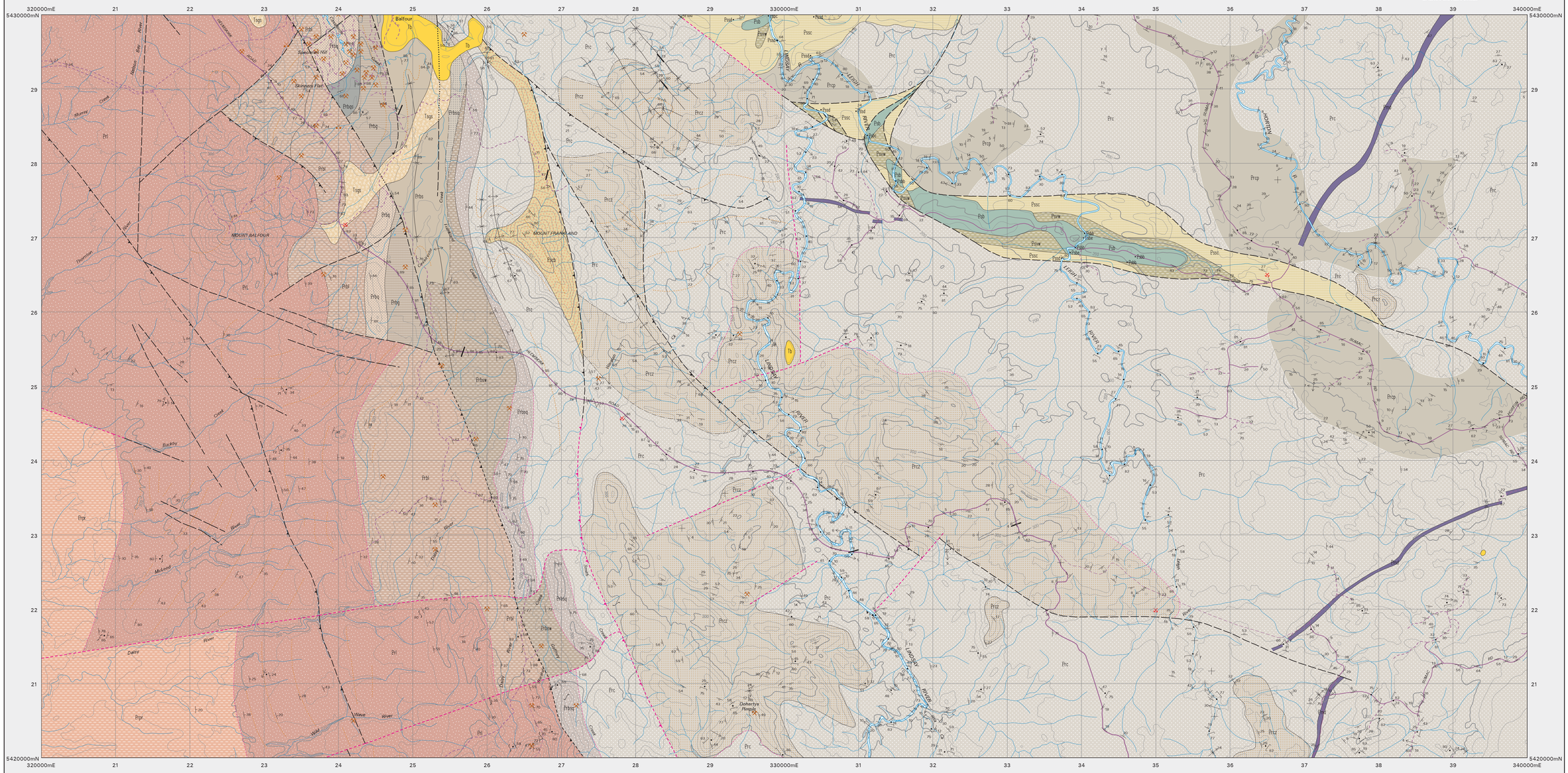
TASMANIAN GEOLOGICAL SURVEY
DIGITAL GEOLOGICAL ATLAS 1:25 000 SERIES
BALFOUR, SHEET 3242

BALFOUR

Scale: 1:25 000

0 500 1000 1500 2000 2500m

MINERAL RESOURCES TASMANIA
Tasmania
DEPARTMENT of INFRASTRUCTURE ENERGY and RESOURCES



CAINOZOIC

QUATERNARY — HOLOCENE

- **Qha** — Alluvium and swamp deposits (Qha).

Erosional surface.

TERTIARY

- **Tb** — Basalt (Tb); transitional olivine basalt (Tbr) and basanite (Tbb) indicated.
- **Tsgs** — Interbedded siliceous gravel, quartz sand and clay (Tsgs).

Angular unconformity.

PRECAMBRIAN

NEOPROTEROZOIC

- **Psbv, Psb** — Interbedded laminated mudstone, siltstone, and lithic wacke with mafic volcanic detritus (Psbw), (Keppel Creek Formation).
  Massive basalt (Psb). Varieties with 1.0 – 1.1% TiO2 (Psbb), 1.5 – 1.8% TiO2 (Psbc) and evolved varieties with 1.6 – 2.3% TiO2 and < 4% MgO (Psbe) indicated. (Psb, Psbb, Psbc, Psbe – Spinks Creek Volcanics).
- **Psgr** — Dolomitic breccia, with clasts of dolomite, stromatolitic dolomite and oolitic chert in a dolomitic matrix (Pssr), (Julius River Member).
- **Pss, Pssc** — Interbedded, massive or banded, black, white and grey chert (oolitic in part) and laminated siltstone, with minor dolomite (Pssc); interbedded dolomite, chert, siltstone and mudstone (Pss); some dolomite outcrops indicated (Pssd).
- **Psscb** — Chert breccia and conglomerate (with clasts dominantly of black, grey and white chert, and subordinate orthoquartzite, interbedded with pale grey–weathering distinctly laminated medium–grained orthoquartzite (Psscb). (Correlate of Forest Conglomerate and Quartzite).

Erosional and transgressive surface; low angle unconformity at some localities.

?NEOPROTEROZOIC

- **Prcz, Prcp, Prc** — Interbedded, black, grey or green, locally pyritic, laminated siltstone and mudstone, with rare sandstone and mud pellet conglomerate (Prc). Some tracts of well exposed fissile black to dark grey pyritic siltstone indicated (Prcp). Siltstone with finely developed alternation of siliceous (pale grey) and ?carbonaceous (dark grey) laminae, commonly with pervasive wavy lamination to small–scale trough cross–lamination, and with beds up to 30cm thick of pale cream to brown plane–laminated (rarely trough cross–laminated) medium–grained well–sorted quartz sandstone (Prcz). (Prc, Prcp, Prcz: Cowrie Siltstone).

PRECAMBRIAN — MESOPROTEROZOIC

- **Prbsq, Prbsa** — Pale–weathering, thickly bedded medium to coarse–grained quartzite interbedded with siltstone to fine sandstone, containing some disseminated porphyroblastic chlorite (Prbsq). Siltstone with finely developed alternation of siliceous (pale grey) and ?carbonaceous (dark grey) laminae, commonly with pervasive wavy lamination to small–scale trough cross–lamination, and with porphyroblastic chlorite in some beds. (Prbsw). Micaceous fine–grained sandstone with subordinate interbedded siltstone and graphitic shale, and containing porphyroblastic chlorite (Prbsa).
- **Prbsw** — Laminated to thinly bedded, chloritic to siliceous siltstone to fine sandstone, containing variably disseminated porphyroblastic chlorite (Prbs), (Prbs, Prbsw, Prbsa, Prbsq, Looneys Flat Siltstone).
- **Prbs** — Dominantly plane–laminated chloritic mudstone to siltstone, containing variably disseminated porphyroblastic chlorite (Prbg). (Emmetts Creek Shale).
- **Prbg** — Mid–dark grey, thin bedded, massive to plane–laminated siltstone with minor pale grey (quartzose) laminae (Prbqs). Interbedded packages of quartzose sandstone to siliceous siltstone and laminated carbonaceous shale (Prbq). (Prbq, Prbqs: Cassiterite Creek Quartzite).
- **Prbqs, Prbq** — Siliceous (pale grey) to ?carbonaceous (dark grey) siltstone, commonly with pervasive wavy lamination to small–scale trough cross–lamination, with finely developed alternation of pale and dark laminae; may show erosional gutters and/or scour at base of some beds, and clastic dykes; quartzose laminae may reach fine sand grade, and some sections include minor packets of pale grey thin–bedded fine–grained quartz sandstone (Prbl). (Skinners Flat Siltstone).
- **Prbl** — Medium grained, trough cross–bedded to parallel–bedded quartzose sandstone, and rare angular quartz–pebble conglomerate and shale (Prl). (Lagoon River Quartzite).
- **Prl** — Dominantly siltstone of varied facies; upper sequences dominantly wavy–to cross–laminated finely alternating siliceous and ?carbonaceous siltstone similar to unit Prbl, merging downward into more varied sequence – typically interbedded mid–dark grey siltstone and pale grey quartz siltstone – fine sandstone, which may show planar–parallel bedding, well developed erosional gutters, clastic dykes, and grading, cross–lamination and lensing of the quartz–rich beds (Prpr). (Pedder River Siltstone).
- **Prpr** —

Formations: Balfour Subgroup; Rocky Cape Group; Tyndarr Formation; Kanunnah Subgroup; Tolkamis Group; Rocky Cape Group.

IGNEOUS ROCKS

- **TERTIARY — Tb** — Basalt (Tb); transitional olivine basalt (Tbr) and basanite (Tbb) indicated.
- **NEOPROTEROZOIC — Psb** — Massive basalt (Psb). Varieties with 1.0 – 1.1% TiO2 (Psbb), 1.5–1.8% TiO2 (Psbc) and evolved varieties with 1.6 – 2.3% TiO2 and < 4% MgO (Psbe) indicated. (Psb, Psbb, Psbc, Psbe – Spinks Creek Volcanics).
- **?NEOPROTEROZOIC — Pmd** — Dolerite dykes (Pmd).

Geological boundary – position accurate or approximate.
Unconformable boundary – position accurate or approximate.
Geological boundary, transitional – position approximate.
Geological boundary – inferred from interpretation of airborne radiometric data.
Fault – unspecified type, position accurate or approximate.
Fault – unspecified type, concealed.
Fault – unspecified type, inferred from airbourne radiometric data.
Thrust fault – position accurate or approximate, teeth on upper plate.
Thrust fault – teeth on upper plate, inferred.
Thrust fault – teeth on upper plate, inferred from airborne radiometric data.
Lithological trend line
Axial surface trace of major antiform.
Axial surface trace of major synform.
(White line) Limit of mapping of sub–unit within undifferentiated rock unit.

Strike and dip of bedding, facing known – right way up; overturned.
Strike and dip of bedding, facing unknown – dipping; vertical; horizontal.
Generalised palaeocurrent direction, showing sense of movement.
Strike and dip of cleavage, relative local age S1 S2.
Strike and dip of cleavage, type and relative age unspecified – dipping, vertical.
Strike and dip of outcrop–scale fault; vertical.
Strike and dip of dominant joint set.
Trend and plunge of hingeline of minor fold, unspecified relative age; with dip and dip direction of axial surface indicated; vertical axial surface.
Trend and plunge of hingeline of minor fold, unspecified relative age, vergence sinistral; dextral.
Trend and plunge of hingeline of minor fold, unspecified relative age: antiform; synform.
Trend of horizontal hingeline of minor fold, unspecified relative age; with dip and dip direction of axial surface indicated; antiform.
Trend and plunge of hingeline of minor chevron fold, unspecified relative age.
Trend and plunge of hingeline of minor fold, relative local age F1.
Strike of dyke or vein, rock type or mineral specified by RCODE in Point Attribute Table; with dip and dip direction indicated.
Field station for adjacent reading(s) on map.
Notable small outcrop, lithology indicated.
Mineral deposit location – hardrock
Mineral deposit location – alluvial
Construction materials location –
(Data derived from Mineral Resources Tasmania MRLOCH data base. Datapoint position has not been verified in every case.)
(Data derived from Mineral Resources Tasmania CONMAT data base. Datapoint position has not been verified in every case.)

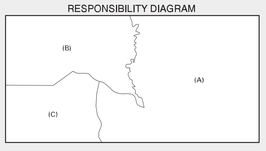
Geology by J.L. Everard, B.Sc.(Hons); A.R. Reed, B.Sc. (Hons), Ph.D.; D.B. Seymour, B.Sc. (Hons), Ph.D.

(see responsibility diagram)
A JLE, new 1:25,000 scale mapping 1998–99, augmented by interpretation of airborne magnetic and radiometric data and interpretation of aerial photographs.
B ARR, new 1:25,000 scale mapping 1998–99, augmented by interpretation of airborne magnetic and radiometric data and interpretation of aerial photographs.
C DBS, new 1:25,000 scale mapping 1998–99, augmented by interpretation of airborne magnetic and radiometric data and interpretation of aerial photographs.

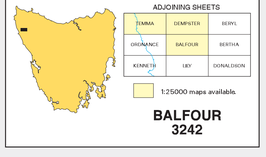
Digital base information from Information and Land Services Division, Department of Primary Industries, Water and Environment.

Map produced by the Data Management Branch of Mineral Resources Tasmania using G.I.S. software. AGD66 - AMG Zone 55. Contour Interval: 20 metres.

RESPONSIBILITY DIAGRAM



LOCATION DIAGRAM



While every care has been taken in the preparation of this data, no warranty is given as to the correctness of the information and no liability is accepted for any statement or opinion or for any error or omission. No reader should act or fail to act on the basis of any material contained herein. Readers should consult professional advisers. As a result the Crown in Right of the State of Tasmania and its employees, contractors and agents expressly disclaim all and any liability (including all liability from or attributable to any negligent or wrongful act or omission) to any persons whatsoever in respect of anything done or omitted to be done by any such person in reliance whether in whole or in part upon any of the material in this data. Crown copyright reserved.

Data correct & plotfile generated: 02-JUL-2004

WARNING: INKS ARE LIGHT SENSITIVE