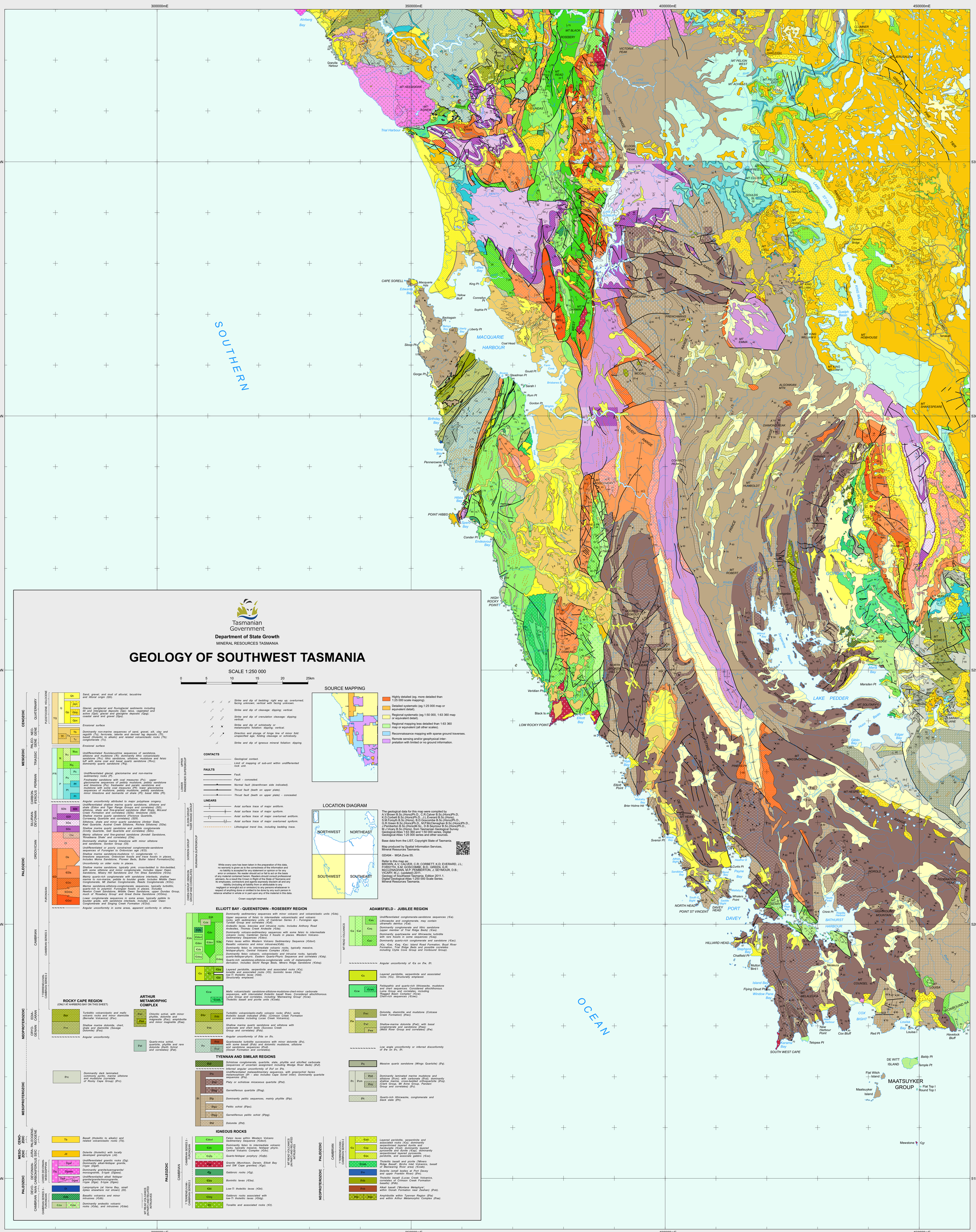
300000mE
350000mE
400000mE
450000mE
5350000mN
5300000mN
5250000mN
5200000mN
5150000mN
SOUTHERN
OCEAN
MACQUARIE HARBOUR
LAKE PEDDER
LAKE GORDON
LAKE ST CLAIR
PORT DAVEY
BATHURST HARBOUR
SOUTH WEST CAPE
POINT HIBBS
LOW ROCKY POINT
HIGH ROCKY POINT
CAPE SORELL
MT HEEMSKIRK
MT ZEEHAN
MT OSMUND
MT SARAH JANE
MAATSUYKER GROUP
DE WITT ISLAND
Tasmanian Government
Department of State Growth
MINERAL RESOURCES TASMANIA
GEOLOGY OF SOUTHWEST TASMANIA
SCALE 1:250 000
0 5 10 15 20 25km
CENOZOIC
MESOZOIC
PALEOZOIC
NEOPROTEROZOIC
MESOPROTEROZOIC
QUATERNARY
PLEISTOCENE - HOLOCENE
PALEO - NEO - GENE
TRIASSIC
PERMIAN
CARBON - IFEROUS
SILURIAN - DEVONIAN
ORDOVICIAN
CAMBRIAN
CRYO - GENIAN
EDIA - CARAN
Qh Sand, gravel, and mud of alluvial, lacustrine and littoral origin (Qh).
Qpf Qpg Qps Glacial, periglacial and fluvioglacial sediments including till and interglacial deposits (Qpg); talus, vegetated and active (Qpf); glacial and glacigene deposits (Qpg); coastal sand and gravel (Qps).
Erosional surface
Tb Dominantly non-marine sequences of sand, gravel, silt, clay and regolith (Ts); ferricrete, laterite and derived lag deposits (Tf); basalt (tholeiitic to alkalic) and related volcaniclastic rocks (Tb); conglomerate (Tc).
Erosional surface
TRv Undifferentiated fluviolacustrine sequences of sandstone, siltstone and mudstone (TR); dominantly lithic volcaniclastic sandstone (Rv); lithic sandstone, siltstone, mudstone and felsic tuff with some coal and basal quartz sandstone (Rvc); dominantly quartz sandstone (Rq).
Pc Pu Pl Pt Undifferentiated glacial, glaciomarine and non-marine sedimentary rocks (P).
Pl Freshwater sandstone with coal measures (Pu); upper glaciomarine sequences of pebbly mudstone, pebbly sandstone and limestone (Pu); freshwater and paralic sandstone and mudstone with coal measures (Pl); lower glaciomarine sequences of mudstone, pebbly mudstone, pebbly sandstone, minor limestone and tasmanite oil shale (Pl); basal tillite (Pt).
Angular unconformity attributed to major polyphase orogeny.
SDo SDd SDl SDa SDc Undifferentiated shallow marine quartz sandstone, siltstone and shale (Eldon and Tiger Range Groups and correlates) (SD); siltstone, shale and fine-grained sandstone (Bell Shale, McLeod Creek Formation and correlates) (SDo); limestone (SDl).
Shallow marine quartz sandstone (Florance Quartzite, Currawong Quartzite and correlates) (SDt).
Siltstone, shale and minor quartz sandstone (Amber Slate, Keel Quartzite, Austral Creek Siltstone, Richea Siltstone) (SDa).
Shallow marine quartz sandstone and pebble conglomerate (Crotty Quartzite, Gell Quartzite and correlates) (SDc).
Ola Mainly siltstone and fine-grained sandstone (Ordwell Sandstone, 'Rinadeena Shale' and correlates) (Ola).
Ol Dominantly shallow marine limestone with minor siltstone and sandstone. Gordon Group (Ol).
Oo Undifferentiated or poorly constrained conglomerate-sandstone sequences of Furongian to Ordovician age (Ꞓ̀O).
Os Shallow marine sandstone-mudstone +/- conglomerate +/- limestone sequences. Ordovician fossils and trace fossils in places. Includes Moina Sandstone, Pioneer Beds, Butler Island Formation(Os).
Unconformity on older rocks in places.
Ꞓ̀Oa Shallow marine sandstone, typically pink, cross-bedded to thin-bedded, with some siltstone and minor conglomerate. Includes Upper Owen Sandstone, Misery Hill Sandstone and Tim Shea Sandstone (Ꞓ̀Oa).
Ꞓ̀Oc Mainly quartz-rich conglomerate with sandstone interbeds, shallow marine to non-marine, pebble to boulder grade. Includes Middle Owen Conglomerate, Mt Zeehan Conglomerate, Reeds Conglomerate (Ꞓ̀Oc).
Ꞓ̀Oms Marine sandstone-siltstone-conglomerate sequences, typically turbiditic, quartz-rich to polymict. Furongian fossils in places. Includes Newton Creek Sandstone, Middle Owen Sandstone, upper Dundas Group, much of 'Rosebery Group' and Great Dome Sandstone (Ꞓ̀Oms).
Ꞓ̀Ocl Lower conglomerate sequences in some areas, typically pebble to boulder grade, with sandstone interbeds. Includes Lower Owen Conglomerate and Singing Creek Formation (Ꞓ̀Ocl).
Angular unconformity in some areas, apparent conformity in others.
Ꞓ̀Ocs Ꞓ̀Ocas Ꞓ̀Ocai Dominantly andesitic volcanic rocks (Ꞓ̀Ocs), and intrusives (Ꞓ̀Ocai).
Prc Dominantly dark laminated, commonly pyritic, marine siltstone and mudstone (correlate of Rocky Cape Group) (Prc).
ROCKY CAPE REGION (ONLY AT AHRBERG BAY ON THIS SHEET)
Pzc Turbiditic volcaniclastic and mafic volcanic rocks and minor diamictite (Bernafai Volcanics) (Pzv).
Pss Shallow marine dolomite, chert, shale and diamictite (Savage Dolomite) (Pss).
Angular unconformity.
ARTHUR METAMORPHIC COMPLEX
Pac Chloritic schist, with minor phyllite, dolomite and magnesite (Pac); amphibolite and minor magnetite (Paa).
Paa
Pat Quartz-mica schist, quartzite, phyllite and rare dolomite (Keith Schist and correlates) (Pat).
Strike and dip of bedding: right way up; overturned; facing unknown; vertical with facing unknown.
Strike and dip of cleavage: dipping; vertical.
Strike and dip of crenulation cleavage: dipping; vertical.
Strike and dip of schistosity or metamorphic foliation: dipping; vertical.
Direction and plunge of hinge line of minor fold: unspecified age; folding cleavage or schistosity.
Strike and dip of igneous mineral foliation: dipping.
CONTACTS
Geological contact.
Limit of mapping of sub-unit within undifferiented rock unit.
FAULTS
Fault.
Fault - concealed.
Normal fault (downthrown side indicated).
Thrust fault (teeth on upper plate).
Thrust fault (teeth on upper plate) - concealed.
LINEARS
Axial surface trace of major antiform.
Axial surface trace of major synform.
Axial surface trace of major overturned antiform.
Axial surface trace of major overturned synform.
Lithological trend line, including bedding trace.
SOURCE MAPPING
Highly detailed (eg. more detailed than 1:25 000 scale mapping).
Detailed systematic (eg.1:25 000 map or equivalent detail).
Regional systematic (eg.1:50 000, 1:63 360 map or equivalent detail).
Regional mapping less detailed than 1:63 360 map or equivalent (all other scales).
Reconnaissance mapping with sparse ground traverses.
Remote sensing and/or geophysical interpretation with limited or no ground information.
LOCATION DIAGRAM
NORTHWEST
NORTHEAST
SOUTHWEST
SOUTHEAST
The geological data for this map were compiled by A.V.Brown B.Sc.(Hons)Ph.D., C.R.Calver B.Sc.(Hons)Ph.D., K.D.Corbett B.Sc.(Hons)Ph.D., J.L.Everard B.Sc.(Hons), S.M.Forsyth B.Sc.(Hons), B.D.Gossetter B.Sc.(Hons)Ph.D., G.R.Green B.Sc.(Hons)Ph.D., M.P.McClenaghan B.Sc.(Hons)Ph.D., J.Pemberton B.Sc.(Hons)M.Sc., D.B.Seymour B.Sc.(Hons)Ph.D., M.J.Vicary B.Sc.(Hons), from Tasmanian Geological Survey Geological Atlas 1:63 360 and 1:50 000 series, Digital Geological Atlas 1:25 000 series and other sources.
Base data from the LIST, Copyright State of Tasmania.
Map produced by Spatial Information Services, Mineral Resources Tasmania.
GDA94 - MGA Zone 55.
Refer to this map as:
BROWN, A.V; CALVER, C.R; CORBETT, K.D; EVERARD, J.L; FORSYTH, S.M; GOSSETTER, B.D.; GREEN, G.R; McCLENAGHAN, M.P; PEMBERTON, J; SEYMOUR, D.B.; VICARY, M.J. (updated) 2011.
Geology of Southwest Tasmania. Edition 2011.1.
Digital Geological Atlas 1:250 000 Scale Series.
Mineral Resources Tasmania.
Crown copyright reserved.
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.
ELLIOTT BAY - QUEENSTOWN - ROSEBERY REGION
Ꞓ̀Oa Ꞓ̀Ocl Ꞓ̀Oms Ꞓ̀Ocas Ꞓ̀Ocai Ꞓ̀Ocs Ꞓ̀Ocl Ꞓ̀Ocdv Ꞓ̀Ocdsv Ꞓ̀Ocdb Ꞓ̀Ocdq Ꞓ̀Ocdsq Ꞓ̀Ocbq
Dominantly sedimentary sequences with minor volcanic and volcaniclastic units (Ꞓ̀Cds).
Upper sequence of felsic to intermediate volcaniclastic and volcanic rocks, with sedimentary units, of Cambrian Series 3 - Furongian age. Tyndall Group and correlates (Ꞓ̀Ct).
Andesitic lavas, breccias and intrusive rocks. Includes Anthony Road Andesites, Thomas Creek Andesite (Ꞓ̀Cda).
Dominantly volcano-sedimentary sequences with some felsic to intermediate volcanic rocks; Cambrian Series 3 fossils in places. Western Volcano-Sedimentary Sequences (Ꞓ̀Cdsv).
Felsic lavas within Western Volcano Sedimentary Sequence (Ꞓ̀Cdsv).
Basaltic volcanics and minor intrusives(Ꞓ̀Cdb).
Dominantly felsic to intermediate volcanic rocks, typically massive, feldspar-phyric. Central Volcanic Complex (Ꞓ̀Cdv).
Dominantly felsic volcanic, volcaniclastic and intrusive rocks, typically quartz-feldspar-phyric. Eastern Quartz-Phyric Sequence and correlates (Ꞓ̀Cdq).
Quartz-rich sandstone-siltstone-conglomerate units of metamorphic derivation. Includes Slicht Range Beds, Miners Ridge Sandstone (Ꞓ̀Cdsq).
Ꞓ̀Cs Ꞓ̀Ct Ꞓ̀Cbq Layered peridotite, serpentinite and associated rocks (Ꞓ̀Cs); boninitic lavas (Ꞓ̀Cba); low-Ti tholeiitic lavas (Ꞓ̀Ct). Structurally emplaced.
Ꞓ̀Ccw Ꞓ̀Ccwc Mafic volcaniclastic sandstone-siltstone-mudstone-chert-minor carbonate sequences, with intercalated tholeiitic basalt flows. Considered allochthonous. Luina Group and correlates, including 'Mainwaring Group' (Ꞓ̀Ccw). Tholeiitic basalt and picrite units (Ꞓ̀Ccwb).
Ꞓ̀Pdv Ꞓ̀Pdb Ꞓ̀Pds Turbiditic volcaniclastic-mafic volcanic rocks (Pdv); some tholeiitic basalt indicated (Pdb). (Crimson Creek Formation and correlates including Lucas Creek Volcanics).
Shallow marine quartz sandstone and siltstone with carbonate and chert beds (Success Creek Group and correlates) (Pds).
Angular unconformity of Pds on Po.
Po Pob Pod Quartzwacke turbidite successions with minor dolomite (Po), with some basalt (Pob) and dolomitic mudstone, siltstone and sandstone sequences (Pod). (Oonah Formation and correlates).
TYENNAN AND SIMILAR REGIONS
Pzq Schistose conglomerate, quartzite, slate, phyllite and silicified carbonate (sequences of uncertain assignment including Wedge River Beds) (Pzf).
Inferred angular unconformity of Pzf on Pts.
Pt Pts Ptsl Ptsg Ptq Ptp Ptpc Ptpg Ptd Undifferentiated metasedimentary sequences, with greenschist facies metamorphism (Pt - also includes Cape Sorell inlier). Dominantly quartzite sequences (Pts).
Platy or schistose micaceous quartzite (Ptsl).
Garnetiferous quartzite (Ptsg).
Dominantly pelitic sequences, mainly phyllite (Ptp).
Pelitic schist (Ptpc).
Garnetiferous pelitic schist (Ptpg).
Dolomite (Ptd).
IGNEOUS ROCKS
Tb Basalt (tholeiitic to alkalic) and related volcaniclastic rocks (Tb).
Jd Dolerite (tholeiitic) with locally developed granophyre (Jd).
Dgaf Undifferentiated granitic rocks (Dg). Dominantly alkali-feldspar granite, I-type (Dgaf).
Dg Dgass Dgas Dominantly granite/syenogranite/monzogranite, S-type (Dgass).
Dgs Undifferentiated alkali feldspar granite/granite/monzogranite, I-type (Dgs). S-type (Dgas).
Dl Lamprophyre (at Varna Bay, small dykes elsewhere not shown) (Dl).
Ꞓ̀Cb Basaltic volcanics and minor intrusives (Ꞓ̀Cdb).
Ꞓ̀Cda Ꞓ̀Cdai Dominantly andesitic volcanic rocks (Ꞓ̀Cda), and intrusives (Ꞓ̀Cdai).
MT READ VOLCANICS (IN PALEOZOIC INTRUSIVES)
Ꞓ̀Cdsvl Felsic lavas within Western Volcano Sedimentary Sequence (Ꞓ̀Cdsvl).
Ꞓ̀Cdv Dominantly felsic to intermediate volcanic rocks, typically massive, feldspar phyric. Central Volcanic Complex (Ꞓ̀Cdv).
Ꞓ̀Cdfp Quartz-feldspar porphyry (Ꞓ̀Cdfp).
Ꞓ̀Cgr Granite (Murchison, Darwin, Elliott Bay and SW Cape granites) (Ꞓ̀Cgr).
Ꞓ̀Cg Gabbroic rocks (Ꞓ̀Cg).
Ꞓ̀Cba Boninitic lavas (Ꞓ̀Cba).
Ꞓ̀Ct Low-Ti tholeiitic lavas (Ꞓ̀Ct).
Ꞓ̀Cbg Gabbroic rocks associated with low-Ti tholeiitic lavas (Ꞓ̀Cbg).
Ꞓ̀Ct Tonalite and associated rocks (Ꞓ̀Ct).
ADAMSFIELD - JUBILEE REGION
Ꞓ̀Ca Ꞓ̀Cal Ꞓ̀Cas Ꞓ̀Cag Ꞓ̀Cac Undifferentiated conglomerate-sandstone sequences (Ꞓ̀Ca).
Lithicwacke and conglomerate, may contain ultramafic detritus (Ꞓ̀Cal).
Dominantly conglomerate and lithic sandstone (upper member of Trial Ridge Beds) (Ꞓ̀Cas).
Dominantly quartzwacke and lithicwacke turbidite with rare fossils in some sequences (Ꞓ̀Cag).
Dominantly quartz-rich conglomerate and sandstone (Ꞓ̀Cac).
(Ꞓ̀Ca, Ꞓ̀Cas, Ꞓ̀Cag, Ꞓ̀Cac: Island Road Formation, Boyd River Formation, Trial Ridge Beds and possible correlates including Clytie Cove Group and Ironbound Group).
Angular unconformity of Ꞓ̀Ca on Pw, Pt.
Ꞓ̀Cs Layered peridotite, serpentinite and associated rocks (Ꞓ̀Cs). Structurally emplaced.
Ꞓ̀Ccw Ꞓ̀Ccwc Feldspathic and quartz-rich lithicwacke, mudstone and chert sequences. Considered allochthonous. Luina Group and correlates, including 'Ragged Basin Complex' (Ꞓ̀Ccw). Chert-rich sequences (Ꞓ̀Ccwc).
Pw Pwc Pwr Pwa Dolomite, diamictite and mudstone (Colcase Creek Formation) (Pwc).
Shallow-marine dolomite (Pwr); with basal conglomerate and sandstone (Pwa). (Weld River Group and correlates) (Pw).
Low angle unconformity or inferred disconformity of Pw on Pc, Pt.
Pq Massive quartz sandstone (Wings Quartzite) (Pq).
Pc Pcm Pcd Pcg Dominantly laminated marine mudstone and siltstone (Pcm); with carbonate (Pcd); dominantly shallow marine, cross-bedded orthoquartzite (Pcq). (Clark Group, Mt Anne Group, Pandani Group and correlates) (Pc).
Ph Quartz-rich lithicwacke, conglomerate and black slate (Ph).
Ꞓ̀Cd Ꞓ̀Cp Ꞓ̀Cx Ꞓ̀Cwb Layered peridotite, serpentinite and associated rocks (Ꞓ̀Cd); dominantly serpentinised layered dunite and harzburgite (Ꞓ̀Cwd); dominantly layered pyroxenite and dunite (Ꞓ̀Cp), dominantly serpentinised layered pyroxenite, peridotite, and associate gabbro (Ꞓ̀Cx).
Tholeiitic basalt and picrite ('Miners Ridge Basalt', Birchs Inlet Volcanics, basalt of Mainwaring River area) (Ꞓ̀Cwb).
Pm Dolerite (small bodies at Port Davey and upper Franklin River) (Pm).
Pob Tholeiitic basalt (Lucas Creek Volcanics, correlates of Crimson Creek Formation basalts) (Pob).
Pob Alkali basalt ('Montana Melaphyre', within Oonah Formation near Zeehan) (Pob).
Pa Paa Amphibolite within Tyennan Region (Pta) and within Arthur Metamorphic Complex (Paa).
Mewstone Ꞓ̀gr
WARNING: INKS ARE LIGHT SENSITIVE.
THIS MAP IS EDITION 2011.1
BASED ON A STATEWIDE DATASET
Map generated: 14-Jul-2023