



A STUDY OF THE STRUCTURAL AND METAMORPHIC RELATIONSHIPS
BETWEEN OLDER AND YOUNGER PRECAMBRIAN ROCKS IN THE
MOUNT LOFTY - OLARY ARC, SOUTH AUSTRALIA.

by

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Rock Type.

- "Houghton" granite
- Quartzite
- Augen gneiss
- Migmatitic gneiss
- Augen schist
- (schistose)
Sillimanite gneiss
(quartzose)
- Granite gneiss
- Foliated pegmatite
- Amphibolite
- Clinopyroxene unit
- Metasomatized amphibolite
- Migmatitic sillimanite gneiss
- "Layered" gneiss
- Biotite rich gneiss
- Cambrian
- Pegmatite
- Granite
- Basaltic dyke
- Permian
- Alluvium

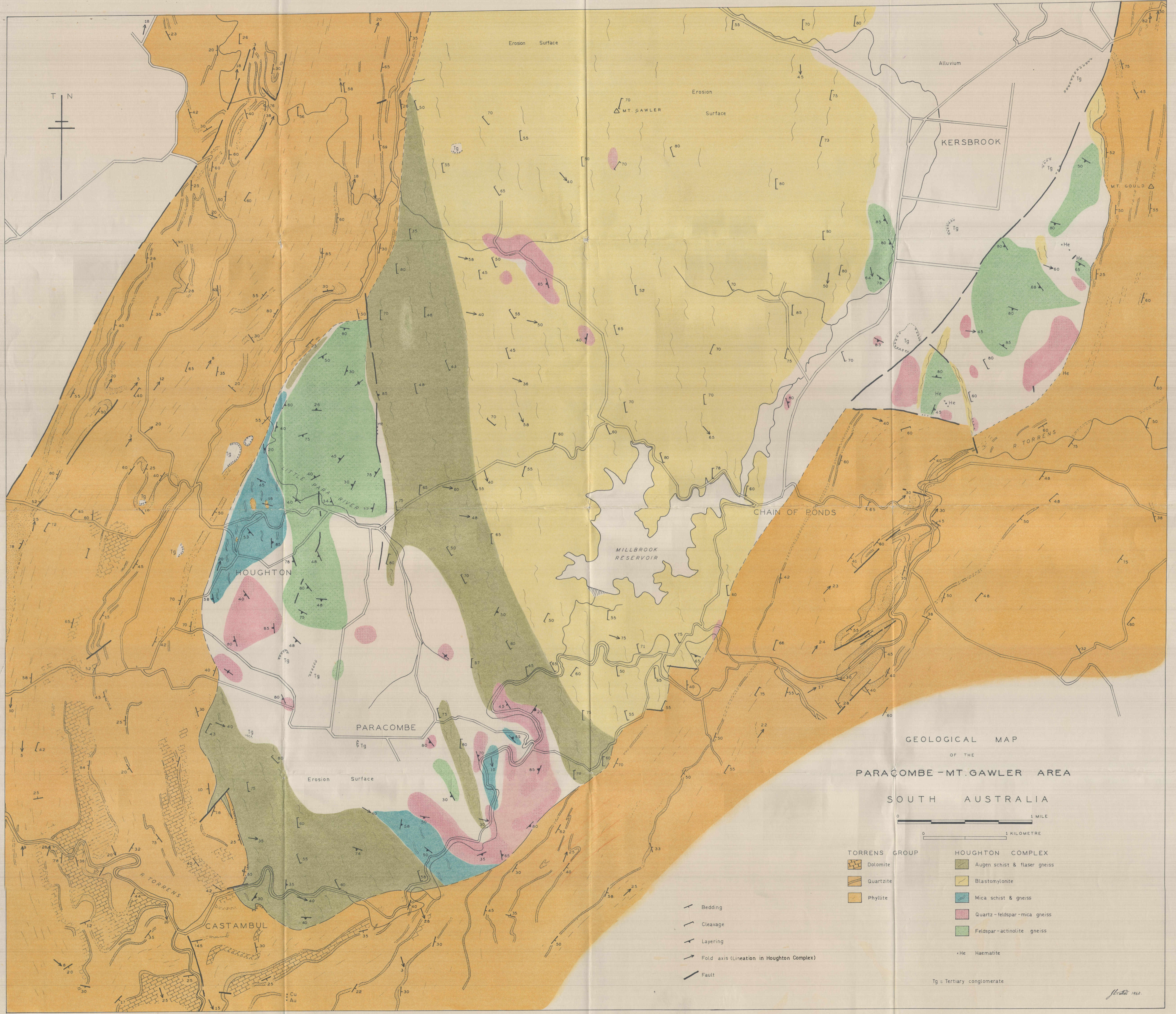
Outcrop map of Archaean basement rocks
south of Normanville.



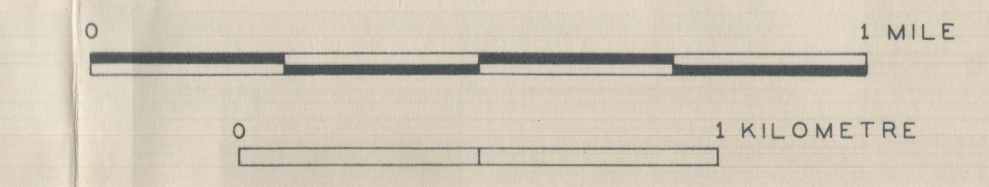
KEY.

- Layering
- Foliation
- Schistosity
- Plunge of lineation
- Fold axes
- Lithological boundaries
- Extent of outcrop
- Main roads
- Dams
- Streams
- Rivers

Scale: 1" Rep. 300 Yds



GEOLOGICAL MAP
OF THE
PARACOMBE-MT. GAWLER AREA
SOUTH AUSTRALIA



- | | |
|----------------------|-----------------------------|
| TORRENS GROUP | HOUGHTON COMPLEX |
| Dolomite | Augen schist & faser gneiss |
| Quartzite | Blastomylonite |
| Phyllite | Mica schist & gneiss |
| | Quartz-feldspar-mica gneiss |
| | Feldspar-actinolite gneiss |
| | * He Haematite |

- Bedding
- Cleavage
- Layering
- Fold axis (Lineation in Houghton Complex)
- Fault

Tg = Tertiary conglomerate

Stretcher 1952

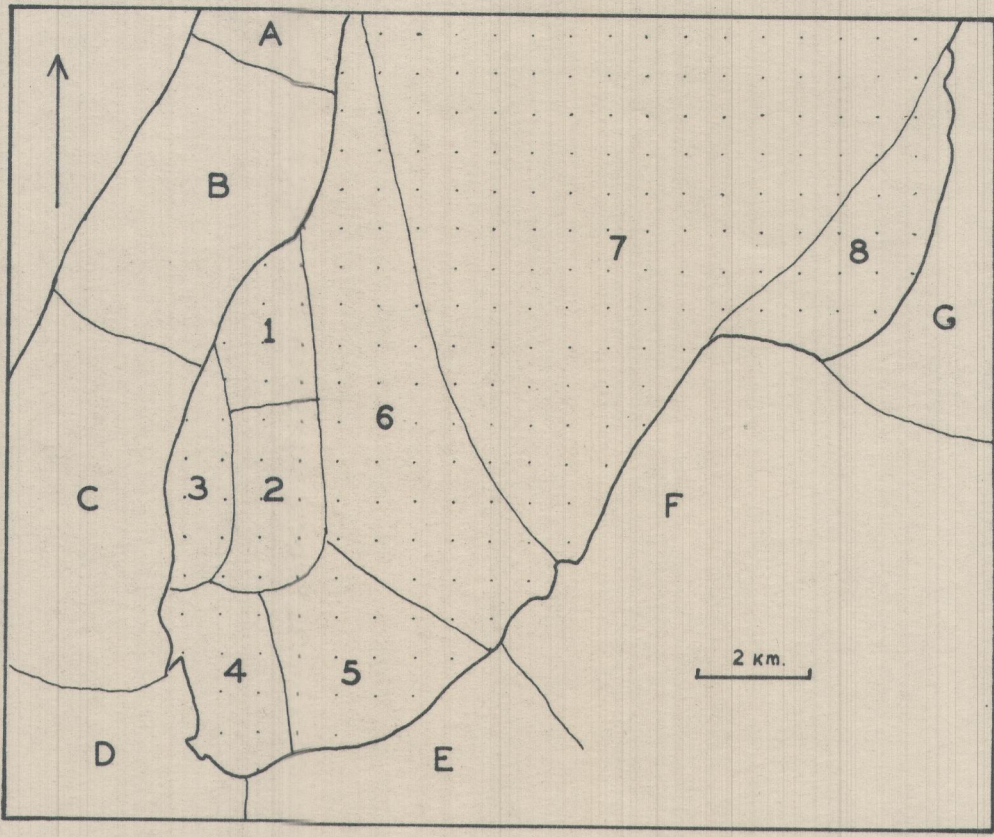
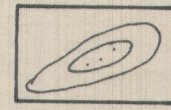
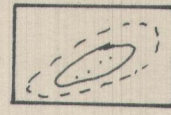


PLATE II
PARACOMBE - MT. GAWLER AREA

MACROSCOPIC GEOMETRY



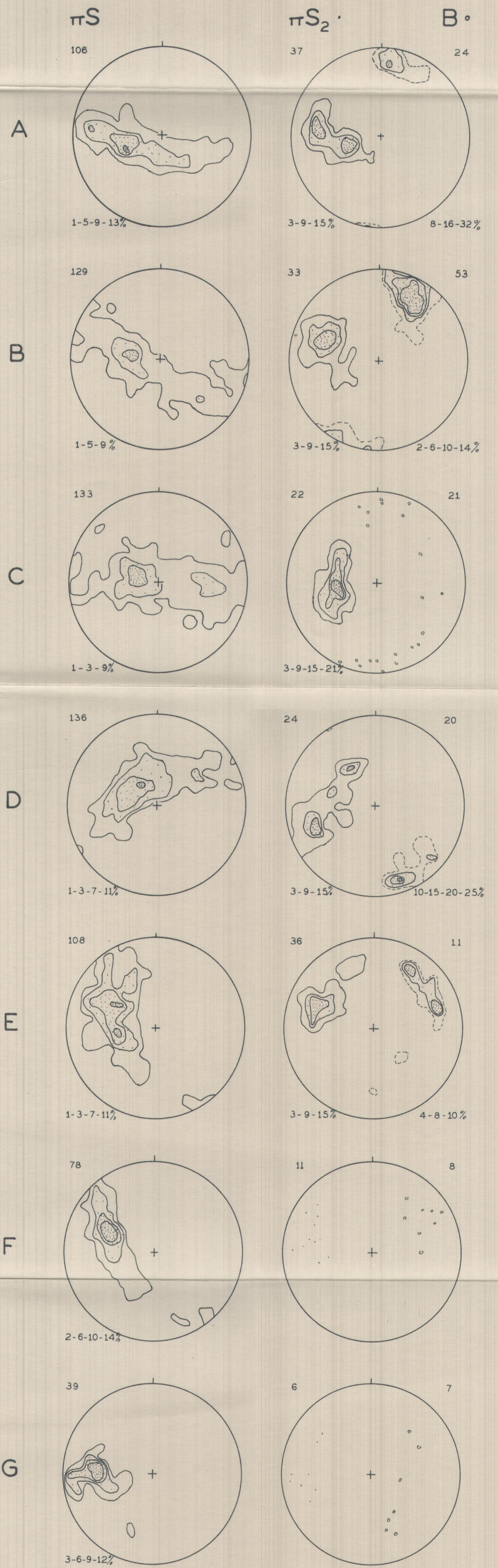
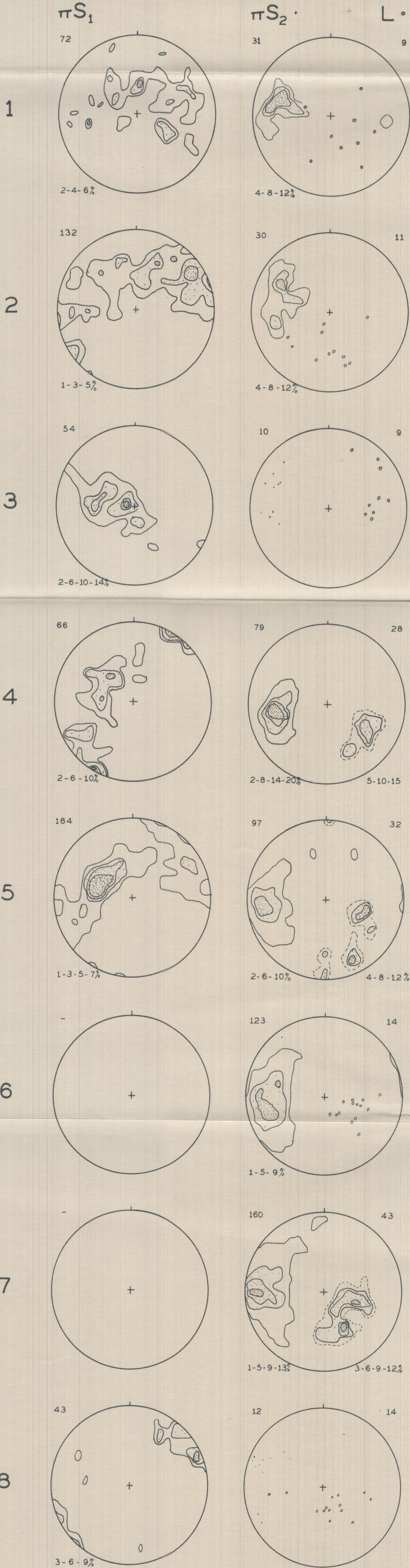
S CONTOURS



B&L CONTOURS

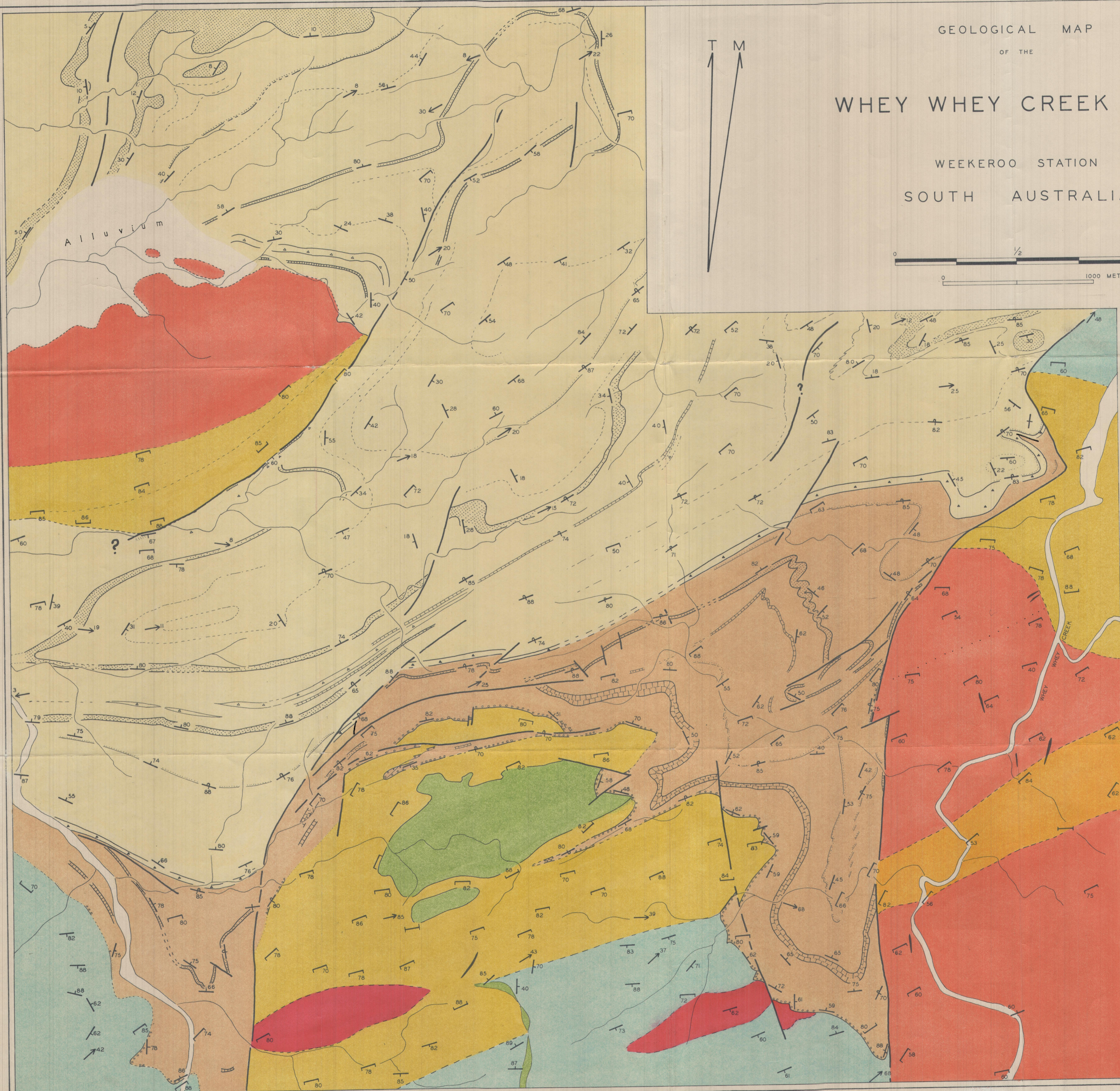
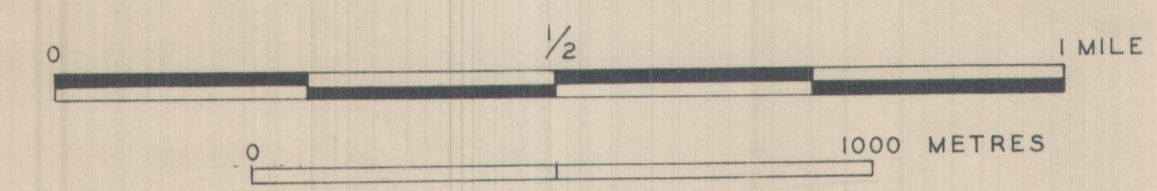
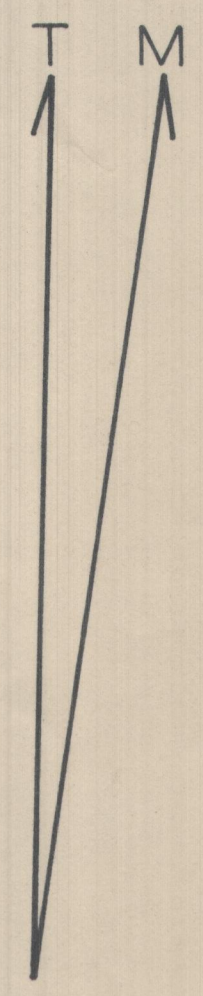
HOUGHTON COMPLEX

TORRENS GROUP



123 NUMBER OF READINGS
1-3-5% CONTOURS PER 1% AREA

GEOLOGICAL MAP
OF THE
WHEY WHEY CREEK AREA
WEEKEROO STATION
SOUTH AUSTRALIA



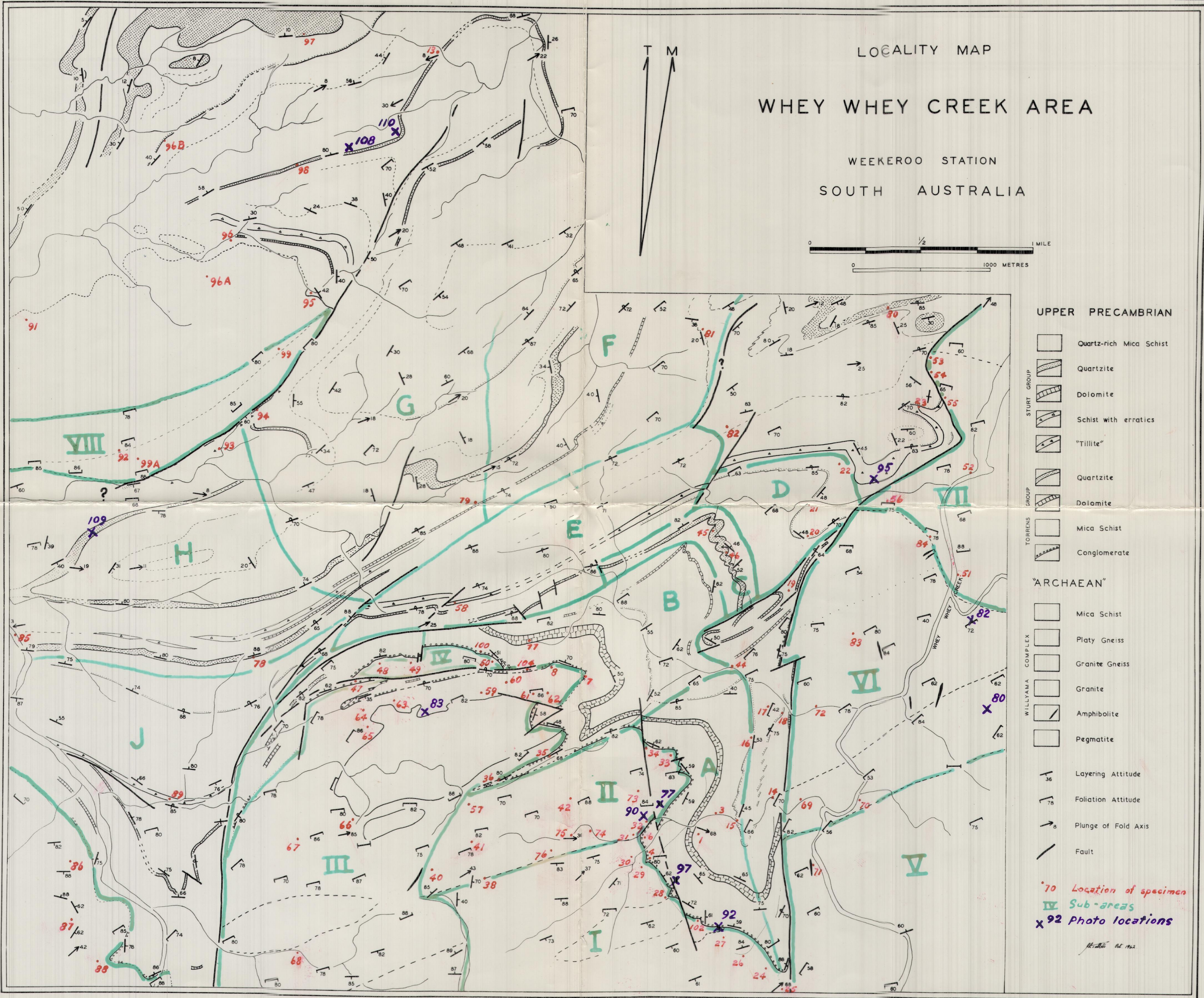
UPPER PRECAMBRIAN

- Quartz-rich Mica Schist
- Quartzite
- Dolomite
- Schist with erratics
- "Tillite"
- Quartzite
- Dolomite
- Mica Schist
- Conglomerate

"ARCHAEOAN"

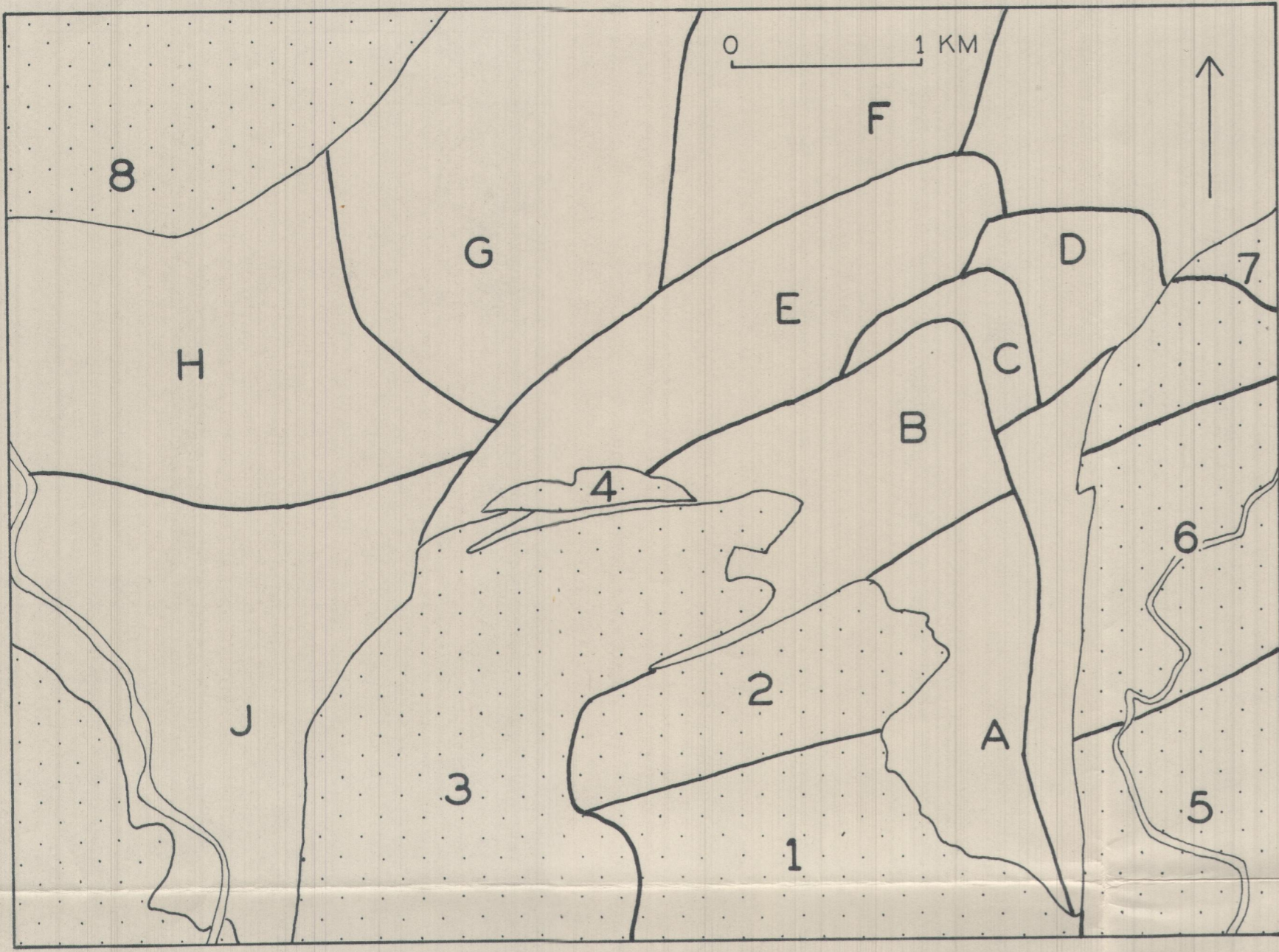
- Mica Schist
- Platy Gneiss
- Granite Gneiss
- Granite
- Amphibolite
- Pegmatite
- Layering Attitude
- Foliation Attitude
- Plunge of Fold Axis
- Fault

H. H. H. et al.



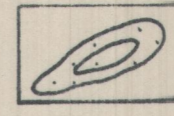
WHEY WHEY CREEK AREA

MACROSCOPIC GEOMETRY

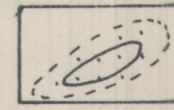


73-19

73 = NUMBER OF READINGS
19 = MAXIMUM CONCENTRATION



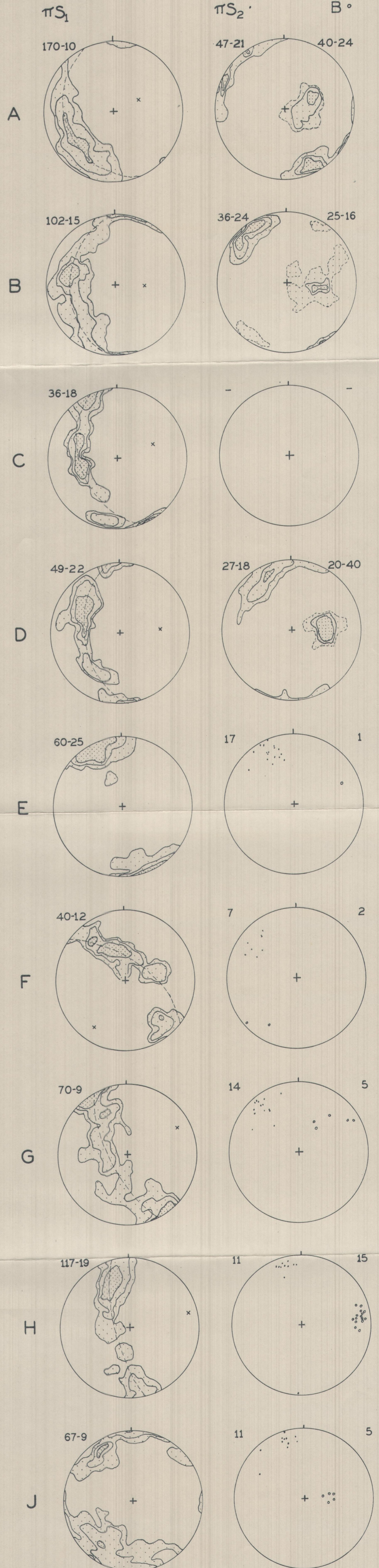
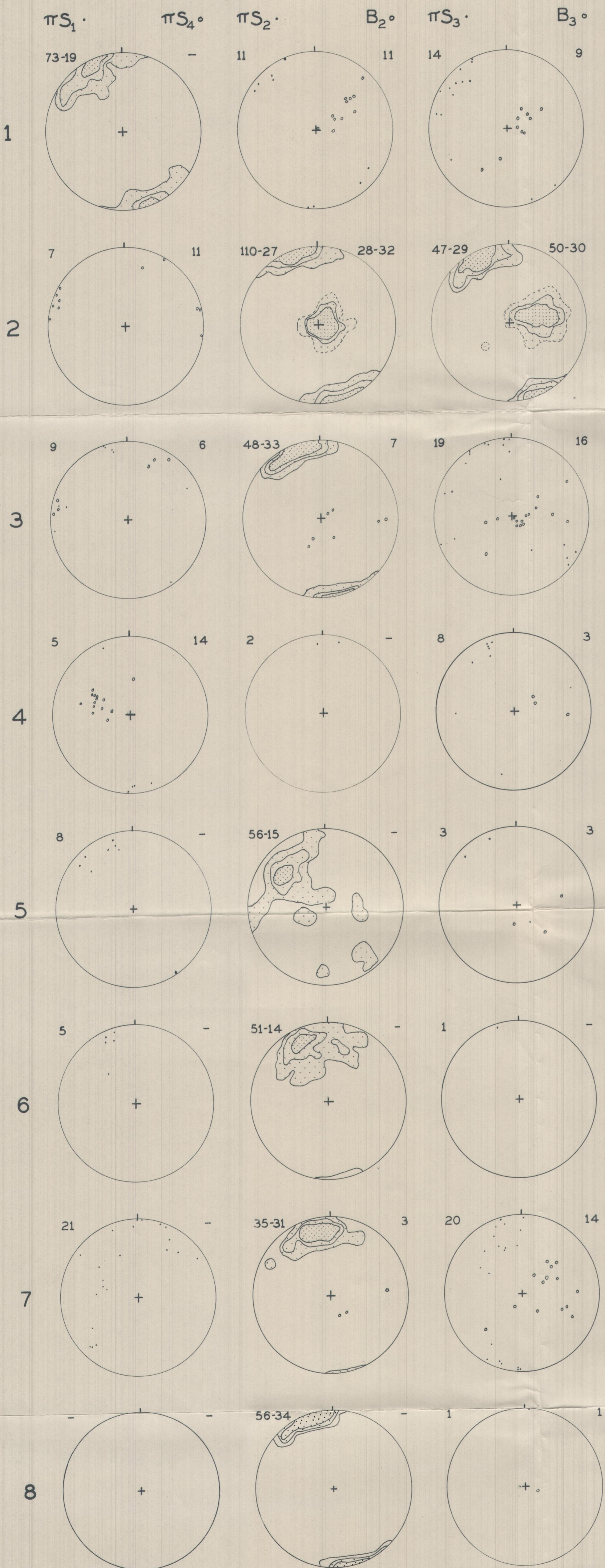
S CONTOURS



B CONTOURS

WILLYAMA COMPLEX

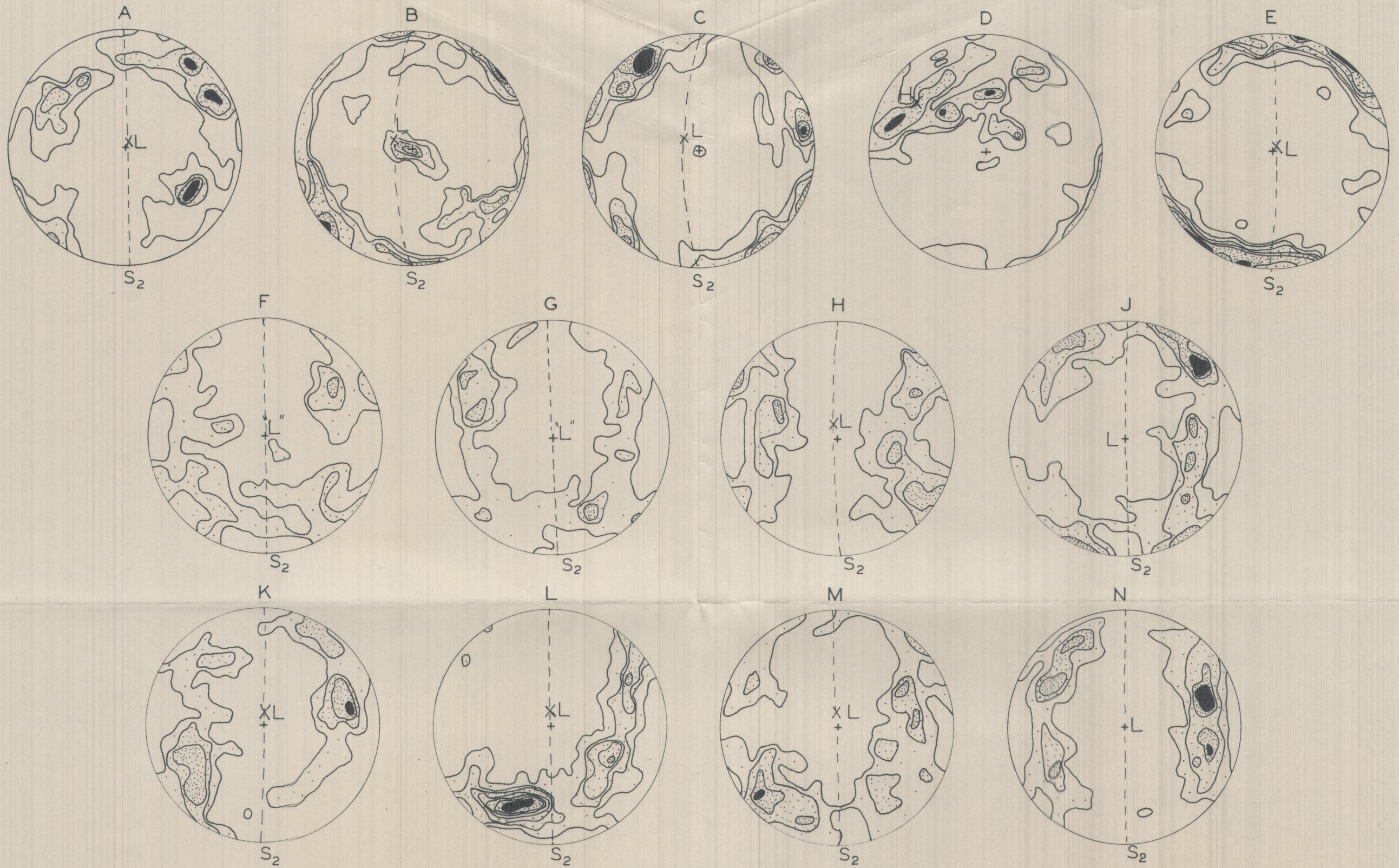
UPPER PRECAMBRIAN



CONTOURS 1-5-10% PER 1% AREA

CONTOURS 1-3-7%

CONTOURS 3-9-15%



QUARTZ ORIENTATION DIAGRAMS

SEE APPENDIX II