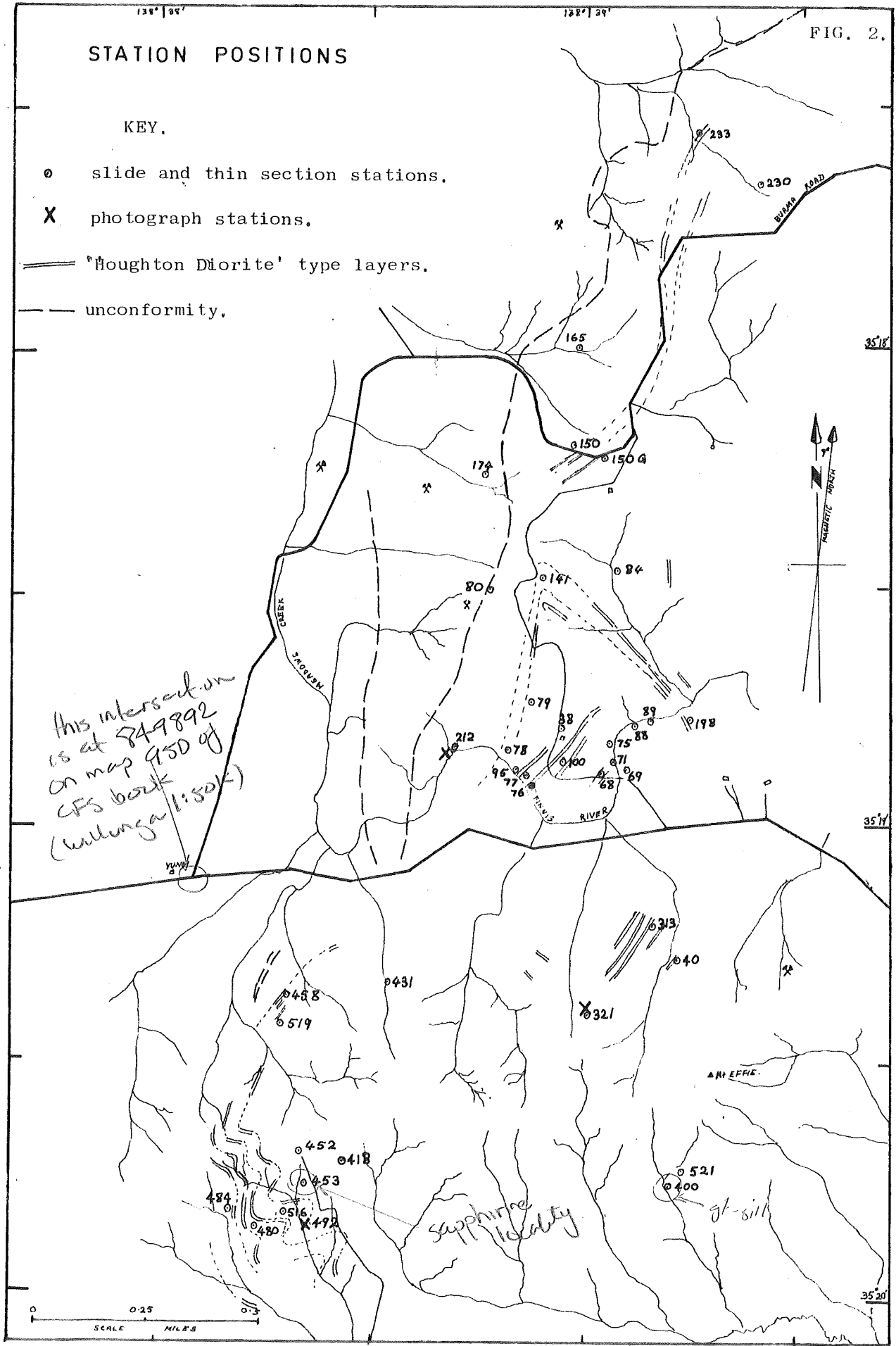
KEY.

○ slide and thin section stations.

X photograph stations.

== 'Houghton Diorite' type layers.

- - - unconformity.



1500?
ABSTRACT:

Basement gneisses, including 'Houghton Diorite' type rocks, show evidence of having been subjected to three deformations the last of which effects the Adelaide Supergroup rocks. Relict sillimanite and sapphirine indicate initial metamorphism to upper amphibolite - granulite facies grade. In an attempt, to ascertain the original nature of the 'Houghton Diorite' type rocks 12 samples were analysed for major oxides and also V, Cr, Co, Ni, Cu, Rb, Sr, La, Ce, and Ba. Comparison of these with those of pertinent known igneous and sedimentary rocks, utilizing multi variant discriminant function analyses, point to a sedimentary origin with a dolomitic shale as parent. Two samples, having both igneous and sedimentary characteristics, are probably the result of local mobilization of 'Houghton Diorite' type rocks.