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REPORT TO THE TASMANIAN DEPARTMENT
 OF MINES ON ACTIVITIES WITHIN
 EL 39/88 - MELALEUCA AND
 EL 13/86 - COX BIGHT
 CABLE SANDS (W.A.) PTY. LTD.

OPEN FILE

89-2943 COPY 1

MINES	
File Ref. E.L. 39/88 E.L. 13/86	
14 APR 1989	
Doc. Ref.	
Action Officer	Initials
Refer TO	
CORRES - 3.4.89	
Resubmit to	Date

MICROFILMED

89-2943

G. De Ross
February, 1989

CONTENTS

Introduction

Location and Access

Previous Investigations

Exploration Activities

Discussion of Results

Recommendations

Cox Bight Sample Results

EL 39/88 Locality Plan

Wacker Drill Locations

INTRODUCTION

Cable Sands (W.A.) Pty. Ltd. were invited to review data on the Cox Bight area by Mr A.C.P. Webb with a view to forming a Joint Venture to explore the area. As part of its appraisal Cable carried out a short programme of 'drill' sampling in EL 13/86 and EL 39/88. EL 39/88 covers the Melaleuca area to the north of Cox Bight and was granted to Cable on the 27th January, 1989.

Exploration is geared to the discovery of economic concentrations and volumes of heavy minerals in older marine sands underlying at shallow depths alluvial sands and gravels in the Cox Bight and Melaleuca valleys.

LOCATION AND ACCESS

The area is located in the extreme south-western corner of Tasmania at latitude 43° 24' South, longitude 146° 15' East. It lies 100kms west south-west of Hobart and can only be reached by light aircraft or by boat from Hobart. An airstrip 300m long at Melaleuca Inlet can accommodate small, single engine Cessna aircraft or a landing can be made on the beach at Cox Bight. Bathurst Harbour provides an excellent harbour for ocean-going craft, but only small jetties are available in Melaleuca Inlet for fishing vessels. Access in the area is restricted to tracked vehicles which can negotiate the swampy button grass plains, but bridges are required to cross the numerous sharply incised creeks.

PREVIOUS INVESTIGATIONS

Alluvial tin deposits in the area were discovered and worked around 1885, all equipment being transported from Hobart by sea, discharging at Boat Harbour on the eastern section of Cox Bight beach. Over 200 tons of tin concentrates were shipped back to Hobart from the same loading harbour.

During 1970-1974 exploration work including mapping, geochemical, sampling and drilling was undertaken by Ludbrooks Ltd., Metals Exploration Ltd. later installed a small treatment plant adjacent to Kings area and produced over 4 tons of cassiterite concentrates (1973).

During testing (1970-1974) aimed at outlining alluvial and colluvial tin deposits, amounts of heavy mineral concentrates were documented as occurring over an extensive area, with colours of gold being noted in various drill holes and pits which reached the alluvial basement.

At Cox Bight Ludbrooks drilled a short line of ten drill holes 20 metres apart. Samples taken from a depth of 1m to 4m were bulked together into a single sample. This sample reportedly contained 15% Heavy Mineral containing:

Ilmenite	31.4%
Zircon	31.6%
Leucoxene	2.6%
Cassiterite	15.4%

During 1973 Metals Exploration Ltd. drilled five holes in a traverse extending most of the way across the Cox Bight Valley at the northern end of Freney Lagoon. Some holes contained measurable cassiterite but the heavy mineral content was not measured.

In 1972 Ludbrooks drilled an east-west line of five holes extending across the alluvial flat east of Kings Workings some 800m south of Melaleuca Lagoon.

Drilling showed an easterly deepening sediment filled valley with the easternmost holes not bottomed at 10-15m. Sediments consisted of around 10m of quartzose fluvial sands and gravels with peat layers overlying compacted probable marine sands.

Heavy mineral contents calculated from the dry weight of concentrate reported by Ludbrooks were generally less than 1kg/cmm. This contradicts Sloggetts (1988) contention that these holes averaged 10% Heavy Mineral content over 8 metres depth.

Geological mapping by M.E.L. geologists has shown that older terraces, possibly representing wave-cut platforms, occur along the edge of the Breakespeare and Moth Creek drainages. Marine sands which may once have filled the valley have since been largely removed by more recent alluvial processes. Remnants of these marine sequences may be represented by tightly packed fine sands intersected at depth in drill holes.

EXPLORATION ACTIVITIES

As part of its assessment Cable contracted N. Pollock, Field Exploration to undertake a programme of shallow drill sampling in the Cox Bight and Melaleuca areas.

A man-portable 'wacker' drill was used for sampling since the logistical difficulties and environmental hazards associated with mobilizing a track mounted rig at this stage made this approach unwarranted.

Personnel and equipment were air lifted into the site by helicopter from a base at Dover.

A total 14 holes were drilled to variable depths but none exceeding 10.0m. Most, particularly in the Cox Bight area, were less than 5m due to the highly compacted and bouldery nature of the alluvial wash.

At Cox Bight an east west traverse roughly following MEL's ~~file~~ hole traverse, was carried out. Nine holes along this traverse line were drilled with most samples being of more or less sandy quartz gravels. Some silty sands of possible lagoonal origin exist at depth near the centre of the valley.

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At Melaleuca five holes were drilled along Ludbrook's traverse line which was recovered on the ground. All holes intersected coarse quartzose fluvial sands and gravels.

Samples were collected at 1 or 2m intervals in all holes and mostly panned on site. Coarse concentrates were shipped to Cable's laboratories in Bunbury, W.A. for TBE separation.

DISCUSSION OF RESULTS

Heavy mineral content of all samples was less than 0.2%. This is not surprising since all holes intersected only recent coarse alluvium with virtually no visible reworking or other concentrating processes having been active. Although Cable was unable to penetrate deep enough to sample the marine sands the results obtained in the overlying material generally agreed with concentrate weights reported by Ludbrooks (1973). It is therefore reasonable to assume that, at Melaleuca at least, the underlying sands were, as Ludbrooks drilling would suggest, low in heavy minerals.

At Cox Bight drilling was unable to confirm previously reported high heavy mineral contents (Ludbrooks 1968). However even if it were possible that such concentrations exist at depth the volume of material available in this area alone would be insufficient to justify a mining operation, given the remoteness and environmental sensitivity of the area.

The possibility of high grade tin bearing deep leads at Cox Bight was not addressed in this survey. Clearly in any future surveys a fairly heavy duty drilling rig would be necessary to penetrate the compacted gravels. This is unlikely to be achievable using a lightweight man-portable rig and a lightweight reverse circulation rig would be optimum.

RECOMMENDATIONS

It is recommended that Cable withdraw from negotiations to explore this area and relinquish title to EL 39/88.

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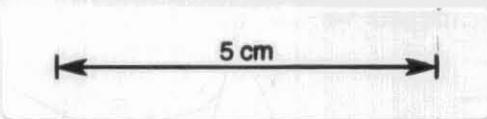
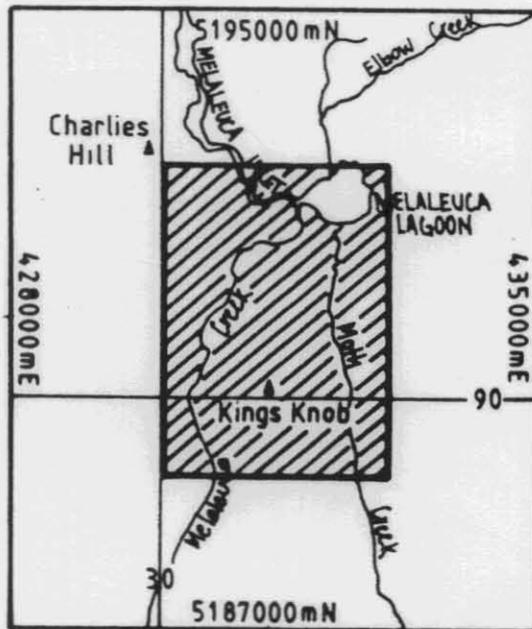
05 CABLE SANDS (W.A.) PTY. LTD. BOX 133, P.O., BUNBURY, W. A. 6230

M E M O	TO GREG DeROSS SYDNEY	FROM SCOTT CARRUTHERS BUNBURY
		SSC/fm:EX
		DATE 9 March 1989

COX BIGHT SAMPLES RESULTS

<u>HOLE</u>	<u>SAMPLE</u>	<u>SLIMES</u>	<u>O'SIZE</u>	<u>H.M.</u>
1	1	1.6	0.0	0.2
2	1	2.6	11.9	0.0
	2	1.0	24.1	0.0
	3	0.5	8.8	0.1
3	1	1.9	9.8	0.1
	2	1.7	14.9	0.1
4	1	0.5	15.8	0.0
5	1	2.2	9.4	0.0
6	1	1.3	11.1	0.0
7	1	0.4	20.2	0.0
8	1	2.0	25.0	0.0
	2	0.0	17.8	0.1
9	1	21.4	26.4	0.0
M1	1	22.7	61.2	0.0
	2	37.4	29.1	0.0
M2	1	24.2	66.3	0.0
M3	1	0.8	25.0	0.0
	2	0.0	20.6	0.0
	4	14.3	51.5	0.0
M4	1	0.6	33.0	0.1
	2	2.3	18.3	0.0
	3	7.8	64.1	0.0
	4	9.2	62.3	0.0
M5	1	21.4	56.1	0.0
	2	18.9	16.9	0.0
	3	11.8	54.4	0.0

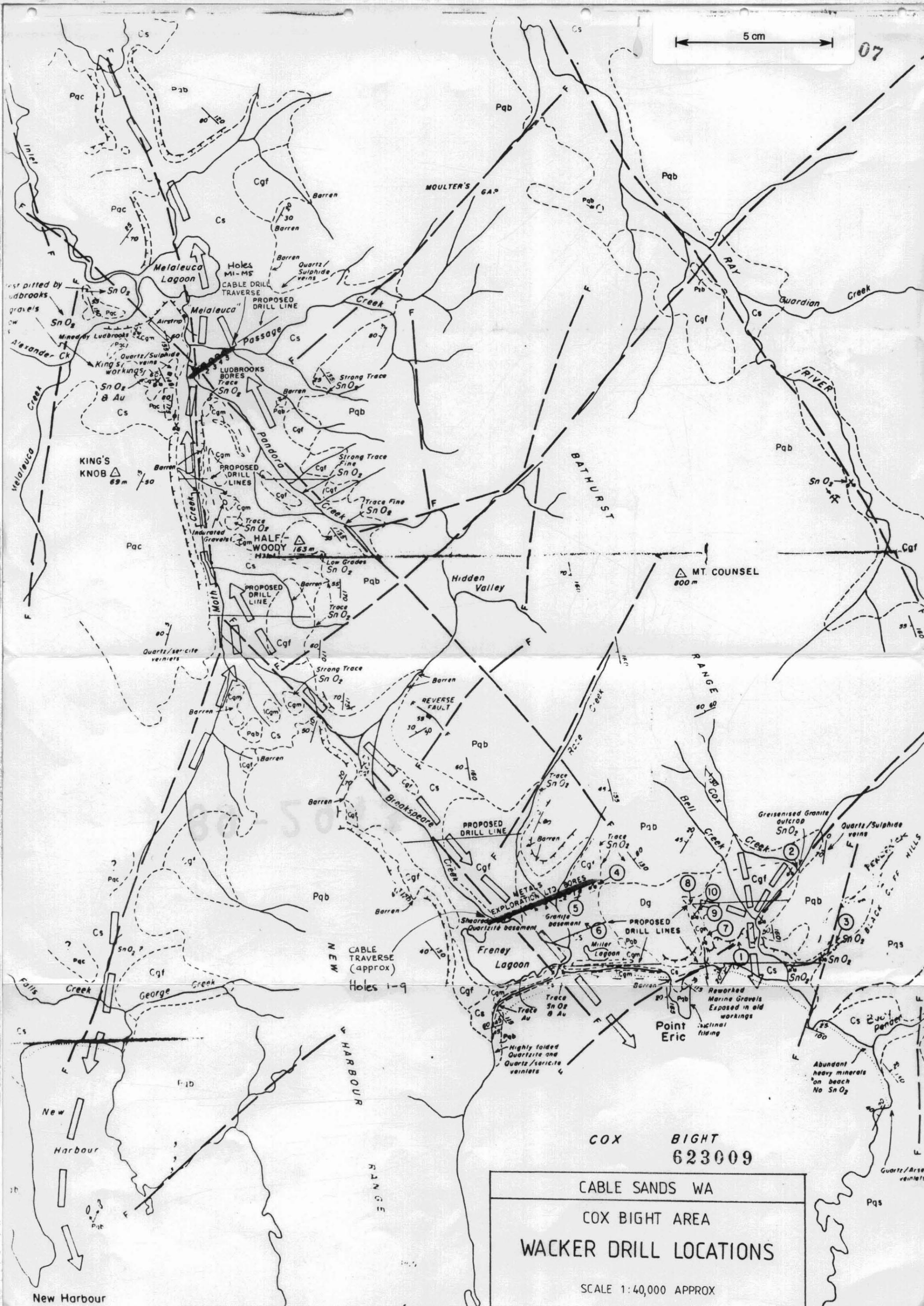
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CABLE SANDS (WA) PTY LTD
COX BIGHT, TASMANIA
EL 39/88 LOCALITY PLAN
MARCH, 1989

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COX BIGHT
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CABLE SANDS WA
COX BIGHT AREA
WACKER DRILL LOCATIONS

SCALE 1:40,000 APPROX