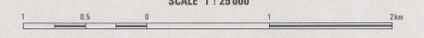


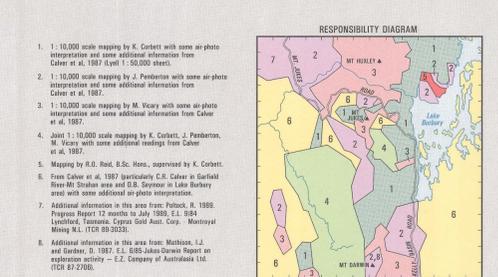
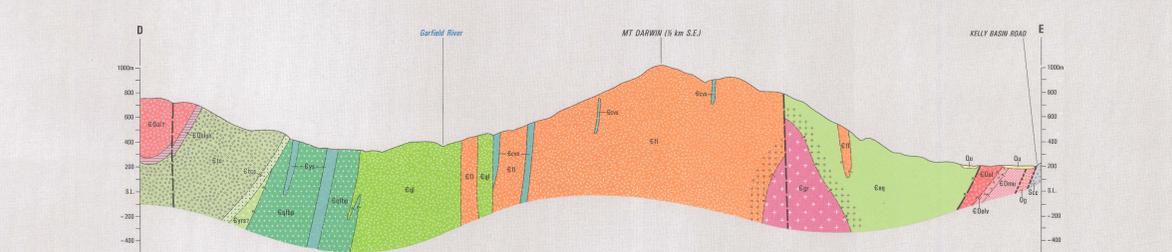
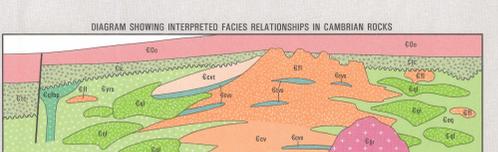
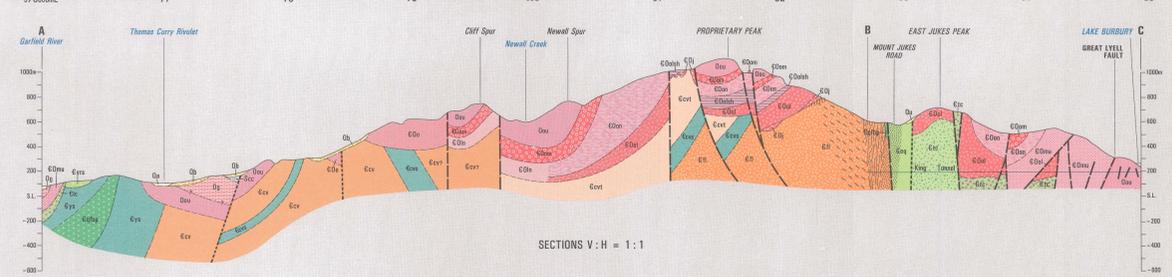
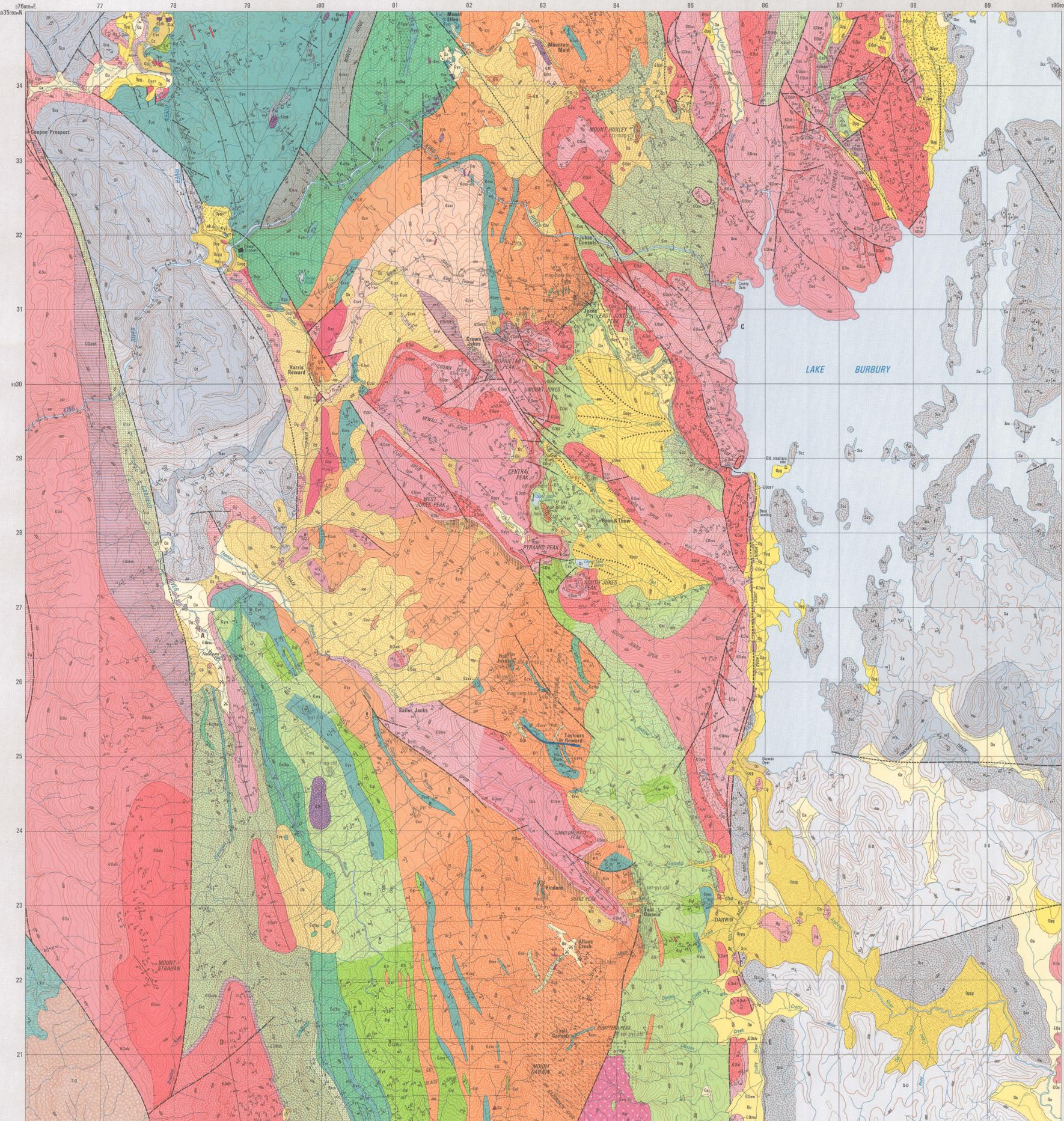
# MAP 13. GEOLOGY OF THE MT. JUKES - MT. DARWIN AREA

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SCALE 1 : 25 000



PERIOD	UNIT	DESCRIPTION
MIOCENE	Mc	Cultural features - spoil dumps, dams, gravelled areas etc.
	Ma	Alluvium, swamp and marsh deposits. May include older alluvium.
	Mb	Talus, scree and colluvial deposits.
QUATERNARY	Qa	Bouldery slope and fan deposits, probably partly of glacial origin.
	Qb	Fluvio-glacial deposits (Qgl). Some massive ridge crests indicated (-----). Some occurrences of Jurassic dolerite boulders indicated (▲, ▲▲).
	Qc	Younger glacial deposits, mostly of till, unweathered or slightly weathered.
PLEISTOCENE	Pl1	Messy outwash gravel.
	Pl2	Messy outwash gravel.
	Pl3	Older glacial deposits - mostly deeply weathered till.
TERTIARY	T10	Undifferentiated gravel deposits of Macquarie Harbour graben.
DEVONIAN	D1	Mainly fine-grained quartz sandstone with minor interbedded siltstone and mudstone. Correlate of Florence Sandstone.
	D2	Mainly mudstone and siltstone with minor sandstone and rare limestone. Unit of fine-grained quartz sandstone indicated (Ss). Correlate of Amber Formation.
SILURIAN	S1	Mainly coarse to fine-grained quartz sandstone (commonly decomposed to friable sand) with upper sequence of siltstone and fine-grained sandstone in some areas. Correlate of Florence Sand.
	S2	Mainly thin bedded siltstone and fine-grained sandstone, commonly fossiliferous.
ORDOVICIAN	O1	Limestone with some interbedded siltstone in places. Commonly decomposed to black bog.
	O2	Grey to pink quartz sandstone and granule-poor conglomerate with chert clasts, fossils and chert-rich matrix. Sparse quartzite clasts in places. Relationship to underlying quartz-phyric rocks difficult to determine in many areas.
	O3	Mainly thin bedded pink to brown quartz sandstone with interbedded siltstone and minor granule-poor conglomerate. Chert clasts in places. Disarticulation common.
	O4	Mainly grey to pale pink, thick bedded granule-poor conglomerate with minor quartz sandstone and some poorly volcaniclastic sandstone in some areas. Correlate of Middle Owen Conglomerate.
	O5	Mainly thin to thick bedded pink quartz sandstone with chert-rich granule-poor conglomerate in some areas. Some locally to interbedded grey siltstone and sandstone with minor volcaniclastic sandstone. Discordant erosional contact on underlying units in some areas. Correlate of Newton Creek Sandstone.
	O6	Mainly interbedded grey to pale pink granule-poor (rare boulder) conglomerate and quartz sandstone with minor siltstone and volcaniclastic sandstone. Correlate of Lower Owen Conglomerate.
	O7	Interbedded grey siltstone and fine-grained sandstone.
	O8	Mainly grey-green volcaniclastic sandstone with minor siltstone.
	O9	Mainly grey sandstone with minor conglomerate and micaceous siltstone, Mt. Strahan area.
	O10	Interbedded grey micaceous siltstone and fine-grained sandstone, with white quartzite in places.
CAMBRIAN	C1	Mainly volcaniclastic conglomerate to boulder grade, with interbedded volcaniclastic sandstone. Quartz-rich matrix. Sparse quartzite clasts in places. Relationship to underlying quartz-phyric rocks difficult to determine in many areas.
	C2	Mainly well bedded quartz-feldspar crystal-rich volcaniclastic sandstone with minor siltstone and volcaniclastic conglomerate. Graded bedding common.
	C3	Mainly thin bedded siltstone and mudstone with subordinate volcaniclastic sandstone.
CENTRAL VOLCANIC COMPLEX	C4	Mixed sequence of poorly bedded to massive quartz-feldspar volcaniclastic sandstone and conglomerate (mostly poorly graded, quartz-feldspar f. biotite-phyric lava, feldspar f. quartz-phyric lava, and minor siltstone and mudstone). Relationship to Central Volcanic Complex varies from probably intertonguing to erosional.
	C5	Mainly quartz-feldspar f. biotite-phyric lava.
	C6	Interbedded siltstone, mudstone, volcaniclastic sandstone, mass flow breccia.
	C7	Mainly feldspar f. quartz-phyric lava, commonly with spherulitic groundmass.
	C8	Dominantly feldspar f. quartz-phyric lavas and pumice-bearing volcaniclastic rocks with minor siltstone and mudstone. Some units have probable intertonguing relationship with sequences to east and west.
	C9	Mainly chert-rich, usually feldspar-phyric, massive to well bedded, with pumice clasts in most areas. Includes probable mass flow deposits.
	C10	Mainly feldspar f. quartz-phyric lavas and possible intrusives (crypto-domes?), commonly with spherulitic or snowflake-textured groundmass. Columnar jointing common in some areas.
	C11	Quartz-feldspar f. biotite-phyric lava and lava breccia.
	C12	Breccia bodies usually with quartz-feldspar-rich matrix and abundant clasts of locally derived lava and cherty rock.
	C13	Units of bedded siltstone, sandstone, shale, cherty ash, mass flow breccia. These units with black shale indicated (C13a).
EASTERN QUARTZ-PHYRIC SEQUENCE	C14	Mixed sequence of bedded volcaniclastic sandstone (usually quartz-feldspar bearing), siltstone, mudstone, quartz-feldspar phyric lava and lava breccia, minor feldspar phyric lava, quartz-feldspar biotite porphyry (mainly intrusives) and minor andesitic-dolitic lava and intrusives.
	C15	Quartz-feldspar-biotite porphyry - mainly intrusive but may be partly extrusive.
	C16	Mainly quartz-feldspar f. biotite-phyric lava.
	C17	Interbedded volcaniclastic sandstone, siltstone, mudstone, mass flow breccia.
YOLAND RIVER SEQUENCE	C18	Feldspar f. quartz-phyric lava.
	C19	Mainly feldspar f. quartz-phyric andesitic-dolitic lava.
	C20	Feldspar-hornblende-phyric andesitic lava and/or intrusives.
	C21	Feldspar-syriacite-hornblende-phyric andesitic lava and/or intrusives.
CAMBRIAN INTRUSIVE ROCKS	C22	Coarse-grained equigranular pink to white granite with minor microgranite (Darwin Granite).
	C23	Quartz-feldspar-biotite porphyry.
	C24	Feldspar-quartz-Tyriacite porphyry.
	C25	Feldspar-syriacite-hornblende porphyry.
ALTERATION - MINERALISATION	A1	Patchy alteration (mainly K-feldspar and disseminated chlorite) mainly in lavas of Central Volcanic Complex, associated with strong pink colouration.
	A2	Moderate alteration.
	A3	Intense alteration, usually associated with veining and/or mineralisation. Pore indicated (p = 1).
	A4	Zone of oxidised, partially brecciated rock with irregular veins of hematite and red Jasper developed beneath Owen Conglomerate - probable palaeo-regolith.
VEINING	V1	Contact metamorphism associated with granite intrusion - mostly quartz-sericite schists, rare gneiss crystallisation of country rock with associated hematite-magnetite veining.
	V2	Barite vein.
	V3	Quartz vein.
	V4	Prospect or abandoned mine - bedrock.
OTHER FEATURES	F1	Major road.
	F2	Minor road and 4-wheel drive track.
	F3	Bullfrogs track.
	F4	Walking track.
SYMBOLS	S1	Exploration gridline.
	S2	Helipad hut.
	S3	Minor field with major: anthracite, syriacite, unspinel.
	S4	Strike and dip of bedding - facing known, facing unknown, overturned, vertical with facing.



**ALTERATION - MINERALISATION**  
Diagrams indicate areas of alteration of igneous rocks. ch = chlorite, ser = sericite, hem = hematite, mag = magnetite, pyr = pyrite, qtz = quartz, tour = tourmaline, cpy = chalcopyrite.

**VEINING**  
Diagrams indicate types of veins and their characteristics.

**OTHER FEATURES**  
Diagrams indicate symbols for roads, tracks, and exploration gridlines.

**RESPONSIBILITY DIAGRAM**

- 1: 1:10,000 scale mapping by K. Corbett with some photo interpretation and some additional information from Calver et al. 1987 (level 1:50,000 sheet).
- 2: 1:10,000 scale mapping by J. Pemberton with some photo interpretation and some additional information from Calver et al. 1987.
- 3: 1:10,000 scale mapping by M. Vicary with some photo interpretation and some additional information from Calver et al. 1987.
- 4: 1:10,000 scale mapping by K. Corbett, J. Pemberton, M. Vicary with some additional readings from Calver et al. 1987.
- 5: Mapping by R.D. Reid, B.Sc. Hons., supervised by K. Corbett.
- 6: From Calver et al. 1987 (particularly C.A. Calver in Garfield River Mt. Strahan area and E.B. Sorensen in Lake Burbury area with some additional or photo interpretation).
- 7: Additional information in this area from: Patlock, R. 1989. Progress Report 12 months to July 1989. L.I. 9044. Livelihood, Tasmania. Cyprus Gold Aust. Corp. - Mineralogy Memo 4. LTR 89/0328.
- 8: Additional information in this area from: Mathison, I.J. and Gardner, D. 1987. E.L. EBS Jukes-Darwin Report on exploration activity - L.I. 87/2708.

Base map redrawn from 1:25,000 maps supplied by the Department of Environment and Planning. Geological map produced by the Cartographic Branch of the Geological Survey, Department of Mines, Tasmania. Cartography by C.A. Marsh and P.D. Rowland. K.D. Corbett, B.Sc.(Hons.), Ph.D., J. Pemberton, B.Sc.(Hons.), M.Sc., M.J. Vicary, B.Sc.(Hons.). Mt. Read Project mapping. G. McP. Dumas, B.Sc.(Hons.), Ph.D., Supervising Geologist, Geology Section, Department of Mines. Compiled under the direction of M.B. Hodgson, Deputy Secretary of the Department of Mines. Published 1983. Issued under the authority of the Minister for Mines. CROWN COPYRIGHT RESERVED.

**LOCATION MAP**