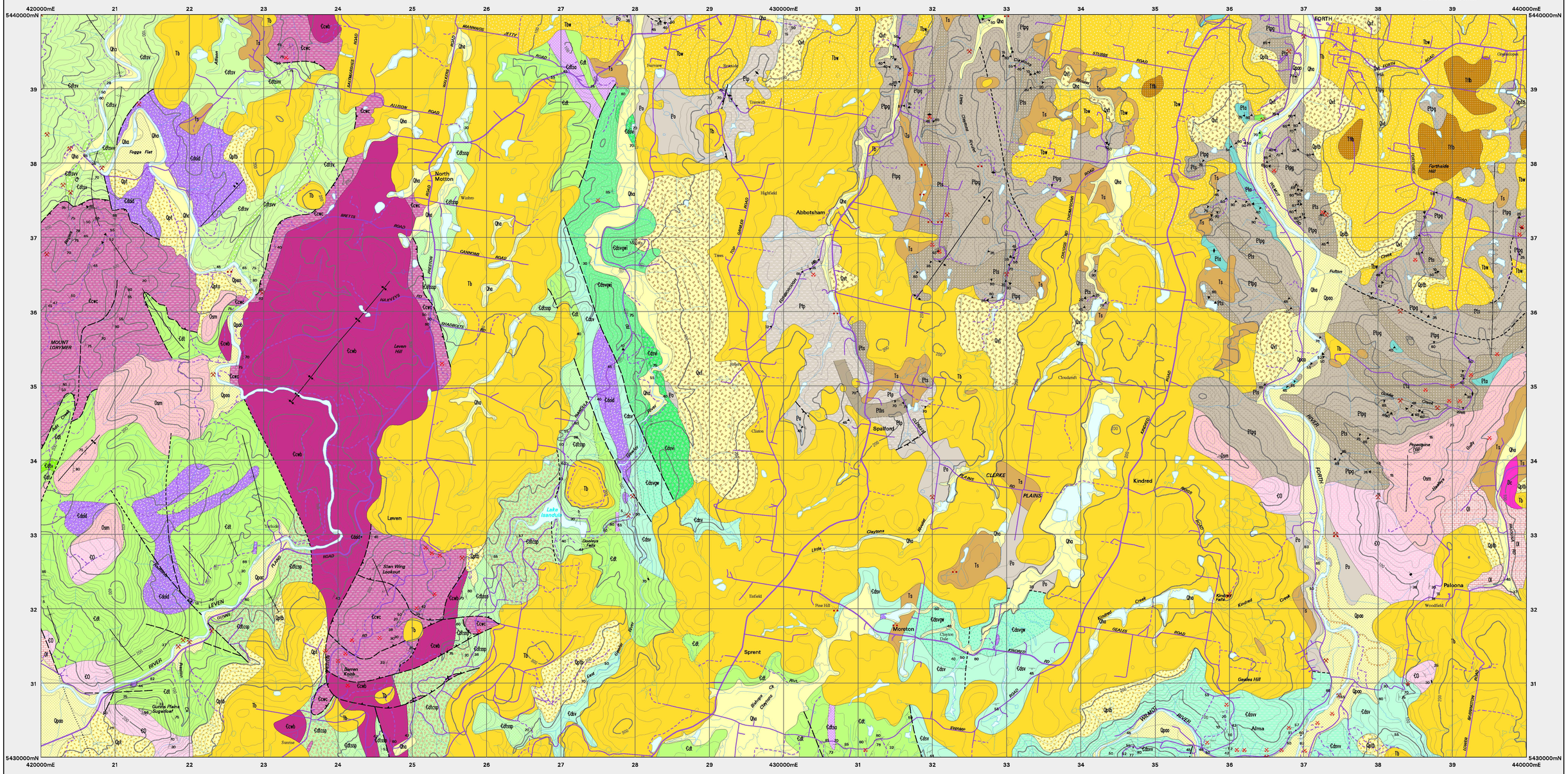
MINERAL RESOURCES TASMANIA
DIGITAL GEOLOGICAL ATLAS 1:25 000 SERIES
KINDRED, SHEET 4243

KINDRED

Scale: 1:25 000

0 500 1000 1500 2000 2500m

MINERAL RESOURCES TASMANIA
Tasmania
DEPARTMENT of INFRASTRUCTURE ENERGY and RESOURCES



CAINOZOIC

QUATERNARY

HOLOCENE

- **Qha** — *Stream alluvium, swamp and marsh deposits (Qha).*
- **Qxt** — *Landslide deposits predominantly derived from weathered Tertiary rocks (Qxt).*

PLEISTOCENE

- **Qptb** — *Basalt talus (Qptb).*
- **Qpt / Qptd** — *Talus consisting dominantly of dolerite boulders (Qptd).*
- **Qpto** — *Quartz sandstone and conglomerate talus derived from Owen Group correlates (Qpto).*
- **Qpao** — *Older alluvium of river terraces (Qpao).*

TERTIARY

- **Tflb** — *Laterite derived from Tertiary Basalt (Tflb).*
- **Tbw** — *Predominantly deeply-weathered basalt (Tbw).*
- **Tb** — *Basalt (Tb).*
- **Ts** — *Terrestrial sand, gravel and minor lacustrine deposits (Ts).*
- **Tsco** — *Sub-basalt conglomerate, quarzy-stone or claystone (Tsco).*

PALAEOZOIC

DEVONIAN

- **Dc** — *Terrestrial cavern filling (Eugenana Beds) (Dc).*

ORDOVICIAN

GORDON GROUP

- **Ol** — *Limestone (correlate of Gordon Limestone) (Ol).*

EARLY ORDOVICIAN - LATE CAMBRIAN

OWEN GROUP

- **Osm** — *Grey poorly sorted fine-grained sandstone, commonly bioturbated (correlate of Moina Sandstone) (Osm).*
- **€O** — *Pebble-cobble siliciclastic conglomerate and coarse-grained sandstone with abundant quartzite and chert clasts (€O).*

PALAEOZOIC

MIDDLE - LATE CAMBRIAN

TYNDALL GROUP

- **€dtsv** — *Poorly defined sequence of Cambrian volcanics and sediments. Undifferentiated Tyndall Group and Western Volcano-Sedimentary Sequence. Previously mapped as Cateena Group (€dtsv).*
- **€dt** — *Predominantly crystal +/- lithic rich volcaniclastic sediments with minor siltstone and minor acid to intermediate volcanics. (Correlate of Tyndall Group and Rosfords Creek Group) (€dt).*
  - **€dtv** — *Quartz-feldspar phyric crystal (lithic) volcaniclastic (€dtv).*
  - **€dtso** — *Mainly feldspar-quartz +/- pyroxene phyric crystal rich volcaniclastic sandstone (€dtso).*
  - **€dtssp** — *Predominantly fine grained ashy siltstone with interbedded lithicwacke, greywacke and shale (€dtssp).*
  - **€dtcsp** — *Coarse-grained polymict conglomerate, lithicwacke and greywacke with clasts of basalt, chert, siltstone and limestone (Sprent Formation) (€dtcsp).*

MIDDLE CAMBRIAN

WESTERN VOLCANO-SEDIMENTARY SEQUENCE / MT READ VOLCANICS AND CORRELATES

- **€dtsvv** — *Felsic volcanic and volcaniclastic rich horizon within €dtsv (€dtsvv).*
- **€dsv** — *Grey to green massive to bedded wacke, pebble conglomerate and laminated siltstone, with clasts of quartzite and chert. (Correlate of Western Volcano-Sedimentary Sequence, Southwest Subgroup and Cateena Group) (€dsv).*
  - **€dsvv** — *Predominantly ashy siltstone (€dsvv).*
  - **€dsvgw** — *Predominantly micaceous greywacke and siltstone (€dsvgw).*
  - **€dsvgwi** — *Predominantly micaceous greywacke and siltstone in the Isandula area. Contains Middle Cambrian fossils (€dsvgwi).*
  - **€dsvvi** — *Purple mudstone clast rich pebble conglomerate with feldspathic rich matrix (Isandula Conglomerate) (€dsvvi).*

EARLY CAMBRIAN

CLEVELAND-WARATAH ASSOCIATION

- **€cwb** — *Pillowed to massive fine-to medium-grained augite bearing tholeiitic basalt with intercalated volcaniclastic sandstone and conglomerate, mudstone and chert bearing breccia (Motton Spilite) (€cwb).*
- **€cwc** — *Pale to dark grey, faintly bedded to massive or brecciated chert (Barrington Chert) (€cwc).*

PROTEROZOIC

NEO-PROTEROZOIC

BURNIE FORMATION

- **Po** — *Quartzwacke turbidite sequence of sandstone, siltstone and well bedded black slaty mudstone (Po).*

?MESOPROTEROZOIC

ULVERSTONE-FORTH METAMORPHICS

- **Ptbs** — *Dominantly schistose conglomerate (Spaforth Conglomerate and correlates) (Ptbs).*
- **Pts** — *Dominantly quartzite (Pts).*
- **Ptp** — *Quartz-chlorite-muscovite schist (Ptp).*
- **Ptpg** — *Quartz-muscovite-garnet schist (Ptpg).*

INTRUSIVE ROCKS

PALAEOZOIC

MIDDLE CAMBRIAN — MT READ VOLCANICS

- **€doid** — *Massive plagioclase-hornblende phyric dioritic, andesitic and dacitic intrusives. U-Pb SHRIMP age of igneous zircon = 500.2 +/- 3.5 My at 420705mE, 5441978mN. (Lobster Creek Intrusives) (€doid).*

EARLY CAMBRIAN — ALLOCHTHONOUS SEQUENCES

- **€s** — *Serpentinite (€s).*

?EARLY CAMBRIAN — CLEVELAND-WARATAH ASSOCIATION

- **€cwb** — *Tholeiitic basalt lava and intrusives (€cwb).*

?PROTEROZOIC

?MESOPROTEROZOIC — ULVERSTONE-FORTH METAMORPHICS

- **Pta** — *Amphibolite (Pta).*

Geological boundary – position accurate or approximate.
Geological boundary – inferred.
Fault – position accurate or approximate.
Fault – inferred.
Fault – concealed.
Thrust fault (teeth on upper plate) – position accurate or approximate.
Thrust fault (teeth on upper plate) – inferred.
(white line) *Limit of mapping of sub-unit within undifferentiated rock unit (colour boundary).*
Axial surface trace of major antiform.
Axial surface trace of major synform.
Axial surface trace of major early antiform.
Axial surface trace of major early synform.
Axial surface trace of major later synform.
Axial surface trace of major later antiform.
Axial surface trace of major later overturned antiform.
Scarp.
Lineament visible on aerial photographs.

Strike and dip of bedding, right way up.
Strike and dip of bedding, facing unknown – dipping; vertical.
Strike and dip of cleavage, relative local age S1 – dipping; vertical.
Strike and dip of metamorphic foliation other than cleavage – dipping; vertical.
Strike and dip of metamorphic foliation other than cleavage, relative local age S1 – dipping; vertical.
Strike and dip of dominant joint set – dipping; vertical.
Trend and plunge of minor fold hinge line, relative local age F1, F2.
Trend of horizontal minor fold hinge line, relative local age F2.
Fossil location.
Mineral deposit location – hardrock } *Data derived from Mineral Resources Tasmania DEPOSITS data base. Data point position has not been verified in every case.*
Mineral deposit location – alluvial
Construction materials location – Data derived from Mineral Resources Tasmania DEPOSITS data base. Data point position has not been verified in every case.

Compiled by M.J. Vicary, 2005 as part of the Western Tasmanian Regional Minerals Program from the following sources (see Responsibility Diagram):

A M.J. Vicary 2004, 1:25000 geological mapping and field checking.

B BURNS, K.D. 1957. Geology of the Nook-Gunns Plains area. BSc (hons) thesis, University of Tasmania. TCR57-185

C PORTER, T.M. 1974. E.L. 19/72 Dial Range, North West Tasmania, Progress Report CRA Exploration Pty Ltd. TCR74-0992

D BURNS, K.L. 1963. Geological atlas 1 mile series. Zone 7 Sheet 29 (N8115 I and IV) Devonport.Tasmania Department of Mines. With additional information from:

1 HERRMANN, W. 1993 and CRAWFORD, A.J. 1993. Appendix B and C in FitzGerald, F.G. 1993. EL8/1992 Dial Range Annual Report June 1992 - June1993. Unpublished Report, Pasminco Exploration. TCR93-3447.

2 SPROULE, R.A. 1994. Stratigraphy and Geochemistry of the Dial Range Trough, NW Tasmania. BSc(hons) thesis. University of Tasmania.

E JENNINGS, I.B; BURNS, K.L; MAYNE, S.J. and ROBINSON, R.G. 1959. Geological 1 mile series. Zone 7 Sheet 37 Sheffield. Tasmania Department of Mines.

F WILSON, P.A. 1982. Annual Report EL 24/1973 Dial Range. 1980 Field Season. Unpublished Report, Geopeko Limited. TCR 82-1875.

G VIVIAN, R.M. 1994. Final Report on Exploration Activities within EL 33/1993, Paloona Northern Tasmania. Unpublished Report, Australia Operations Proprietary Limited. Austamax Resources Limited. TCR 94-2297.

Updated by:

H M.J. Vicary 2004, as part of WTRMP review.

I C.R. Calver 2005. Field checking and revision of geology as part of the Northwest Landslide Hazard Project.

REFERENCE THIS MAP AS:

VICARY, M.J. 2005 (compiler). Digital Geological Atlas 1:25000 series, sheet 4243 Kindred. Mineral Resources Tasmania.

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AGD66 - AMG Zone 55. Contour Interval: 20 metres.

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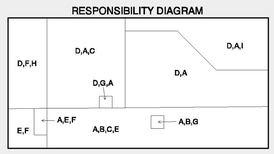
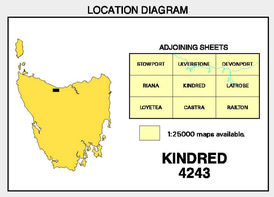
RESPONSIBILITY DIAGRAM



LOCATION DIAGRAM



Plotfile for this map generated from digital data as at: 04-MAY-2006

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