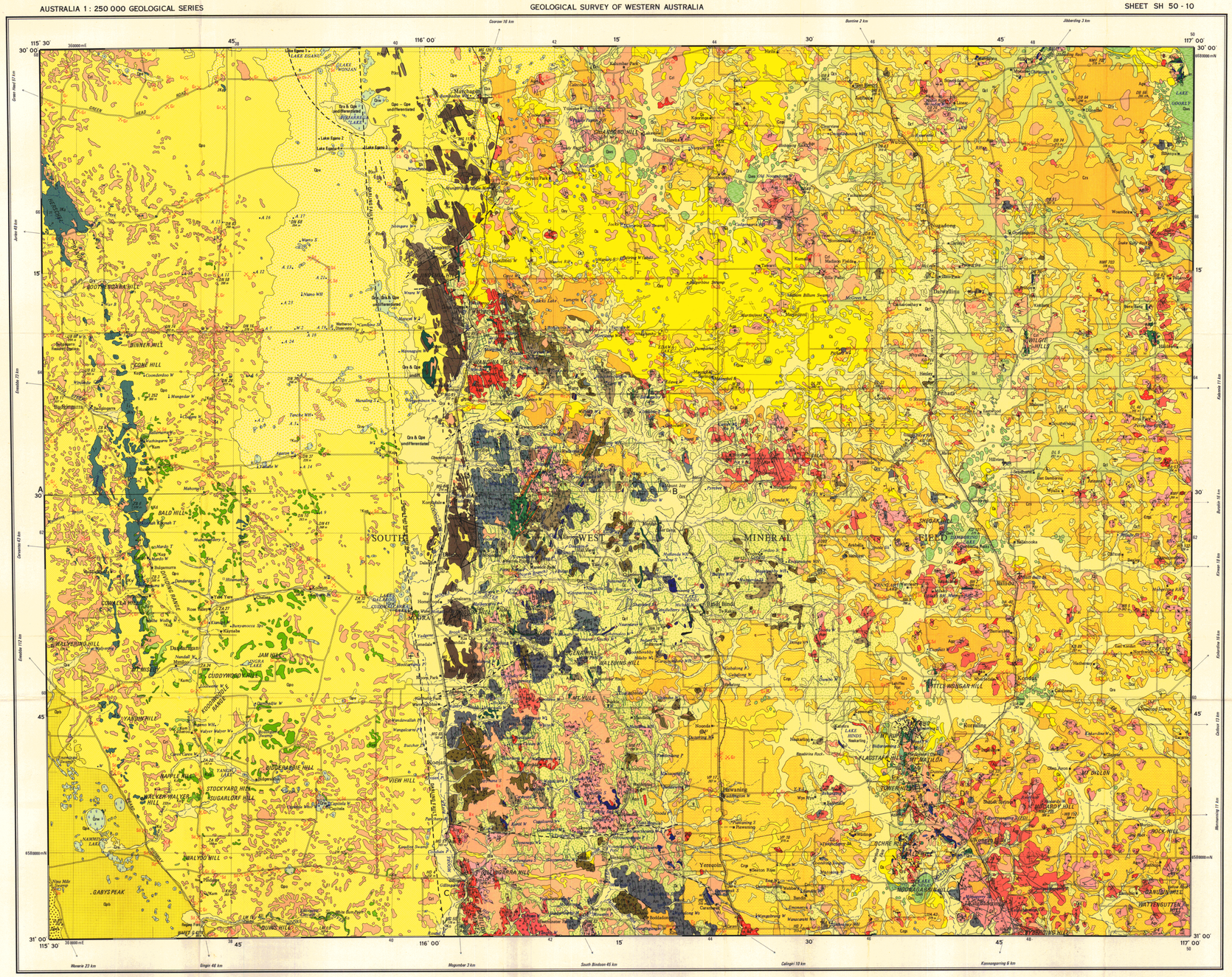
MOORA

AUSTRALIA 1 : 250 000 GEOLOGICAL SERIES

GEOLOGICAL SURVEY OF WESTERN AUSTRALIA

SHEET SH 50 - 10



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.

HON. P.V. JONES, M.L.A.
MINISTER FOR MINES

A.F. TRENDALL, DIRECTOR, GEOLOGICAL SURVEY

Geology : Perth Basin – G.H. Low and D.C. Lowry 1968
Yilgarn Block – J.D. Carter and G.L. Lipple 1972-76

Printed by Mercury-Walch, Hobart, Australia

SYMBOLS

- Geological boundary
  - Approximate
  - Inferred
- Fault
  - Accurate
  - Approximate
  - Concealed
  - Inferred
  - Normal
  - Shear zone
- Fold
  - Anticline overturned with plunge
  - Syncline with plunge
  - Plunge of minor syncline
  - Plunge of drag fold
- Bedding
  - Strike and dip measured
  - Horizontal
  - Vertical
  - Overturned
  - Facing of lava flow
  - Trend line
  - Air photo interpretation, dip<15°
- Cleavage
  - Inclined
  - Vertical
- Gneissic foliation
  - Inclined
  - Vertical
  - Horizontal
  - Dip indeterminate
- Mineral foliation in plutonic rocks
  - Inclined
  - Inclined with plunge of lineation
  - Vertical
  - Horizontal
  - Dip indeterminate
- Direction and plunge of lineation
- Air photo lineament
- Attitude of laterite surface
- Type section locality
- Fossil locality
- Gossan
- Bores for coal (unsuccessful), near Lake Egnu — Lake Egnu 2
- Highway with national route marker
- Formed road
- Track
- Railway (3'6") with siding
- Townsite gazetted, pop. 1000 – 10 000 — MOORA
  - less than 1000 — Dandaragan
- Locality — Berkshire Valley
- Landing ground
- Homestead or farm — Mardo
- Building
- Horizontal control; major, minor
- Bench mark, height in metres — HG 8 / 266 m
- Transmitting station
- Watercourse, intermittent
- Well — W
- Bore — B
- Well or bore with windpump
  - Ageton bore — A 6
  - Watheroo bore — W 2
- Dam
- Tank
- Spring — S
- Soak — Sk
- Pool — P
- Rockhole — RH
- Waterhole — WH
- Mine or mining area
- Quarry
- Prospect, (abandoned)
- Mineral and rock locations
  - Amphibole (asbestos) — As
  - Bauxite — Bx
  - Building stone — Bs
  - Clay–bentonite — Cb
  - Copper — Cu
  - Diatomite — Dt
  - Gold — Au
  - Gravel — Gr
  - Heavy mineral sands — Hm
  - Quartz crystal — Qz
  - Rock and road materials — Rc
  - Sand, building — Sd
  - Silica — Si

RELIABILITY DIAGRAM

B1 Numerous traverses with air photo interpretation

SCALE 1 : 250 000

5 0 5 10 15 20 25 30 Kilometres

TRANSVERSE MERCATOR PROJECTION
ZONE 1 AUSTRALIA SERIES

Grid represents the 10000 metre superimposed Australian Map Grid

INDEX TO ADJOINING SHEETS

DONGARA – HILL RIVER SH 50 - 5, 9	PERENJORI SH 50 - 6	NINGHAN SH 50 - 7
INDIAN OCEAN	MOORA SH 50 - 10	BENCUBBIN SH 50 - 11
	PERTH SH 50 - 14	KELLERBERRIN SH 50 - 15

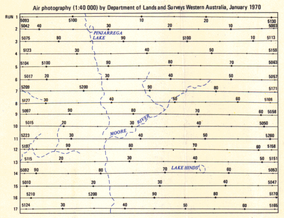
DECLINATION DIAGRAM

The lines indicate magnetic declination. With magnetic north, true bearing = magnetic bearing must be added to compass bearing to give true bearing. – means declination is west and correction must be subtracted from compass bearing to give true bearing.

Annual change is –1' westerly.

FLIGHT DIAGRAM

Air photography (1:40 000) by Department of Lands and Surveys Western Australia, January 1970



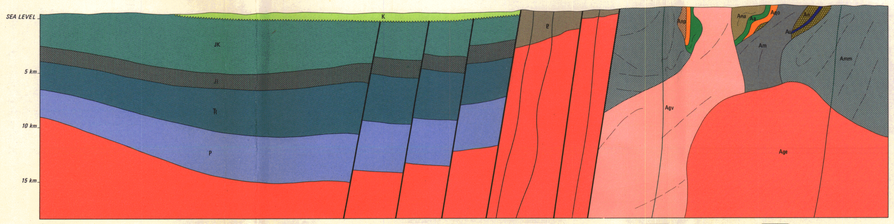
DIAGRAMMATIC SECTIONS

NATURAL SCALE

SECTION A - B

A — PERTH BASIN — B

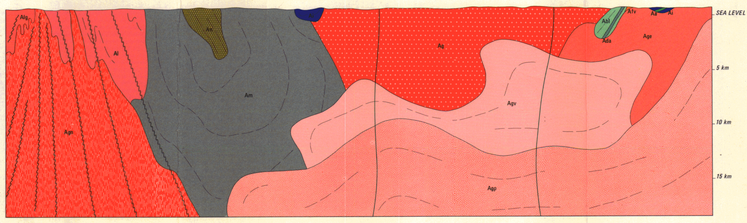
DANDARAGAN TROUGH — DARLING FAULT



SECTION C - D

C — YILGARN BLOCK — D

GILLINGARRA — WONGAN HILLS



K CRETACEOUS — JK MIDDLE JURASSIC TO LOWER CRETACEOUS — J LOWER JURASSIC — TR TRIASSIC — P PERMIAN — P PROTEROZOIC — PRECAMBRIAN undifferentiated

REFERENCE

CAINOZOIC — QUATERNARY — RECENT

- Qws — Salt lake deposits – saline silt and clay
- Qrw — Swamp and lacustrine deposits – peat, clay, sand
- Qra — Alluvium – clay, silt, sand

CAINOZOIC — QUATERNARY — PLEISTOCENE TO RECENT

- Qc — Colluvium – unassigned clay, sand and gravel
- Qcf — Colluvium – rock fragments
- Qcs — Colluvium – lithic sand
- Qcl — Colluvium – clay and loam
- Qs — Sand – mainly eolian, quartz sand
- Qsy — Sand – variously reworked quartz sands, usually associated with lakes and older drainage
- Qpo — Colluvium – quartz sand and soil
- Qpe — Eolian sand – quartz sand

Over Archaean rocks: Qc, Qcf, Qcs, Qcl, Qs, Qsy, Qpo, Qpe

Over Phanerozoic and Proterozoic rocks: Qc, Qcf, Qcs, Qcl, Qs, Qsy, Qpo, Qpe

CAINOZOIC — QUATERNARY — PLEISTOCENE TO RECENT

- Qk — Kankar

CAINOZOIC — QUATERNARY — PLEISTOCENE

- Qpcs — TAMALA LIMESTONE : leached dunes of quartz sand
- Qpb — BASSENDEAN SAND : leached dunes of quartz sand

CAINOZOIC — TERTIARY

- Crl — Silcrete
- Crgs — Residual clay and sand with bands of ferruginous pisoliths and lateritic gravel
- Crs — Residual yellow and white quartz sand
- Crg — Lateritic colluvium of Wongan Hills
- Crl — Laterite and associated sand

MESOZOIC — UPPER CRETACEOUS — Coolyena Group

- ? Campanian — Kcp — POISON HILL GREENSAND : glauconitic sand and clay
- Santonian — Kcg — GINGIN CHALK : slightly glauconitic chalk
- ? Coniacian to ? Turonian — Kcm — MOLECAP GREENSAND : glauconitic sand and clay
- Cenomanian to Albian — Ko — OSBORNE FORMATION : sandstone, siltstone, shale and claystone, commonly glauconitic

MESOZOIC — LOWER CRETACEOUS — Warnbro Group

- Kd — DANDARAGAN SANDSTONE : ferruginous, feldspathic sandstone
- Kl — LEEDERVILLE FORMATION : sandstone, siltstone, shale and conglomerate

MESOZOIC — MIDDLE JURASSIC TO LOWER CRETACEOUS

- JKs — YARRAGADEE FORMATION : sandstone and conglomerate

PRECAMBRIAN (INVESTIGATED)

- Mafic dykes – fine to coarse-grained doleritic and gabbroic dykes, variously altered
- Xenolithic mafic dykes – doleritic dykes with abundant quartzofeldspathic xenoliths
- Quartz dykes and veins

PROTEROZOIC — ?MIDDLE OR LATE PROTEROZOIC — Moora Group — Coomberdale Sub-group

- Pzw — WINEMAYA QUARTZITE : orthoquartzite (and pebbly orthoquartzite) with minor chert and siltstone
- Pzn — NOINGARRA SILTSTONE : siltstone with minor sandstone and chert
- Pzn — NOODBINE CHERT : chert and orthoquartzite, with minor siltstone, sandstone, claystone and dolomite
- Pzm — MOKADINE FORMATION : arkose with sandstone, siltstone, claystone and chert

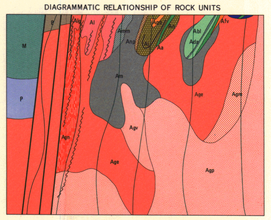
PROTEROZOIC — ?MIDDLE OR LATE PROTEROZOIC — Moora Group — Bolingup Subgroup

- Pzdw — DALARDO SILTSTONE AND CAPALCARRA SANDSTONE (undifferentiated) : siltstone and claystone, with basal arkose, sandstone and conglomerate

ARCHAEAN

- Ag — Unassigned granitic rocks
- Age — Even-grained granitic rocks; fine to coarse-grained granite, adamellite and granodiorite
- Agp — Porphyritic granitic rocks; medium to coarse-grained granitic rocks with feldspar megacrysts
- Agb — NARMAN GRANITE : porphyritic granitic rocks, variously coloured medium to coarse-grained granitic rocks with feldspar megacrysts
- Agv — Fine to medium-grained granitic rocks with scattered feldspar megacrysts
- Agm — Mixed granitic rocks; interdevelopments of even-grained and porphyritic types
- Agn — Cataclastic granitic rocks
- Am — Migmatite; nebulitic, often strongly contorted
- Amm — Migmatite; stromatic, banded
- Aic — Ultramafic dykes and sills – often foliated and variously altered to greenschist facies metamorphic assemblages; includes peridotite and pyroxenite
- An — Unassigned gneiss
- Anb — Quartz-feldspar-biotite-hornblende gneiss
- Anl — Leucocratic quartz-feldspar (biotite) gneiss
- Ana — Augen gneiss; cataclastic gneisses with feldspar augen; includes thin amphibolites near Berkshire Valley
- Ans — Feldspar-pyroxene-quartz-sphene augen gneiss
- Anp — Porphyroblastic granite gneiss; granite gneiss with feldspar megacrysts
- Anc — Quartz-hornblende-biotite-garnet-plagioclase gneiss
- Al — Unassigned schist
- Alm — Quartz-muscovite schist
- Alg — Quartz-garnet-mica schist in the Berkshire Valley Succession; garnet-mica-quartz (sillimanite-andalusite) schist in the Wongan Hills Succession
- Alq — Quartz(-mica-feldspar) schist with quartz-mica-feldspar gneiss and quartz-mica-feldspar granofels
- Alh — Quartz-plagioclase-hornblende schist with quartz-plagioclase-hornblende gneiss and quartz-plagioclase hornfels; quartz-muscovite-graphite schist; meta-conglomerate
- Alc — Cordierite-tremolite(-ummingtonite)-(quartz) rock
- Abl — Metabasalt (fine-grained hornblende-plagioclase rocks)
- Ada — Metadiorite and metagabbro (medium to coarse-grained hornblende-plagioclase rocks)
- Afv — Felsic metavolcanic rocks (fine-grained quartz plagioclase rock, quartz muscovite rock and quartz-tremolite schist)
- Aa — Amphibolite; mainly hornblende-plagioclase rocks. Near Berkshire Valley, includes bodies of quartz-biotite gneiss (Anb) and augen gneiss (Ana)
- Ai — Unassigned banded iron formation; quartz-magnetite-grunerite assemblages
- Aiw — Quartz-magnetite-hypersthene rock
- Aia — Grunerite, grunerite-quartz and grunerite-quartz-magnetite assemblages
- Aic — Banded metachert
- Aqs — Quartzite; metamorphosed orthoquartzite
- Aag — Mafic granulite; amphibole and pyroxene rich assemblages
- Overprint, indicating bedrock largely obscured by residual, colluvial and aeolian deposits

DIAGRAMMATIC RELATIONSHIP OF ROCK UNITS



M MESOZOIC — P PROTEROZOIC — P PERMIAN — PRECAMBRIAN undifferentiated

MOORA
SHEET SH 50 - 10
FIRST EDITION 1982

Crown Copyright Reserved

GEOLOGICAL SURVEY & GENERAL LIBRARY
22 SEP 1989
DEPARTMENT OF MINES WESTERN AUSTRALIA