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TASMAN ALLUVIALS  
C/O FRANK GRIFFITHS  
7 SASSAFRAS COURT  
ROSEBERY TAS. 7470

**1996 ANNUAL REPORT**  
**EL30/92 & EL6/94**

**TASMAN RIVER & BIG ROCKY CREEK**

**MICROFILMED**  
**FICHE No. 014150-**

**1.0 INTRODUCTION**

Exploration during the 1996 year continued the drilling program started in 1995. Difficulties accessing drilling sites on the soft marshes and buttongrass plains which cover the inferred northern extension of the Tasman River paleochannel through EL6/94, resulted in drilling activities being restricted to the firmer wooded country on EL30/92.

During this year negotiations continued with Renison Limited with respect to an Renison entering into an agreement to explore on the tenements with the option to purchase at the conclusion of or during a three year period. During the negotiation period Renison geological personnel conducted a number of inspections of the tenements. On the 10th of October 1996, Renison commenced exploration under an option agreement with S. Laffer and F. Griffiths. This agreement has been registered with Mineral Resources Tasmania.

Renison's expertise with alluvial deposits both in their Mineral Sands Division and the PT Koba Indonesian alluvial tin deposit will be utilised in planning and assessment of the proposed exploration program.

**2.0 DRILLING PROGRAM**

Difficult access conditions to the buttongrass which cover the northern extension of the Tasman River paleochannel has restricted drill rig access to the firm basalt covered margins immediately north of the old Tasman alluvial workings. Shallow silcrete and basalt rock has prevented completion of any holes to basement depth using the current cable tool equipment. Two holes were abandoned at 10m depth, 1 hole at 7m, and 1 hole at 3m. An alternative drilling technique is being investigated by Renison Ltd.

Hand augering and panning of samples has been undertaken on the buttongrass plains on EL6/94 to assess the location of the cassiterite host paleochannel. An exposure of alluvial sediments comprising sands, grits and gravels has been identified in embankments of the Heemskirk - Reece Dam road, northwest of EL6/94. It is assessed that the Tasman River paleochannel may turn to the west in the region of EL6/94. Drilling on the buttongrass plains will be necessary to further delineate the paleochannel.

**3.0 EXPLORATION UNDERTAKEN BY RENISON LTD.**

Renison Ltd commenced exploration activities on EL30/92 and EL6/94 during October 1996. Renison engaged the services of contract geologist Mr Revel Munro to undertake assessment of these tenements. Mr Munro has had previous experience in exploration for cassiterite placer deposits in Northeast Tasmania. An inspection of the tenements was also conducted by expert personnel from Renison's PT Koba Indonesian alluvial tin mine.

Exploration work conducted by Renison Ltd has included a literature review of historical mining data that had been compiled by Tasman Alluvials (including mining and processing records from mining licences operated by R & S Laffer), geological mapping, and processing of sediment samples. Exploration expenditure by Renison Ltd for the period 10th October 1996 to 31st December 1996 is planned at \$56,400 for EL30/92 and 6/94 combined. Renison's expenditure is to date is currently in excess of \$12000.

### **3.1 Base Mapping**

A 1:10,000 base map covering the area of EL30/92 and 6/94 has been produced incorporating the geological mapping of the Geological Survey 1:50,000 Zeehan sheet with topographic input from the Tasmap 1:25,000 series map sheets. Additional information, particularly the location of firefighting tracks cut during the 1995 "Heemskirk Bushfire", has been added from photogrammetric work and exploration sites located by GPS methods.

### **3.2 Geological Mapping**

Refinement of the existing geological mapping has been a priority. The quest for definition of the placer has led to mapping the extent of Tertiary sediments. Controls on the paleo-drainage by mapping of additional basement "highs" has also been undertaken.

The comments made below are based on inspections of a preliminary nature:

- The application of mapping units ascribed to the Quaternary period is not considered valid for this area. A vein quartz / water worn quartz pebble / peat B horizon is widespread throughout. Nowhere (to date) have accumulations of Pleistocene sediments been of a thickness worthy of mapping.
- Some minor amendments have been made to the extent of the Tertiary basalt flow remnants immediately north of the Tasman mine. Mapping marginal to the large forest mass that occupies most of the northern half of the tenements has indicated 500 ha of additional basalt cover. It is probable that an additional area of up to 3000 ha presently mapped as Tertiary sediment is also basalt.
- Cassiterite in economic quantities is expected to only be found in the pre-basaltic Tertiary alluvials. These sediments are frequently difficult to distinguish from the afore mentioned Quaternary / Pliocene veneer and eluvial vein quartz material overlying the Precambrian basement metasediments. In a number of new locations the thickness of these alluvials has been discounted to a thin horizon with mapping of new occurrences of Precambrian phyllitic rocks. Field observations in relation to the Tertiary units mapped as Tc (conglomerate, gravel & grit) and Tg (coarse gravels) suggest they are not always valid mappable units. The silcrete / conglomerate previously thought to be a thick silicified unit is now regarded as a residual capping only rarely exceeding 1.5 metres.
- The occurrence of Cambrian gabbro has long been known to form an island block to the northward continuance of a paleo-channel. The east-west width of this body has been expanded several hundred metres and further outcrops have been mapped up to 1 km to the east. It is now unlikely that a placer exists to the east of the gabbro high.

### **3.3 Excavator Pit Sampling**

In July 1990 R. & S. Laffer dug 57 excavator pits to a maximum of 6m depth. To fully utilise these endeavours, efforts (not fully resolved) to locate, sequence and assay the untreated samples has been undertaken. 30 samples averaging 13.4 kg have been described and concentrated. To date only one sample has been assayed; a pebble-wash horizon grading 50g/cu.m.

### **3.4 Cable Tool Drilling**

Three 6" cable tool holes were spudded in 1995 by S. Laffer and F. Griffiths. Hole 1 recorded 39.5m of alluvial sediments over basement. Hole 2 has samples to 22m. The basement was not penetrated. Hole 3 could not penetrate overlying basalt. All samples have been left in the field for in excess of one year. During this time most of the number identification of Hole 1 was lost. To provide a numerical assessment of this drilling all samples have been collected. At present half the estimated 3000kg of samples have been concentrated and lithology's recorded. As clayey silts, (sometimes with grits and pebbles) predominate, a cement mixer ahead of a cradle was used to reduce 35 kg samples down to 4 kg intermediate concentrates. The strata processed to date are not suggestive of being hosts to cassiterite. An overall grade for both holes 1 and 2 will be determined. (note: assays from split 3m composite samples of hole 1 were reported in the EL30/92 1995 Annual Report)

### **3.5 Track Cutting**

The cutting of two lines (4.5 line km) east through thick wet eucalypt and rainforest is soon to begin. The lines at 5371800mN and 5372500mN are primarily designed to test continuance of Tertiary sediments. Other forms of prospecting may also be utilised to take advantage of access to a difficult area.

### **3.6 Reverse Circulation Drilling**

A proposal to undertake some 500-600m of sample drilling is well advanced. Two lines of holes have been sited to define the structure of a paleo-channel if one exists in the large buttongrass area north of the Granville Tramway. Other holes will be sited to complement the cable tool holes on the partly basalt covered area closer to the most northerly Tasman workings. Some of these holes will determine basalt thickness.

The commencement of the drilling is dependant on the availability of a track mounted Warman 650 drill rig. It is possible the program could be undertaken as early as December 1996.

## **4.0 GEOPHYSICS**

Previous drilling north of the Tasman mine workings together with the geomorphology of the area suggests a deepening and widening of the paleochannel (Waterhouse, 1915). The extension of the lead immediately north of the old Tasman River alluvial workings is overlain by basalt. The basalt may preclude the use of conventional seismic refraction techniques for delineation of the paleochannel and basement contact. A program of reverse circulation drill holes is planned to prove the thickness of basalt and underlying alluvials.

A seismic technique known as SUBS has been developed by the earthscience and mining consultants, Coffey Partners International Pty Ltd. The SUBS technique combines surface to borehole and crosshole seismic techniques with tomographic processing to enable delineation of low velocity profiles beneath high velocity strata (such as basalt). The technique has been used in the Bowen Basin coal fields (QLD), to define Tertiary paleochannel aquifers beneath high strength basalt flows in excess of 50m thick.

A trial of the SUBS technique may be conducted to provide infill information between the R.C. holes drilled through the Tertiary basalt on EL30/92. The location of this trial will be determined after assessment of the initial drilling results.

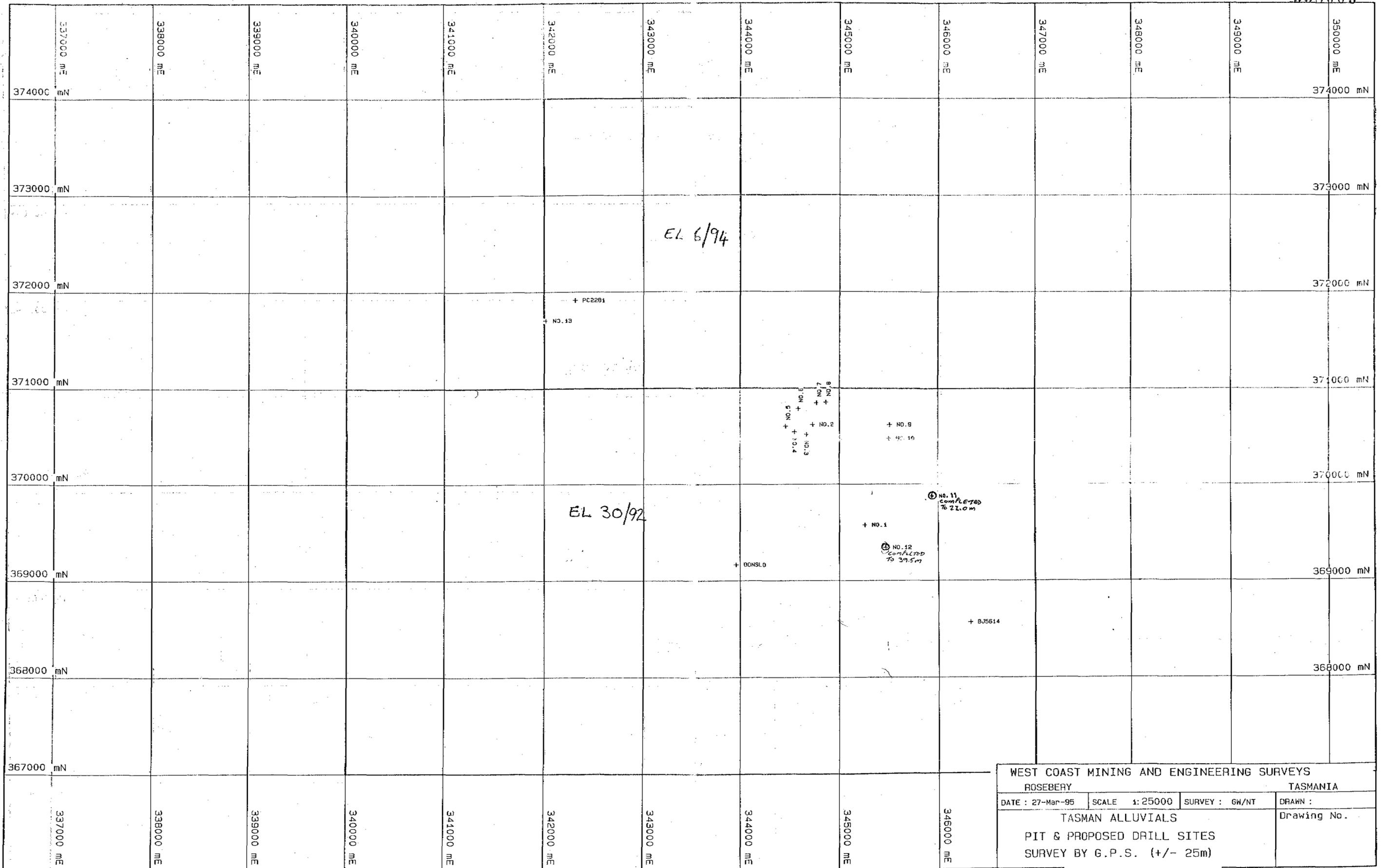
#### 5.0 FUTURE WORK PROGRAM 1996/97

This work program will be undertaken by Renison Ltd under an option agreement signed with S. Laffer and F. Griffiths on 11th October 1996.

- Review of past information; both historical mining and recent exploration.
- Aerial photographic interpretation
- Ground checking, mapping, and surface sampling
- Reverse Circulation Drilling program (potentially 30 to 40 holes) to test alluvial gravels and thickness of overburden.
- A qualitative evaluation of tin concentration and distribution will be undertaken from the drilling program.
- Depending on drilling results there is potential for trenching with an excavator to provide bulk samples.
- Depending on results a geophysical survey may be undertaken to further delineate the paleochannel profile.
- Mineral Resources Tasmania will be notified for written approval before any drilling is commenced and two weeks notice would be provided to allow time for field inspection prior to any earthworks.

#### 5.1 Expenditure Budget (12months Total) 1996/97 EL30/92 & 6/94 Combined.

Item	Description	Budget
1	Consultant Geologist	\$20,000
2	Drilling	\$50,000
3	R.G.C. Geologists and Staff	\$10,000
4	Sample Preparation / Assay	\$10,000
5	Field Assistant	\$10,000
6	Grid Cutting	\$7,000
7	Costeaming	\$4,000
8	Geophysics	\$10,000
9	Mapping and Drafting	\$5,000
	<b>TOTAL</b>	<b>\$126,000</b>



WEST COAST MINING AND ENGINEERING SURVEYS			
ROSEBERY		TASMANIA	
DATE : 27-Mar-95	SCALE 1:25000	SURVEY : GW/NT	DRAWN :
TASMAN ALLUVIALS			Drawing No.
PIT & PROPOSED DRILL SITES			
SURVEY BY G.P.S. (+/- 25m)			

5 cm

MAP.PF