MARBLE BAR

GEOLOGICAL SURVEY OF WESTERN AUSTRALIA

AUSTRALIA 1 : 250 000 GEOLOGICAL SERIES

SHEET SF 50 - 8

SYMBOLS

Geological boundary
- Accurate
- Approximate

Fault
- Accurate
- Approximate
- Inferred

Fold
- Plunge of minor syncline
- Plunge of minor anticline
- Plunge of drag fold

Bedding
- Inclined
- Vertical
- Horizontal
- Generalized undulating strata showing plunge
- Trend line

Facing
- General
- Cross-bedding
- Pillow lava

Air photo interpretation of bedding
- Dip < 15°
- Dip 15°-45°
- Dip > 45°

Cleavage
- Inclined
- Vertical

Foliation
- Inclined
- Vertical
- Horizontal
- Dip indeterminate

Lineation
- Direction and plunge
- Horizontal

Joint
- Inclined
- Vertical
- Columnar
- Pattern

Air photo lineament

Prevailing palaeocurrent direction

Prevailing palaeocurrent direction, sense unknown

Geochronology sample locality

Schistosity

Shear zone

Pillows observed

Grasso

Algae fossil

Fossil wood

Goldfield boundary

Goldfield district boundary

National highway with route marker

Formed road

Track

Railway standard gauge

Railway 2'6", abandoned

Telegraph line

Townsite gazetted — Marble Bar

Homestead — Millindie

Building

Airfield

Landing ground

Horizontal control: major, minor

Bench mark, height accurate — BM 127

Transmitting station

Sand dune

Watercourse, intermittent

Bore — B

Well — W

Windpump — Y

Pool

Waterhole — WH

Soak — SK

Rockhole — RH

Spring — S

Dam — D

Tank — T

Abandoned — (ABd)

Position doubtful — (PD)

Position approximate — (PA)

Mining centre

Mine (gold unless otherwise indicated)

Mine, not being worked

Open cut

Open cut, not being worked

Prospect

Prospect, alluvial workings

Alluvial workings

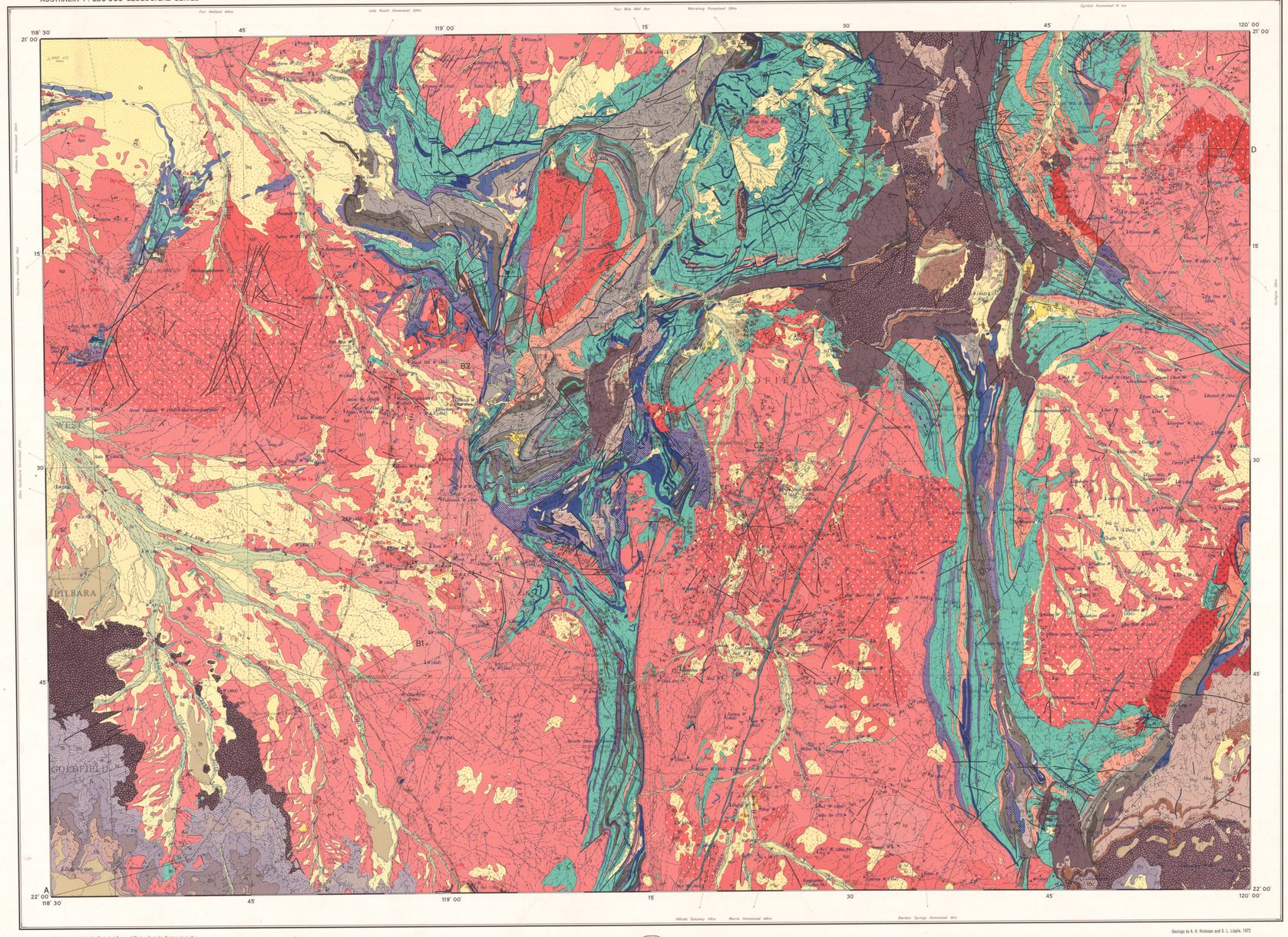
Alluvial workings, not being worked

Quarry

Battery or treatment plant

Battery, abandoned

Mineral occurrence
- Barite — Ba
- Beryllium — Be
- Bismuth — Bi
- Chromium — Cr
- Chrysotile (asbestos) — Ac
- Copper — Cu
- Fluorite — Fl
- Gadolinite — Gd
- Gems (emerald) — Gs
- Gold — Au
- Gravel — Gr
- Iron — Fe
- Lead — Pb
- Lithium — Li
- Nickel — Ni
- Niobium (columbium) — Nb
- Perophillite — Pp
- Road material, crushed rock aggregate — Rc
- Road material, other than aggregate — Rm
- Silver — Ag
- Tantalum — Ta
- Tin — Sn
- Tungsten (wolfram, scheelite) — W
- Uranium — U
- Zinc — Zn



Geology by A. H. Hickman and S. L. Lipple, 1972

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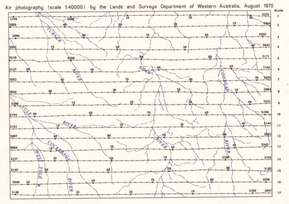
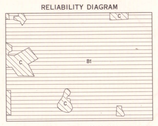
FLIGHT DIAGRAM

Air photography (scale 1:40000) by the Lands and Surveys Department of Western Australia, August 1970



RELIABILITY DIAGRAM



B1 Numerous traverses with air photo interpretation

C Air photo interpretation

SCALE 1 : 250 000

5 0 5 10 15 20 25 30 Kilometres

TRANSVERSE MERCATOR PROJECTION

ZONE 2 AUSTRALIA SERIES

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DECLINATION DIAGRAM

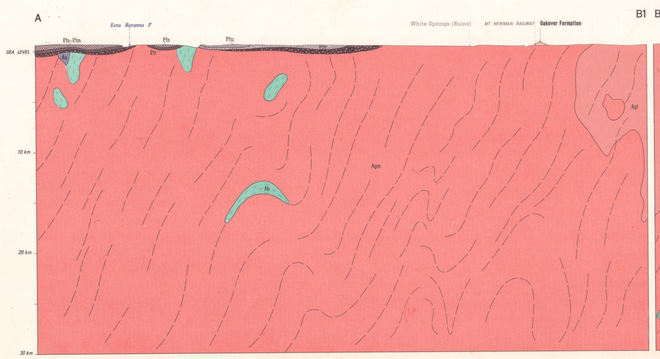
The lines indicate magnetic declination. With a nearly declination is east and correction must be added to compass bearing to give true bearing. Conversely correction must be subtracted from compass bearing to give true bearing.

Annual change is 1° westerly

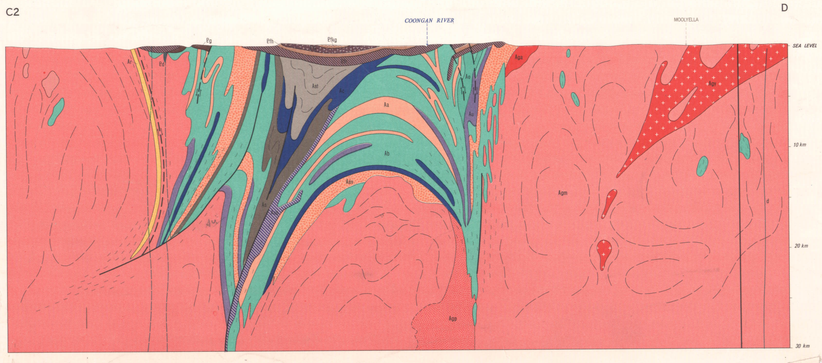
DIAGRAMMATIC SECTIONS

NATURAL SCALE

SECTION A-C1



SECTION C2-D



REFERENCE

CAINOZOIC — QUATERNARY

Qs Alluvium—sand, silt and gravel

Qmg Elurium—sand and rock fragments over granitic rocks. Partly transported

Qs Transported sand, some self dunes. Nature of underlying rock uncertain

Qb Heave soil (gilgai)—clay and basaltic boulders

Qc Colluvium—lithic sand and gravel of outwash fans and scree. Partly Recent

Qg Poorly consolidated gravel deposits of the **Tulo Surface**

Qk Kankar. Locally underlies Qg and includes lime-cemented gravel

CAINOZOIC — TERTIARY

Tp Pisolitic limonite and goethite deposits, many containing fossil wood

Td Ferruginous duricrust of the **Rumarizzy Surface.** Some consolidated breccia. In places grades downslope into Tp

Tw Yuppo white opaline silica above gravel and siltstone. Correlative with the **Oakover Formation**

LOWER PROTEROZOIC — Fortescue Group

Pbo **MARDINA BASALT:** vesicular and amygdaloidal basalt

Pbs **KURUNA SILTSTONE:** siltstone, pisolitic tuff and carbonate

Pbn **NYMERINA BASALT:** massive and coarse textured with flows of vesicular basalt

Pbt **TUMBUNA FORMATION:**

Pbtc **Meentheena Carbonate Member:** banded dark grey siliceous limestone, some tuff. Stromatolites

Pbtt **Mingah Tuff Member:** pisolitic tuff with mudstone, shale and local basalt

Pbk **KYLENA BASALT:** vesicular and amygdaloidal basalt, some pillow and columnar jointed flows

Pbkg Local sandstone and grit

Pbkb Local basaltic agglomerate

Pbh **HARDEY SANDSTONE:** sandstone, grit and conglomerate, commonly arkosic and containing current structures. Minor shale, tuff, mudstone and ovidal sediments. Local basalt and agglomerate

Pbw Tuff, siltstone and mudstone. Pisolitic and ovidal beds

Pbwg Sandstone, grit and conglomerate (well sorted)

Pbwr Grey shale. Correlated with **Glen Herring Shale**

Pbwa Wacke (lithic and clayey) sandstone (poorly sorted) with some tuff and shale

Pbwb Basalt with lacal agglomerate and tuff

Pbr **MOUNT RIOE BASALT:** amygdaloidal, vesicular, columnar jointed, pillow and massive basalt; some distinctive plagioclase-phyric flows

Pbrb Agglomerate and lapilli tuff

Pb Basalt

Pbw Basaltic agglomerate

Pt Tuff, tuffaceous shale, mudstone and siltstone

Pg Sandstone and grit

Pc Conglomerate, usually polmictic

Not assigned to a formation

Pd Dolerite dyke

Pp Quartz-plagioclase porphyry? Partly extrusive. Includes **Spinaway Porphyry**

Pux Coarse-grained peroxenite dyke

d Dolerite dyke

Mesozoic rocks

Ad Dolerite dyke

Am Microgranite dyke

Ar Rhyolite or dacite dyke

Aps Felsic porphyry

Af Felsite

Apf Dark feldspar-quartz-biotite porphyry. **Boobina Porphyry**

p Pegmatite

q Quartz vein

c T-chert (tectonically controlled)

ARCHAEAN

Sedimentary rocks (not subdivided)

Aq Quartzite

Asc Conglomerate, generally polmictic containing abundant vein quartz, chert and arenite pebbles

Ast Grit and sandstone with some conglomerate beds

Asl Siltstone

Asf Ferruginous sandstone, siltstone, shale and chert closely interbedded

Sedimentary rocks

Ac Chert (not subdivided)

Acq Quartzite or meta-chert

Acw Black/white and grey/white banded chert, some dark chert

Acj Red/white banded chert

Acf Ferruginous chert

Aci Banded iron-formation, jaspilite

Chert

Aa Rhyolite to dacite lava; massive, porphyritic, vesicular, columnar jointed and pillow varieties. Includes some peroclastic units and felsic schist (note schistosity symbol)

Aat Tuff

Aax Agglomerate

Felsic rocks

Ab Basalt and andesite; often pillowform, and vesicular but generally massive. Some columnar jointing. Includes mafic schist

Abt Tuff

Abx Agglomerate

Abm Coarsely dendritic tremolite-chlorite rock, locally vesicular. Includes magnesia-rich basalt

Ag Gabbro. Some layered varieties

Ad Diorite

Mafic rocks

Au Ultramafic rock (not subdivided)

Aua Amphibole rock (tremolite/actinolite ± chlorite). Generally schistose

Auc Serpentinite

Aup Peridotite and dunite. Light green and medium to coarse-grained

Aul Pyroxene peridotite. Black, coarse-grained olivine-phyric. Includes philogopite lherzolite

Aut Talc schist, mostly with chlorite, actinolite and carbonate

Aux Peroxenite

Ultramafic rocks

Regional greenschist facies metamorphism

2700–2600 m.y.

Agc Medium, even-grained albite adamellite. Poorly foliated to non-foliated. Associated tin deposits. Restricted to **Moolyella Adamellite**

Agc Medium to coarse, even-grained (locally porphyritic) biotite granite and biotite adamellite. Poorly foliated. Associated tin deposits

≥3 500 m.y.

Ags Coarse-grained granophyre and alkali-feldspar granite. No clear foliation. Restricted to **Strelley Granite** (outer zone)

Agb Fine to medium, even-grained biotite adamellite. No clear foliation. Restricted to **Bardoopiquithanna Adamellite**

Age Medium to coarse-grained alkali-feldspar granite. No clear foliation. Locally porphyritic

Agp Medium to coarse-grained, porphyritic biotite adamellite and porphyritic granodiorite. Generally well foliated. Age variable

Agl Fine to medium, even-grained biotite adamellite representing remobilized older granitic rocks. Well foliated. Typical example is the **Muligandimah Adamellite**

Agd Even-grained granitic rock forming intrusive bodies within areas of greenstone. Extremely variable composition resulting from assimilation of greenstone material. Poorly foliated with well preserved igneous textures

Agl Medium, even-grained granodiorite. Poorly foliated with some mafic schlieren. Restricted to **Mount Grafwick Granodiorite**

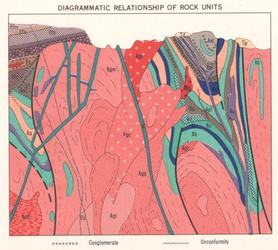
Agt Fine to medium, even-grained leuco-, biotite- and biotite-hornblende granodiorite. Well foliated to schistose

Agm Fine to coarse, even-grained biotite adamellite, biotite granodiorite and, less commonly, biotite tonalite. Well foliated, often gneissic and migmatitic. Complex of several intrusive episodes. Includes **Tambourah Granodiorite**

Agmc Greenstone xenoliths and granitic rocks in approximately equal proportions (as in root zones)

Granitic rocks

DIAGRAMMATIC RELATIONSHIP OF ROCK UNITS



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SHEET SF 50 - 8

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