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Prospect No. 606

CSR LIMITED - ALUMINIUM, MINERALS AND CHEMICALS DIVISION

EXPLORATION AND DEVELOPMENT GROUP

RELINQUISHMENT REPORT

MT. MAURICE, E.L. 43/82

NORTHEAST TASMANIA

EMR 62/84

HOBART

JULY 1984

P.D. ELLIS

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KEYWORDS

TASMANIA	EXPLORATION
TIN	MINERALISATION
COPPER	GREISEN
ARSENIC	STREAM SEDIMENT
MOLYBDENUM	PANNED CONCENTRATES
GEOLOGY	FERRUGINOUS GRAVELS
E.L. 43/82	K554

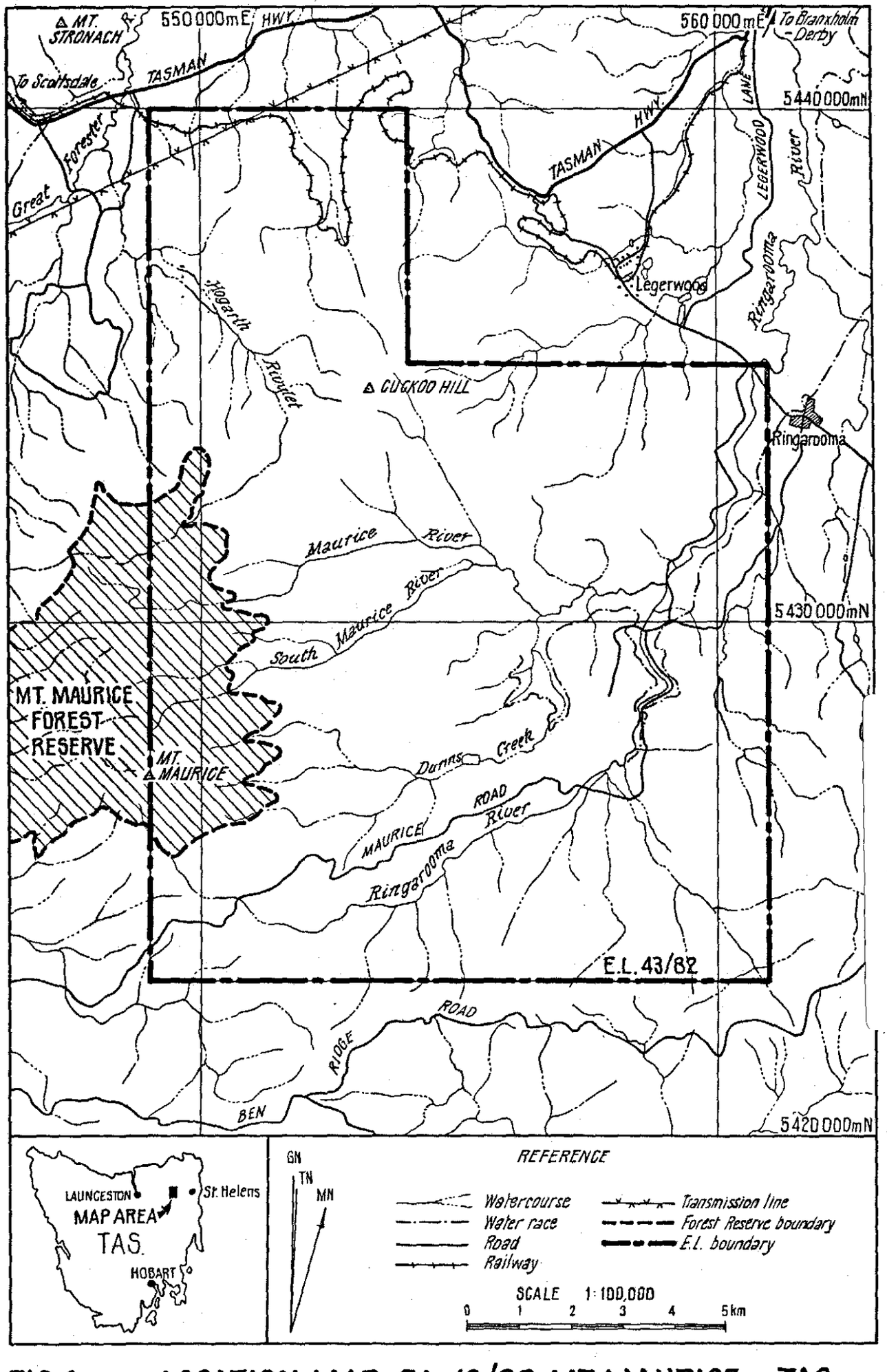

FIG.1. LOCATION MAP E.L.43/82 MT. MAURICE TAS.

1. INTRODUCTION

Exploration Licence 43/82 (E.L. 43/82) was granted to CSR Limited on 15th August, 1983. The Licence covers an area of 169 km^2 situated immediately west of Ringarooma and southeast of Scottsdale in northeastern Tasmania (Figure 1). The area extends west from Ringarooma to Mt. Maurice and south from Tonganah to Ben Ridge Road.

The area was considered to have potential for disseminated and/or lode tin/copper within the granite mass. Copper veining is known in one area while copper, tungsten, molybdenum and zinc were indicated in other zones.

Although tin and copper mineralisation has been known in the area since 1876, very little exploration to locate economic deposits has been undertaken. CSR commenced evaluation and exploration in 1983.

This report summarises the investigations completed in the twelve months to July, 1984.

2. SUMMARY

The exploration of E.L. 43/82 commenced in August, 1983 when the Licence was granted to CSR Limited.

Past exploration data were reviewed, compiled and ground checked. Regional drainage sampling and geological mapping of the Licence was completed. A large greisen was located, but only minor geochemical anomalies were defined.

No further work is recommended.

3. GENERAL INFORMATION

The eastern boundary of E.L. 43/82 cuts the western boundary of the Ringarooma town reserve in the Land District of Dorset in northeast Tasmania (Figure 1). It extends west from Ringarooma for 12 km to Mt. Maurice and south from Tonganah for 17 km to the Ben Ridge Road.

Although Ringarooma is connected by sealed roads to the Tasman Highway, only variable grade dirt/gravel roads exist within the Licence. This network of minor public, forestry and farm roads and tracks provides reasonable vehicle access to most parts of the Licence. Forestry grids give foot access to more heavily forested areas.

About 90% of the Licence is underlain by granitic rocks of the Devonian Scottsdale Batholith. These adamellites and granites support thick, cool, temperate rainforests (with or without dense underbrush) on the steeper slopes, and open grasslands in higher, more exposed, flat areas. The Forestry Commission has planted pine forests on the slopes north of Cuckoo Hill. Most of the remaining 10% of the Licence is underlain by metamorphosed Cambrian to Silurian sediments of the Mathinna Beds and extrusions of Tertiary basalts. These areas are generally along the Ringarooma River flats and are heavily cultivated. A small area of Permian sediments, capped by Jurassic dolerite, occurs on Mt. Maurice. These rocks support similar vegetation to the granitic rocks, although it is generally more stunted due to the altitude.

No - top of Mt Maurice is Permian. JLE

E.L. 43/82 covers portions of two drainage basins. The northern part of the Licence is drained by the Great Forester River while most of the remainder is drained by the northeasterly-flowing Ringarooma River system.

Minor headwater tributaries of the St. Patricks/Esk River system drain the southeast corner of the Licence. These rivers and streams are deeply incised into the granites and Mathinna Beds to form a hilly to very steep topography ranging in elevations from 250 to 1200 m. Elevations of 400 to 600 m are common. Flat areas occur as high-level erosion surfaces around Mt. Maurice (elevation 1120 m) and as low-level alluvial plains along the Ringarooma River (elevation 240 m).

5. PREVIOUS EXPLORATION

Gold was discovered at Mangana-Mathinna in 1852 and traced through Alberton, Ringarooma, Branxholm, Warrentinna and Forester to Waterhouse. Tin was discovered in the Blue Tier area at the end of the 19th century. Prospecting for tin and gold led to the discovery of the Mt. Maurice altered granite-hosted copper-tin-quartz veining in 1876. This prospect was worked by shaft and adit until the late 1890's. Mining in the northeast of Tasmania all but ceased in the early 1930's, except for the Pioneer tin mine and the Mathinna gold mine.

Exploration paralleled the mining activity and was dominated by small prospectors until the 1970's. Mines Department geologists visited the Mt. Maurice prospect at the end of the last century, but little other work is recorded until 1970.

Although the area of E.L. 43/82 has been investigated by J.J. O'Shea, the Cox Syndicate, R.B. Mining Pty. Ltd., Stannon Engineering Co. Pty. Ltd., Oceanic Exploration Co. and Union Corporation, very little information has been recorded. The Cox Syndicate showed the Mt. Maurice prospect was a quartz vein (with some chalcopyrite, pyrite, bornite, chalcocite and molybdenite) in a greisenised orthoclase-rich muscovite granite. This greisenised rock is in a dominantly biotite granite. Up to 80 soil samples and 4 drill holes were supposed to have been completed, but no information was recorded.

Oceanic Exploration produced an elementary geological map which showed a "tin granite" extending southwards from the Mt. Stronarch molybdenum anomalous zone to the Ben Ridge Road area. This zone contained several Sn anomalous stream sediment samples (analysed by semi-quantitative spectrographic analyses for Sn, W, Mo, Be, V, Cu, Sb, Zn, As and Au). No follow-up work was reported.

Union Corporation held part of the E.L. 43/82 area as E.L. 21/80. Of 42 stream sediment samples from this area, 11 had anomalous values (particularly Sn to 380 ppm). Most anomalous values were from the Cuckoo Hill-Maurice River area. Only minor rock sampling was undertaken as follow-up, but with poor results.

Apart from minor mention of the Mt. Maurice prospect in the 1870's to 1890's, no Government geological work was completed in the area until the 1977 Ringaroom 1:50,000 sheet mapping. This recent mapping showed several zones of alkali feldspar granite intrusions in a dominantly biotite adamellite mass. The "tin granite" of Oceanic Exploration was shown to be a medium- to coarse-grained, sparsely porphyritic, white biotite adamellite.

A detailed compilation of this previous work is contained in Ellis (1983).

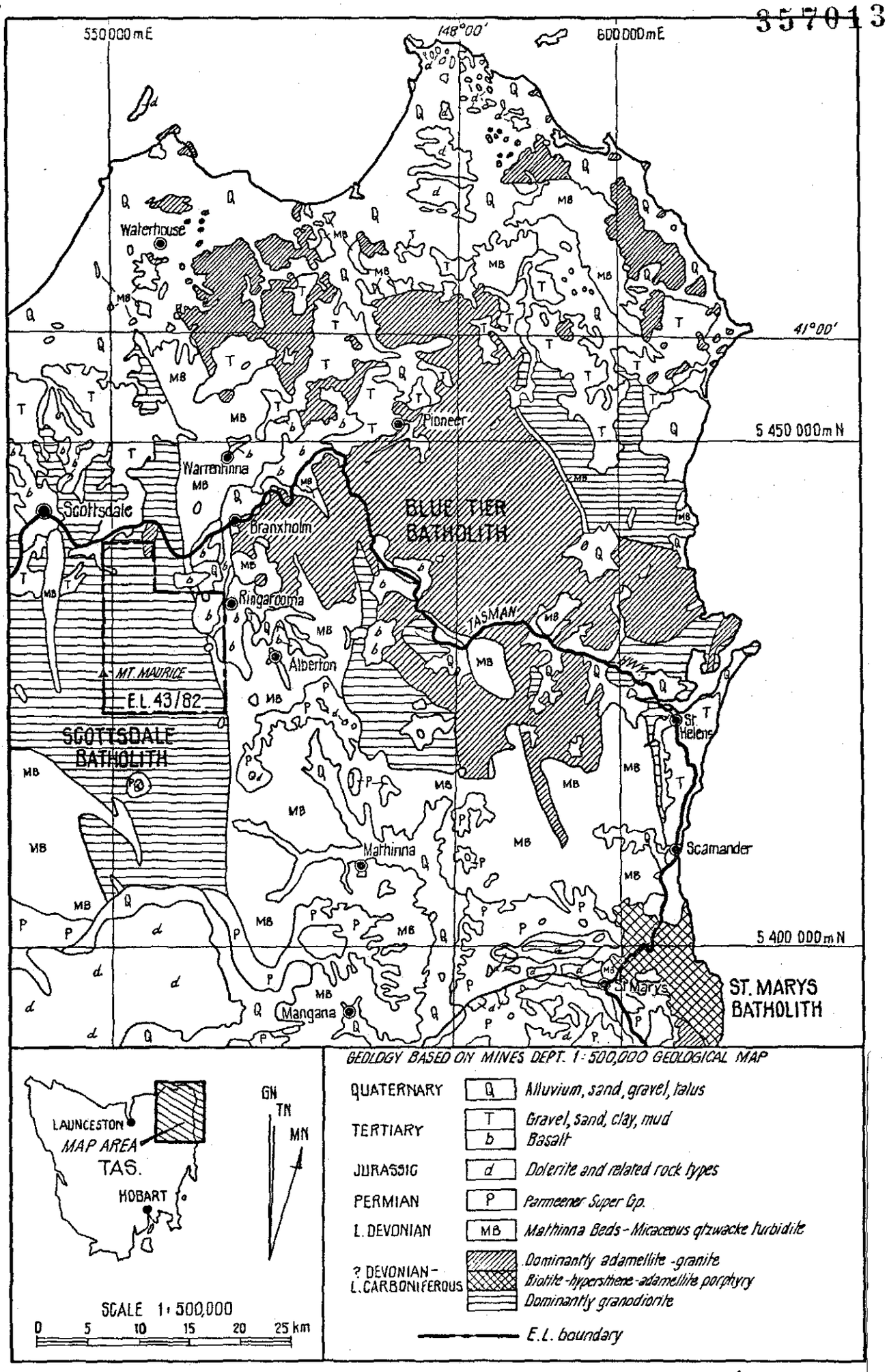

FIG. 2. GEOLOGY OF NORTHEASTERN TASMANIA - E.L.43/82 TAS.

5. GEOLOGY

The oldest rocks in the area (Figure 2) are the Cambrian to Lower Devonian rocks of the Mathinna Beds. This sequence of alternating beds of quartzwacke, poorly sorted siltstones and mudstones underlie the 15 km^2 area in the east of the Licence near Ringarooma and Legerwood.

These Mathinna Beds sediments have been intruded by granitic rocks of the Devonian to Lower Carboniferous Scottsdale Batholith which underlie most of the remaining 90% of the Licence. The initial injection phase of this multiphase intrusion was (in this area) a coarse-grained biotite adamellite, followed by a medium- to coarse-grained, sparsely porphyritic, white biotite adamellite. Late stage intrusions included the injection of a large mass of ferromanganese-poor micro-granite with greisenisation over large areas (particularly in the Mt. Maurice Road area). This greisenisation has associated tin, copper and molybdenum mineralisation, both with the greisen veins (Mt. Maurice prospect) and the greisen mass (Mt. Maurice Road). Other minor late stage intrusions include aplite, fine-grained adamellite/granite and alkali feldspar granite, generally as narrow dykes. In the Blue Tier Batholith (to the east) the alkali feldspar granite intrusions are associated with the main tin mineralisation at the Anchor and Bell's Hill mines.

Minor outcrops of Permian siltstones and Jurassic dolerite are found near the peak of Mt. Maurice. Extremities of the Tertiary basalt flows of the Ringarooma area overlie the Mathinna Beds and minor Tertiary gravels in the east of the Licence.

6. CURRENT EXPLORATION

6.1 Techniques

E.L. 43/82 was acquired to cover the area of Sn/Cu/Mo mineralisation in the Mt. Maurice area and an area of indicated "tin granite" south of the Mt. Stronarch zone of Mo mineralisation. After pegging, all previous exploration data on the area were reviewed and compiled.

After the Licence was granted, an airphotograph geological interpretation of the area (with ground checking) was undertaken to define the extent of the Mt. Maurice mineralisation and to outline areas of possible potential for further detailed work. Further geological mapping of the area was undertaken during a regional drainage sampling programme. Stream sediment samples were taken from all drainages within the Licence (DRG No. K554-16) with panned concentrate and ferruginous gravel samples being taken from the major drainages. Some rock samples (from the Mt. Maurice prospect and the greisenous zones on the Mt. Maurice Road) were also taken for analysis. Other rock samples were taken for reference. All samples were analysed for Sn, W, As, Mo, Cu, Pb, Zn, Ni and Bi, with panned concentrate and ferruginous gravels also being analysed for Au, Ag and Sb. The rock samples were also analysed for Co, Ag and some for Ba, Ga, Nb, Rb, Sr, Th and whole rock analysis.

6.2 Results

The review of all previous exploration data from the area (Ellis, 1983) showed very little work had been completed. Sn/Cu/Mo mineralisation was known from the Mt. Maurice area (head of the South Maurice River), but very little geological work had been completed. Also, preliminary drainage sampling of the northeast portion of the area showed anomalous Sn, Cu, Mo and W values.

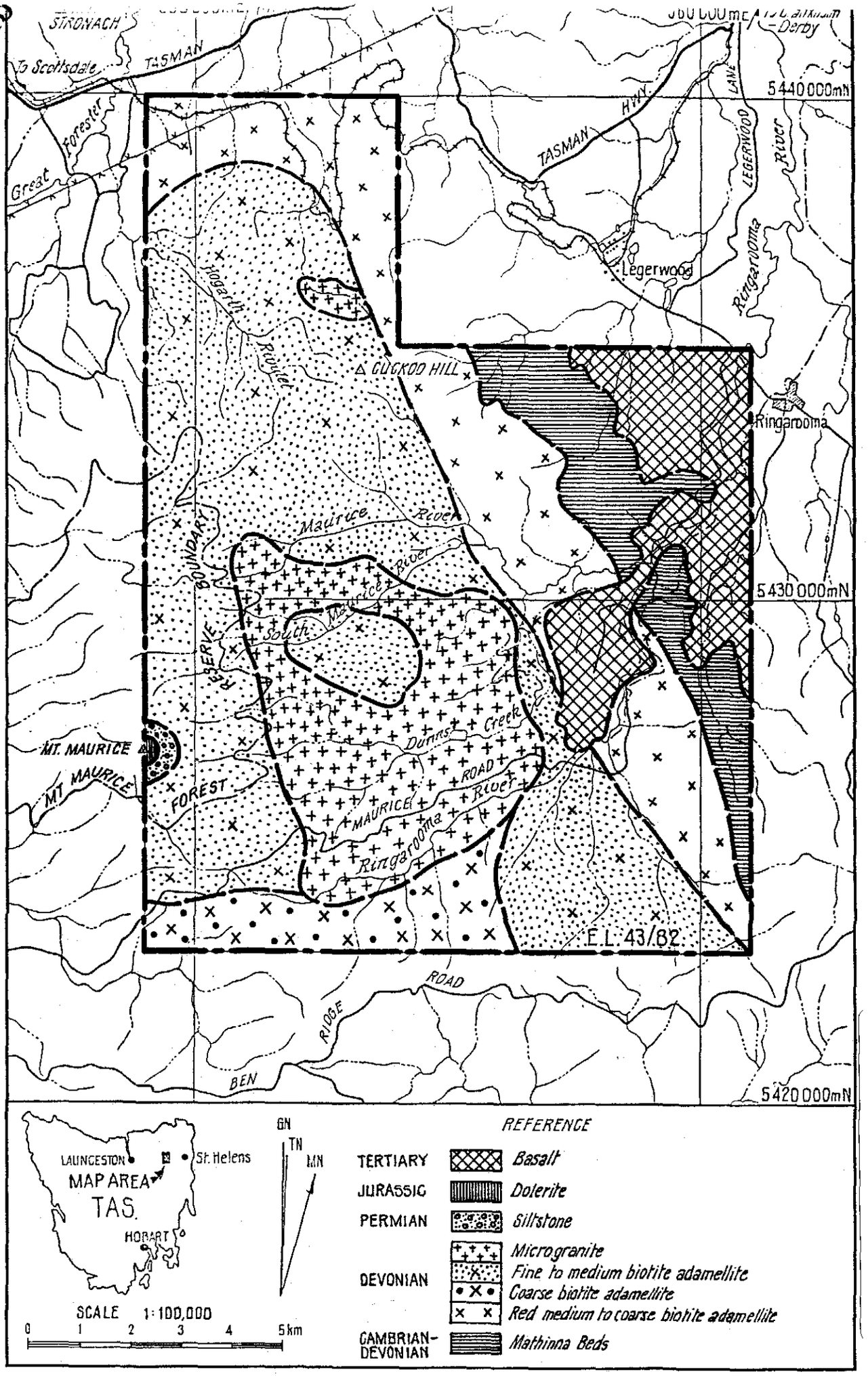

FIG. 3. GEOLOGICAL INTERPRETATION E.L.43/82 MT. MAURICE TAS.

The airphotograph geological interpretation (DRG No. K554-15) showed the distribution of the main rock types within the Licence. A large area of ferromanganese-poor microgranite with some areas of greisenisation was outlined. Several areas of anomalous features were ground checked and found to be more siliceous granitic phases. An example of such an area is a zone 20 m to the north of the Mt. Maurice Road within the microgranite at its western contact with the biotite granite.

The ground mapping (DRG No. K554-17) and its interpretation (Figure 3) showed fairly good agreement with the photogeological interpretation. Most of the geology and its interpretation has been discussed earlier (Section 5) and will not be discussed further.

Initial drainage sampling (Appendix I) was generally very disappointing. Apart from isolated anomalous Sn (to 230 ppm), Cu (to 270 ppm), Zn (to 135 ppm) and Mo (to 80 ppm) values, there was only one small zone of Cu (to 440 ppm) and Zn (to 270 ppm) anomalies. This zone covered a series of small streams in the headwaters of the Ringarooma River draining from the south of the Licence (Ben Ridge Road area).

An area of anomalous Sn (to 190 ppm), Cu (to 185 ppm) and Zn (to 110 ppm) drainage values in Dunn's Creek tributaries was related to the greisens in the microgranites along Mt. Maurice Road. Rock samples from the greisen zones (Table 1) showed anomalous Sn (to 400 ppm), As (to 60 ppm), Ca (to 720 ppm), Zn (to 190 ppm) and Mo (to 24 ppm). However, there was a marked variation between samples with values ranging from detection limit to the peak anomaly values.

TABLE 2

MT. MAURICE PROSPECT - ROCK ANALYSES

Sample No.	Sn	As	W	Cu	Pb	Zn	Ni	Co	Bi	Ag	...	
A161645*	6	5	25	12	12	46	<4	6	<4	<1	Adamellite	)
A161646*	4	<2	15	<2	8	44	<4	6	<4	<1	Adamellite	) Northwestern
A161647	960	12	65	2900	18	120	<4	<4	320	12	Greisenised vein	) Prospect
A161648	590	9	135	3200	26	80	<4	<4	390	18	Greisenised vein	)
A161649*	14	2	230	460	12	36	<4	14	20	<1	Adamellite	)
A161650	640	20	990	2900	30	75	<4	<4	280	15	Dump mineralisation	)
A161651*	20	2	20	170	16	65	<4	6	<4	<1	Adamellite	)
A161652*	50	2	460	400	34	60	<4	<4	75	10	Adamellite	)
A161653*	12	<2	30	18	8	50	8	8	<4	<1	Adamellite	) Southeast
A161654	230	30	105	110	14	2	<4	<4	1050	23	Veins	) Prospect
A161655	300	6	200	80	14	<2	<4	<4	60	<1	Main trench-south wall alteration	)
A161656	830	6	135	40	14	<2	<4	<4	230	<1	Main trench-southwest wall alteration	)
A161657	7750	90	870	1.40%	34	100	<4	6	890	59	Main trench-central mineralisation	)
A161658	2100	80	260	5100	26	36	<4	<4	1200	35	" " " "	)
A161659	1100	16	540	310	10	12	<4	<4	260	3	" " " "	)

* See Table 3 for trace element analyses and Table 4 for whole rock analyses.

(See Figure 4 for sample locations)

TABLE 1

ANALYSES OF ROCK SAMPLES FROM THE MT. MAURICE ROAD GREISEN

Sample No.	Sn	W	As	Sb	Au	Cu	Pb	Zn	Ni	Bi	Ag	Mo
A119660	400	15	60	8	<0.005	720	40	190	6	6	<1	10
A119661	135	30	<2	<4	<0.005	60	30	30	8	65	<1	10
A119662	210	50	<2	<4	<0.005	130	26	35	8	<4	<1	10
A119663	34	25	<2	4	<0.005	48	160	100	<4	<4	<1	6
A119664	16	<10	2	<4	<0.005	70	80	50	6	8	1	24

(see DRG No. K554-16 for sample locations)

Analyses of rock samples from the Mt. Maurice prospect (Table 2) showed the Sn/Cu mineralisation to be associated with the greisenised granite and the quartz veining rather than the unaltered biotite adamellite. Peak Sn and Cu values for the adamellite were 50 ppm and 460 ppm while the range for the greisenised zone and the quartz veins was 230 to 7750 ppm Sn and 40 ppm to 1.40% Cu. Bismuth and W also showed marked variations. Very little mineralisation occurred outside the altered zone. The known altered zones consisted of 3 quartz veins with greisenised granites over widths of less than 0.5 m. These three zones were about 0.5 m apart and tended to be parallel with a generally east northeast orientation. It is doubtful whether they would have any economic potential.

Trace element analyses of the rocks adjacent to the greisen zones (Table 3) show that these granitic rocks have very little affinity to the tin-bearing rocks at the Bell's Hill Sn prospect. This gives further indications that there is unlikely to be an economic Sn/Cu deposit in the area.

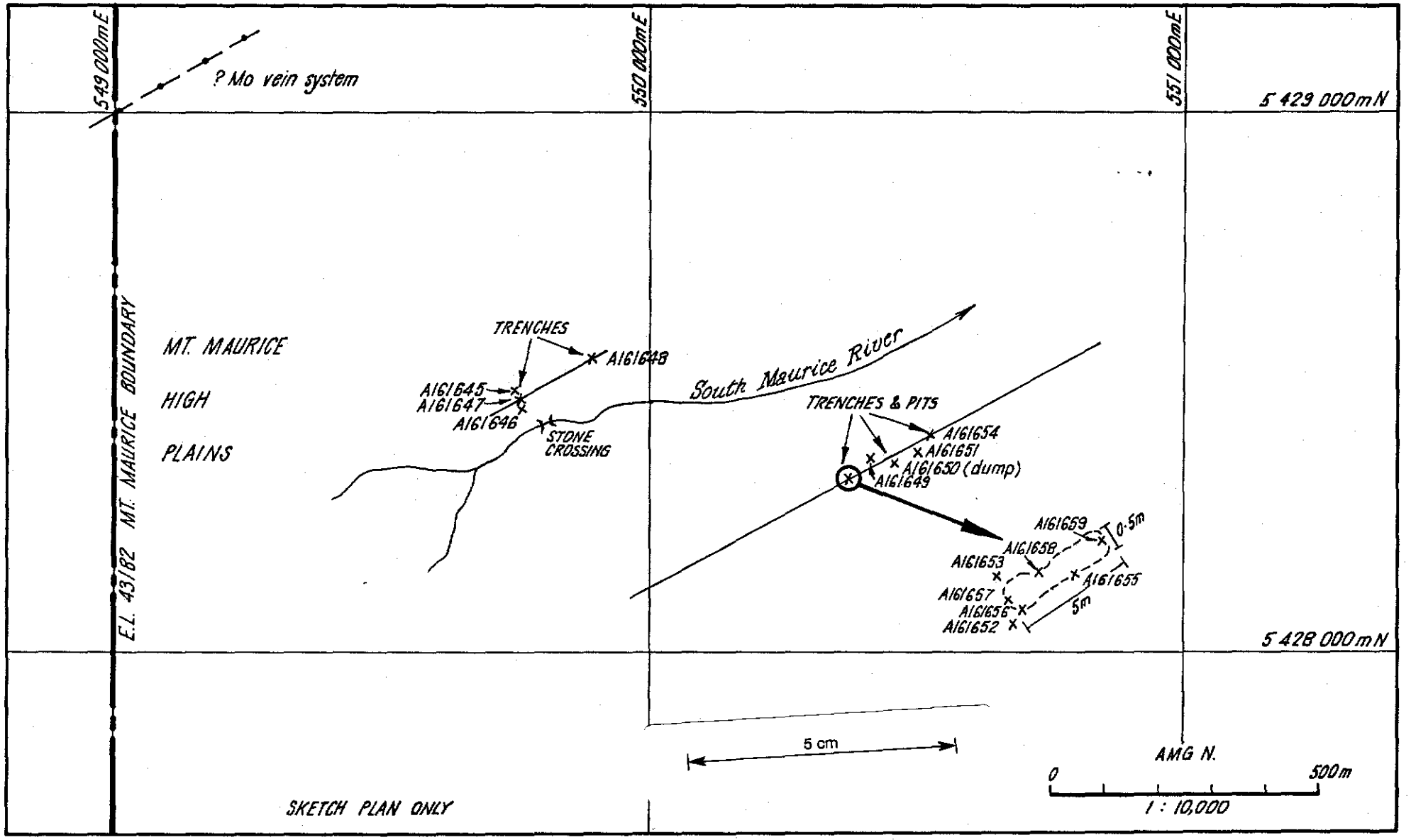

FIG. 4. SAMPLE LOCATIONS MT. MAURICE PROSPECT E.L.43/82 MT. MAURICE TAS.

TABLE 3

MT. MAURICE PROSPECT TRACE ELEMENT ROCK ANALYSES

Sample No.	Ba	Ga	Nb	Rb	Sr	Th
A161645	380	12	14	190	140	20
A161646	400	10	14	190	150	18
A161649	230	12	14	185	22	24
A161651	320	10	14	240	135	18
A161652	320	8	12	250	80	22
A161653	380	16	16	180	175	20
Average for Bell's Hill Granite	14	10	25	285	14	11
Range for Bell's Hill Granite (9 samples*)	<10-30	<4-38	14-38	28-840	3-46	4-18

* with the co-operation of the lease holder N. Brown/ J. Cox

The whole rock analyses (Table 4) were of little value due to the effects of weathering.

Generally, the above investigations of E.L. 43/82 were very disappointing with little potential for an economic deposit being indicated.

6.3 Quality Control

(a) Duplicates

In the initial batch of drainage and rock sample analyses there were 4 sets of duplicate samples. These showed very good agreement.

TABLE 4

MT. MAURICE PROSPECT - WHOLE ROCK ANALYSES

Sample No.	Fe_2O_3	MnO	TiO_2	CaO	K_2O	P_2O_5	SiO_2	Al_2O_3	MgO	Na_2O	I.L.
A161645	2.65	0.05	0.35	1.10	4.00	0.08	72.0	13.3	0.67	3.60	1.50
A161646	2.60	0.04	0.33	1.32	3.90	0.08	71.4	13.7	0.64	3.70	1.30
A161649	1.05	0.10	0.37	0.02	3.05	0.06	66.3	19.5	0.14	0.36	8.30
A161651	2.90	0.05	0.37	1.35	4.10	0.10	72.7	13.0	0.58	3.55	0.80
A161652	2.85	0.05	0.27	0.47	3.85	0.07	78.2	9.75	0.35	2.45	1.10
A161653	3.25	0.06	0.41	1.70	3.40	0.10	70.3	14.3	0.84	3.65	1.70

Dupl. No.	Sample	Sn	As	W	Cu	Pb	Zn	Ni	Co	Bi	Ag
1	A161511	32	<2	40	2	270	34	<4	<4	<4	<1
	A161590	12	4	60	6	270	36	<4	<4	<4	<1
2	A161515	24	<2	35	4	10	36	12	8	<4	<1
	A161591	20	2	40	2	6	38	14	8	<4	<1
3	A161535	10	<2	25	4	14	28	26	6	<4	<1
	A161592	10	2	45	10	6	28	28	8	<4	<1
4	A161537	30	3	25	12	16	26	<4	4	<4	<1
	A161593	42	<2	30	6	14	34	<4	<4	<4	<1

In the main batch of drainage sample analyses there were 15 sets of duplicate samples. Generally, these showed very good agreement (Table 5).

The batch of panned concentrate samples contained 3 duplicate sets. Again, there was fairly good agreement between the analyses.

Dupl. No.	Sample	Sn	W	As	Sb	Au	Cu	Pb	Zn	Ni	Bi	Ag	Mo
1	A119669H	360	<10	22	<4	<0.01	22	24	26	10	<4	<1	<4
	A140470H	190	45	<2	<4	<0.01	10	<4	12	<4	<4	<1	<4
2	A119670H	14	<10	<2	<4	<0.01	26	8	22	8	<4	<1	6
	A140425H	16	20	<2	<4	<0.01	10	6	12	<4	<4	<1	<4
3	A119671H	180	40	<2	4	<0.01	28	6	16	8	<4	<1	6
	A140429H	240	50	<2	<4	<0.01	10	<4	10	<4	<4	<1	<4

TABLE 5

COMPARISON OF DUPLICATE ANALYSES

Duplicate No.	Sample No.	Sn	W	As	Sb	Mo	Cu	Pb	Zn	Ni	Bi
1	A119672	8	10	<2	6	-	210	18	130	18	<4
	A119456	10	30	<2	-	38	24	8	22	28	<4
2	A119673	4	<10	<2	4	-	60	12	42	6	<4
	A140416	8	<10	<2	-	6	30	12	28	8	<4
3	A119674	8	<10	2	<4	-	80	12	60	6	<4
	A140441	4	<10	2	-	<4	44	10	38	8	<4
4	A119676	8	10	2	<4	-	40	14	44	6	<4
	A119484	8	<10	2	-	<4	8	10	28	8	<4
5	A119677	28	<10	9	6	-	32	14	50	26	<4
	A140536	48	<10	10	-	28	22	14	50	32	<4
6	A119678	24	<10	<2	<4	-	60	12	30	8	<4
	A140482	24	10	<2	-	30	180	28	120	16	<4
7	A119679	6	10	<2	4	-	42	14	46	8	<4
	A140478	16	10	<2	-	26	60	18	60	8	<4
8	A119680	30	15	3	4	-	50	14	50	8	<4
	A140461	8	10	2	-	<4	28	16	40	6	<4
9	A119681	<4	<10	2	4	-	20	24	42	12	<4
	A140454	8	<10	<2	-	<4	16	32	34	10	<4
10	A119685	6	<10	<2	<4	-	38	<4	28	4	<4
	A140407	<4	10	<2	-	<4	26	20	18	4	<4
11	A119686	34	<10	2	4	-	26	14	48	32	<4
	A140411	22	<10	<2	-	4	20	18	40	26	<4
12	A119687	8	<10	<2	<4	-	44	10	44	8	<4
	A140436	10	10	<2	-	4	60	20	48	8	<4
13	A119688	16	10	<2	6	-	32	14	38	8	<4
	A140425	14	<10	<2	-	4	24	24	34	6	<4
14	A119690	8	<10	2	<4	-	70	10	75	8	<4
	A140404	6	<10	<2	-	4	70	44	70	8	<4
15	A119691	<4	<10	<2	4	-	60	14	65	6	<4
	A140442	6	<10	<2	-	<4	46	16	55	8	<4

(b) Standards

Eleven standards were tested by 21 sets of analyses during the drainage and rock evaluations. Generally, there was very good agreement with the quoted values (Table 6). The standards with the higher tin contents generally analysed low (i.e. Standards 14, 16, 17).

6.4 Proposed Exploration

Within the area of E.L. 43/82 there are only three areas of any interest. These are the Mt. Maurice Road greisen, the Cu/Zn anomaly south of the Ringarooma River, and the Mt. Maurice prospect area. However, it is doubtful if any of these have any potential for an economic deposit. No further work is planned for the area.

TABLE 6 - ANALYSES OF STANDARD SAMPLES

Standard	Sample	Sn	As	W	Cu	Pb	Zn	Ni	Co	Bi	Ag	Sb	Mo	Au
5	Quoted		14		107	13	112			28				
	A161614	4	16	30	100	10	110	42	8	<4	<1	-	-	-
	A140421A	6	12	45	100	<4	100	50		32	-	-	16	-
	A140497A	6	12	40	110	14	110	65		26	-	-	16	-
6	Quoted		7		185	15	140			29		9	66	
	A140406A	6	10	70	170	14	120	48		24	-	-	70	-
	A140550D	8	7	80	170	10	120	50		28	-	-	65	-
7	Quoted		14		60	25	29			4		4	49	
	A140444A	6	12	20	60	30	24	14		<4	-	-	42	-
	A140550B	4	16	20	50	22	22	14		<4	-	-	42	-
9	Quoted	21.4												
	A161617	24	<2	80	4	<4	<2	<4	<4	<4	<1	-	-	-
	A140438A	22	2	<10	4	<4	<2	<4		<4	-	-	<4	-
	A140543H	6	3	40	8	4	14	<4		<4	<1	6	<4	<0.01
11	Quoted	138												
	A161620	145	4	<10	12	<4	<2	<4	<4	<4	<1	-	-	-
12	Quoted	68												
	A161623	70	<2	65	<2	10	<2	<4	<4	<4	<1	-	-	-
	A140458A	65	2	15	6	8	<2	<4		<4	-	-	<4	-
	A140514A	65	3	<10	4	<4	2	<4		<4	-	-	<4	-
13	Quoted	505												
	A161626	500	<2	15	<2	8	<2	<4	<4	<4	<1	-	-	-
14	Quoted	995												
	A140550C	910	<2	<10	4	<4	<2	<4		<4	-	-	<4	-
16	Quoted	1.47%												
	A140480A	1.36%	50	20	6	<4	<2	<4		<4	-	-	<4	-
	A140530A	1.36%	50	20	4	<2	<2	<4		<4	-	-	<4	-
17	Quoted	7135												
	A140550A	6500	50	10	4	<4	<2	<4		<4	-	-	<4	-
	A119461A	6750	50	15	2	<4	<2	<4		<4	-	-	<4	-
19	Quoted	-	47.8	-	-	-	-	-		-	-	14.4	-	-
	A140401AF	10	50	<10	2	<4	10	<4		<4	<1	20	<4	<0.01

7. REFERENCE

ELLIS, P.D., 1983 : Historical Review, Mt. Maurice,
E.L. 43/82, Northeast Tasmania
CSR Limited Report EMR 105/83 (unpubl.)

PDE/SGL
July 1984

APPENDIX I

STREAM GEOCHEMISTRY

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM832210 O/N : 10404 - 10407

DATA BASE NO

Results in ppm

	SAMPLE	Sn	As	W
8069	161469 -20+80#	8	2	30
8070	161470 -20+80#	8	4	70
1	161471 -20+80#	10	<2	35
2	161472 -20+80#	8	<2	55
3	161473 -20+80#	6	2	30
4	161474 -20+80#	8	<2	45
5	161475 -20+80#	8	<2	35
6	161476 -20+80#	24	<2	45
7	161477 -20+80#	6	<2	40
8	161478 -20+80#	32	<2	65
9	161479 -20+80#	6	<2	30
8080	161480 -20+80#	38	<2	50
1	161481 -20+80#	10	<2	20
2	161482 -20+80#	18	<2	40
3	161483 -20+80#	40	<2	40
4	161484 -20+80#	4	<2	25
5	161485 -20+80#	6	<2	30
6	161486 -20+80#	8	<2	20
7	161487 -20+80#	140	<2	55
8	161488 -20+80#	34	<2	30
9	161489 -20+80#	165	<2	45
8090	161490 -20+80#	190	<2	45
1	161491 -20+80#	22	4	45
2	161492 -20+80#	22	2	25
8093	161493 -20+80#	28	<2	55

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM832210 O/N : 10404 - 10407

Results in ppm

	SAMPLE	Sn	As	W
8014	161494 -20+80#	26	5	45
5	161495 -20+80#	10	<2	35
6	161496 -20+80#	12	24	35
7	161497 -20+80#	22	9	50
8	161498 -20+80#	6	6	40
9	161499 -20+80#	4	<2	50
8100	161500 -20+80#	6	<2	20
8101	161501 -20+80#	<4	7	40
8102	161502 -20+80#	6	4	40
	161502A -20+80#	6	4	20
8103	161503 -20+80#	16	4	30
4	161504 -20+80#	4	<2	65
5	161505 -20+80#	<4	3	15
6	161506 -20+80#	8	4	60
7	161507 -20+80#	4	3	35
8	161508 -20+80#	<4	2	80
9	161509 -20+80#	4	3	45
8110	161510 -20+80#	4	4	55
1	161511 -20+80#	32	<2	40
2	161512 -20+80#	12	20	55
3	161513 -20+80#	10	10	75
4	161514 -20+80#	12	2	75
5	161515 -20+80#	24	<2	35
6	161516 -20+80#	22	3	60
7	161517 -20+80#	12	10	45

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM832210 O/N : 10404 - 10407

Results in ppm

	SAMPLE	Sn	As	W
8118	161518 -20+80#	42	<2	55
9	161519 -20+80#	10	4	35
8120	161520 -20+80#	20	5	40
1	161521 -20+80#	10	<2	40
2	161522 -20+80#	24	<2	60
3	161523 -20+80#	20	7	40
4	161524 -20+80#	10	5	65
5	161525 -20+80#	6	<2	35
6	161526 -20+80#	6	2	75
7	161527 -20+80#	<4	3	25
8	161528 -20+80#	8	5	30
9	161529 -20+80#	6	5	25
8130	161530 -20+80#	4	2	60
1	161531 -20+80#	<4	<2	30
2	161532 -20+80#	10	<2	50
3	161533 -20+80#	14	3	65
4	161534 -20+80#	6	<2	65
5	161535 -20+80#	10	<2	25
6	161536 -20+80#	26	<2	70
7	161537 -20+80#	30	3	25
8	161538 -20+80#	16	<2	50
9	161539 -20+80#	10	<2	35
8140	161540 -20+80#	10	<2	50
1	161541 -20+80#	4	<2	45
2	161542 -20+80#	<4	<2	50

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM832210 O/N : 10404 - 10407

Results in ppm

	SAMPLE	Sn	As	W	
~~8143~~	161543 -20+80#	6	<2	20	not on map
~~8~~	161590 -20+80#	12	4	60	~~Dup of 16151~~
8191 ~~8~~	161591 -20+80#	20	2	40	" 16151
8192 ~~8~~	161592 -20+80#	10	2	45	" 16153
8193	161593 -20+80#	42	<2	30	Dup of 16157
	161469 H	18	<2	10	panned concentrates
	161470 H	4	<2	85	
	161471 H	1800	<2	45	
	161475 H	14	<2	60	
	161522 H	22	<2	10	
	161539 H	4	<2	<10	
	161543 H	6	3	40	
	161614 Rock	4	16	30	Standard 5 ✓
	161617 Rock	24	<2	80	9 ✓
	161620 Rock	145	4	<10	11 ✓
	161623 Rock	70	<2	65	12 ✓
	161626 Rock	500	<2	15	13 ✓

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM832210 O/N : 10404 - 10407

Results in ppm

SAMPLE	Sn	As	W
161645 Rock	6	5	25
161646 Rock	4	<2	15
161647 Rock	960	12	65
161648 Rock	590	9	135
161649 Rock	14	2	230
161650 Rock	640	20	990
161651 Rock	20	2	20
161652 Rock	50	2	460
161653 Rock	12	<2	30
161654 Rock	230	30	105
161655 Rock	300	6	200
161656 Rock	830	6	135
161657 Rock	7750	90	870
161658 Rock	2100	80	260
161659 Rock	1100	16	540

Mt Maria Co/Sn Small

Mt Maria Co/Sn Large

Method of Analysis : XRF1/2

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

See p. 28

JOB COM832210 O/N : 10404 - 10407

Results in ppm

	SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Ag
8069	161469 -80#	70	16	46	<4	6	<4	<1
8070	161470 -80#	42	20	32	18	8	<4	<1
1	161471 -80#	32	24	28	<4	4	<4	<1
2	161472 -80#	38	20	22	8	6	<4	<1
3	161473 -80#	6	20	48	<4	<4	<4	<1
4	161474 -80#	4	16	26	<4	4	<4	<1
5	161475 -80#	10	20	34	<4	4	<4	<1
6	161476 -80#	2	16	22	<4	<4	<4	<1
7	161477 -80#	22	18	34	<4	<4	<4	<1
8	161478 -80#	30	110	75	<4	10	<4	<1
9	161479 -80#	2	16	26	<4	<4	<4	<1
8080	161480 -80#	44	48	120	<4	10	<4	<1
1	161481 -80#	4	16	32	<4	<4	<4	<1
2	161482 -80#	8	32	46	<4	<4	<4	<1
3	161483 -80#	<2	12	20	<4	<4	<4	<1
4	161484 -80#	2	20	28	<4	<4	<4	<1
5	161485 -80#	2	20	50	<4	<4	<4	<1
6	161486 -80#	<2	14	32	<4	<4	<4	<1
7	161487 -80#	185	46	110	<4	<4	<4	<1
8	161488 -80#	28	28	46	<4	<4	<4	<1
9	161489 -80#	70	28	85	<4	8	<4	<1
8090	161490 -80#	14	22	40	<4	<4	<4	<1
1	161491 -80#	<2	26	34	<4	<4	<4	<1
2	161492 -80#	12	24	38	<4	<4	<4	<1
8093	161493 -80#	44	30	65	<4	<4	<4	<1

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LABS Pty. Ltd.
UTERISED ANALYTICAL LABORATORIES

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ANALYTICAL REPORT

JOB COM832210 O/N : 10404 - 10407

Results in ppm

	SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Ag
8094	161494 -80#	12	90	70	30	6	<4	<1
5	161495 -80#	<2	50	65	<4	<4	<4	<1
6	161496 -80#	4	50	120	<4	8	<4	1
7	161497 -80#	10	20	34	10	16	<4	<1
8	161498 -80#	4	10	48	<4	8	<4	<1
8099	161499 -80#	<2	10	4	<4	<4	<4	<1
8100	161500 -80#	<2	8	34	<4	<4	<4	<1
8101	161501 -80#	<2	12	26	<4	6	<4	<1
8102	161502 -80#	<2	8	20	<4	4	<4	<1
	161502A -80#	<2	8	14	<4	<4	<4	<1
8103	161503 -80#	<2	16	10	<4	<4	<4	<1
4	161504 -80#	<2	10	10	<4	<4	<4	<1
5	161505 -80#	<2	32	70	10	6	<4	<1
6	161506 -80#	10	24	46	<4	<4	<4	<1
7	161507 -80#	4	8	26	<4	4	<4	<1
8	161508 -80#	18	14	44	<4	10	<4	<1
9	161509 -80#	<2	8	24	<4	6	<4	<1
8110	161510 -80#	<2	10	22	<4	6	<4	<1
	161511 -80#	2	270	34	<4	<4	<4	<1
8112	161512 -80#	18	22	80	24	12	<4	<1
3	161513 -80#	50	26	80	16	8	<4	<1
4	161514 -80#	24	20	34	40	10	<4	<1
5	161515 -80#	4	10	36	12	8	<4	<1
6	161516 -80#	24	12	10	<4	4	<4	<1
8117	161517 -80#	<2	10	4	<4	<4	<4	<1

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM832210 O/N : 10404 - 10407

Results in ppm

	SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Ag
8118	161518 -80#	<2	6	<2	<4	<4	<4	<1
8119	161519 -80#	<2	28	20	<4	<4	<4	<1
8120	161520 -80#	<2	34	22	<4	<4	<4	<1
1	161521 -80#	8	10	2	<4	<4	<4	<1
2	161522 -80#	<2	6	12	<4	<4	<4	<1
3	161523 -80#	18	200	80	<4	8	<4	<1
4	161524 -80#	8	20	12	<4	<4	<4	<1
5	161525 -80#	4	6	16	<4	<4	<4	<1
6	161526 -80#	<2	12	12	<4	<4	<4	<1
7	161527 -80#	<2	8	30	<4	<4	<4	<1
8	161528 -80#	6	8	16	<4	<4	<4	<1
9	161529 -80#	12	8	16	<4	<4	<4	<1
8130	161530 -80#	16	4	16	<4	<4	<4	<1
1	161531 -80#	<2	6	18	<4	<4	<4	<1
2	161532 -80#	4	10	10	<4	<4	<4	<1
3	161533 -80#	100	8	50	18	20	<4	<1
4	161534 -80#	4	<4	8	<4	<4	<4	<1
5	161535 -80#	4	14	28	26	6	<4	<1
6	161536 -80#	<2	10	22	<4	8	<4	<1
7	161537 -80#	12	16	26	<4	4	<4	<1
8	161538 -80#	<2	6	16	<4	<4	<4	<1
9	161539 -80#	<2	<4	<2	<4	<4	<4	<1
8140	161540 -80#	18	10	44	<4	6	<4	<1
1	161541 -80#	<2	<4	<2	<4	<4	<4	<1
8142	161542 -80#	<2	<4	<2	<4	<4	<4	<1

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

See p. 31

JOB COM832210 O/N : 10404 - 10407

Results in ppm

	SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Ag	
	161543 -80#	10	6	38	8	6	<4	<1	not on map
	161590 -80#	6	270	36	<4	<4	<4	<1	
8191	161591 -80#	2	6	38	14	8	<4	<1	
8192	161592 -80#	10	6	28	28	8	<4	<1	
8193	161593 -80#	6	14	34	<4	<4	<4	<1	
	161469 H	<2	<4	10	<4	<4	<4	<1	panned concentrates
	161470 H	<2	<4	<2	<4	<4	<4	<1	
	161471 H	<2	<4	<2	<4	<4	<4	<1	
	161475 H	<2	<4	6	<4	<4	<4	<1	
	161522 H	<2	<4	6	<4	<4	<4	<1	
	161539 H	<2	<4	<2	<4	<4	<4	<1	
	161543 H	<2	<4	36	<4	8	<4	<1	
	161614 Rock	100	10	110	42	8	<4	<1	
	161617 Rock	4	<4	<2	<4	<4	<4	<1	
	161620 Rock	12	<4	<2	<4	<4	<4	<1	
	161623 Rock	<2	10	<2	<4	<4	<4	<1	
	161626 Rock	<2	8	<2	<4	<4	<4	<1	

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM832210 O/N : 10404 - 10407

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Ag
161645 Rock	12	12	46	<4	6	<4	<1
161646 Rock	<2	8	44	<4	6	<4	<1
161647 Rock	2900	18	120	<4	<4	320	12
161648 Rock	3200	26	80	<4	<4	390	18
161649 Rock	460	12	36	<4	14	20	<1
161650 Rock	2900	30	75	<4	<4	280	15
161651 Rock	170	16	65	<4	6	<4	<1
161652 Rock	400	34	60	<4	<4	75	10
161653 Rock	18	8	50	8	8	<4	<1
161654 Rock	110	14	2	<4	<4	1050	23
161655 Rock	80	14	<2	<4	<4	60	<1
161656 Rock	40	14	<2	<4	<4	230	<1
161657 Rock	1.40%	34	100	<4	6	890	59
161658 Rock	5100	26	36	<4	<4	1200	35
161659 Rock	310	10	12	<4	<4	260	3

Method of Analysis : Cu Pb Zn Ni Co Bi : AAS1
Ag : AAS3

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

Job: 00140481 C/I : 10735

Results in ppm

	SAMPLE	Sr	I	As	Mo
8201	A140401 -20+80#	10	15	50	<4
2	A140402 -20+80#	10	<10	<2	6
3	A140403 -20+80#	4	<10	<2	4
4	A140404 -20+80#	6	<10	<2	4
5	A140405 -20+80#	4	<10	2	<4
8206	A140406 -20+80#	6	<10	<2	4
	A140406A	6	70	10	70
8207	A140407 -20+80#	<4	10	<2	<4
8	A140408 -20+80#	4	<10	3	6
9	A140409 -20+80#	4	<10	5	4
8210	A140410 -20+80#	10	<10	<2	6
1	A140411 -20+80#	22	<10	<2	4
2	A140412 -20+80#	14	25	4	<4
3	A140413 -20+80#	10	10	2	<4
4	A140414 -20+80#	12	<10	<2	4
5	A140415 -20+80#	6	<10	2	<4
6	A140416 -20+80#	8	<10	<2	6
7	A140417 -20+80#	8	<10	2	<4
8	A140418 -20+80#	20	10	6	<4
9	A140419 -20+80#	100	15	<2	4
8220	A140420 -20+80#	4	<10	<2	<4
1	A140421 -20+80#	4	<10	<2	6
	A140421A	6	45	12	10
8222	A140422 -20+80#	6	<10	<2	4
3	A140423 -20+80#	46	<10	<2	6

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

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ANALYTICAL REPORT

JOB 001040488 C/L : 30725

Results in ppm

	SAMPLE	Sr	U	Zr	Th
8224	A140424 -20+80#	10	<10	2	<4
5	A140425 -20+80#	14	<10	<2	4
8227	A140427 -20+80#	510	75	<2	<4
8	A140428 -20+80#	20	10	2	4
9	A140429 -20+80#	14	<10	<2	<4
8230	A140430 -20+80#	6	<10	<2	6
1	A140431 -20+80#	6	<10	2	<4
2	A140432 -20+80#	14	<10	<2	5
3	A140433 -20+80#	60	10	2	4
4	A140434 -20+80#	12	<10	<2	6
5	A140435 -20+80#	12	<10	<2	<4
6	A140436 -20+80#	10	10	<2	4
7	A140437 -20+80#	22	<10	<2	4
8250	A140438 -20+80#	6	10	<2	4
	A140438A	22	<10	2	<4
8251	A140439 -20+80#	8	<10	2	<4
8240	A140440 -20+80#	4	<10	<2	4
1	A140441 -20+80#	4	<10	2	<4
2	A140442 -20+80#	6	<10	<2	<4
3	A140443 -20+80#	<4	<10	<2	<4
4	A140444 -20+80#	6	<10	<2	4
	A140444A	6	20	12	42
8245	A140445 -20+80#	6	<10	<2	4
6	A140446 -20+80#	4	<10	2	4
7	A140447 -20+80#	4	10	<2	4

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

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ANALYTICAL REPORT

JOB COMS40488 C/I : 30735

Results in ppm

	SAMPLE	Sn	W	As	Mo
8248	A140448 -20+80#	<4	<10	2	<4
9	A140449 -20+80#	6	<10	<2	4
8250	A140450 -20+80#	6	10	<2	4
1	A140451 -20+80#	10	<10	2	6
2	A140452 -20+80#	6	<10	<2	4
3	A140453 -20+80#	6	15	4	8
4	A140454 -20+80#	8	<10	<2	<4
5	A140455 -20+80#	10	<10	4	<4
6	A140456 -20+80#	4	<10	<2	4
7	A140457 -20+80#	8	10	2	<4
8258	A140458 -20+80#	<4	<10	2	4
8195	A140458A	65	15	2	<4
8259	A140459 -20+80#	10	10	<2	<4
8260	A140460 -20+80#	10	10	<2	6
1	A140461 -20+80#	8	10	2	<4
2	A140462 -20+80#	70	<10	2	4
3	A140463 -20+80#	230	45	<2	<4
4	A140464 -20+80#	10	<10	2	8
5	A140465 -20+80#	10	15	2	<4
6	A140466 -20+80#	12	10	2	4
7	A140467 -20+80#	6	<10	<2	<4
8	A140468 -20+80#	10	15	2	<4
9	A140469 -20+80#	12	25	<2	30
8270	A140470 -20+80#	10	20	4	30
1	A140471 -20+80#	12	15	<2	30

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

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ANALYTICAL REPORT

JOB CO140469 C/F : 30725

Results in ppm

		SAMPLE	Sr	Y	As	Pb
8272		A140472 -20+80#	8	10	<2	26
	3	A140473 -20+80#	65	20	<2	24
	4	A140474 -20+80#	8	<10	<2	18
	5	A140475 -20+80#	14	10	<2	24
	6	A140476 -20+80#	8	15	2	32
	7	A140477 -20+80#	6	20	2	32
	8	A140478 -20+80#	10	10	<2	26
	9	A140479 -20+80#	10	<10	<2	20
8280		A140480 -20+80#	4	15	2	32
		A140480#	1.20%	20	50	<4
8281		A140481 -20+80#	6	10	<2	20
	2	A140482 -20+80#	24	10	<2	30
	3	A140483 -20+80#	4	10	2	20
	4	A140484 -20+80#	12	10	<2	24
	5	A140485 -20+80#	<4	15	<2	30
	6	A140486 -20+80#	12	35	3	28
	7	A140487 -20+80#	4	<10	3	26
	8	A140488 -20+80#	6	15	<2	22
	9	A140489 -20+80#	4	10	<2	12
8290		A140490 -20+80#	48	10	<2	24
	1	A140491 -20+80#	<4	20	3	22
	2	A140492 -20+80#	16	20	<2	18
	3	A140493 -20+80#	<4	10	2	26
	4	A140494 -20+80#	10	<10	<2	24
8295		A140495 -20+80#	6	<10	<2	20

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

357043

ANALYTICAL REPORT

JOB CO:840488 O/N : 30725

Results in ppm

	SAMPLE	Sn	W	As	Mo
8296	A140496 -20+80#	4	10	2	22
8297	A140497 -20+80#	6	10	<2	18
	A140497A	6	40	12	16
8298	A140498 -20+80#	12	<10	2	20
8299	A140499 -20+80#	6	10	<2	20
8300	A140501 -20+80#	10	30	<2	38
8302	A140502 -20+80#	18	<10	<2	30
3	A140503 -20+80#	6	10	3	28
4	A140504 -20+80#	8	<10	2	30
5	A140505 -20+80#	6	<10	3	24
6	A140506 -20+80#	10	<10	<2	28
7	A140507 -20+80#	8	15	<2	28
8	A140508 -20+80#	6	10	3	30
9	A140509 -20+80#	14	10	3	22
8310	A140510 -20+80#	8	<10	3	18
1	A140511 -20+80#	4	15	2	20
2	A140512 -20+80#	4	<10	<2	24
3	A140513 -20+80#	8	<10	<2	18
4	A140514 -20+80#	22	10	<2	12
	A140514A	65	<10	3	<4
8315	A140515 -20+80#	8	10	2	24
6	A140516 -20+80#	8	10	<2	28
7	A140517 -20+80#	4	<10	4	22
8	A140518 -20+80#	4	<10	2	24
9	A140519 -20+80#	<4	<10	4	20

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

357044

ANALYTICAL REPORT

JOB CC140400 O/N : 10715

Results in ppm

	SAMPLE	Cu	I	As	Te
8326	A140520 -20+80#	4	10	<2	24
1	A140521 -20+80#	6	<10	3	20
2	A140522 -20+80#	8	15	<2	32
3	A140523 -20+80#	6	10	<2	22
4	A140524 -20+80#	8	15	2	18
5	A140525 -20+80#	20	<10	<2	20
6	A140526 -20+80#	12	15	<2	50
7	A140527 -20+80#	14	10	<2	24
8	A140528 -20+80#	6	<10	<2	22
9	A140529 -20+80#	10	15	3	18
8330	A140530 -20+80#	6	10	<2	24
	A140530A	1.36%	20	50	<4
8331	A140531 -20+80#	6	<10	2	16
2	A140532 -20+80#	12	<10	2	14
3	A140533 -20+80#	26	<10	5	14
4	A140534 -20+80#	8	<10	8	18
5	A140535 -20+80#	70	<10	4	32
6	A140536 -20+80#	40	<10	10	28
8337	A140537 -20+80#	6	<10	2	40
8339	A140539 -20+80#	4	<10	<2	24
8340	A140540 -20+80#	<4	15	7	70
1	A140541 -20+80#	<4	<10	<2	36
2	A140542 -20+80#	<4	10	<2	32
3	A140543 -20+80#	4	10	<2	24
4	A140544 -20+80#	<4	<10	<2	24

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044

357045

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB CO:840488 O/N : 30735

Results in ppm

	SAMPLE	Sn	W	As	Mo
8345	A140545 -20+80#	4	10	3	20
6	A140546 -20+80#	4	<10	<2	28
7	A140547 -20+80#	16	15	3	80
8	A140548 -20+80#	8	15	5	38
9	A140549 -20+80#	10	30	10	10
8350	A140550 -20+80#	<4	10	<2	30
	A140550A	6500	10	50	<4
	A140550B	4	20	16	42
	A140550C	910	<10	<2	<4
	A140550D	8	80	7	65

A140545 -20+80#

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045

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

- 0 -

357046

ANALYTICAL REPORT

JOB COM840488 O/N : 30735

Results in ppm

	SAMPLE	Sn	V	As	Mo
8151	A119451 -20+80#	95	15	<2	32
2	A119452 -20+80#	8	15	<2	28
3	A119453 -20+80#	230	30	<2	28
4	A119454 -20+80#	14	20	<2	22
5	A119455 -20+80#	12	15	2	26
6	A119456 -20+80#	10	30	<2	38
7	A119457 -20+80#	44	30	<2	30
8	A119458 -20+80#	<4	15	2	32
9	A119459 -20+80#	6	<10	2	28
8160	A119460 -20+80#	6	10	<2	30
8161	A119461 -20+80#	24	30	2	36
	A119461A	6750	15	50	<4
8162	A119462 -20+80#	<4	10	<2	26

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM840488 O/N : 30735

Results in ppm

	SAMPLE	Sn	V	As	Ba
8163	A119463 -20+80#	12	15	<2	32
4	A119464 -20+80#	6	15	<2	30
5	A119465 -20+80#	8	<10	2	32
6	A119466 -20+80#	12	10	2	28
7	A119467 -20+80#	50	20	<2	32
8	A119468 -20+80#	100	65	<2	24
9	A119469 -20+80#	8	<10	2	28
	A119469A	10	20	<2	34
8170	A119470 -20+80#	4	15	4	38
1	A119471 -20+80#	4	10	4	28
2	A119472 -20+80#	4	<10	3	30
3	A119473 -20+80#	6	15	<2	24
4	A119474 -20+80#	8	10	<2	28
5	A119475 -20+80#	60	<10	<2	28
6	A119476 -20+80#	48	10	<2	20
7	A119477 -20+80#	10	10	<2	26
8	A119478 -20+80#	12	<10	<2	18
9	A119479 -20+80#	145	<10	<2	40
8180	A119480 -20+80#	6	<10	2	26
1	A119481 -20+80#	6	15	<2	32
2	A119482 -20+80#	6	10	<2	30
3	A119483 -20+80#	4	<10	2	28
4	A119484 -20+80#	8	<10	2	<4

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

357048

ANALYTICAL REPORT

JOB COMS40488 O/N : 30735

Results in ppm

	SAMPLE	Cu	Pb	Zn	Ni	Bi
8201	A140401 -80#	40	12	40	8	<4
2	A140402 -80#	65	140	50	6	<4
3	A140403 -80#	34	8	28	8	<4
4	A140404 -80#	70	44	70	8	<4
5	A140405 -80#	44	16	38	8	<4
6	A140406 -80#	60	26	44	8	<4
	A140406A	170	14	120	48	24
7	A140407 -80#	26	20	18	4	<4
8	A140408 -80#	32	12	28	6	<4
9	A140409 -80#	26	10	36	12	<4
8210	A140410 -80#	14	10	12	8	<4
1	A140411 -80#	20	18	40	26	<4
2	A140412 -80#	16	16	30	24	<4
3	A140413 -80#	18	22	46	36	<4
4	A140414 -80#	36	18	130	100	<4
5	A140415 -80#	26	20	42	8	<4
6	A140416 -80#	30	12	28	8	<4
7	A140417 -80#	26	14	30	4	<4
8	A140418 -80#	65	50	90	8	<4
9	A140419 -80#	75	30	70	10	<4
8220	A140420 -80#	26	16	44	8	<4
1	A140421 -80#	60	16	60	8	<4
	A140421A	100	<4	100	50	32
8222	A140422 -80#	26	30	60	10	<4
8223	A140423 -80#	30	24	46	16	<4

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357049

ANALYTICAL REPORT

JOB CON840488 C/N : 30735

Results in ppm

	SAMPLE	Cu	Pb	Zn	Ni	Ti
8224	A140424 -80#	20	16	32	8	<4
5	A140425 -80#	24	24	34	6	<4
8227	A140427 -80#	30	18	34	8	<4
8	A140428 -80#	50	26	60	10	<4
9	A140429 -80#	65	14	50	12	<4
8230	A140430 -80#	210	26	135	30	<4
1	A140431 -80#	36	10	34	10	<4
2	A140432 -80#	22	10	28	6	<4
3	A140433 -80#	40	14	90	8	<4
4	A140434 -80#	36	14	26	6	<4
5	A140435 -80#	120	22	80	20	<4
6	A140436 -80#	60	20	48	8	<4
7	A140437 -80#	180	24	110	18	<4
8	A140438 -80#	34	32	38	<4	<4
	A140438A	4	<4	<2	<4	<4
8239	A140439 -80#	20	20	44	<4	<4
8240	A140440 -80#	34	12	38	8	<4
1	A140441 -80#	44	10	30	8	<4
2	A140442 -80#	46	16	55	8	<4
3	A140443 -80#	16	10	30	6	<4
4	A140444 -80#	80	34	70	8	<4
	A140444A	60	30	24	14	<4
8245	A140445 -80#	110	22	80	10	<4
6	A140446 -80#	440	44	270	26	<4
7	A140447 -80#	36	14	38	6	<4

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357050

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOI CCL840488 O/N : 30735

Results in ppm

	SAMPLE	Cu	Pb	Zn	Ni	Li
8245	A140448 -80#	55	20	60	8	<4
9	A140449 -80#	95	16	70	12	<4
8150	A140450 -80#	75	16	60	12	<4
1	A140451 -80#	16	16	14	6	<4
2	A140452 -80#	30	16	22	6	<4
3	A140453 -80#	34	12	24	6	<4
4	A140454 -80#	16	32	34	10	<4
5	A140455 -80#	28	12	36	8	<4
6	A140456 -80#	26	14	28	8	<4
7	A140457 -80#	14	14	34	6	<4
8	A140458 -80#	22	16	36	8	<4
8195	A140458A	6	8	<2	<4	<4
8254	A140459 -80#	28	14	32	6	<4
8260	A140460 -80#	26	14	30	8	<4
1	A140461 -80#	28	16	40	6	<4
2	A140462 -80#	32	18	40	8	<4
3	A140463 -80#	26	14	36	6	<4
4	A140464 -80#	55	26	70	8	<4
5	A140465 -80#	110	28	105	34	<4
6	A140466 -80#	42	8	40	6	<4
7	A140467 -80#	140	28	100	22	<4
8	A140468 -80#	55	12	50	8	<4
9	A140469 -80#	120	18	90	16	<4
8270	A140470 -80#	190	22	135	14	<4
1	A140471 -80#	90	16	70	8	<4

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051

357051

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COL840488 O/N : 30735

Results in ppm

	SAMPLE	Cu	Pb	Zn	Ni	Bi
8272	A140472 -80#	65	22	65	6	<4
3	A140473 -80#	55	16	50	8	<4
4	A140474 -80#	60	18	60	8	<4
5	A140475 -80#	60	18	60	8	<4
6	A140476 -80#	270	34	190	22	<4
7	A140477 -80#	22	16	30	8	<4
8	A140478 -80#	60	18	60	8	<4
9	A140479 -80#	110	16	70	14	<4
8280	A140480 -80#	60	20	60	8	<4
	A140480A	6	<4	<2	<2	<4
8281	A140481 -80#	65	16	60	10	<4
2	A140482 -80#	180	28	120	16	<4
3	A140483 -80#	34	18	44	20	<4
4	A140484 -80#	55	12	46	6	<4
5	A140485 -80#	60	18	55	6	<4
6	A140486 -80#	120	24	70	10	<4
7	A140487 -80#	28	26	38	6	<4
8	A140488 -80#	28	26	42	10	<4
9	A140489 -80#	26	34	48	12	<4
8290	A140490 -80#	42	20	60	6	<4
1	A140491 -80#	50	18	60	8	<4
2	A140492 -80#	22	22	48	8	<4
3	A140493 -80#	50	44	65	8	<4
4	A140494 -80#	90	26	70	18	<4
5	A140495 -80#	46	22	60	10	<4

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050

357052

ANALYTICAL REPORT

JOB C01840488 C/N : 30735

Results in ppm

	SAMPLE	Cu	Pb	Zn	Ni	Bi
8296	A140496 -80#	42	20	65	8	<4
7	A140497 -80#	70	20	70	12	<4
	A140497A	110	14	110	65	20
8298	A140498 -80#	30	18	40	8	<4
8299	A140499 -80#	22	14	40	8	<4
8301	A140501 -80#	80	22	60	8	<4
2	A140502 -80#	44	20	34	12	<4
3	A140503 -80#	32	12	38	10	<4
4	A140504 -80#	70	18	60	10	<4
5	A140505 -80#	30	16	38	10	<4
6	A140506 -80#	26	12	30	6	<4
7	A140507 -80#	40	14	40	10	<4
8	A140508 -80#	34	14	36	10	<4
9	A140509 -80#	50	20	55	8	<4
8310	A140510 -80#	16	18	28	6	<4
1	A140511 -80#	28	20	50	6	<4
2	A140512 -80#	36	22	50	8	<4
3	A140513 -80#	30	16	46	6	<4
4	A140514 -80#	30	28	65	10	<4
	A140514A	4	<4	2	<4	<4
8315	A140515 -80#	50	20	60	8	<4
6	A140516 -80#	30	16	42	<4	<4
7	A140517 -80#	20	16	40	10	<4
8	A140518 -80#	16	16	40	10	<4
9	A140519 -80#	26	20	50	12	<4

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM840488 O/N : 30735

Results in ppm

	SAMPLE	Cu	Pb	Zn	Ni	Ti
8320	A140520 -80#	22	16	38	8	<4
1	A140521 -80#	26	16	34	8	<4
2	A140522 -80#	16	8	12	6	<4
3	A140523 -80#	16	8	24	6	<4
4	A140524 -80#	32	14	50	12	<4
5	A140525 -80#	110	34	120	16	<4
6	A140526 -80#	22	16	30	8	<4
7	A140527 -80#	28	24	50	10	<4
8	A140528 -80#	150	36	120	20	<4
9	A140529 -80#	60	14	60	14	<4
8330	A140530 -80#	75	10	70	20	<4
	A140530A	4	<2	<2	<4	<4
8331	A140531 -80#	28	10	50	10	<4
2	A140532 -80#	40	16	140	170	<4
3	A140533 -80#	30	12	100	120	<4
4	A140534 -80#	34	16	110	70	<4
5	A140535 -80#	22	8	32	24	<4
6	A140536 -80#	22	14	50	32	<4
7	A140537 -80#	50	14	80	65	<4
8239	A140539 -80#	16	12	22	8	<4
8240	A140540 -80#	80	16	50	16	<4
1	A140541 -80#	12	6	6	12	<4
2	A140542 -80#	30	8	28	16	<4
3	A140543 -80#	32	10	24	12	<4
4	A140544 -80#	44	8	26	8	<4

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357054

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM840488 O/N : 30735

Results in ppm

	SAMPLE	Cu	Pb	Zn	Ni	Fi
0345	A140545 -80#	30	14	26	8	<4
6	A140546 -80#	14	4	10	10	<4
7	A140547 -80#	28	20	30	8	<4
8	A140548 -80#	80	20	60	12	<4
9	A140549 -80#	40	16	100	50	<4
0350	A140550 -80#	44	14	32	8	<4
	A140550A	4	<4	<4	<4	<4
	A140550B	50	22	22	14	<4
	A140550C	4	<4	<4	<4	<4
	A140550D	170	10	120	50	28

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053

357055

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB CCM840488 O/N : 30735

Results in ppm

	SAMPLE	Cu	Pb	Zn	Ni	Li
8151	A119451 -80#	22	10	36	8	<4
2	A119452 -80#	30	14	42	8	<4
3	A119453 -80#	22	12	36	10	<4
4	A119454 -80#	18	10	34	6	<4
5	A119455 -80#	18	12	34	8	<4
6	A119456 -80#	24	8	22	28	<4
7	A119457 -80#	I.S.	I.S.	I.S.	I.S.	I.S.
8	A119458 -80#	18	10	22	12	<4
9	A119459 -80#	18	120	8	14	<4
8160	A119460 -80#	10	<4	6	10	<4
8161	A119461 -80#	10	6	12	8	<4
	A119461A	2	<4	<2	<4	<4
8162	A119462 -80#	8	<4	12	6	<4

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357056

ANALYTICAL REPORT

JOB CON840488 O/N : 30735

Results in ppm

	SAMPLE	Cu	Pb	Zn	Ni	Bi
8163	A119463 -80#	10	<4	16	6	<4
4	A119464 -80#	32	6	32	24	<4
5	A119465 -80#	I.S.	I.S.	I.S.	I.S.	I.S.
6	A119466 -80#	I.S.	I.S.	I.S.	I.S.	I.S.
7	A119467 -80#	60	32	34	6	<4
8	A119468 -80#	44	30	12	8	<4
9	A119469 -80#	42	60	38	6	<4
	A119469A	20	16	55	18	<4
8170	A119470 -80#	10	8	26	8	<4
1	A119471 -80#	8	8	24	8	<4
2	A119472 -80#	16	12	32	10	<4
3	A119473 -80#	12	8	34	10	<4
4	A119474 -80#	10	10	34	6	<4
5	A119475 -80#	12	6	24	10	<4
6	A119476 -80#	18	12	34	10	<4
7	A119477 -80#	18	12	42	12	<4
8	A119478 -80#	14	12	30	8	<4
9	A119479 -80#	8	24	16	10	<4
8180	A119480 -80#	12	20	42	12	<4
1	A119481 -80#	6	18	16	6	<4
2	A119482 -80#	10	12	12	8	<4
3	A119483 -80#	8	6	10	<4	<4
4	A119484 -80#	8	10	28	8	<4

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

panned concentrates

JOB CON840488 O/N : 30735

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Ti	Ag	Mo
A140401 H	6	8	14	<4	<4	<1	<4
A140419 H	14	10	14	<4	<4	<1	<4
A140420 H	8	6	14	<4	<4	<1	<4
A140425 H	10	6	12	<4	<4	<1	<4
A140429 H	10	<4	10	<4	<4	<1	<4
A140430 H	6	<4	10	<4	<4	<1	<4
A140440 H	4	6	12	<4	<4	<1	<4
A140453 H	6	8	10	<4	<4	<1	<4
A140459 H	6	8	12	<4	<4	<1	<4
A140470 H	10	<4	12	<4	<4	<1	6
A140480 H	8	<4	10	<4	<4	<1	<4
A140502 H	4	6	6	<4	<4	<1	10
A140506 H	4	<4	8	<4	<4	<1	<4
A140507 H	6	<4	6	<4	<4	<1	<4
A140515 H	6	16	16	<4	<4	<1	<4
A140542 H	4	<4	8	<4	<4	<1	6
A140543 H	10	<4	4	<4	<4	<1	<4
A119475 H	26	26	34	8	<4	<1	6
A119480 H	34	36	65	8	<4	<1	<4
A119483 H	65	16	44	10	<4	<1	18
A119485 H	18	<4	20	14	<4	<1	<4
A119485A H	18	4	22	10	<4	<1	6.

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COMPUTERISED ANALYTICAL LABORATORIES

357058

ANALYTICAL REPORT

panned concentrates

JOB CON840488 O/N : 30735

Results in ppm

SAMPLE	Sn	W	As	Sb	Au	Wt(g)
A140401 H	6	20	<2	<4	<0.01	273.5
A140419 H	4000	185	30	6	<0.01	348.4
A140420 H	14	20	<2	6	<0.01	257.7
A140425 H	16	20	<2	<4	<0.01	204.5
A140429 H	240	50	<2	<4	<0.01	89.8
A140430 H	14	25	<2	<4	<0.01	137.6
A140440 H	8	35	<2	<4	<0.01	211.0
A140453 H	14	65	7	<4	<0.01	45.6
A140459 H	1700	260	<2	<4	<0.01	40.3
A140470 H	190	45	<2	<4	<0.01	31.0
A140480 H	220	95	<2	<4	<0.01	41.9
A140502 H	220	35	<2	6	<0.01	202.5
A140506 H	28	40	<2	4	<0.01	125.4
A140507 H	42	35	<2	6	<0.01	123.9
A140515 H	36	20	5	6	<0.01	61.6
A140542 H	10	45	4	6	<0.01	81.0
A140543 H	24	40	<2	<4	<0.01	30.7
A119475 H	1150	140	20	<4	<0.01	28.2
A119480 H	240	200	40	10	<0.01	14.0
A119483 H	22	85	12	<4	<0.01	13.6
A119485 H	8	35	<2	<4	<0.01	49.1 *
A119485A H	8	30	3	4	<0.01	59.7 *

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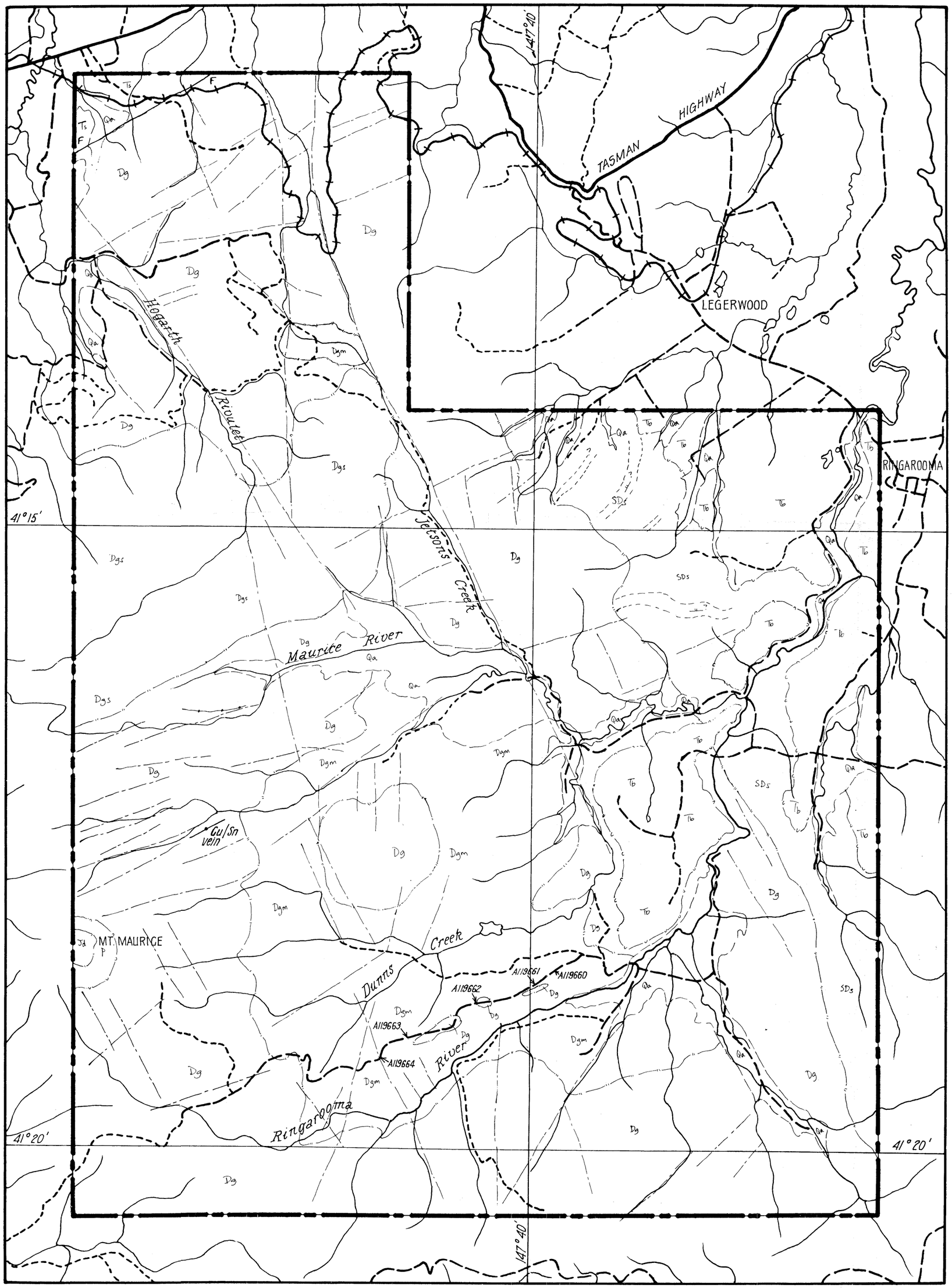

REFERENCE

- Watercourse
- Highway, road, track
- E.L. boundary
- Boundary of surficial deposits
- Trace of bedding
- Strike and dip of strata > 20° < 45°
- U—U Unconformity
- I—I Geological contact
- II—II Inferred geological contact
- Fracture (photolineament)
- F—F Fault
- 20→ Rock sample location
- Vein or dyke

QUATERNARY	Qa	Alluvium
TERTIARY	Ts	Sandy sediments
	Tb	Basalt
JURASSIC	Jd	Dolerite
PERMIAN	P	Tillite
DEVONIAN	Dgm	Microgranite, contains greissen and minor MoS2 near the contact with Dg
	Dgs	Adamellite
	Dg	Undifferentiated granite mostly medium grained biotite granite
SILURIAN	SDs	Undifferentiated hornfelsed sediments

357059

CSR LIMITED-AMCD

E.L. 43 82 MT. MAURICE, TASMANIA

PHOTOGEOLOGICAL MAP

5 cm

2081

'84-2203

SCALE : 1:50,000	DRG. No.
DRAWN : M.I'O	K554-15
DATE : June '84	
REVISED :	

2082

SEE FIG. 4 FOR SAMPLES

- Rivers and streams with dams
- Roads, minor roads
- Vehicular track, unspecified track, walking track
- Railway
- Forest Reserve boundary
- E.L. boundary
- Trig station, spot height

5 cm

GEOCHEMISTRY

NOTE : ALL SAMPLES PREFIXED A (Sample series -161, 113, 140)

- H.M.S. Panned concentrate, stream sediment and ferruginous gravel (if obtainable)
- 140503 Sample location and number
- 113465B Rock chip sample location and number

A.M.G. GRID

GRID CONVERGENCE 0.5°

GRID / MAGNETIC 13.9°

½ 0 ½ 1 1½ 2 km

CSR LIMITED-AMCD

E.L. 43/82 MT. MAURICE, N.E. TASMANIA

GEOCHEMISTRY SAMPLE LOCATION MAP

2082

84-2208

SCALE : 1 : 20,000	DRG. No. K554-16
DRAWN : P.D.E. / P.R.	
DATE : July '84	
REVISED :	

357060


2083
To Scottsdale
To Branxholm
TASMAN HWY.
NORTH EASTERN LINE
550 000mE
555 000mE
560 000mE
5 440 000 m N
5 435 000 m N
5 430 000 m N
5 425 000 m N
TEN MILE TRACK
CUCKOO ROAD
TONGANAH ROAD
GREAT FORESTER RIVER
Parrs Rivulet
RINGAROOMA RIVER
Legerwood Rivulet
LEGERWOOD LANE
BILLYCOCK HILL
LEGERWOOD
HAAS ROAD
PEDDLES ROAD
RINGAROOMA ROAD
SCHRAMMS ROAD
RINGAROOMA
TREWALLA HILL
TREWALLA ROAD
Aplite dyke
FALLS ROAD
HARWICKS ROAD
Hogarth Rivulet
JOHNSTONES HILL
CUCKOO HILL
CUCKOO FALLS
VALLEY ROAD
Little Mackenzie Rivulet
Mackenzie Rivulet
LOONE HILL
Mc LENNANS HILL
PEDDLES HILL
MOUNT HEATHORN
CUCKOO HILL ROAD
Jetsons Creek
MAURICE RIVER
SOUTH MAURICE RIVER
MAURICE ROAD
EAST MAURICE ROAD
BARNETT ROAD
FORSYTH HILL
MT. MAURICE FOREST RESERVE
GREAT FORESTER RIVER
? Mo vein system
MT. MAURICE
Dunns Creek
Federal Creek
PARADISE HILL
RINGAROOMA RIVER
PATRICKS RIVER
RUSSELLS ROAD
BEN RIDGE ROAD
? Very fine grain siliceous granite
ALT. ZONE
TB
FMBA
CBA
RFMBA
RCMBA
MG
SG
MB
MB ?
A.M.G. GRID
GN
TN
MN
GRID CONVERGENCE 0·5°
GRID / MAGNETIC 13·9°
½ 0 ½ 1 1½ 2 km
Rivers and streams with dams
Roads , minor roads
Vehicular track, unspecified track, walking track
Railway
Forest Reserve boundary
E.L. boundary
Trig station , spot height
5 cm
TB Tertiary Basalt
FMBA Fine to medium biotite adamellite
CBA Coarse biotite adamellite
RFMBA Red fine to medium biotite adamellite
RCMBA Red medium to coarse biotite adamellite
MG Micro granite
SG Siliceous granitic rocks
MB Mathinna Beds
CSR LIMITED-AMCD
E.L. 43/82 MT. MAURICE, N.E. TASMANIA
GEOLOGICAL FACT MAP
2083
84-2203
SCALE : 1: 20,000
DRAWN : P.D.E. / P.R.
DATE : July '84
REVISED :
DRG. No.
K554 - 17
357061