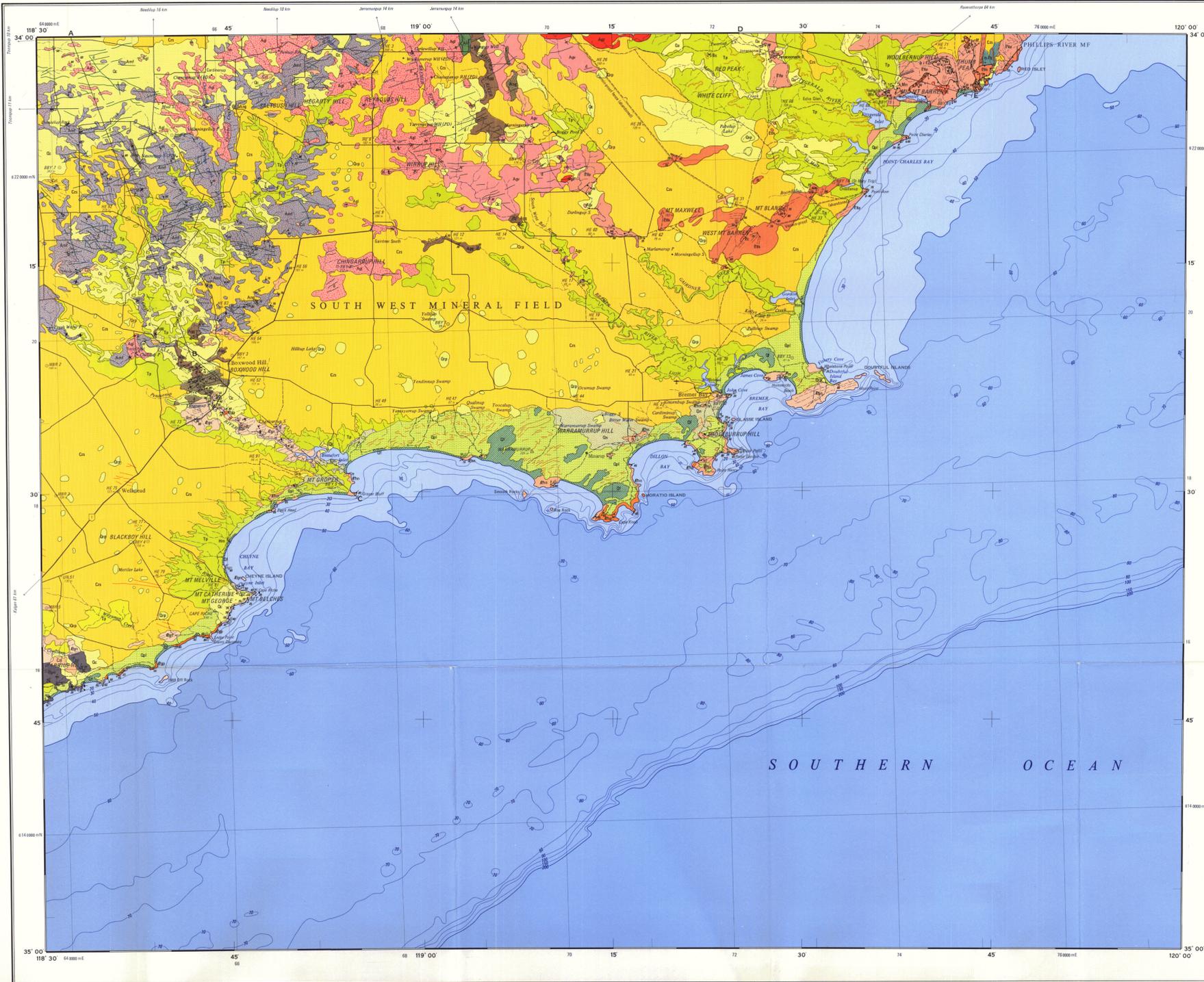


# BREMER BAY

GEOLOGICAL SURVEY OF WESTERN AUSTRALIA

AUSTRALIA 1:250 000 GEOLOGICAL SERIES

SHEET SI 50-12



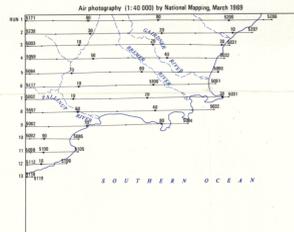
## SYMBOLS

- Geological boundary**
  - major
  - minor
  - minor with vergence
  - Low angle thrust; folded
  - Clear zone
  - Strike and dip of strata (dip not inferred)
  - inclined
  - vertical
  - Facing indicated by cross bedding
  - Trend line visible on air photo
  - Displacement, foliation in metamorphosed sedimentary rocks and fracture change in granite
  - inclined
  - vertical
  - Location
  - Metamorphic foliation in crystalline rocks
  - inclined
  - vertical
  - dip undetermined
  - Phonolite
  - inclined
  - vertical
  - Compositional layering in gneiss, spongy gneiss
  - inclined
  - vertical
  - dip undetermined
  - Alignment of phenocrysts in porphyritic granite
  - inclined
  - vertical
  - dip undetermined
  - Petroleum exploration well, dry, abandoned
- Mineral field boundary**
  - Highway with national route marker
  - Formed road
  - Track
  - Townsite, gauged, population less than 1000
  - Homestead
  - Locality
  - Landing ground
  - Horizontal control, major, minor
  - Benchmark, height accurate
  - Drainage
  - Sand dune
- Hydrography, intermittent**
  - Hydrographic contour, depth in metres
  - Pool
  - Waterhole
  - Rockhole
  - Spring
  - Position doubtful
- Quarry, abandoned**
- Prospect**
- Mineral occurrence**
  - Building stone
  - Copper (reported)
  - Heavy mineral beach sand
  - Lightly leached massive wax
  - Manganese
  - Road material

## REFERENCE

- QUATERNARY**
  - Qa: Middle sand to conglomerate dunes and beach deposits
  - Qb: Fossil soils in vegetated dunes
  - Qc: Coloured silty sandstone and silt in coastal dunes, sheets and foreshore reefs - may be equivalent to TAMALA LIMESTONE; commonly with thin sand cover
  - Qd: Clay and silt deposits in beach claypan and swamps
  - Qe: Shallow and alluvium - derived mainly from Tp
  - Qf: Colluvium and minor alluvium - derived mainly from Qa and bedrock
  - Qg: Sandplain - yellow to white sand and clay, contains scattered smooth pebbles derived from underlying gravel and laterite
  - Qh: Checkers and weathered rock - includes laterite, lateritic gravel, siliceous and kaolinitic rock
  - Qj: PLANTAGENET GROUP - yellow to grey silstone, silty sandstone and sandstone of the PALLINUP SILTSTONE, with minor sandstone and conglomerate of the WERILUP FORMATION
- PROTEROZOIC**
  - P1: Chert dikes - poorly sorted felsitic wacks, contain pebbles of quartz, iron, feldspar and bedded iron formation
  - P2: Porphyritic granite - medium to coarse grained, foliated and partially recrystallized in places
  - P3: Migmatite - Apg and Apg extensively invaded by P2
  - P4: Deformed quartzitic breccia and conglomerate - mainly derived from P5
  - P5: Chertiferous SF - altered dolerite
  - P6: KUNDUP QUARTZITE - partially to completely recrystallized quartz arenite and micaceous sandstone
  - P7: KYBULUP SCHIST - shale, sandstone, phyllite and schist
  - P8: Bedded iron formation - alternating layers of iron oxides and granoblastic quartz
- ARCHAEOZOIC**
  - A1: Diabase and diorite dykes
  - A2: Admetite - medium to coarse grained, variably textured; commonly variate due to continuous variation in grain size; locally porphyritic
  - A3: Granite and adamellite - medium to coarse grained, with abundant large phenocrysts; commonly variate in texture and gradational into Apg
  - A4: Hornblende gneiss - medium to coarse grained
  - A5: Adamellite and granodiorite - foliated, granoblastic texture and sparse garnet; foliation defined by enainment and alignment of cloners and grains of biotite (see commonly hornblende)
  - A6: Quartz, feldspar and biotite (or hornblende) orthogneiss and porphyry - compositional layering
  - A7: Quartz and admetitic spongy gneiss
  - A8: Metamorphosed gneiss - granoblastic or gneiss older than composition of Apg, minor spongy gneiss and amphibolite; enclosed by granoblastic hornblende granite and adamellite
  - A9: Schist and porphyry - includes cordierite schist, calc-silicate gneiss and basic gneiss gneiss

## FLIGHT DIAGRAM



Compiled and published by the Geological Survey of Western Australia. Cartography by the Geological Mapping Section, Department of Mines, Topographic Unit from corrections by the Department of Lands and Surveys. Copies of this map may be obtained from the Geological Survey of Western Australia, 65 Adelaide Terrace, Perth. Printed by the Government Printing Office, Perth.



## RELIABILITY DIAGRAM



HON. DAVID PARKER, M.L.A.  
MINISTER FOR MINERALS AND ENERGY  
A. P. TRENDAILL, DIRECTOR, GEOLOGICAL SURVEY DIVISION

SCALE 1:250 000

TRANSVERSE MERCATOR PROJECTION  
ZONE 50 AUSTRALIAN MAP GRID

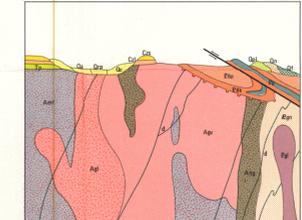
## INDEX TO ADJOINING SHEETS

DUMBLEYUNG SI 50-7	NEWDEGATE SI 50-8	RAVENSTHORPE SI 51-5
MT BARKER SI 50-11	<b>BREMER BAY SI 50-12</b>	
ALBANY SI 50-15	SOUTHERN OCEAN	

## DECLINATION DIAGRAM

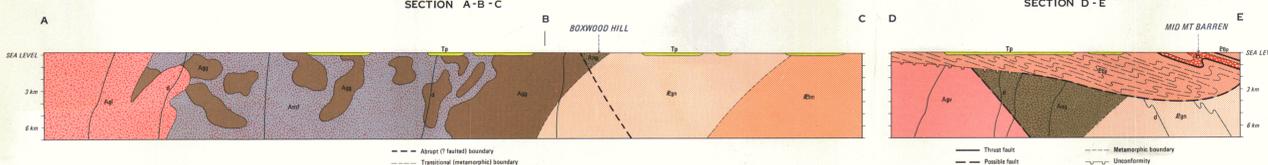


## DIAGRAMMATIC RELATIONSHIP OF PRINCIPAL ROCK UNITS



## DIAGRAMMATIC SECTIONS

NATURAL SCALE



BREMER BAY  
SHEET SI 50-12  
FIRST EDITION 1984  
© Western Australia 1984

GEOLOGICAL SURVEY  
& GENERAL LIBRARY  
DEPARTMENT OF MINES  
WESTERN AUSTRALIA

(941b)13