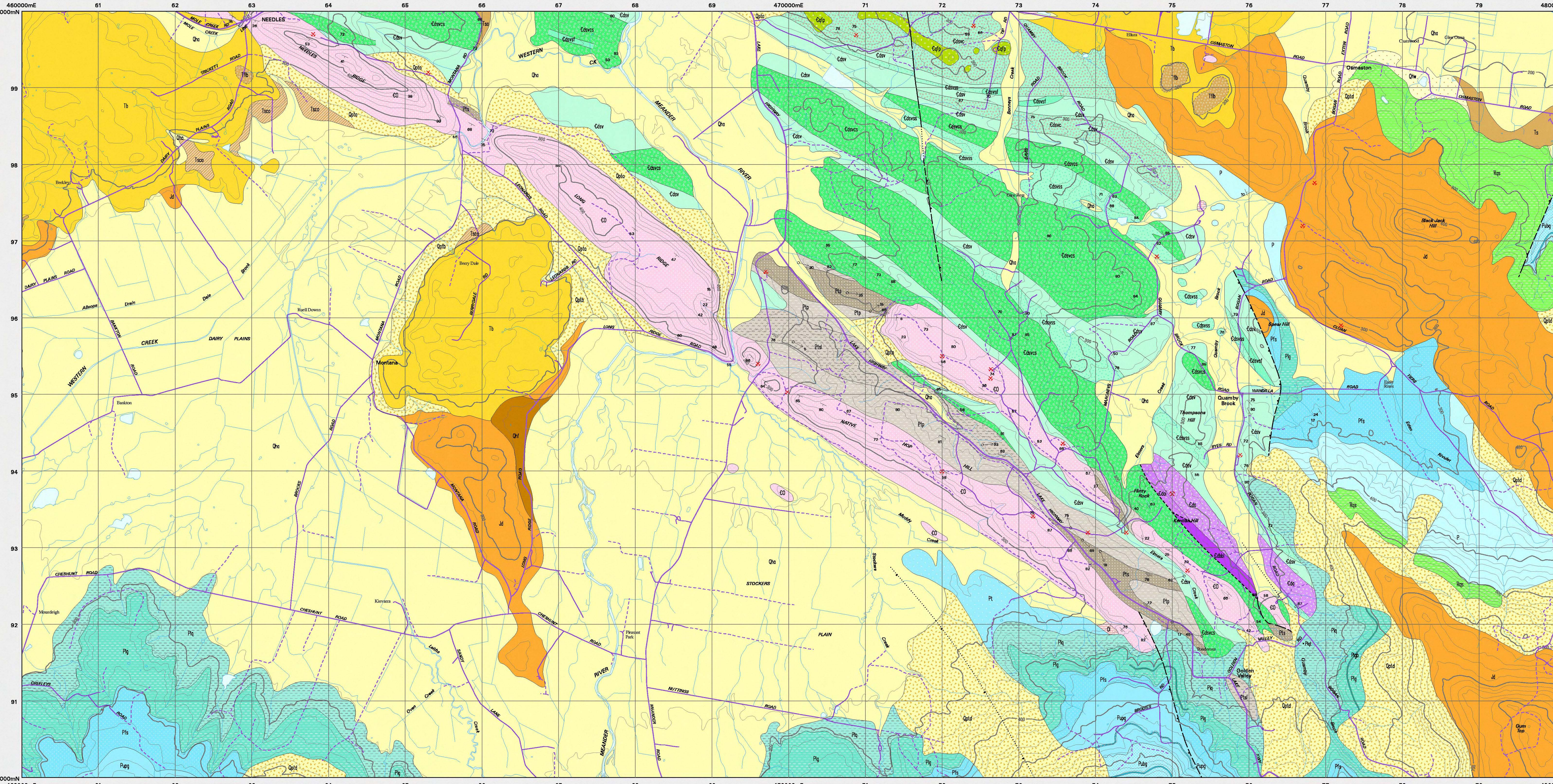
MINERAL RESOURCES TASMANIA
DIGITAL GEOLOGICAL ATLAS 1:25 000 SERIES
MONTANA, SHEET 4639

MONTANA

Scale: 1:25 000

0 500 1000 1500 2000 2500m

MINERAL RESOURCES TASMANIA
Tasmania
DEPARTMENT of INFRASTRUCTURE ENERGY and RESOURCES



Era	Period	Epoch	Symbol	Description	Group
CAINOZOIC	QUATERNARY	HOLOCENE	Qha	*Stream alluvium, swamp and marsh deposits (Qha).*	
			Qhw	*Windblown and locally derived sand (Qhw).*	
			Qhf	*Ferricrete lag deposit (Qhf).*	
		PLEISTOCENE	Qptb	*Basalt talus (Qptb).*	
			Qptd	*Talus consisting dominantly of dolerite boulders (Qptd).*	
			Qpto	*Quartz sandstone and conglomerate talus derived from Owen Group correlates (Qpto).*	
	TERTIARY		Tflb	*Laterite derived from Tertiary basalt (Tflb).*	
			Ts	*Undifferentiated Tertiary sediments; dominantly non–marine sequence of quartz sand, silt, clay and regolith (Ts).*	
			Tsa	*Poorly consolidated clay, silt and clayey labile sands with rare gravel and lignite: some iron oxide–cemented layers and concretion (Tsa).*	
			Tb	*Basalt (Tb).*	
			Tsco	*Inter–and sub–basalt gravels of predominantly quartzite pebbles (Tsco).*	
MESOZOIC	TRIASSIC		Rqs	*Cross bedded quartz sandstone, feldspathic sandstone and shale (Rqs).*	UPPER PARMEENER SUPERGROUP
PALAEOZOIC	PERMIAN	P	Pubb	*1 to 2m thick resistant unit of siliceous granule to pebble conglomerate (Blackwood Conglomerate) (Pubb).*	LOWER PARMEENER SUPERGROUP
			Pubg	*Unfossiliferous pebbly siltstone, siltstone and sandstone (Bogan Gap Group) (Pubg).*	
			Pubp	*3 to 5m thick resistant unit of unfossiliferous pebbly sandstone and conglomerate (Palmer Sandstone) (Pubp).*	
			Pupg	*Sandstone, mudstone and pebbly mudstone with marine fossils (Poatina Group) (Pupg).*	
			Pupd	*7 to 12m thick resistant unit of brown–grey medium grained fossiliferous pebbly sandstone (Dabool Sandstone) (Pupd).*	

Era	Period	Symbol	Description	Group
PALAEOZOIC	PERMIAN	P / Pfs	*Dominantly well–sorted quartz sandstone, normally cross–bedded or laminated and commonly with interbedded and laminated carbonaceous shale, lesser conglomerate and rare coal (Liffey Sandstone) (Pfs).*	LOWER PARMEENER SUPERGROUP
		Plg	*Predominantly fossiliferous and erratic rich mudstone, shale, limestone and sandstone (Golden Valley Group) (Plg).*	
		Plgb	*8m thick resistant unit of fossiliferous, pebbly micaceous sandstone (Billop Sandstone) (Plgb).*	
		Plq	*Unfossilerous dark grey pyritic mudstone (Quamby Mudstone) (Plq), with local occurrence of Tasmanite Oil Shale at 476,710mE 5,391,740mN (Plqt)*	
		Pt	*Tillite and erratic rich mudstone (Stockers Tillite) (Pt).*	
	ORDOVICIAN	Ol	*Dark grey limestone, dolomite, calcareous mudstone and minor quartz sandstone. In part fossiliferous (Ol).*	GORDON GROUP / WURAWINA SUPERGROUP
	EARLY ORDOVICIAN -LATE CAMBRIAN	€O	*Undifferentiated shallow marine – non–marine siliciclastic conglomerate–sandstone sequence (€O).*	OWEN GROUP / WURAWINA SUPERGROUP
	MIDDLE-LATE CAMBRIAN	€dsv	*Mixed volcano–sedimentary and sedimentary sequences of sandstone, siltstone and conglomerate with felsic to intermediate volcanics. Includes 'Gog Range Greywacke' (€dsv).*	CORRELATE OF WESTERN VOLCANO-SEDIMENTARY SEQUENCES / MOUNT READ VOLCANICS
		€dsvcs	*Siliciclastic conglomerate and sandstone, typically rich in quartzite clasts (€dsvcs).*	
		€dsvss	*Dominantly non–volcanic sandstone and siltstone, massive to thinly bedded, typically of metamorphic derivation (€dsvss).*	
		€dsvc	*Polymict conglomerate with volcanic and metamorphic clasts (€dsvc).*	
		€dsvsf	*Dominantly felsic volcaniclastic sandstone, typically quartz–feldspar rich, well bedded to massive (€dsvsf).*	
		€da	*Plagioclase–clinopyroxene phyric andesite lava and breccia (€da).*	
		€ddbl	*Tholeiitic basalt and associated clastic units of uncertain affinity (€ddbl).*	
PROTEROZOIC	MESO - PROTEROZOIC	Pts	*Massive, platy and banded quartzite (Pts).*	TYENNAN REGION METASEDIMENTS
		Ptp	*Quartz–muscovite schist and phyllite (Ptp).*	
		Ptsl	*Schistose quartzite, quartzite and schist (Ptsl).*	

INTRUSIVE ROCKS

Era	Period	Symbol	Description	Group
MESOZOIC	JURASSIC	Jd	*Dolerite and related rocks (Jd).*	
PALAEOZOIC	MIDDLE-LATE CAMBRIAN	€qfp	*Quartz–feldspar porphyry – dominantly intrusive (€qfp).*	MOUNT READ VOLCANICS
		€da	*Plagioclase–clinopyroxene andesite lava and breccia (€da).*	
		€dai	*Clinopyroxene–olivine cumulate rock (€dai).*	
		€ddbl	*Tholeiitic basalt and associated clastic units of uncertain affinity (€ddbl).*	

Geological boundary – position accurate or approximate.
Geological boundary – inferred.
Fault (unspecified) – position accurate or approximate.
Fault (unspecified) – concealed.
Normal fault (downthrown side indicated) – position accurate or approximate.
Normal fault (downthrown side indicated) – concealed.
(white line) *Limit of mapping of sub–unit within undifferentiated rock unit ('Colour boundary').*

Strike and dip of bedding, right way up.
Strike and dip of cleavage of unspecified type and relative age.
Strike and dip of bedding, overturned.
Strike and dip of compositional layering.
Strike and vertical cleavage of unspecified type and relative age.
Trend and plunge of lineation of unspecified type.
Notable small outcrop with rock unit indicated
Mineral deposit location – hardrock
Mineral deposit location – alluvial
Data derived from Mineral Resources Tasmania DEPOSITS data base. Data point position has not been verified in every case.
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, 2004 as part of the Western Tasmanian Regional Minerals Program from the following sources (see Responsibility Diagram):

A BARTON, C.M., BRAVO, A.P., GULLINE, A.B., LONGMAN, M.J., MARSHALL, B., MATHEWS, W.L., MOORE, W.R., NAVQI, I.H. and PIKE, G.P., 1969. Geological atlas 1 mile series. Sheet 46 (8214N) Quamby. Tasmania Department of Mines.

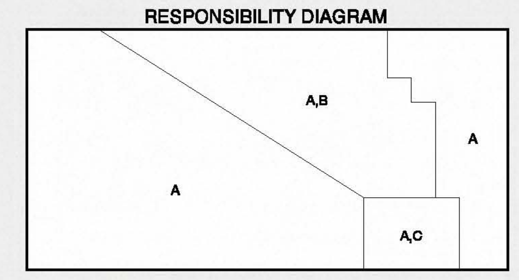
B HERRMANN, W., 1991 Annual report to 3/8/92 EL 16/90 - Deloraine. Unpublished report Outokumpu Exploration Australia Proprietary Limited. TCR 91-3277.

C CLARKE, M.J., 1968. A reappraisal of a Lower Permian type section, Golden Valley, Tasmania. Rec. Geol. Surv, Tasm 7.

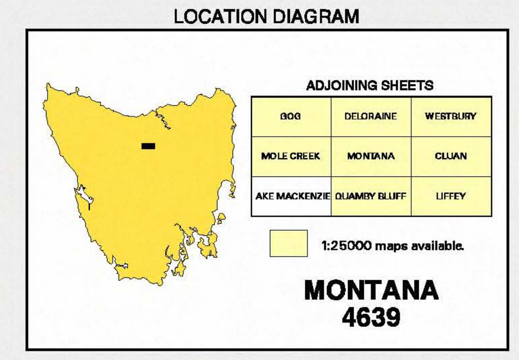
Digital base information from Information and Land Services Division, Department of Primary Industries, Water and Environment.

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



Data correct & plotfile generated: 22-MAR-2005

WARNING: INKS ARE LIGHT SENSITIVE