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PLANET GOLD LIMITED

Mineral Sands Exploration
E.L. 13/67

Northern Tasmania

CONTENTS

22nd January, 1968 Kenneth McMahon & Partners Pty. Ltd.

INTRODUCTION

A preliminary exploration programme was designed and carried out by Kenneth McMahon & Partners Pty. Ltd. on behalf of Planet Gold Limited in their Exploration Licence No. E.L. 13/67, in Northern Tasmania. The object of the programme was to test the hinterland of the bay between West Head and Badger Head to the west of the Tamar River, the middle arm of the Tamar River, and the eastern area of E.L. 13/67 in the vicinity of Five Mile Bluff and Stony Head, for heavy minerals, notably rutile, zircon and gold.

The initial programme in the West Head-Badger Head area was based on the study of a topographical map and aerial photographs only, and consisted of regular line and hole spacings, but owing to the sparse mineralization of the area, the programme was altered to one of random scout drilling of the lease area.

All drilling and sampling was carried out by Kenneth McMahon & Partners Pty. Ltd., whilst assaying was conducted by Geochemical and Mineralogical Laboratories Pty. Ltd. of Rushcutters Bay.

SUMMARY and RECOMMENDATIONS

A total of 48 holes and 560 feet were drilled for 142 samples in E.L. 13/67 in Northern Tasmania between Badger Head in the west and Stony Head in the east. The drilling was carried out between 13th November and 26th November, 1967 using standard hand auger equipment.

24% of the samples had assays of 1% or more, while 52% of the samples assayed 0.5% heavy minerals or better. The mineral fractions were mineralogically examined and found to contain only 6-8% rutile, traces of zircon, and $7\frac{1}{2}$ to $16\frac{1}{2}$% ilmenite, with the balance being mainly amphiboles, garnet, topaz-andalusite, tourmaline and iron oxides.

Clay and/or indurated sand were encountered in 25 of the holes, the remainder being drilled to the water table. Twelve holes were sludged below the water table.

On the whole, mineralization was disappointing, particularly west of the Tamar River although eight of the holes exceeded 1% heavy mineral. On the eastern side of the Tamar, 6 of the 11 scout holes contained 1% heavy mineral or more, these being mainly concentrated about the small bays between rocky headlands on the eastern approaches of Port Dalrymple (Tamar River). However, the volume represented by these holes is small.

Wet weather prevented further drilling on the east section and operations were prematurely curtailed. Therefore, it may appear that further drilling is justified on the eastern sections of the lease, although it is pointed out that mineralization generally was not very encouraging.

In the western areas it is recommended that no further drilling be done for heavy sand minerals. With regard to gold mineralization, the samples taken showed no trace of gold, although this may be due to the large amount of clearing and farming in the areas where the old creeks drain.

It is considered that potential mineralization in the area is restricted primarily to hard rock occurrences rather than to alluvial prospects. This applies particularly to the vicinity of the Beaconsfield gold district where the local council have expressed their desire to co-operate fully with any mineral investigation work. In addition, the Asbestos Range behind Badger Head has an interesting history of mineral exploitation, particularly copper and asbestos, whilst some recent prospecting in the area has shown that the serpentine contains a small percentage of nickel in the form of garnierite. It is also known that silica deposits near Beaconsfield are being investigated for the purpose of manufacturing ferro-silicon. Hence, there are many indications that the area could be worthy of more detailed investigations.

LOCATION OF BORE LINES AND HOLES

A location map of E.L. 13/67 is shown in Figure 1 in the Appendix.

It was originally intended to drill on a grid 2000 feet by 200 feet between Badger Head and West Head where low-lying sand dunes covered with dense scrub occur in what is believed to be an old outlet of the Tamar River. To this end, a datum peg was placed at the base of West Head on the easternmost limit of the beach, and Line 1 datum was positioned 700 feet west of the West Head datum. Three other datum posts were placed along the beach on the frontal dunes for Lines 2, 3 and 4 at intervals of 4000 feet, 3400 feet and 3000 feet, such that the lines, which were on a true bearing of 100°, had a vertical distance between them of 2000 feet.

After having drilled 8 holes at 200 feet intervals on Line 1W, and obtaining negligible mineralization, it was decided to revert to a random scout drilling programme over the area in order to assess quickly whether any potential existed in the area at all. This was continued elsewhere in the lease until the end of the project (see Borehole Location Maps in the Appendix).

DRILLING

Kenneth McMahon & Partners Pty. Limited supplied a mineral sand drilling team and a supervisor to test the area on behalf of Planet Gold Ltd. Work was carried out between 13th and 26th November, 1967, as follows:-

Holes drilled	48
Total footage	560 feet
Samples taken	142

Drilling equipment comprised standard Dormer's Engineering Works 3" hand augers with 5' aluminium extension rods. Two-inch I.D. steel casing was used for sludging below the water table, the underwater sample being removed by a hand-operated sludge pump.

On bare sand, samples were removed in five feet increments, with a representative sample of from 1 to 2lbs. being grab-sampled for assay after thorough mixing. When the water table was reached, the five feet increment straddling the water table was removed in two parts, one wet and one dry.

Where the sand was covered by grass or underbrush, such that in a mining operation, stripping would be necessary, the sample from the top foot was discarded.

Samples were placed in plastic bags and identified by a numbered aluminium tag. The location of the sample, and its corresponding number was known only to the supervisor.

SUPERVISOR'S OPERATIONAL LOG

13.11.67

Arrived Launceston approximately 11.00 a.m. Bought axe, files, pencils, etc. Drove to Beauty Point and checked into motel. Did quick reconnaissance of the area.

14.11.67

Put in base line 700'E-10400'W. Drilled one hole (1W/0S-50'). Rain interrupted work at 4.00 p.m.

15.11.67

Notified Mr. Gardiner of Green's Beach that we would be drilling on his land. Drilled 7 holes (1W/2S-1W/14S), total footage 89'). Drilling was hindered by thick scrub which covers the area. As all samples to date have been barren, will drill 400' intervals tomorrow.

16.11.67

Drilled holes 2W/0S and then scout holes 1S to 10S. Hole 10S was drilled on beach where traces of mineral were seen. However, the area seems to be barren of mineral.

17.11.67

Drove to Georgetown and then 5 mile Bluff. Due to failure in automatic transmission on Falcon we lost about 2 hours. Drove Peter Jamieson to airport and then had vehicle attended to at Peter Jackson's.

18.11.67

Split and repacked samples in Planet Metals' Store. Residue dumped in the river and plastic bags taken to the local dump. Store was swept and tidied up.

19.11.67

Day's break.

20.11.67

Drilled 3 holes at western end of beach (12S, 13S, 14S and 15S - total footage 79½') and sludged holes 11S, 17S, 18S, 19S - total footage 13'). Sample 16S is a surface sample where poor traces of mineral occur. Rain stopped work.

21.11.67

Sludged holes 20S-23S (total footage 33'). Rain squalls interrupted work approximately 6 times in the morning and when rain set in we abandoned work and returned to the motel. Ian Dolby checked and repaired a leaking fuel line and Ross McMahon and I bagged the samples.

22.11.67

Checked out of motel. Dropped 8 bags of samples at Rex Bennett's and dropped key to Planet Metals' Store in at John Payton's. Drove to Georgetown and checked into motel. Rain prevented work. Rang Peter Jamieson for instructions and will attempt to drill dunes and check beaches for mineral tomorrow if weather permits.

23.11.67

Drilled holes 24S-30S around 5 mile Bluff. Did beach traverses to the east and west but was unable to find any traces of mineral. Rain interrupted work at 4.15 p.m.

24.11.67

Due to Jehovah Witness Conference were forced to book into Hotel Centennial in Launceston. Arranged return flight tickets. Rain cleared about 2.00 p.m., and we drilled holes 31S-33S around Green's Beach and Kelso areas. Rain set in at 4.00 p.m.

25.11.67

Drilled holes 34S-39S around East Beach, Low Head and Tam O'Shanter and Stormy Point. Frequent rain interrupted work along the Tamar River sludging was hindered by shell and grit which is mixed with the sand. Large sand masses occur to the east of Stormy Point but are outside E.L. 13/67.

26.11.67

Dropped off car, despatched remaining samples and drilling gear, and returned to Sydney.

ASSAYING

All samples were freighted to Sydney and delivered to Geochemical and Mineralogical Laboratories Pty. Ltd. of Rushcutters Bay, N.S.W. who carried out the assays.

The method of assaying consisted of a sink-float determination. The field sample was dried, sieved and split to approximately 20 grammes, carefully weighed and then the silica floated from the heavy mineral using bromoform. The heavy mineral was washed, dried and weighed, and the resulting concentrate expressed as a percentage by weight of the total sample. The results obtained are listed in the accompanying Table of Assays.

The heavy mineral fractions were retained and grouped for mineral identification using a Franz Iso-Dynamic Magnetic Separator, followed by mineralogical grain counts on each fraction, the results being as follows:-

Mineralogical Results

	Group A (Holes 1W/0S to 1W/14S, 2W/0S, 1S to 9S, 25S to 39S)	Group B (Holes 10S to 23S)
% Rutile	8	6
% Zircon	Trace	$\frac{1}{4}$
% Ilmenite	$16\frac{1}{2}$	$7\frac{1}{2}$
% Amphiboles	45	$56\frac{1}{2}$
% Topaz-Andalusite	10	$5\frac{1}{2}$
% Garnet	8	$16\frac{1}{2}$
% Iron Oxides*	$5\frac{1}{2}$	$4\frac{1}{2}$
% Tourmaline	$6\frac{1}{2}$	3
	$99\frac{1}{2}$	$99\frac{3}{4}$

* Contains approximately $2\frac{1}{2}$% magnetite

APPENDIX I

Table of Assays

Hole No.	Footage Increment	Percentage H.M.	
		Increment	Cumulative
1W/0S - 1	0'-5'	0.21	
2	5'-10'	0.16	
3	10'-15'	0.19	
4	15'-20'	0.26	
5	20'-25'	0.25	
6	25'-30'	0.17	
7	30'-35'	0.27	
8	35'-40'	0.22	
9	40'-45'	0.33	
10	45'-50'	0.40	
1W/2S - 1	0'-5'	0.31	
2	5'-10'	0.30	
1W/4S - 1	0'-5'	0.33	
2	5'-10'	0.30	
3	10'-15'	0.22	
4	15'-19½'	0.33	
1W/6S - 1	0'-4'	0.31	
1W/8S - 1	0'-5'	0.26	
2	5'-8'	0.33	
1W/10S - 1	0'-5'	0.57	
2	5'-10'	0.35	
3	10'-15'	-	
4	15'-18½'	0.30	
1W/12S - 1	0'-5'	0.18	
2	5'-6'	0.31	
1W/14S - 1	0'-5'	0.29	
2	5'-10'	0.31	
3	10'-15'	0.23	
4	15'-20'	0.15	
5	20'-23'	0.27	
2W/0S - 1	0'-5'	0.38	
2	5'-10'	0.66	
3	10'-15'	0.29	
1S - 1	0'-5'	0.55	
2	5'-7'	0.37	
2S - 1	0'-5'	0.38	
2	5'-10'	0.42	
3	10'-15'	0.54	

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Table of Assays Continued

Hole No.	Footage Increment	Percentage H.M.	
		Increment	Cumulative
3S - 1	0'-5'	0.62	
2	5'-8'	0.56	
4S - 1	0'-5'	0.77	
2	5'-10'	0.89	
3	10'-15'	0.70	
4	15'-20'	0.49	
5S - 1	0'-5'	0.87	
6S - 1	0'-5'	0.47	
2	5'-10'	0.35	
7S - 1	0'-5'	0.93	
2	5'-10'	0.68	
3	10'-15'	0.30	
4	15'-20'	0.55	
5	20'-24'	0.43	
8S - 1	0'-1'	0.37	
9S - 1	0'-5'	0.17	
2	5'-10'	0.72	
3	10'-15'	0.49	
10S - 1	0'-5'	0.99	0.99
2	5'-10'	1.05	1.02
	10'-12'	0.72	
11S - 1	0'-4'	1.63	1.63
12S - 1	0'-5'	1.37	1.37
2	5'-10'	1.33	1.35
3	10'-15'	0.75	1.15
4	15'-20'	1.36	1.20
5	20'-25'	0.93	1.15
6	25'-30'	Missing	-
	30'-34'	1.05	-
13S - 1	0'-5'	1.02	1.02
	5'-9'	0.86	0.95
14S - 1	0'-5'	4.31	4.31
	5'-10'	2.80	3.55
	10'-12'	2.88	
15S - 1	0'-5'	4.21	4.21
	5'-10'	4.19	4.20
	10'-15'	3.16	3.85
	15'-20'	3.22	3.69
	20'-24'	4.23	3.80
16S - 1	Surface Grab Sample	18.40	18.40

Table of Assays Continued

Hole No.	Footage Increment	Percentage H.M.		
		Increment		Cumulative
			Au	
17S - 1	0'-1'	0.20	×	
2	1'-2'	0.26	×	
3	2'-3'	0.28	×	
4	3'-5'	0.23	×	
18S - 1	0'-1'	0.57	×	
2	1'-2'	0.59	×	
19S - 1	0'-2'	0.54	×	
20S - 1	0'-5'	0.81		0.81
2	5'-10'	1.05		0.93
3	10'-15'	0.72		0.86
21S - 1	0'-5'	0.58		
	5'-10'	0.88		
22S - 1	0'-3'	5.78		5.78
23S - 1	0'-2'	0.38	×	
2	2'-4'	0.57	×	
3	4'-5'	0.75	×	
24S - 1	0'-5'	0.50		
2	5'-10'	0.59		
3	10'-15'	0.60		
4	15'-18'	0.50		
25S - 1	0'-5'	1.45		1.45
2	5'-10'	0.98		1.21
3	10'-15'	1.82		1.42
4	15'-19'	1.05		1.34
26S - 1	0'-5'	0.74		
2	5'-10'	0.83		
3	10'-15'	0.76		
4	15'-20'	0.38		
5	20'-22'	0.39		
27S - 1	0'-5'	0.37		
2	5'-10'	0.23		
3	10'-15'	0.33		
4	15'-20'	0.12		
5	20'-24'	0.19		
28S - 1	0'-5'	0.48		
29S - 1	0'-5'	0.42		
2	5'-9½'	0.43		
30S - 1	0'-5'	1.05		1.05
2	5'-10'	1.11		1.08
3	10'-13'	0.93		1.04

Table of Assays Continued

Hole No.	Footage Increment	Percentage H.M.	
		Increment	Cumulative
31S - 1	0'-5'	0.40	
2	5'-10'	0.42	
3	10'-15'	0.57	
4	15'-18'	0.90	
32S - 1	0'-5'	0.25	
2	5'-8'	0.43	
33S - 1	0'-3'	0.34	
34S - 1	0'-5'	1.42	1.42
2	5'-10'	3.28	2.35
3	10'-15'	2.36	2.35
4	15'-18½	1.92	2.27
35S - 1	0'-1½'	1.32	1.32
2	1½'-2½'	0.95	1.17
36S - 1	0'-5'	1.90	1.90
2	5'-6½'	1.94	1.91
37S - 1	0'-1½'	1.23	1.23
2	1½'-3'	1.99	1.61
3	3'-4½'	1.94	1.72
38S - 1	0'-5'	0.44	
2	5'-9'	0.26	
39S - 1	0'-5'	0.38	
2	5'-10'	0.39	
3	10'-14½'	0.38	

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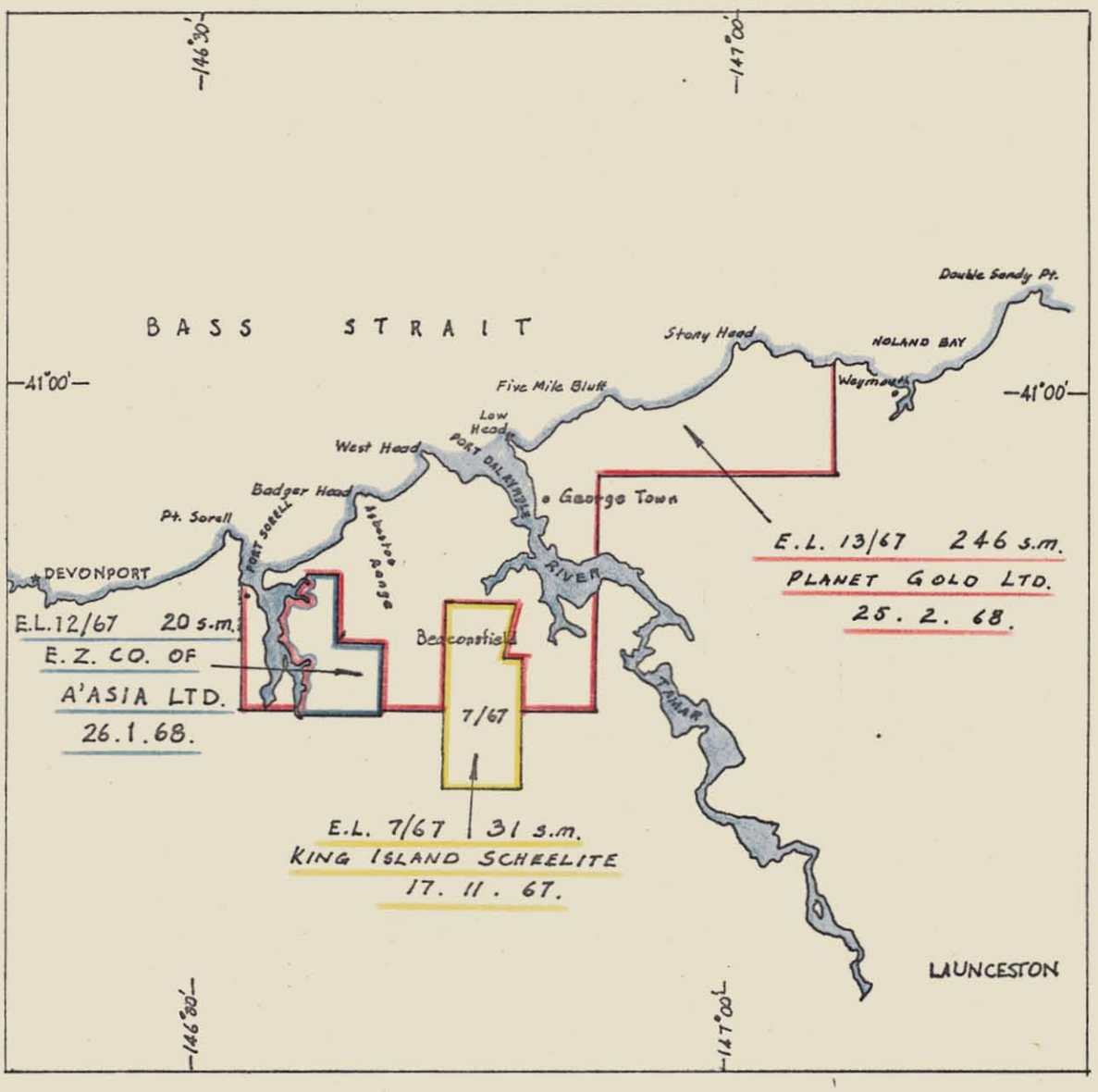
144013 APPENDIX II



PLANET GOLD LIMITED.

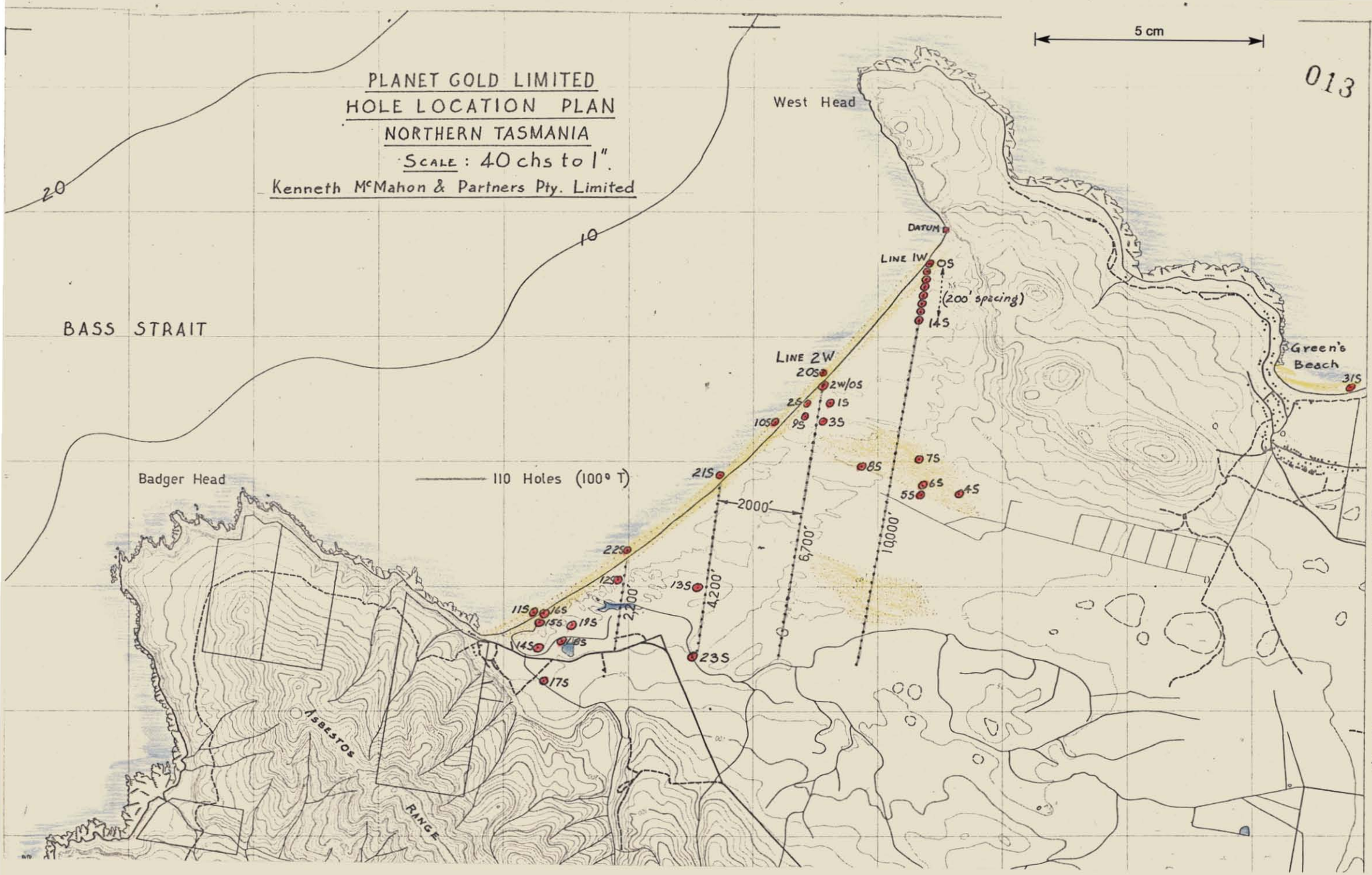
LEASE LOCATION PLAN.

NORTHERN TASMANIA

Scale 1:500,000

Kenneth McMahon & Partners Pty. Limited

5 cm


PLANET GOLD LIMITED
HOLE LOCATION PLAN
NORTHERN TASMANIA
Scale : 40 chs to 1".
Kenneth McMahon & Partners Pty. Limited
5 cm
013
West Head
BASS STRAIT
20
10
DATUM
LINE 1W
0S
(200' spacing)
14S
LINE 2W
20S
2W/0S
2S
1S
10S
9S
3S
Green's Beach
31S
Badger Head
110 Holes (100° T)
21S
2000'
8S
7S
6S
5S
4S
6,700'
10,000'
22S
12S
13S
4,200'
2,200'
11S
16S
15S
19S
14S
18S
23S
17S
ASBESTOS
RANGE
940
144014
APPENDIX III

144015

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AUSTRALIA 1:31,680

GEORGE TOWN

Produced by the LANDS AND SURVEYS DEPARTMENT
Hobart, Tasmania

Sheet No. 8215-1-N.

PLANET GOLD LIMITED
HOLE LOCATION PLAN
NORTHERN TASMANIA
SCALE: 40 Chains to 1".
Kenneth McMahon & Partners Pty. Limited

5 cm

E.L. 13/67

STONY HEAD
385
395
FIVE MILE BLUFF
255
265
305
245
295
275
285
LOW HEAD
345
355
365
375
PORT DALRYMPLE
325
KELSO
GEORGETOWN
335
470
480
490
950
940