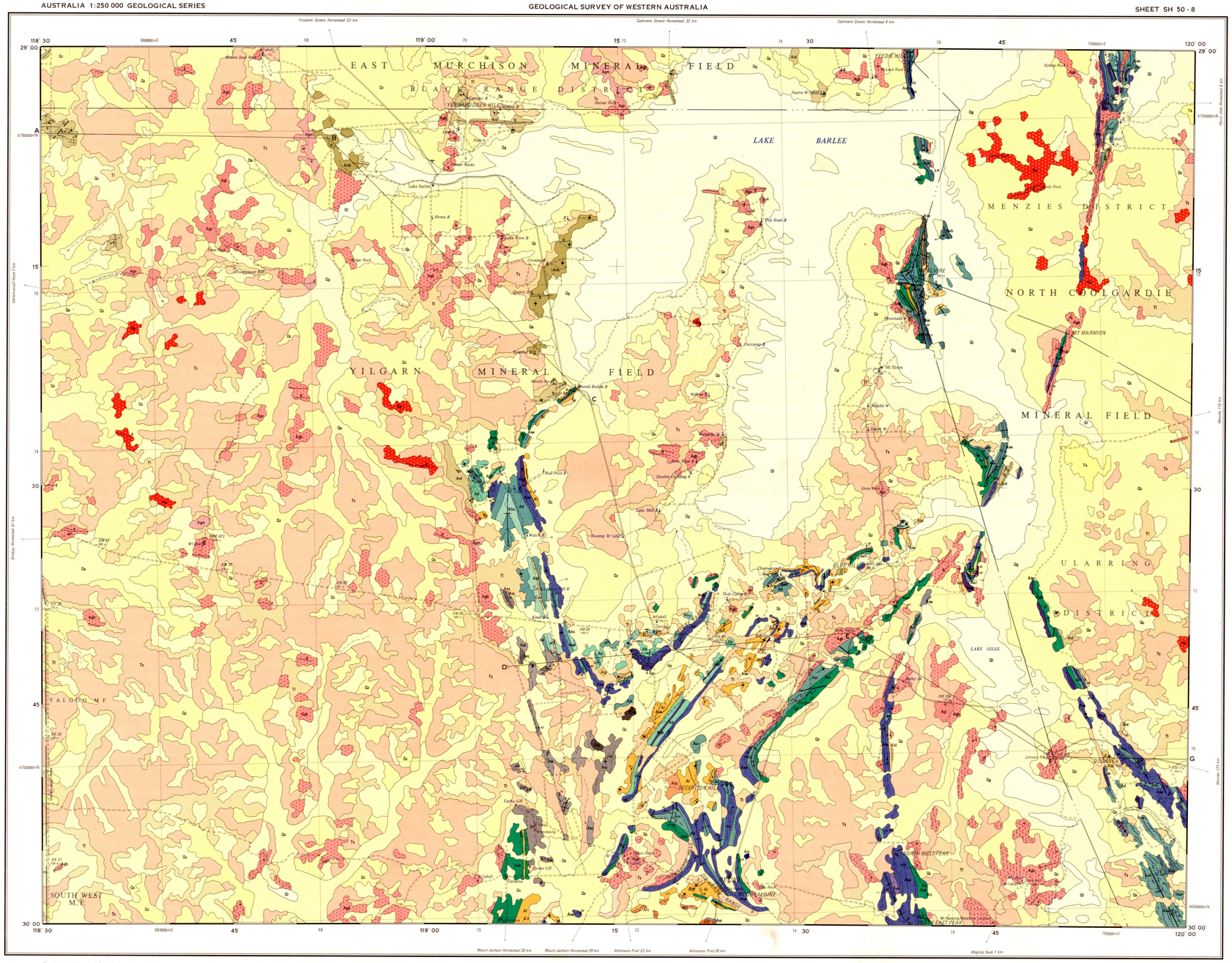
BARLEE

AUSTRALIA 1:250 000 GEOLOGICAL SERIES

GEOLOGICAL SURVEY OF WESTERN AUSTRALIA

SHEET SH 50 - 8

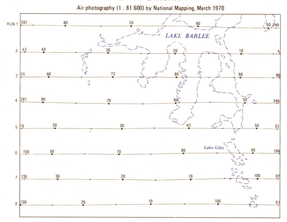


SYMBOLS

- Geological boundary
- Fault
  - Accurate
  - Approximate
- Shear zone or blastomylonite
- Lithological trend visible on air photos
- Early structures showing plunge
  - Sinistral minor fold
  - Dextral minor fold
  - Minor antiform
  - Minor synform
  - Antiformal axis
  - Synformal axis
  - Lineation
- Late structures showing plunge
  - Sinistral minor fold
  - Dextral minor fold
  - Minor antiform
  - Antiformal axis
  - Synformal axis
  - Lineation
- Orientation of bedding
  - Inclined
  - Vertical
- Facing
  - Graded bedding
  - Pillow lava top
- Metamorphic foliation
  - Inclined
  - Vertical
  - Indeterminable
- Foliation in granite
  - Inclined
  - Vertical
  - Indeterminable
- Lineation in granite
- Overprint used where granite has protoclastic foliation or lineation
- Mineral field boundary
- Mineral field district boundary
- Formed road
- Track
- Homestead — Lake Barlee
- Landing ground
- Horizontal control; minor — XX 29
- Benchmark, height accurate — 278 m
- Watercourse, intermittent
- Well — W
- Bore — B
- Windpump
- Gramma hole — GH
- Rockhole — RH
- Soak — Sk
- Abandoned — (abd)
- Mine, gold (may or may not be working) — Bullseye
- Mineral occurrence
  - Copper — Cu

FLIGHT DIAGRAM

Air photography (1 : 81 600) by National Mapping, March 1970



REFERENCE

CAINOZOIC

QUATERNARY

- Qi — Alluvium—clay, silt and sand; mainly saline playa lake surface
- Qg — Mixed alluvium and eolian clay, silt and sand — lake, claypan and dune country adjacent to main playas
- Qa — Sandy loam — alluvial wash
- Qc — Mixed colluvium and alluvium — red-brown loam, sheetwash deposits; grades to Qa and Qz
- Qs — Eolian sand in dunes — red-brown
- Qz — Colluvium — quartz and rock fragments in loam adjacent to outcrop

TERTIARY

- Tk — Calcrete — sheet carbonate with minor chalcedony, in paleodrainage lines
- Ts — Sandplain — yellow to white; scattered limonite nodules; remnant of extensive Tertiary sandplain
- Tl — Laterite — limonite nodules in cemented matrix; grades upward into Ts and downward into bedrock

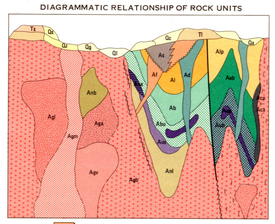
PROTEROZOIC

- d — Dolerite dyke — some metamorphosed
- q — Quartz vein

ARCHAEAN

- Aop — Olivine-orthopyroxene-clinopyroxene-hornblende contact hornfels. Pyroxene hornfels facies
- Aos — Quartz-andalusite-muscovite contact hornfels. Hornblende hornfels facies
- Ag, Agb, Agv, Agl, Agm, Agx — Granitoid, unassigned
  - Agb — Biotite adamellite — even-grained allotriomorphic; with biotite in books
  - Agv — Variably textured, medium to coarse-grained adamellite; commonly aerlate with continuous gradation in grain size of microcline phenocrysts
  - Agl — Medium to coarse-grained porphyritic adamellite to granite
  - Agm — Mixed granitic rock not separable on map scale — includes pervasive pegmatite component
  - Agx — Heterogeneous facies of granitoid pluton; complex mixing of anatectically derived granitoid, and assimilated gneissic rock; prominent schlieric banding
- Afz — MARDA COMPLEX
  - Af1 — Metamorphosed volcanic rock — includes agglomerate, and crystal and lithic tuffs of rhyolite and dacite composition
  - Af2 — Metamorphosed andesite — porphyritic and vesicular
- Aaq, Aab, Aas, Aad — DIEMALS FORMATION
  - Aaq — Quartzite
  - Aaa — Metamorphosed arenaceous rock — includes quartz-muscovite-andalusite schist
  - Aas — Metamorphosed argillaceous rock — includes fine-grained quartz-sericite-andalusite schist
  - Aac — Metamorphosed conglomerate — generally oligomictic
- Afp — Quartz-albite porphyry — sills, dykes and irregular bodies
- Ad — Metamorphosed gabbroic sills, dykes and irregular bodies; contains actinolite rimmed by hornblende, and calcic plagioclase. Transitional greenschist to low amphibolite facies
- Al, Alp, Alc, Ala, Ald — Unassigned quartz-mica schist—deep weathered; metasediment with probable acid volcanic component
  - Alp — Pelitic metasediment — fine-grained quartz-sericite-graphite-andalusite schist
  - Alc — Chlorite schist — fine-grained
  - Ala — Psammitic quartz-muscovite-andalusite schist
  - Ald — Calc-silicate rock — contains diopside, quartz, biotite, microcline, epidote and rarely garnet
- Alw, Alc — Iron-formation—laminated Fe-amphibole rock with magnetite, hematite and/or quartz; includes jaspilite
  - Alc — Banded chert
- Ab, Abt, Abh — Ab — Metabasalt — tholeiitic, narrow interlayered tuff bands. Greenschist to low amphibolite facies
  - Abt — Metamorphosed mafic tuff — coarse lithic fragments
  - Abh — Amphibolite — fine to medium-grained; contains hornblende, plagioclase, quartz and biotite; dynamically metamorphosed tholeiitic basalt. Low amphibolite facies
- Abo, Abh — Abo — Metamorphosed komatiitic basalt — spinifex and variolitic textures. Greenschist to low amphibolite facies
  - Abh — Tremolite-chlorite-talc schist — lineated and/or crenulated; dynamically metamorphosed komatiitic basalt. Low amphibolite facies
- Aup, Aus, Aua, Aur — Aup — Serpentinite — palimpsest olivine textures recognizable
  - Aus — Metapyroxenite — cumulate layers within komatiitic flows, or as separate pyroxenite intrusions; large actinolite (or hornblende) pseudomorphs after primary pyroxene; contains relict cumulate textures
  - Aua — Metamorphosed komatiitic peridotite — spinifex texture; skeletal olivine pseudomorphed by serpentine and fibrous tremolite
  - Aur — Talc-chlorite-tremolite schist — medium to coarse-grained crystalloblastic; dynamically metamorphosed ultramafic volcanics or sediments; often crenulated and/or lineated
- Am, Ani, Anb — Am — Migmatite with adamellite neosome and quartz-feldspar-biotite orthogneiss paleosome
  - Ani — Layered and lineated, adamellite, granodiorite or tonalite orthogneiss and augen gneiss
  - Anb — Banded gneiss — layered quartz-feldspar-biotite gneiss with enclaves of high-grade metamorphosed sediments and dykes; some orthogneiss component

DIAGRAMMATIC RELATIONSHIP OF ROCK UNITS

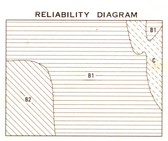


Compiled and published by the Geological Survey of Western Australia. Cartography by the Geological Mapping Section, Department of Mines. Topographic base from compilations by the Department of Lands and Surveys.

Copies of this map may be obtained from the Geological Survey of Western Australia, 66 Adelaide Tce., Perth.

Geology by I.W. Walker and D.F. Blight, 1979

RELIABILITY DIAGRAM



- B1 Numerous traverses with air photo interpretation
- B2 Air photo interpretation with a few traverses
- C Air photo interpretation

HON. P. DOWDING, M.L.C.
MINISTER FOR MINES

A.F. TRENDALL, DIRECTOR, GEOLOGICAL SURVEY

SCALE 1:250 000

5 0 5 10 15 20 25 30 Kilometres

TRANSVERSE MERCATOR PROJECTION

ZONE 2 AUSTRALIA SERIES

Grid represents 10 000 metre superimposed Australian Map Grid

INDEX TO ADJOINING SHEETS

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NINGHAN SH 50 - 7	BARLEE SH 50 - 8	MENZIES SH 51 - 5
BENCUBBIN SH 50 - 11	JACKSON SH 50 - 12	KALGOORLIE SH 51 - 9

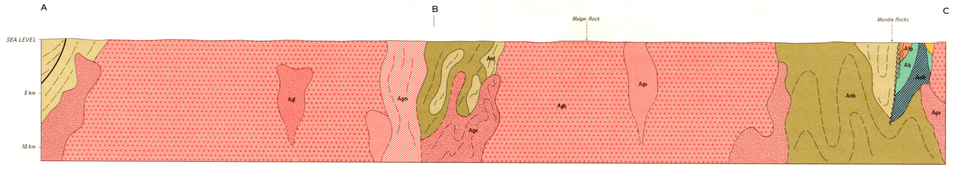
DECLINATION DIAGRAM

The map indicates magnetic declination, 1980 ± mean variation is east and variation must be added to compass bearing to give true bearing ± mean declination is west and variation must be subtracted from compass bearing to give true bearing. Annual change is 1.7' westerly.

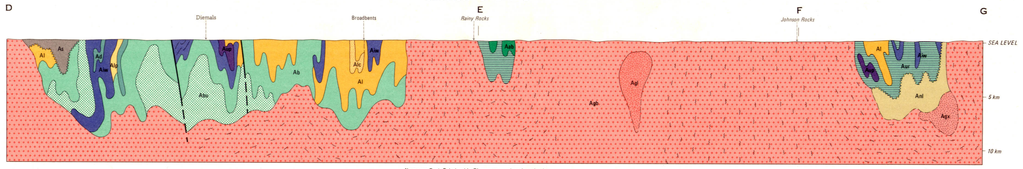
DIAGRAMMATIC SECTIONS

NATURAL SCALE

SECTION A-B-C



SECTION D-E-F-G



Note : see Rock Relationship Diagram for explanation of units

BARLEE

SHEET SH 50 -8

FIRST EDITION 1983

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