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MICROFILMED

GEOLOGICAL EVALUATION OF

OFFSHORE DRILLING FOR TIN

N.E. TASMANIA AND CAPE BARREN ISLAND.

EL 18/70 AND 19/70

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Consulting Geologist,
September, 1970.

AMG REFERENCE POINTS ADDED

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GEOLOGICAL EVALUATION OF OFFSHORE DRILLINGFOR TIN - N.E. TASMANIA AND CAPE BARREN ISLAND.SUMMARY:

The offshore drilling programme conducted by a joint venture between B.H.P. and Utah Development in March and April, 1968, failed to locate commercial concentrations of tin.

An evaluation of the offshore drilling programme was undertaken by the author in September, 1970, and it was found that when their drilling data was processed and plotted as contour lines the results are of geological and possible economic significance.

The results obtained from the drilling in Ringarooma Bay have indicated the possible location of an ancient mouth to the Ringarooma River that has not been previously found and it also indicates the possible location of a tin bearing "deep lead" not previously known.

DISCUSSION:

In March and April, 1968, a drilling programme was conducted by a joint venture between B.H.P. and Utah Development company. The results of this drilling programme are given in a report, No. C.R. 528, by J. Volker 1968.

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These results have been converted to values expressed in cents per cubic yard for the total hole and for the bottom 15 feet of sample from each hole, and are listed in Table 1.

Contour maps showing the distribution of these values are shown on Plates I, II, III and IV. Plates I - 4 inc. show the distribution of S_n values in the panned concentrate and Plate 5 shows the holes in Deep Bay, Cape Barren Island, that were not bottomed.

One square mile of bottom sediment 30 feet deep is equal to 92.8 million cubic yards, using a value of \$3,283 per short ton of S_n . One cent per cubic yard sediment is worth \$928,000. If n the above price for tin is for a long ton multiply all results by 0.89285

In Ringarooma Bay the best concentration of tin using the whole hole is worth about \$1,000,000. The cost of production would be far greater than this.

GEOLOGICAL INTERPRETATION.
RINGAROOMA BAY.

The plotting of the tin values of the whole hole shows a concentration of tin which is not present at the bottom of the sediment. This concentration is interpreted as being deposited by the Ringarooma River when its mouth was located about 2½ miles to the north-east of where it is at the present time.

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GEOLOGICAL INTERPRETATION.
RINGAROOMA BAY. Cont'd.

The highest value of tin found in any of the drilling was in hole 11A, which was located about $\frac{1}{4}$ mile offshore, $4\frac{1}{4}$ miles N.E. of the present mouth of the Ringarooma River. This is interpreted as being caused by a tin bearing deep lead ~~lead~~ which has not been previously located. An examination of the topographic map of the onshore area indicates that a now covered stream channel up to a length of about $1\frac{1}{2}$ miles could be present between the coast and Ringarooma Tier, the first outcrop of rock to the east of the coast.

The higher concentration of tin in holes 11A, 12A and 13A, all of which are located less than $\frac{1}{4}$ mile offshore, indicates that the beaches in this area may contain tin vlues which are of interest.

DEEP BAY, CAPE BARREN ISLAND.

This bay is located off the mouth of the Rook's River which is known to contain tin deposits.

The closest row of holes to mouth of the river, 17, 13, 19 and 20, were not bottomed and therefore the results are inconclusive.

A study of plates 1 and 2 indicates that there is a strong north-westward current, which has moved some of the tin brought in to the bay by the Rook's River to the N.W. and deposited it near the shore in the area around holes 9 and 15.

RECOMMENDATION:
RINGAROOMA BAY AREA.

It is recommended that: (1) a scout drilling programme of 6 lines, parallel to the beach, spaced $\frac{1}{4}$ mile apart and with holes every 400 ft. along these lines be drilled on-shore of the area which in Plate 1 exceed one cent per cubic yard. If a channel is located sample drilling should be done.

- 2) A scout drilling programme of 6 lines, parallel to the beach, 6000 feet long and $\frac{1}{4}$ mile apart with holes every 400 feet (15 holes per line) be conducted between Bowler's Lagoon and the beach (inland from hole 8A).
- 3) Sample drilling of Boobyalla beach on $\frac{1}{4}$ mile centre (25 holes) from the mouth of the Ringarooma to north end of the beach.

CAPE BARREN ISLAND.

It is recommended that the North-South trending beach located about 2 miles east of the mouth of Rook's River be sample-bored on $\frac{1}{4}$ mile interval (9 holes).

J.C. Standard

B.M.I. MINING.

TASMANIAN TIN ASSAY RESULTS

7th September 1970.

1 ton of tin on the London market = £1520 or \$3283 Australian.
 Assuming short tons, one pound of tin is valued at \$1.64
 If the above price for tin is for a long ton multiply all value result
 by 0.89285.

HOLE	WHOLE OF HOLE AV. lb OF TIN PER cu.yd.	WHOLE OF HOLE VALUE OF TIN PER cu.yd. £	BOTTOM 15' AV. lb. OF TIN PER cu.yd.	BOTTOM 15' VALUE OF TIN PER cu.yd. £
3RB	0.00692	1.135	0.00857	1.405
5RB	-----	-----	-----	-----
7RB	0.00252	0.413 (15.27)	0.00267	0.438
9RB	0.00397	0.651 (18')	0.00333	0.546
11RB	0.00332	0.544	0.00467	0.767
13RB	0.00587	0.963	0.00772	1.266
9ARB	0.00385	0.631	0.00316	0.518
11ARB	0.01196	1.961	0.01994	3.270
12ARB	0.00512	0.840	0.00610	1.000
12BRB	0.00764	1.253	0.01707	2.799
* 13ARB	0.00565	0.926 (11')	0.00805	1.320
8ARB	0.00620	1.017 (16')	0.00323	0.530
14BRB	0.00472	0.774 (17')	0.00707	1.159
12DB	0.00325	0.533	0.00343	0.563
13DB	0.00205	0.336 (17')	0.00174	0.285
15DB	0.00684	1.122 (11.5')	0.00684	1.122
18DB	0.00190	0.312	0.00185	0.303
19DB	0.00424	0.695	0.00479	0.779
20DB	0.00194	0.318	0.00238	0.390
1DB	0.00502	0.823 (18')	0.00570	0.935
5DB	0.00424	0.695 (16')	0.00545	0.894
7DB	0.00477	0.782	0.00420	0.689
8DB	0.00494	0.810 (18.5')	0.00464	0.761
9DB	0.00268	0.440	0.00268	0.440
10DB	0.00509	0.835	0.00569	0.933
11DB	0.00467	0.766	0.00626	1.027
14DB	0.00239	0.392	0.00239	0.392
16DB	0.00465	0.763 (18')	0.00467	0.766
17DB	0.00308	0.505	0.00546	0.895
4DB	0.00483	0.792 (10')	0.00483	0.792
5 Anson Bay	0.00346	0.567 (5')	0.00346	0.567
2DB	0.00426	0.699	0.00357	0.585
3DB	0.00668	1.096 (10')	0.00668	1.096
6DB	0.00703	1.153	0.00801	1.314

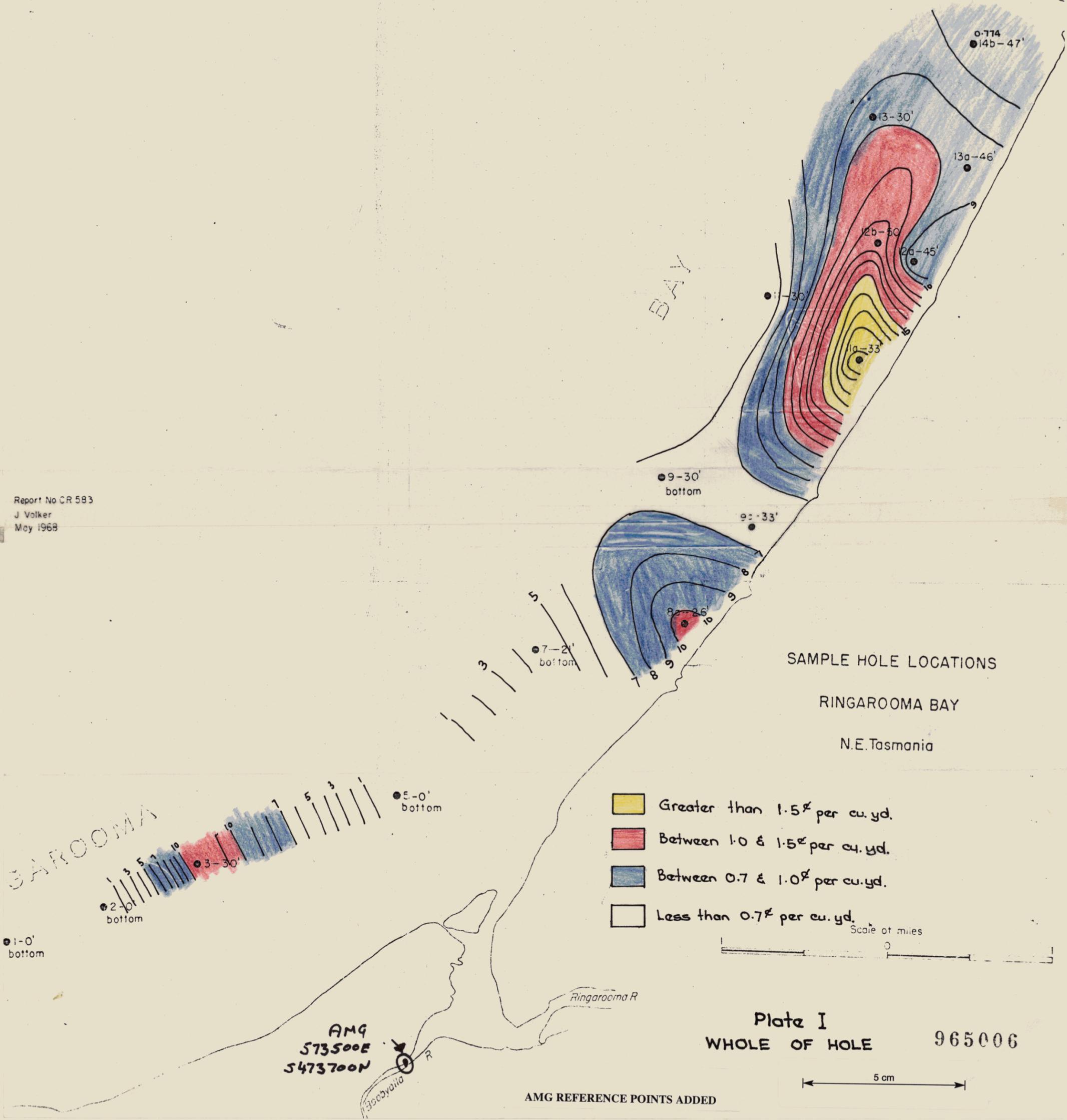
* SAMPLES MISSING, AVERAGED ON AVAILABLE SAMPLES ONLY.

Table 1

Petal Point
605

AMG
579500E
5485400N

Report No CR 583
J Volker
May 1968



SAMPLE HOLE LOCATIONS
RINGAROOMA BAY
N.E. Tasmania

- Greater than 1.5% per cu. yd.
- Between 1.0 & 1.5% per cu. yd.
- Between 0.7 & 1.0% per cu. yd.
- Less than 0.7% per cu. yd.

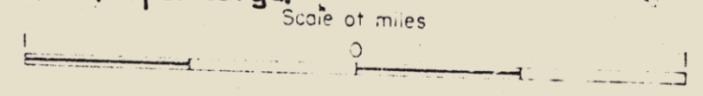
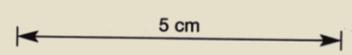


Plate I
WHOLE OF HOLE 965006



AMG REFERENCE POINTS ADDED

AMG
573500E
5473700N

300byalla R

Ringarooma R

RINGAROOMA

BAY

Report No CR 583
J Volker
May 1968



SAMPLE HOLE LOCATIONS

RINGAROOMA BAY

N.E. Tasmania

- Over 3¢ per cu. yd.
- Between 2.0 & 3.0¢ per cu. yd.
- Between 1.5 & 2.0¢ per cu. yd.
- Between 1.0 & 1.5¢ per cu. yd.
- Between 0.7 & 1.0¢ per cu. yd.
- Less than 0.7¢ per cu. yd.

Scale of miles



Plate II
BOTTOM 15'



965007

FLINDERS ISLAND

Little Dog Island

Great Dog Islands

VANSITTART ISLAND

SOUND

Tin Kettle Island

Anderson Island

FRANKLIN

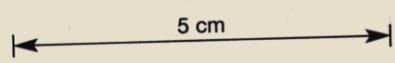
AMG
591800E
5533800N

AMG
605500E
5535200N

965008

Dough Bay Island

AMG REFERENCE POINTS ADDED

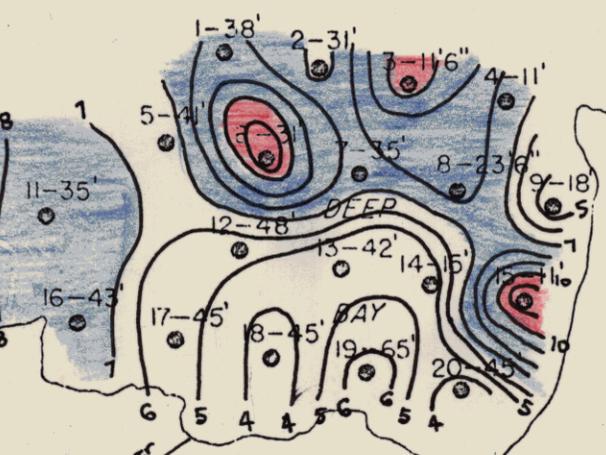


CAPE

BARREN

ISLAND

Rooker River



- Greater than 1% per cu. yd.
- Between 0.7% & 1.0% per cu. yd.
- Less than 0.7% per cu. yd.

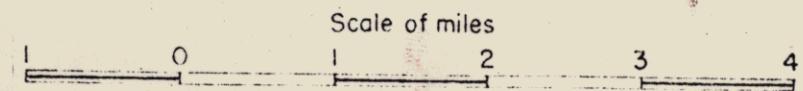


Plate III

TOTAL HOLE

FLINDERS ISLAND

Little Dog Island

Great Dog Island

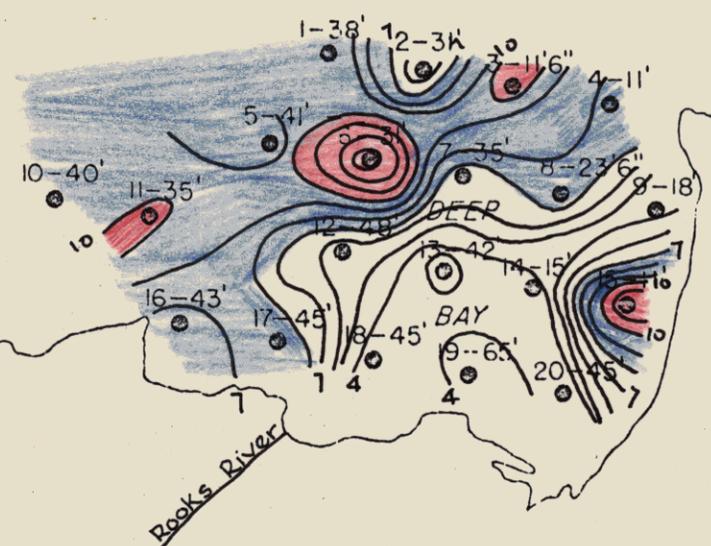
SOUND

VANSITTART ISLAND

FRANKLIN

Anderson Island

Tin Kettle Island



965009

- Greater than 1^g per cu. yd.
- Between 0.7^g & 1.0^g per cu. yd.
- Less than 0.7^g per cu. yd.

5 cm

CAPE

BARREN

ISLAND

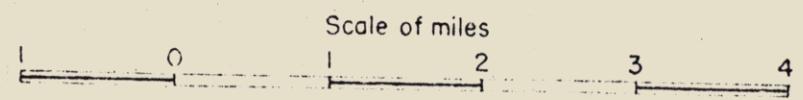


Plate IV

BOTTOM 15'

FLINDERS ISLAND

Little Dog Island

Great Dog Island

SOUND

VANSITTART ISLAND

FRANKLIN

Anderson Island

Tin Kettle Island

1-38' 2-31' 3-11'6" 4-11'

5-41' 6-31' 7-35' 8-23'6" 9-18'

10-40' 37

11-35' 36

12-48' 38

13-42' 30

14-15' 40

15-11' 40

16-43' 44

17-45' 44

18-45' 35

19-65' 58

20-45' 25

DEEP

BAY

Rocky River

Dough Bay Island

965010

Total Hole

43 = .040% Sn. in panned concentrates

CAPE BARREN ISLAND

5 cm

Scale of miles



010

FLINDERS ISLAND

Little Dog Island

Great Dog Island

SOUND

VANSITTART ISLAND

FRANKLIN

Anderson Island

Tin Kettle Island

1-38' 2-31' 3-11' 4-11'

5-41' 6-31'

10-40' 11-35'

12-48' 13-42' 14-15'

16-43' 17-45' 18-45' 19-65' 20-45'

DEEP BAY

Dough Bay Island

Rocks River

CAPE BARREN ISLAND

965011

Bottom 15 Feet of Sample
40 = .040% Sn in Panned Concentrates

5 cm

Scale of miles
0 1 2 3 4

Plate 2

FLINDERS ISLAND

Little Dog Island

Great Dog Island

SOUND

VANSITTART ISLAND

FRANKLIN

Tin Kettle Island

Anderson Island

1-38'

2-31'

3-11'6"

4-11'

5-41'

6-31'

7-35'

8-23'6"

10-40'

11-35'

12-48'

13-42'

14-15'

15-11'

16-43'

17-45'

18-45'

19-65'

20-45'

DEEP

BAY

Dough Bay Island

Rooks River

CAPE BARREN ISLAND

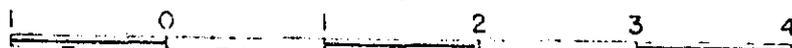
Bottom 10 Feet of Sample

40 - .040% Sn. in panned concentrates

965012

5 cm

Scale of miles



FLINDERS ISLAND

Little Dog Island

Great Dog Island

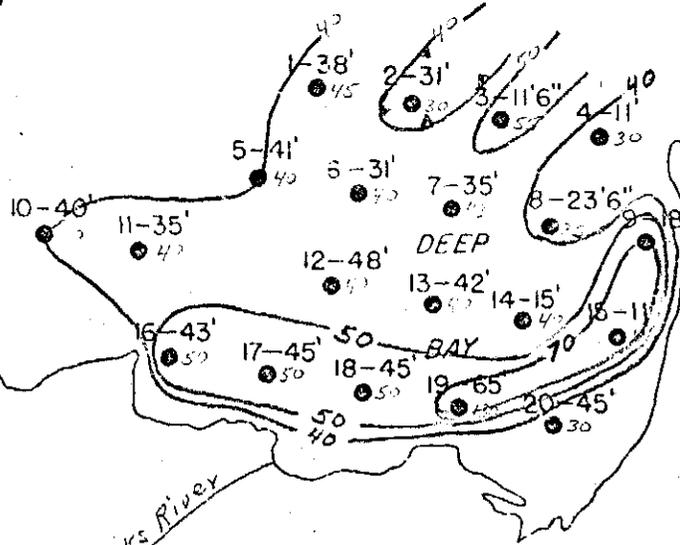
SOUND

VANSITTART ISLAND

FRANKLIN

Anderson Island

Tin Kettle Island



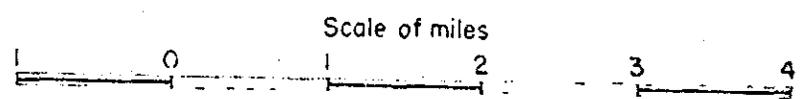
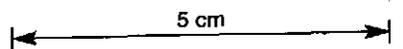
Best 10 Feet of Sample
 40 = .040% Sn. in panned concentrates

Dough Bay Island

Rooks River

CAPE BARREN ISLAND

965013



FLINDERS ISLAND

Little Dog Island

Great Dog Island

SOUND

VANSITTART ISLAND

FRANKLIN

Anderson Island

Tin Kettle Island

1-38' 2-31' 3-11'6" 4-11'

5-41' 6-31' 7-35' 8-23'6" 9-18'

10-40' NB 11-35' NB 12-48' NB 13-42' NB 14-15' 15-11'

16-43' 17-45' NB 18-45' NB 19-65' NB 20-45' NB

DEEP

BAY

NB = Not Bottomed

Dough Bay Island

965014

CAPE BARREN ISLAND

5 cm

Scale of miles



Plate 5