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J of M <i>[Signature]</i>	A.O. /	C.G. /	E.O.	D.S.M.E. /
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UNION CORPORATION (AUSTRALIA) PTY. LIMITED. N.J.W. MARCH, 1982

E.L. 21/80

**OPEN FILE**

FINAL REPORT

UNION CORPORATION (AUSTRALIA) PTY. LIMITED, N.J.W. MARCH, 1982E.L. 21/80FINAL REPORTA. ATTACHED

- Appendix 1 - Table 1
- Plan No. 1 - Scale 1:50,000

B. INTRODUCTION AND WORK CARRIED OUT

The exploration licence area was considered prospective for mainly tin-tungsten mineralisation in veins and sub-horizontal sheets in granites and as 'stockworks' deposits in Mathinna Bed sediments. A stream sediment programme indicated numerous anomalies in respect of tin, tungsten, molybdenum, copper, lead and zinc.

Work carried out since Preliminary Report No. 6 of December, 1981 involved principally geological reconnaissance follow-up of stream sediment anomalies scattered throughout the E.L. area. The results are discussed below.

C. RESULTS

Analyses of samples that may be related to stream anomalies are shown in Table 1, Appendix 1 and on Plan No. 1.

In general tin anomalies appear to be related to narrow quartz-greisen veins e.g. UCT 1887 of 0.24 per cent tin, and Tertiary sediments, particularly basal conglomerates (see Preliminary Report No. 4, June, 1981).

The probable sources of some of the anomalies that were investigated are indicated in the table below.

<u>Anomaly No</u>	<u>Area</u>	<u>Character</u>	<u>Probable Source - Rock Sample No.</u>
501	North Scottsdale	Moderate Sn in sediments, high Cu, moderate Zn	Tertiary sediments, basalts - UCT 1886
632	Walduck Hill	Moderate Sn in sediments at granite/sediment contact	Tertiary sediments - no rock samples
663	Legerwood	High Zn	Tertiary basalts - UCT 1859 and 1860
703	Mt. Heathorn	Moderate W,Cu,Pb and Zn	W-Cu-Mo-quartz veins at Mount Maurice?
770	Star of Peace	Moderate tin in sediments, moderate W and Cu	Star of Peace Sn prospect
552	Weldborough	High W	Reported narrow W- quartz-veins that pass under Tertiary basalt

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D. CONCLUSIONS

1. Greisenisation has occurred in some areas but on a very limited scale.
2. The follow-up investigations provide no encouragement for further exploration.

E. RECOMMENDATION

No further work should be carried out.



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N.J. WINNALL

APPENDIX 1

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TABLE 1

SAMPLE ANALYSES - SEE PLAN 1 FOR LOCALITIES

Sample No UCT Prefix	Sn	W	Mo	Cu	Pb	Zn	DESCRIPTION	LOCALITY
	(analyses in ppm unless otherwise stated)							
1849	10	20	<4	2	20	35	Granite/adamellite, coarse grained.	North Scottsdale, east of
1850	10	20	<4	<2	15	10	" " ,fine grained.	" " "
1851	5	40	<4	<2	10	15	Pegmatite vein, tourmaline.	" " "
1852	5	20	<4	<2	15	35	Biotite granite/adamellite, coarse grained.	" " "
1853	<5	20	<4	2	20	20	Biotite granite/adamellite, coarse grained.	Walduck Hill, east of
1854	5	10	<4	10	30	70	Siltstone, hornfelsed with muscovite.	" " "
1855	<5	20	<4	2	20	35	Biotite granite/adamellite, coarse grained.	" " "
1856	5	20	<4	2	20	10	Aplite-pegmatite with biotite.	Legerwood, west of
1857	<5	20	<4	<2	15	30	Biotite adamellite, coarse grained.	" "
1858	<5	20	<4	2	10	15	Aplite and pegmatite.	" "
1859	<5	<10	<4	45	25	110	Basalt.	" "
1860	<5	<10	<4	45	50	105	Basalt.	" "
1861	10	10	<4	5	20	30	Granite/adamellite, biotite +muscovite.	Mount Heathorn
1862	<5	10	<4	5	25	35	Biotite adamellite, coarse grained.	"
1863	5	10	<4	<2	30	70	Biotite adamellite, coarse grained.	"
1870	35	30	<4	<2	15	20	Aplite,+biotite, dyke, 15 metres wide.	Weldborough, west of
1871	105	40	<4	5	10	10	Quartz greisen vein, 5 cm. wide.	" "
1872	35	40	<4	2	10	20	Aplite	" "
1873	35	20	<4	5	40	15	Aplite	" "
1875	<5	20	<4	5	50	10	Siltstone and vein quartz.	Warrentina, south of
1876	<5	30	<4	2	40	5	Vein quartz, float	" "

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Sample No UCT Prefix	Sn	W	Mo	Cu	Pb	Zn	DESCRIPTION	LOCALITY
1877	<5	40	<4	2	5	<5	Vein quartz, ? tourmaline, float	Warrentina, south of
1878	<5	30	<4	5	15	5	Vein quartz, + Fe oxides, float	" "
1879	<5	40	<4	5	10	20	Vein quartz, + Fe oxides, float	" "
1880	<5	40	<4	2	10	5	Vein quartz, float	" "
1881	<5	30	<4	5	20	10	Vein quartz, 'stockworks' in siltstone	" "
1882	<5	20	<4	5	10	<5	Vein quartz, float	" "
1883	<5	40	<4	5	10	5	" " , + Fe oxides	" "
1884	20	30	<4	5	10	40	Vein quartz-pegmatite- biotite granite	Weldborough, west of
1885	5	20	<4	20	20	65	Hornblende granodiorite- vein quartz	" "
1886	? 10	<10	<4	55	30	170	Basalt	North Scottsdale, east of
1887	0.24%	30	<4	35	10	80	Greisen vein, 2cm wide, sub outcrop	Weldborough, west of
1888	710	30	<4	140	10	90	Greisen float, + Fe oxides	" "
1889	20	20	<4	125	45	110	Kaolinised granite/ adamellite, 1 metre sample	" "
1890	5	20	<4	10	10	10	Aplite, 5cm wide vein	" "
1891	15	40	<4	20	5	5	Vein quartz, + Fe oxides, float	" "
1892	0.23%	90	<4	85	10	90	Greisen, float	" "
1893	? 20	<10	<4	35	25	55	Basalt, float	" "
1894	15	20	<4	5	20	60	Biotite granite/ adamellite, coarse grained	" , south east of
1895	<5	30	<4	5	15	40	Quartz-feldspar porphyry	" "
1896	15	30	<4	15	20	30	Aplite-minor pegmatite	" "
1897	10	30	<4	10	15	10	Aplite vein, 3cm wide	" "
1898	10	20	<4	<2	20	55	Biotite granite/adamellite, porphyritic	" "
1899	5	20	<4	10	20	25	Vein quartz, + muscovite	Star of Peace, south of
1941	<5	10	<4	5	20	20	Vein quartz, 0.5cm wide	" "
1942	<5	30	<4	2	10	5	Vein quartz, 1cm wide in siltstone	" "
1943	<5	10	<4	2	20	15	Vein quartz, 1 and 2cm wide veins	" "

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Sample No UCT Prefix	Sn	W	Mo	Cu	Pb	Zn	DESCRIPTION	LOCALITY
1944	<5	20	<4	5	15	30	Vein quartz, 2cm wide in siltstone	Star of Peace, south of
1945	<5	20	<4	5	15	15	Vein quartz, + Fe oxides?	" "
1946	<5	40	<4	5	20	50	Vein quartz, 10cm wide	" "
1947	10	20	<4	5	20	10	Aplite + tourmaline, float	Weldborough, west of
1948	40	40	<4	5	50	40	Quartz greisen vein, 5cm wide	" "
1958	<5	30	<4	10	30	15	Vein quartz as 'stock-works' in siltstone	Hogan's Track Goldfield
1959	<5	30	<4	10	20	70	Vein quartz, + Fe oxides	" " "
1960	<5	30	<4	5	10	20	Vein quartz, + Fe oxides	" " "
1961	<5	30	<4	230	30	210	Vein quartz, gossanous, float	" " "
1962	<5	30	<4	10	20	25	Vein quartz, + Fe oxides	" " "
1963	<5	20	<4	10	25	45	Vein quartz, + Fe oxides	" " "
1964	<5	30	<4	10	20	15	Vein quartz, 2cm wide, ?Fe oxides	" " "
1965	<5	20	<4	10	35	50	Vein quartz, + Fe oxides	" " "
1966	<5	30	<4	5	15	5	Vein quartz, 3cm wide, pyrite blebs	" " "
1967	5	20	<4	2	10	15	Vein quartz, + Fe oxides	" " "
1968	5	20	<4	2	25	65	Biotite granodiorite, medium grained, foliated	Pyengana, north of
1969	15	40	<4	5	30	10	Muscovite aplite, float	" "
1970	<5	20	<4	10	35	70	Granodiorite at contact with siltstone	" "
1971	5	20	<4	2	25	50	Biotite granodiorite	" "
1972	5	10	<4	15	35	70	Biotite granite/adamellite, fine grained, float	" "
1973	10	20	<4	2	20	55	Porphyritic biotite granodiorite	" "
1974	15	10	<4	2	20	45	Biotite granite/adamellite, medium grained	" "
1975	15	10	<4	2	45	15	Biotite granite/adamellite, silicified	" "
1976	10	10	<4	2	20	15	Aplite	" "
1977	10	20	<4	2	25	30	Biotite granite/adamellite, fine grained	" "
1978	<5	10	<4	2	20	5	Pegmatite vein, 10cm wide	" , west of
1979	<5	20	<4	2	10	2	Pegmatite float, ? Fe oxides	" "

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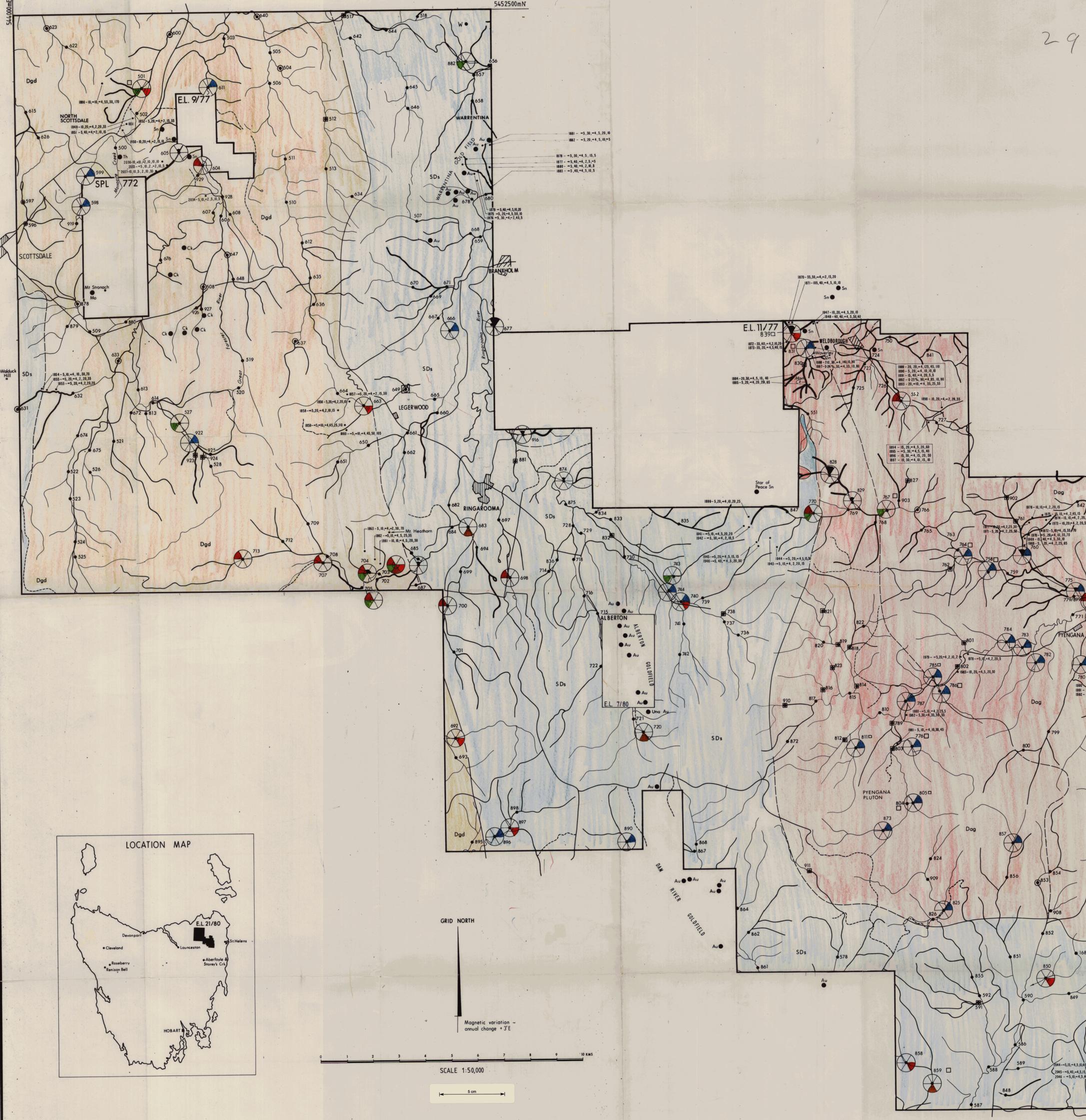
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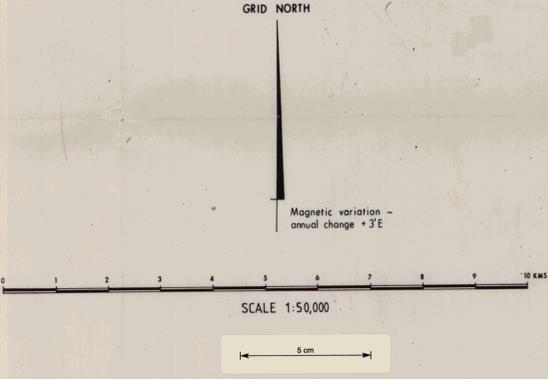
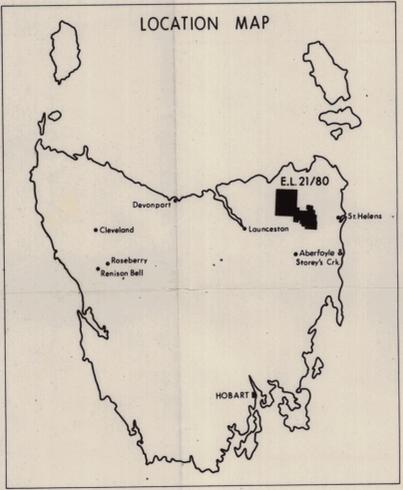
Sample No UCT Prefix	Sn	W	Mo	Cu	Pb	Zn	DESCRIPTION	LOCALITY
1980	<5	10	<4	2	25	5	Aplite	Pyengana, west of
1981	5	10	<4	10	30	45	Hornblende biotite granodiorite	" "
1982	5	30	<4	35	30	55	Hornblende biotite granodiorite	" "
1983	10	20	<4	5	20	30	Biotite granodiorite	" "
1984	25	20	<4	2	15	10	Aplite, + tourmaline	" , south of
1985	<5	10	<4	5	20	50	Biotite granodiorite, coarse grained	" "
1986	20	20	<4	5	15	15	Aplite-pegmatite, +tourmaline	" "
1987	15	10	<4	2	20	5	Aplite, + tourmaline	" "
1988	40	20	<4	5	45	15	Pegmatite-aplite, + tourmaline	" "
1989	40	20	<4	5	35	10	Pegmatite-aplite, + tourmaline	" "
1990	15	10	<4	5	25	65	Biotite granodiorite, float	" "
1991	25	30	<4	65	40	25	Granite/adamellite, + Fe oxides	" "
1992	15	510	<4	25	30	50	Biotite granite, coarse grained	" "
1993	10	20	<4	10	25	55	Biotite granite, coarse grained	" "
1994	<5	10	<4	5	25	55	Biotite granite, medium grained	" "
1995	10	30	<4	5	25	20	Vein quartz, vuggy	" "
1996	<5	20	<4	2	15	40	" " , +Fe oxides	Hogan's Track Goldfield
1997	5	30	<4	10	20	30	" " , "	" " "
1998	<5	20	<4	2	10	5	" " , 'stockworks' in siltstone	" " "
1999	<5	20	<4	2	15	10	Vein quartz, 'stockworks' in siltstone	" " "

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Sample No UCT Prefix	Sn	W	Mo	Cu	Pb	Zn	DESCRIPTION	LOCALITY
2034	5	10	<2	5	10	5	Aplite	North Scottsdale, east of
2035	<5	10	2	<2	10	5	Aplite vein	" " "
2036	10	<10	<2	10	10	10	Aplite vein	" " "
2037	10	10	5	2	10	30	Granite	" " "
2044	<5	15	<4	5	10	40	Vein quartz, 'stockworks' +Fe oxides	Hogan's Track Goldfield
2045	<5	40	<4	5	15	25	Vein quartz, +Fe oxides	" " "
2046	<5	10	<4	5	40	15	Quartz-tourmaline in siltstone, float	" " "
2047	<5	30	<4	5	10	20	Vein quartz, +Fe oxides float	" " "
2048	<5	10	<4	5	25	20	Vein quartz, +Fe oxides	" " "
2049	<5	20	<4	5	15	5	Vein quartz, +Fe oxides	" " "
2050	<5	20	<4	5	15	15	Vein quartz, in siltstone, + muscovite	" " "
2051	<5	10	<4	2	20	5	Pebble conglomerate	" " "

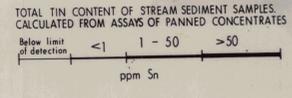


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REFERENCE

- 5,10,2,5,30,70 - Rock sample location with Sn, W, Mo, Cu, Pb, Zn analysis as shown in ppm unless otherwise stated
- Mineral occurrence - Sn (tin), Au (gold), W (wolframite &/or scheelite), Mo (molybdenum), Cu (copper), Th (monazite), Ck (kaolin)
- 894 - Stream sediment sample location and number
- Road
- - - Track
- Exploration licence boundary
- ⊠ - Sample location; magnetite in panned concentrate
- ⊙ - Sample location; fluorescent minerals (probably zircon) in panned concentrate



MULTI-ELEMENT PLOT, MINUS 80 MESH FRACTION

THRESHOLD VALUES

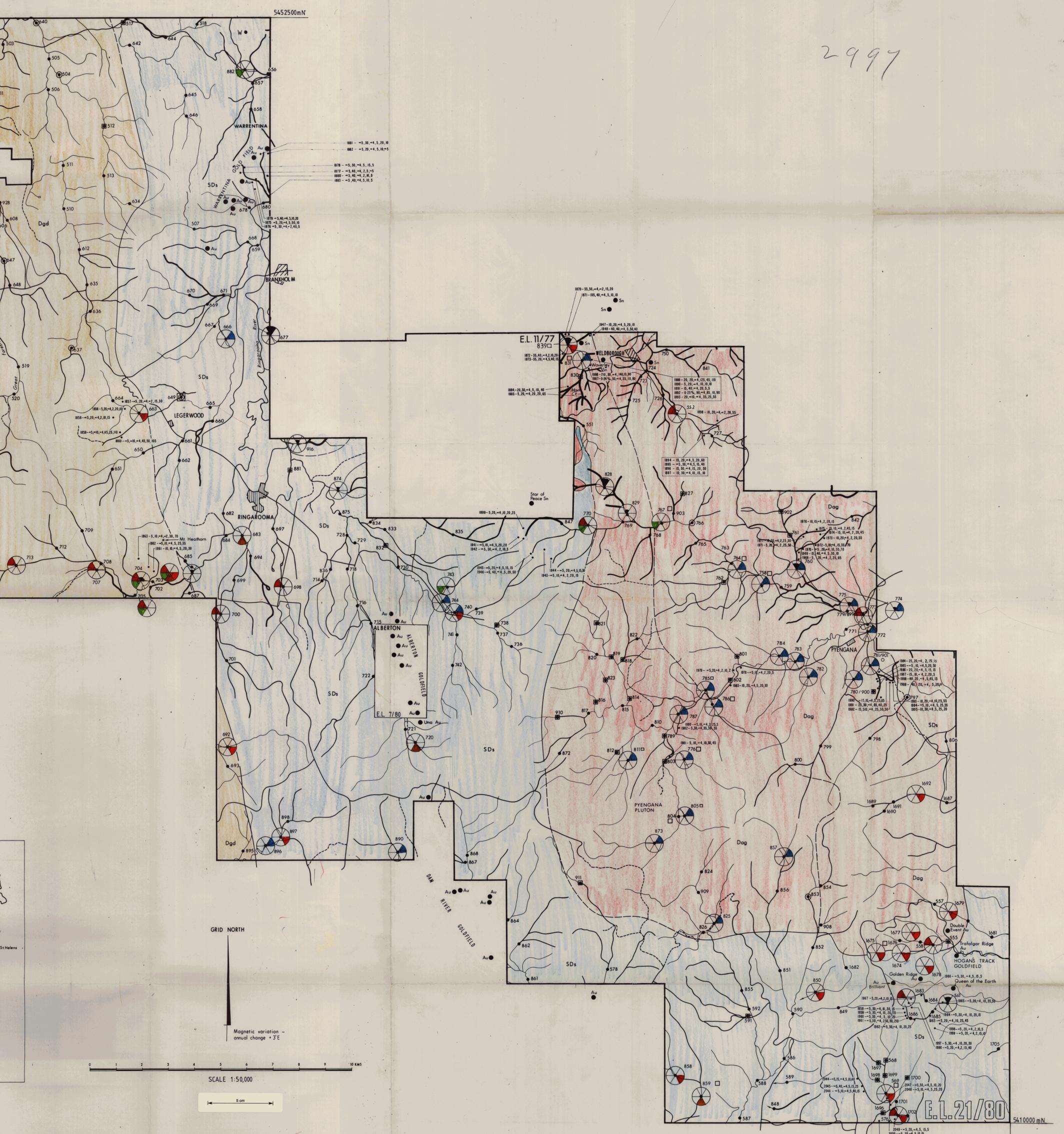
	MATHINNA BEDS	GRANODIORITE	ADAMELLITE/ALKALI GRANITE
Sn	210	270	2975
W	20	25	104
Mo	10	10	9
Cu	39	26	115
Pb	87	62	57
Zn	135	108	162

MAJOR ROCK GROUPS FOR PURPOSE OF STREAM SEDIMENT INTERPRETATION

- SDs MATHINNA BEDS (quartz sandstone, siltstone, quartzwacke, mudstone, minor schist)
- Dgd GRANODIORITE (dominantly granodiorite with minor adamellite) - SCOTTSDALE BATHOLITH
- Dag ADAMELLITE & ALKALI GRANITE (dominantly granite/adamellite with minor granodiorite) - BLUE TIER BATHOLITH
- Geological boundary - approximate
- - - Geological boundary - inferred

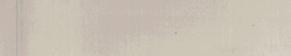
NOTE: Geology after - Brown et al (1977)  
- Groves et al (1977)  
- Mc Clenaghan et al (1974)

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MULTI-ELEMENT PLOT, MINUS 80 MESH FRACTION

TOTAL TIN CONTENT OF STREAM SEDIMENT SAMPLES CALCULATED FROM ASSAYS OF PANNED CONCENTRATES



	THRESHOLD VALUES	MATHINNA BEDS	GRANDIORITE	ADAMELITE/ALKALI GRANITE
Sn	210	270	2975	
W	20	25	104	
Mo	10	10	9	
Cu	39	26	115	
Pb	87	62	57	
Zn	135	108	162	

MAJOR ROCK GROUPS FOR PURPOSE OF STREAM SEDIMENT INTERPRETATION

- SDs** MATHINNA BEDS (quartz sandstone, siltstone, quartzwacke, mudstone, minor schist)
- Dgd** GRANDIORITE (dominantly granodiorite with minor adamellite) - SCOTTS DALE BATHOLITH
- Dag** ADAMELITE & ALKALI GRANITE (dominantly granite/adamellite with minor granodiorite) - BLUE TIER BATHOLITH
- Geological boundary - approximate
- Geological boundary - inferred

NOTE: Geology after - Brown et al (1977)  
- Graves et al (1977)  
- McClenaghan et al (1974)

UNION CORPORATION (AUSTRALIA) PTY LIMITED  
EXPLORATION LICENCE 21/80 - TASMANIA

**STREAM SEDIMENT AND ROCK GEOCHEMISTRY**  
TIN, TUNGSTEN, MOLYBDENUM, COPPER, LEAD AND ZINC

N.J.W. PLAN No. 1 MARCH 1982

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