BONAPARTE AND ORD BASINS: NORTHERN SHEET

REFERENCE

Qa Alluvium — sand, silt and clay
Qc Tidal flats and mangrove swamps — silty clay, black organic clay, minor gypsum and salt
Qe Beach ridges — yellow sand, medium grained

Czs Sand plain
Czb Black soil
Czl Lateritic soil
Czk Caliche

Tp Laterite

BONAPARTE BASIN

Pk **KEEP INLET FORMATION :** medium to fine sandstone and pebbly sandstone, laminated, massive and cross-bedded; minor massive pebble-boulder conglomerate; minor shale with dropstones; fan-delta and glaciomarine

Cw **Weaber Group :** undifferentiated

Cup **POINT SPRING SANDSTONE :** grey, medium to fine sandstone and pebbly sandstone, parallel-bedded, laminated, medium cross-bedded; bioturbated and fossiliferous, minor shale; deltaic

Cuk **Border Creek Member :** medium to fine pebbly sandstone and sandstone, minor pebble-cobble conglomerate; medium to thick planar and trough cross-bedded; minor laminated shale and siltstone; fluvio-deltaic

Cut **TANMURRA FORMATION :** sandstone, limestone, dolomite; ? deltaic (subsurface only — section A–A')

Clr **BURVILL FORMATION :** very fine to fine sandstone, thin parallel and low angle cross-bedded; minor medium to coarse sandy limestone, medium to thick beds; fossiliferous, bioturbated; offshore, prodelta

Clu **UTTING CALCARENITE :** grey and yellow-brown sandy limestone (packstone, grainstone), and shale; offshore

Clw **WAGGON CREEK FORMATION :** fine to coarse sandstone and minor conglomerate, massive, graded, thin to medium parallel-bedded; shale and dolomite boulders locally common; minor laminated shales; fossiliferous, submarine fan

Clm **MILLIGANS FORMATION :** black and dark-grey shale, partly calcareous; minor limestone; rare fine to medium sandstone, thin to thick beds; diverse fauna; offshore

Langfield Group

Clz **ZIMMERMAN SANDSTONE :** medium to fine quartz arenite and quartz wacke, parallel and medium to thin cross-bedded; minor laminated siltstone and shale; bioturbated and fossiliferous; lower shoreface, offshore

Cls **SEPTIMUS LIMESTONE :** sandy limestone (packstone, grainstone), parallel, massive and thick planar cross-bedded; minor medium to coarse calcareous sandstone, thin to medium trough cross-bedded; diverse fauna; shoreface, foreshore, shelf

Cle **ENGA SANDSTONE :** very fine to medium quartz arenite, minor calcareous sandstone, parallel-bedded, massive, common *Skolithos*, minor cross-bedding; minor massive and laminated siltstone and shale; barrier

Clb **BURT RANGE FORMATION :** Lower : limestone, minor sandy limestone, rare calcareous sandstone. Upper : very fine to fine calcareous sandstone and sandstone, parallel-bedded and massive, massive limestone; diverse fauna; locally dolomitized; shelf, shoreface

D-Co **BONAPARTE FORMATION :** dark shale, siltstone and sandstone; offshore (subsurface only — section A–A')

Dun **Ningbing Group :** undifferentiated reef complex

Dug **GARIMALA LIMESTONE :** limestone breccia; marginal slope

Dub **BUTTONS FORMATION :** well-bedded limestone with sandstone; back-reef

Dul **WUNGABAL LIMESTONE :** red "scheck" breccia; marginal slope

Dui **KAMILILI FORMATION :** flaggy limestone and shale; marginal slope to basin

Dud **DJILIRRI LIMESTONE :** well-bedded limestone; back-reef (b), massive microbial limestone; reef-margin (r), limestone breccia; marginal slope (f)

Duc **Cockatoo Group :** undifferentiated, generally along faults; silicified, strongly jointed sandstones

Duh **HARGREAVES FORMATION :** very fine to medium quartz arenite, glauconitic, massive, laminated, parallel and medium cross-bedded; minor dolomite and dolomitic sandstones, massive to laminated; minor siltstones; fossiliferous, bioturbated; shallow marine, barrier complex

Duw **Wentwood Member :** massive stromatoporoid — *Renalcis* — stromatolite limestone, bedded fossiliferous limestone and sandstone; reef margin to back reef

Dus **Siggins Spring Member :** fine to medium quartz arenite, thin to medium cross-bedded, minor medium parallel-bedded; minor siltstone; fluvial

Dum **MAUDODBAR SANDSTONE :** fine to medium quartz arenite, well sorted, medium to thick planar cross-beds, minor parallel and medium trough cross-bedding; barite rosettes; eolian

Due **CECIL SANDSTONE :** fine to medium quartz arenite; pebbly sandstone and minor pebble-cobble conglomerate, medium to thin parallel and cross-bedded; minor siltstone; wood fragments; fluvial

Duf **GALLOPING CREEK FORMATION :** fine to very coarse arkose and pebbly arkose, cross-bedded and laminated; red pebble-boulder conglomerate, massive and cross-bedded; alluvial fan, fluvial

Dua **ABNEY SANDSTONE :** red, quartz arenite and arkose, medium to thin parallel and cross-bedded, laminated, scattered granules, locally pebbly; locally bioturbated, sparsely fossiliferous; tidal, fluvial

Duu **KUNUNURRA FORMATION :** very fine to fine quartz arenite, thin to medium parallel-bedded, laminated; minor dolomitic sandstone and shale, massive to laminated; fossiliferous, *Cruziana* ; shallow marine

Duk **KELLYS KNOB SANDSTONE :** fine to medium quartz arenite, well sorted, medium to thick planar cross-bedded, minor parallel and medium trough cross-bedded; local bioturbation; eolian, fluvial, tidal

Dur **RAGGED RANGE CONGLOMERATE :** red, massive pebble-boulder conglomerate; medium to thick cross-bedded pebbly sandstone; minor fine to very fine sandstone, laminated to thin parallel-bedded; alluvial fan

Dup **STEEPLE PEAK SANDSTONE :** red, quartz arenite and arkose, medium to thin parallel and cross-bedded, laminated, scattered granules, locally pebbly; rare thick pebble-boulder conglomerate; locally bioturbated, sparsely fossiliferous; tidal, fluvial

Duy **CYRIL SANDSTONE :** fine to medium quartz arenite, pebbly sandstone, and minor pebble-boulder conglomerate, medium to thin parallel and cross-bedded; minor siltstone, rare local bioturbation; fluvial

ORD BASIN

Mahony Group : (southern sheet only)

Dd **GLASS HILL SANDSTONE :** medium to fine quartz arenite and minor pebbly sandstone, medium cross and parallel-bedded; minor siltstone; rare conglomerate; fluvial

Db **BOLL CONGLOMERATE :** red, pebble-boulder conglomerate, massive; pebbly sandstone and quartz arenite, medium to thick cross-bedded, minor parallel-bedded; minor siltstone; alluvial fan

Dc **PURRALILI SANDSTONE :** medium quartz arenite, well sorted, medium to thick planar cross-bedded, low angle cross-bedded, minor massive and parallel-bedded; eolian, fluvial

BONAPARTE BASIN

Cc **Carlton Group :** undifferentiated (solid geology and section only)

Olp **PANDER GREENSAND :** fossiliferous, glauconitic quartz sandstone; shallow marine

Cuc **CLARKE SANDSTONE :** fossiliferous, red, glauconitic, feldspathic quartz sandstone, thin to medium cross-bedded; shallow marine

Cup **PRETLOVE SANDSTONE :** flaggy, cross-bedded and rippled, bioturbated quartz sandstone, siltstone; intertidal to shallow marine

Cms **SKEWTHORPE FORMATION :** flaggy, thinly cross-bedded and rippled sandstone, bioturbated siltstone, cross-bedded dolomitic sandstone and oolitic dolomite; stromatolitic; intertidal to shallow marine

Cmh **HART SPRING SANDSTONE :** red, very fine to fine, micaceous quartz sandstone, thin to thick cross-bedded and thin parallel-bedded, rippled, unfossiliferous; tidal sand flats. Probable correlative of EAGLE HAWK SANDSTONE (Ord Basin)

Cmt **TARRARA FORMATION :** siltstone with minor sandstone and fossiliferous oncolitic dolomite; shallow marine

ORD BASIN

Goose Hole Group

Elder Subgroup

Cur **OVERLAND SANDSTONE :** white, clayey, lithic arkose, medium to thick cross-bedded, minor laminated; fluvial (southern sheet only)

Cmb **EAGLE HAWK SANDSTONE :** red, fine, micaceous feldspathic sandstone, thin to medium cross-bedded, parallel-bedded, minor siltstone; tidal sand flats and possible fluvial. Probable correlative of HART SPRING SANDSTONE (Bonaparte Basin)

En **Negri Subgroup :** undifferentiated (southern sheet only)

Cmp **PANTON FORMATION :** siltstone, lesser flaggy arkosic sandstone and mudstone, minor limestone; fossiliferous; intertidal and shallow marine

Cmc **Corby Limestone Member :** grey, fine-grained micritic limestone with chert nodules; unfossiliferous; probably intertidal

Cmd **Shady Camp Limestone Member :** fossiliferous oncolitic limestone; shallow marine

Cml **LINNEKAR LIMESTONE :** Lower : laminated, fine-grained micritic limestone with chert nodules and stromatolites
Middle : grey-olive trilobitic shales. Upper : fossiliferous flaggy limestone and shale; probably intertidal to shallow marine

Cmo **NELSON SHALE :** purple siltstone and mudstone, minor flaggy arkosic sandstone; intertidal

Cmy **HEADLEYS LIMESTONE :** grey, laminated to massive, fine-grained micritic limestone with chert nodules and stromatolites; probably intertidal

Cla **ANTRIM PLATEAU VOLCANICS :** massive, vesicular, amygdaloidal and porphyritic basalts with minor agglomerate, sandstone, tuff, siltstone and chert

Clr **Blackfella Rockhole Member :** fine-grained basalt and agglomerate

Clb **Bingy Bingy Member :** glomeroporphyritic basalt

Cla1 Unnamed, medium-grained, friable, cross-bedded sandstone; probably eolian

P Undifferentiated

For Symbols Panel see Plate 2

SOLID GEOLOGY

SCALE 1: 500 000

0 10 20 30 Kilometres

RELIABILITY DIAGRAM

A Detailed mapping
B1 Numerous traverses with air photo interpretation
B2 Air photo interpretation with a few traverses
C Air photo interpretation

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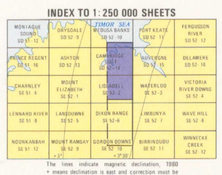
SCALE 1: 250 000

5000 0 5 10 15 20 25 30
Metres Kilometres

TRANSVERSE MERCATOR PROJECTION
ZONE 52 AUSTRALIAN MAP GRID

See Plate 2 for sections A–A', B–B', C–C'

INDEX TO 1:250 000 SHEETS



The lines indicate magnetic declination, 1980
+ means declination is east and correction 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 in — 1' westerly

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GEOLOGICAL MAP OF BONAPARTE AND ORD BASINS: NORTHERN SHEET