



AMDEX MINING LIMITED

TRIAKO MINES N.L., BUKA MINERALS N.L.,

GIPPSLAND MINERALS N.L., KIBUKA MINES PTY. LTD.

169 MILLER STREET, NORTH SYDNEY, AUSTRALIA 2060

TECHNICAL REPORT

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A.P. 4/80 SIX MONTHLY REPORT
FROM 26TH NOVEMBER 1980 TO
THE 25TH MAY 1981.

MICROFILMED

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CONTENTS

	PAGE NUMBER
1. Introduction	1
2. Summary and Conclusions	3
3. Current Exploration	4
4. The Australian Anglo American Joint Venture	10
5. Reference	10

FIGURES

1. Location Map 1:250 000 (In text)
2. Delta Auger Drilling 1:1000
3. Sequence of fluvial gravels and sands exposed in the Delta Mine. (In text)

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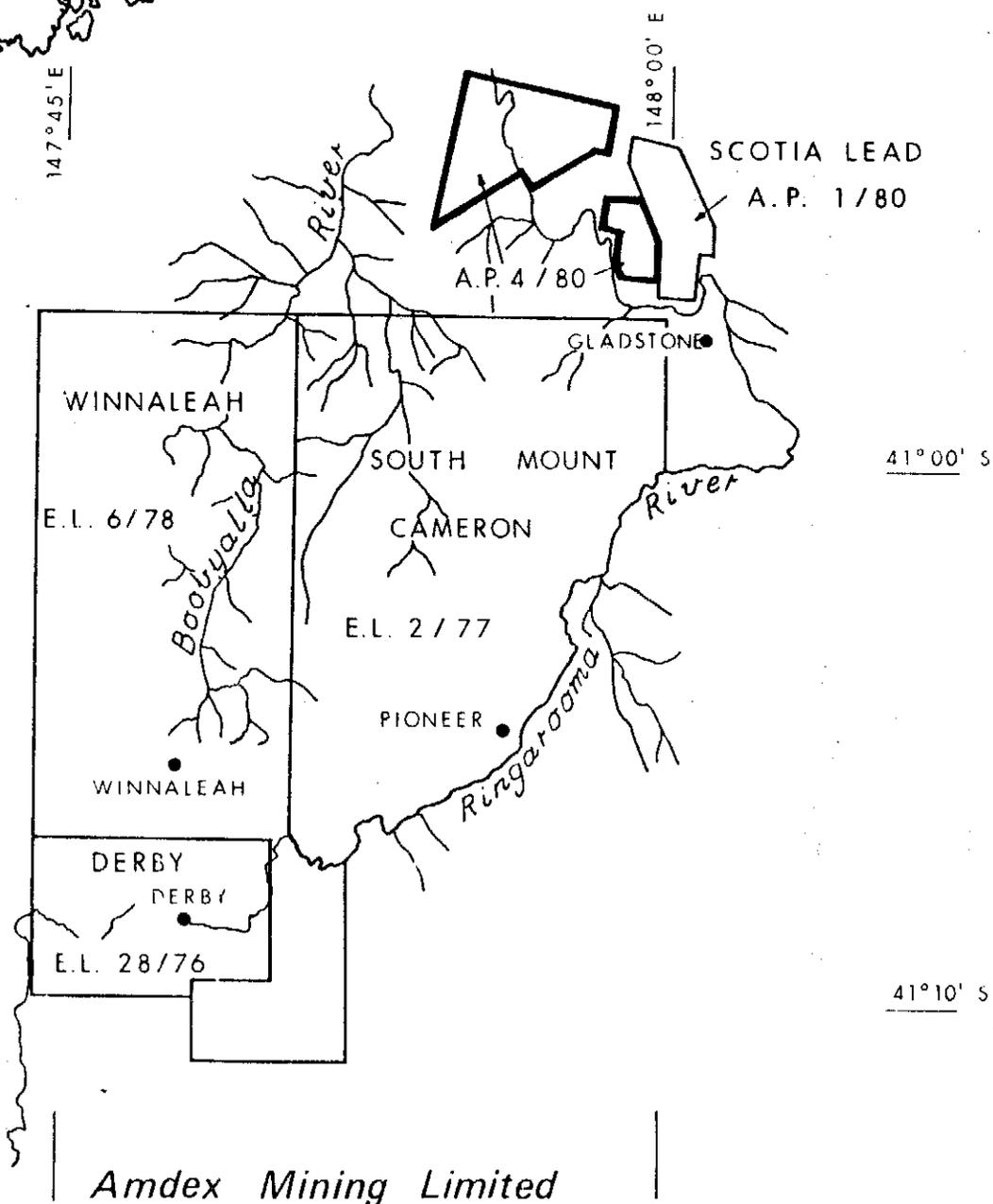
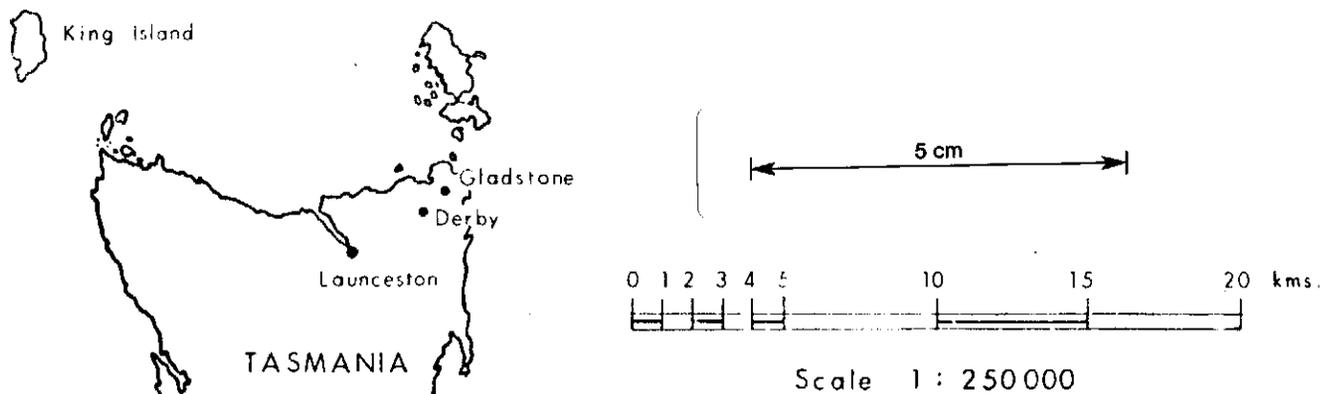
1. INTRODUCTION

1. 1. Scope

This report deals with all exploration conducted within, or relevant to, areas which constitute A.P. 4/80 during the six month period from 26/11/1980 to 25/5/1981. The work included field geology, drilling and joint venture negotiations. The company's philosophy of unified exploration, and rationalization of properties on the Great Northern Plains is re-stated in the context of current exploration. The results of drilling are presented and discussed, and the nature and effects of a joint venture agreement are outlined.

1. 2. Tenement Details

Authority to Prospect 4/80 (Fig. 1) consists of two blocks of ground (SR 32/70, SR 1975/179), which together comprise 21 km² of the Great Northern Plains, north of Mount Cameron. The Authority was initially granted to Kibuka Mines Pty. Ltd., on the 25/5/1980 and it has been renewed for successive six month periods.



NORTH - EASTERN TASMANIA LOCATION MAP

Author	Date	Dwg. No.	Fig 1
Drafting	Report No.	Base Plan	

2. SUMMARY AND CONCLUSIONS

1. A drilling program in the Delta Mine area has demonstrated that the mine could not be re-started as a viable operation.
2. A viable dredging operation on the Northern Plains would require the joint efforts of all the major property holders.
3. A Heads of Agreement for a Joint Venture between Australian Anglo American Ltd., Kibuka Mines Pty. Ltd., and Moruka Tin Pty. Ltd., has been finalised. The exploration programs, for at least the next six month period, within all Amdex properties in north east Tasmania, will be formulated and carried out within the limits of this agreement.

3. CURRENT EXPLORATION

3. 1. Introduction

The area has always been viewed by Amdex as one having potential for the extension of proven tin reserves suitable for a dredging operation. The preliminary field work and evaluation of past drilling has resulted in the following conclusions.

1. A large scale drilling, and possibly geophysics, program will be necessary to delimit ore bodies. The nature of sediments exposed in old workings, and the grade distribution encountered during previous drilling programs indicate that the grades will be generally marginal, without the rich "nugget effects" typical of the fluvial fan deep leads south of Mount Cameron.
2. A viable dredging operation would require a unified approach to sequentially work all those targets on the Great Northern Plains which can be proven as deposits.
3. Minor potential exists for small scale, open-cut gravel pump operations at several sites in the upper terrace level associated with the present Ringarooma River.
4. Minor gold is ubiquitous in association with all tin deposits except the deeper and older extensions of the Scoloch system.

As a result of these conclusions, the company has continued its policy of simultaneously; exploring for small deposits suitable for mining as part of the operation based at South Mount Cameron, and actively promoting the larger scale dredging concept with view to a joint venture with another company. During the last period progress has been made on both fronts, and in the accumulation of geological information necessary for any appraisal of the region.

3. 2. Delta Drilling

During the summer a drilling program was conducted in the Delta Mine area (Fig. 2), on the western bank of the Ringarooma River, and within SR 32/70. This area was considered to have potential for a gravel pump operation in the 50-100 tonne category. Nineteen holes were drilled into the upper terrace level, using a Gemco auger rig with a 14.2 cm. bit diameter and with a theoretical sample volume of 15.8 litres over one metre depth interval. As has been demonstrated on other target areas, this rig is ideal for sample drilling shallow ground above the water table. At Delta the depths drilled to a "false bottom", of a characteristic green-black gritty clay, varied from three to ten metres. The sediments overlying the false bottom are considered to represent fluvial channel gravels and overbank fines, plus a covering of aeolian sand and silt.

The results of the drilling program were disappointing (Fig. 2 Table 1). Although fine grained tin and gold mineralization was encountered in most holes, the grades were very low. Only two holes gave overall grades greater than 100 g/m^3 and the mean for the nineteen holes was 50 g/m^3 . In addition, most of the heavy minerals were in the fine sand-silt range and cassiterite was commonly less abundant than ilmenite, zircon, topaz and rutile. Gold was widespread, very fine grained and in very low concentrations. Both the host and false-bottom sediments were regularly checked for radioactivity, however no anomalies were detected.

It is considered that this target has been adequately explored for the purpose stated, and that it has been clearly demonstrated as sub-economic. No further drilling is planned for the Delta area. The drilling log sheets are appended.

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TABLE 1. SUMMARY OF DELTA DRILLING.

AMDEX MINING LIMITED - NORTH EAST TASMANIA - DRILLING SUMMARY

AREA DELTA, GREAT NORTHERN PLAIN YEAR 1981

DRILLING METHOD: AUGER . BIT DIAMETER = 14.2 CM.

Hole No	Collar Coordinates mN mE	Surface R.L.	Basement R.L.	Depth Drilled (m)	Depth to Basement (m)	Area of influence (m ²)	Volume (m ³)	Total rec. volume to basement	Total rec. SnO ₂ (g)	Grade * (gSnO ₂ /m ³)	Contained SnO ₂ (kg)	Grade + (gSnO ₂ /m ³)	Contained SnO ₂ (kg)				
D.A. 1				5.0	4.7					92							
D.A. 2				7.5	6.9					42							
D.A. 3				8.0	7.5					24							
D.A. 4				7.0	6.1					6							
D.A. 5				6.5	6.4					21							
D.A. 6				8.0	7.9					5							
D.A. 7				10.0	9.2					13							
D.A. 8				9.0	8.9					60							
D.A. 9				8.0	7.8					63							
D.A. 10				5.0	4.0					68							
D.A. 11				3.0	2.9					109							
D.A. 12				5.0	3.5					13							
D.A. 13				4.0	3.9					42							
D.A. 14				5.0	2.8					5							
D.A. 15				4.0	3.9					62							
D.A. 16				3.0	2.5					51							
D.A. 17				3.0	2.0					164							
D.A. 18				3.0	2.5					54							
D.A. 19				4.0	3.6					10							

* Grade calculated by relating recorded volume to recovered tin

Author K. MORRISON

Subsequent to the Delta drilling the Gemco rig and one driller were temporarily hired to Santos Ltd., for their work within E.L. 19/77.

3. 3. Geological Considerations

The fabric of gravels exposed in several old workings in the area has a disrupted appearance and often the matrix is rich in loosely packed, relatively well-sorted sand, and depleted in clay. Such a texture is atypical of the fluvial terrace sediments further upstream and in the past we have suggested that it represents the effect of marine transgression.

Microscopic examination of screened silt and sand fractions of the matrix sediment has not produced any forams or fragments of other fossils. The sediments appear to have been leached however, and the present ground waters are acidic, so probably only siliceous tests or calcareous fragments which had been silicified prior to ground water leaching would have survived.

Exposures in the Delta Mine (Fig. 3) were examined in January by research student Mr. W. Yim and geomorphologist Dr. E. Colhoun, together with Amdex geologists, and the general consensus was that all sediments exposed were most likely to be of fluvial and aeolian origin.

Evidence of marine/estuarine sedimentation was subsequently obtained on the eastern side of the Ringarooma River, in the form of well-pressured mollusk shell fragments in black muds. These muds were sampled at depths from five to twelve metres below the surface during reconnaissance auger drilling. These shell-bearing muds are probable correlates with those drilled by Preussag (Wong, 1979) in the Fosters Marsh area. They are located at a lower Datum Level than the site of the Delta drilling.



Figure 3.

Sequence of fluvial gravels and sands exposed in the Delta Mine.

The composition of gravel clasts recovered during the Delta drilling was heterogenous, including; several granite types, vein quartz, abundant chalcedony and silicified wood, Mathinna Group fragments (quartzite, sandstone, slate, shale, phyllite), cherts, siliceous breccia and silcrete. As is usual with most placers in the region, many of the rock types represented in alluvial gravels no longer occur in outcrop, however the source rocks can be interpreted as a mixture of granites, Mathinna Group, Cainozoic silcretes and possibly remnants of Permian conglomerates.

4. THE AUSTRALIAN ANGLO AMERICAN JOINT VENTURE

Agreement has recently been reached with Australian Anglo American Ltd., concerning a joint venture for the exploration of all Exploration Licenses and Authorities held in northeast Tasmania. As stated during the recent discussion with the Director of Mines, Australian Anglo American Ltd. is currently preparing an exploration program encompassing all these areas jointly. In relation to the Great Northern Plains, Anglo see potential for a large scale tin and gold dredging operation. Their proposed exploration program will be submitted in support of the current application for renewal of A.P. 4/80.

5. REFERENCE

Wong, Y. F. 1979. Ringarooma Joint Venture, North East Tasmania. Scout-Drilling report Preussag Australia Proprietary Limited. Report No. Tas/19.

AMDEX MINING LIMITED - NORTH EAST TASMANIA DRILL LOG

Area: DELTA Hole No.: D.A.7 Collar Co-ordinates: mN mE Drilling Method: Gemco Auger

Surface R.L.: m Basement R.L.: m Cutting Shoe / Bit diameter: 14.3 cm. Theoretical Volume: 15.83 litres

Date: 10/3/81 Driller: S. Moore Assistant: J. Petrie Sample Washer: S. Moore Geologist: K. Morrison

Section	Metres	Sample No.	Recovered Volume (l)	Weight Conc. (g)	Conc. Assay (%Sn)	Recovered Tin (gSnO ₂)	Grade * (gSnO ₂ /m ³)	Grade + (gSnO ₂ /m ³)	Description of Sample
From	To								
0	1	6091	13LTRS	434.2	0.10	0.62	4.7		F. brown humic sands, abundant wash, inc. agate. Tr. f. ilmenite, zircon.
1	2	6092	19 "				4.7		Lge. amount rounded wash, f. sand. Sm. amount heavies inc. ilmenite, tin, zirc, spinel.
2	3	6093	15 "				4.7		Lge. amount wash, f. sand. Sm. amount f. heavies with minor gold.
3	4	6094	12 "				4.7		C. sand, sm. amount sm. wash. Tr. f. heavies.
4	5	6095	13 "				4.7		Yellow clayey sand, sm-med. wash. Sm. amount f. heavies.
5	6	6096	20 "				4.7		Yellow clayey sand, silt, abundant rounded wash, no binding matrix. Sm. amount f. heavies.
6	7	6097	17 "				4.7		F. yellow sand, sm. amount well rounded wash. Sm. amount heavies inc. minor f. tin.
7	8	6098	8 "				4.7		F. grey sand, silt, sm. rounded wash. Sm. amount heavies, inc. minor f. tin.
8	9	6099	14 "				4.7		F. grey sand, sm. amount wash. Reasonable amount f. heavies inc. tin, coarser spinel.
9	10	6100	19 "	94.9	1.07	1.45	76.3		Grey sand, black clay, falsebottom. Reasonable amount heavies with good grade of tin.

* Grade calculated by relating recovered volume to recovered tin + Grade calculated by relating Radford factored theoretical volume to recovered tin Rad.F = 80%
 Drillers reported basement at 9.2 m. Grade from surface to inferred basement at 9.2 m. 33 g SnO₂ / m³ *
 Total recovered volume, surface to basement l. at m g SnO₂ / m³ +
 Total recovered tin g SnO₂

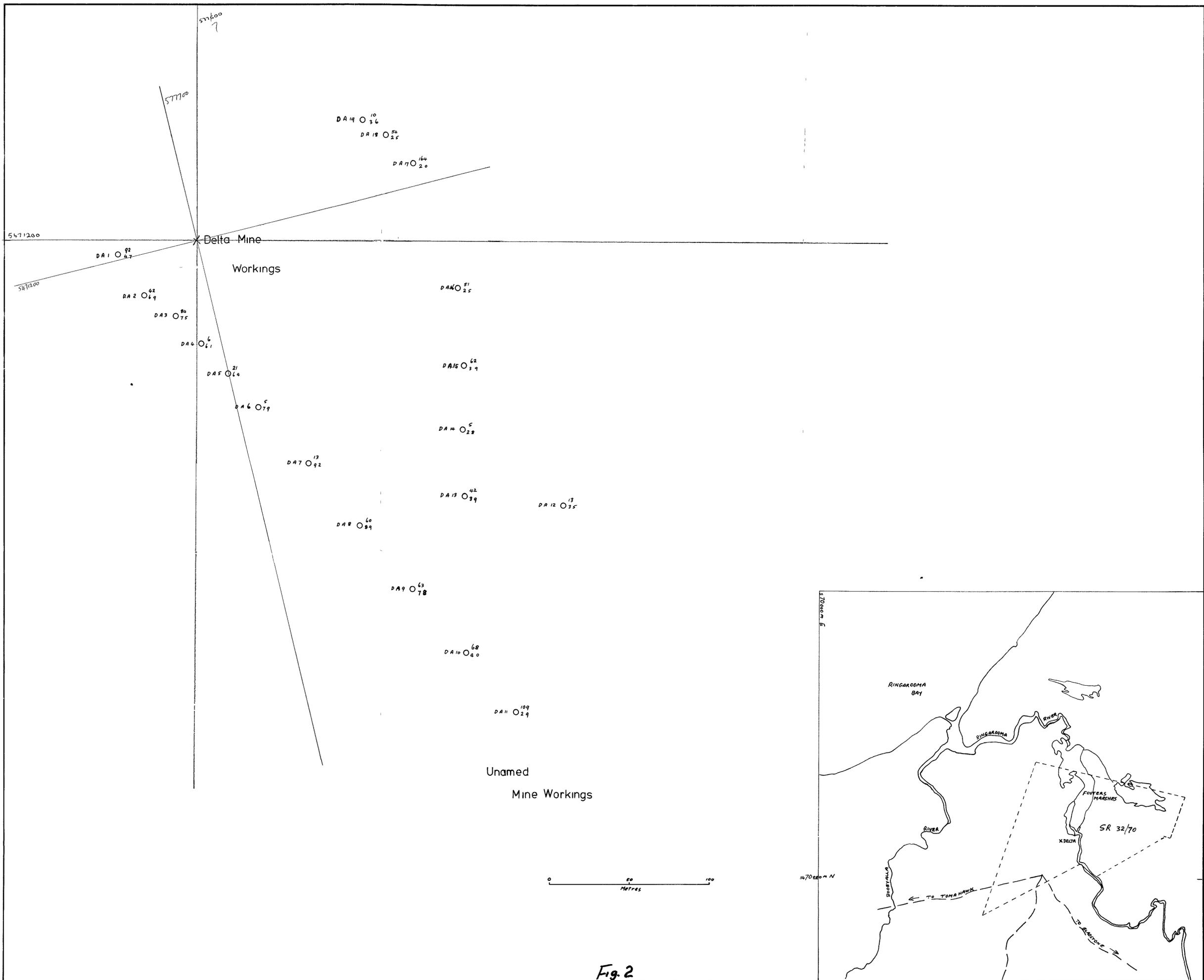


Fig. 2

KIBUKA MINES PTY LTD

DELTA AUGER DRILLING 2-3/1981

SCALE 1:1000

MN

↑

5cm

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Hole Number - DA 5 O 50/6 — Grade in grams SnO₂ (70% Sn) per metre³, top to bottom
 — Depth in metres to false bottom

K MORRISON 6/1981