PILBARA BLOCK

STRATIGRAPHIC INTERPRETATION REFERENCE

PHANEROZOIC

- JK — Mesozoic rocks, includes **CALLAWA FORMATION**
- P — Permian rocks, includes **PATERSON FORMATION**

PROTEROZOIC

Intrusive rocks:
- Ey — Granophyre
- Edc — **COOYA POOYA DOLERITE**
- Ed — Dolerite
- Eb — Gabbro
- Ebx — SPINAWAY PORPHYRY
- Eba — BAMBOO CREEK PORPHYRY
- Eby — Hornblende adamellite

- EG — **MANGANESE GROUP**

unconformity

- EY — **YENEENA GROUP**
- Ee — **EEL CREEK FORMATION**
- Ee(i) — Iron-formation (clastic)
- Ew — **WALTHA WOORA FORMATION:** shale and carbonate

unconformity

- Eca — **PINJIAN CHERT BRECCIA**

unconformity

Hamersley Group:
- EHw — **WEELI WOLLI FORMATION:** jaspilite and shale
- EHb — **BROCKMAN IRON FORMATION**
- EHn — **MT McRAE SHALE & MT SYLVIA FORMATION**
- EHc — **CARAWINE DOLOMITE – WITTENOOM DOLOMITE**
- EHm — **MARRA MAMBA IRON FORMATION**

Fortescue Group:
- EFj — **JEERINAH FORMATION:** shales, minor sandstone and chert
- EFm — **MADDINA BASALT**
- EFk — **KURUNA SILTSTONE**
- EFp — **PEARANA BASALT**
- EFn — **NYMERINA BASALT**
- EFt — **TUMBIANA FORMATION:** carbonate and tuff (stromatolites)
- EFy — **KYLENA BASALT**
- EFs(s) — Sandstone and grit
- EFh — **HARDEY SANDSTONE**
- EFr — **MT ROE BASALT**
- EFk — **KOONGALING VOLCANICS:** felsic

unconformity

Intrusive rocks:
- Ar — Felsic porphyry
- Ad — Dolerite
- Ab — Gabbro
- Au — Ultramafic rock

- Y — **NEGRI VOLCANICS**

unconformity

- AL — **LOUDEN VOLCANICS**

fault/sat contact at Whim Creek

Whim Creek Group:
- ACr — **RUSHALL SLATE**
- ACm — **MONS CUPRI VOLCANICS**
- ACw — **WARAMBIE BASALT**

unconformity

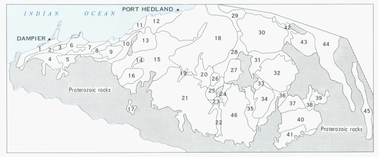
Gorge Creek Group:
- AGm — **MOSQUITO CREEK FORMATION – MALLINA FORMATION**
- AGl — **LALLA ROOKH SANDSTONE**
- AGh — **HONEYEATER BASALT**
- AGs — **SOANESVILLE SUBGROUP**
- AGc — **CLEAVERVILLE FORMATION:** BIF, ferruginous chert
- AGa — **CHARTERIS BASALT**
- AGc — **CORBOY FORMATION:** sediments

ARCHAEAN

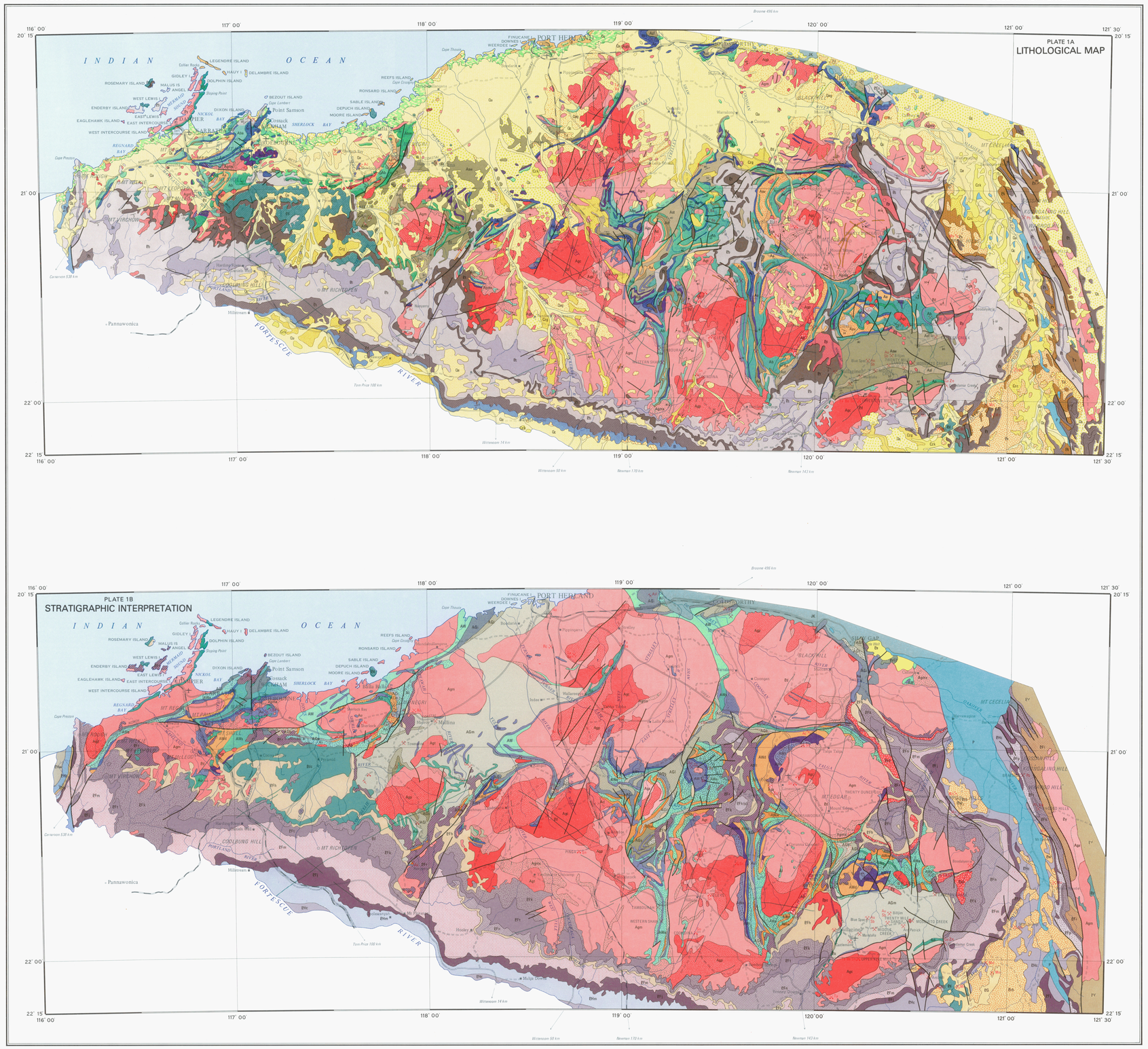
Warrawoona Group:
- AW — **WARRAWOONA GROUP:** (unsubdivided)
- AWw — **WYMAN FORMATION:** chiefly porphyritic rhyolite
- local unconformity
- AWs — **SALGASH SUBGROUP**
- AWe — **EURO BASALT**
- AWp — **PANORAMA FORMATION:** felsic volcanics and sediments
- AWa — **APEX BASALT**
- AWt — **TOWERS FORMATION:** chert, minor basalt (inc **MARBLE BAR CHERT MEMBER**)
- AWd — **DUFFER FORMATION:** felsic lava and pyroclastics
- AWT — **TALGA TALGA SUBGROUP**
- AWm — **MOUNT ADA BASALT**
- AWu — **McPHEE FORMATION:** ultramafics and sediments
- AWn — **NORTH STAR BASALT**

GRANITIC ROCKS:
- Agc — Post-tectonic granite and adamellite
- Ags — Alkali-feldspar granite
- Agp — Porphyritic adamellite and granodiorite
- Agt — Granodiorite and tonalite
- Agm — Well foliated, gneissic, migmatitic adamellite and granodiorite
- Agmx — Numerous greenstone xenoliths in 'Agm'

MAJOR STRUCTURAL UNITS OF THE PILBARA BLOCK



1 Dampier Batholith
2 Regal Belt
3 Karratha Granite
4 Chinatta Batholith
5 Shoal Belt
6 Roebourne Syncline
7 Harding Granite
8 Sherlock Belt
9 Caines Well Granite
10 Whim Creek Belt
11 Balla Balla Granite
12 Boodarie Belt
13 Pyrite Granite
14 Peawah Granodiorite
15 Mallina Synclinorium
16 Satirist Granite
17 Nunyerry Inlier
18 Carlindi Batholith
19 Wodgina Belt
20 Pilgangoora Syncline
21 Yule Batholith
22 Western Shaw Belt
23 Tambina Complex
24 North Shaw Belt
25 Soanesville Belt
26 Strelley Granite
27 North Pole Dome
28 Lalla Rookh Syncline
29 Goldsworthy Syncline
30 Moiran Batholith
31 Marble Bar Belt
32 Mount Edgar Batholith
33 Warrawoona Syncline
34 Corunna Downs Batholith
35 Coongan Syncline
36 Kelly Belt
37 McPhee Dome
38 Mount Elsie Belt
39 Yilgalong Granite
40 Mosquito Creek Synclinorium
41 Kurrana Batholith
42 Shay Gap Syncline
43 Warrawagine Batholith
44 Canning Basin
45 Gregory Granitic Complex
46 Shaw Batholith



LITHOLOGICAL MAP REFERENCE

CAINOZOIC

QUATERNARY:
- Qa — Alluvium
- Qc — Colluvium
- Qe — Eolian sand
- Qe — Eluvium: gilgai over basalt, pebbly sand over Permian rocks
- Qt — Supratidal and intertidal clay and silt
- Qd — Sandy and shelly limestone
- Qeg — Eluvium over granitic rocks
- Qcc — Colluvium and alluvium
- Crk — Calcrete
- Crg — Gravel

TERTIARY:
- Tr — Ferruginous duricrust
- Tp — Pisolitic limonite
- Tr — Siliceous cap rock

MESOZOIC
- JK — Chiefly sandstone

PERMIAN
- P — Fluvioglacial deposits

PROTEROZOIC

INTRUSIVE ROCKS:
- Eb — Gabbro
- Ed — Dolerite
- Er — Felsic rock of minor intrusions
- Eby — Hornblende adamellite
- Ey — Granophyre
- Ep — Decite porphyry

- Ec — Limestone and pisolitic tuff. Includes stromatolites
- Eb — Basalt and andesite
- Es — Sandstone and conglomerate
- Ec — Shale and chert. Local carbonate rocks with stromatolites
- Ed — Dolomite
- Ef — Felsic volcanic rocks
- Ei — Iron-formation (clastic)
- Ech — Chert breccia
- Ees — Sediments of uncertain age

ARCHAEAN

INTRUSIVE ROCKS:
- Ab — Gabbro
- Ap — Felsic porphyry
- Ad — Dolerite
- Ar — Felsic rock of minor intrusions

- As — Sedimentary rock (not subdivided)
- Asf — Ferruginous clastic sedimentary rock
- Asl — Siltstone and shale
- Ast — Sandstone and conglomerate
- Asw — Psammitic to pelitic schist (includes turbidites)
- Ac — Chert : grey – white or red – white banded
- Acf — Banded iron-formation, jaspilite
- Av — Felsic volcanic rocks
- Avp — Felsic agglomerate and tuff
- Ab — Basalt
- Aba — Amphibolite (after basalt and dolerite)
- Abm — Tremolite – chlorite rock. Includes magnesia-rich basalt
- Au — Ultramafic rocks (not subdivided)
- Aup — Peridotite
- Auw — Pyroxenite

GRANITIC ROCKS:
- Agc — Granite and adamellite. Poorly foliated and generally equigranular
- Ags — Alkali-feldspar granite
- Agp — Porphyritic granitic rock
- Agt — Tonalite and granodiorite
- Agm — Biotite adamellite, granodiorite and tonalite. Typically foliated, gneissic or migmatitic
- Agmx — Numerous greenstone xenoliths in 'Agm'

SYMBOLS

- Geological boundary
- Intrusive relationship
- Fault
- Bedding
  - Inclined
  - Vertical
- Foliation
  - Inclined
  - Vertical
- Highway
- Formed road
- Track
- Railway, standard gauge
- Townsite
  - Population 10 000 and over — PORT HEDLAND
  - 1 000 – 10 000 — DAMPIER
  - Under 1 000 — Point Samson
- Homestead — Woodstock
- Airfield
- Horizontal control
- Watercourse, intermittent

- Mining centre
- Mine
- Prospect
- Open cut
- Alluvial workings
- Mineral occurrence
  - Antimony — Sb
  - Barite — Ba
  - Beryllium — Be
  - Chrysotile (asbestos) — Ac
  - Copper — Cu
  - Crocidolite (tiger eye) — Ad
  - Crushed rock aggregate — Rc
  - Fluorite — Fl
  - Gemstones — Gs
  - Gold — Au
  - Iron — Fe
  - Lead — Pb
  - Manganese — Mn
  - Molybdenum — Mo
  - Nickel — Ni
  - Salt (solar evaporation) — Na
  - Silver — Ag
  - Tantalum — Ta
  - Tin — Sn
  - Titanium — Ti
  - Tungsten — W
  - Vanadium — V
  - Zinc — Zn

WESTERN SHAW
- Blue Spec

LOCALITY DIAGRAM

INDEX TO 1:250 000 SHEETS

DAMPIER SF 50 - 2	ROEBOURNE SF 50 - 3	PORT HEDLAND SF 50 - 4
YARRIYLOOLA SF 50 - 6	PYRAMID SF 50 - 7	MARBLE BAR SF 50 - 8
	MT BRUCE SF 50 - 11	ROY HILL SF 50 - 12

YARRIE SF 51 - 1	NULLAGINE SF 51 - 5
BALFOUR DOWNS SF 51 - 9	

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

A.F. TRENDALL, DIRECTOR, GEOLOGICAL SURVEY

SCALE 1 : 1 000 000

20 0 20 40 60 80 100 120 KILOMETRES

ALBERS EQUAL AREA PROJECTION WITH STANDARD PARALLELS 17°30' AND 31°30'S

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.
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Geology by A.H. Hickman

LITHOLOGICAL MAP AND STRATIGRAPHIC INTERPRETATION OF THE PILBARA BLOCK

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