

REVIEW OF KING DELTA PROJECT, EL 2/74, TASMANIA

The history and potential of this property are broadly:

1. In the period 1970-1980 Cottesloe considered the copper, sulphur and cobalt values to be the most important, with possible credits from the zinc and barium content. The whole of the tailings was drilled (both the exposed "dry" delta and the submarine portion), and the mean grade of the total resource was quoted as 2.9% S, 1255 ppm Cu, 87 ppm Co and 185 ppm Zn. A probable reserve of 125 million tons of sediment was identified.
2. Experimental work on a bulk tailings sample was carried out at Mineral Deposits Limited under the supervision of Mr. M.S. Cross in 1976. This defined parameters for a 1000 tonne/hour floating dredge with a three stage Reichert cone gravity plant, in order to produce a gravity concentrate in the simplest and cheapest way. Cross concluded (Report 15.213.1/2) that:
 - (a) Sulphur recovery was about 80% in a sulphide concentrate assaying 43.9%, which represented 6 to 8% of the raw sand.
 - (b) This concentrate assays 0.33% Cu with a copper recovery of 12%. Cross reports "the copper minerals are hard to identify and equally hard to recover.....copper is not associated with the sulphur minerals to a very large extent".

see TDM
JR 1986/87
3. In late 1983 Cottesloe collected two drums (marked A and B) of sediment from the delta surface and near the main King River channel for determination of gold grade and distribution at AMDEL. The report is attached as Appendix 1. The critical findings were:
 - (a) The grade was 190 ppb Au for drum A and 110 ppb Au for drum B, from which an average grade of the total resource of 150 ppb Au was inferred.

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-2-

- (b) Each of the samples was split into gravity concentrates of density - 2.93, 2.93 to 4.3, and +4.3 and the portions assayed for gold. In sample A the +D4.3 fraction (taken to be the pyrite concentrate) contained 24% of the gold, while in sample B the "pyrite fraction" contained 58% of the gold. Averaging the two results, it appeared that a gravity separation would recover about 40% of the gold in a "pyrite" concentrate which would be of grade about 900 ppb gold and would represent about 6% of the raw sediment.
 - (c) Less than 200 ppb of the gold in the "pyrite" concentrate is mercury soluble (i.e. present as free gold particles) and the remaining 700 ppb is probably in solid solution in pyrite.
4. In mid 1986 Constellation drilled 26 hand auger and baler holes in the "dry" delta, which represents about 20% of the total sediment. These were intended to provide detailed data on gold and other metal distribution, and to provide a representative bulk sample. Samples were collected over one metre intervals and fire assayed for gold at the Tasmanian Mines Department, then a composite representing each hole was analysed for gold, copper, lead, zinc, silver and cobalt at three other laboratories. Results are provided in various quarterly reports.

The major conclusions drawn from this work are:

- (a) From the Mines Department gold assays, Constellation are satisfied that each sample is representative of the interval drilled. There is a suggestion of laying of values, which could only be precisely identified by further drilling.
- (b) There is a grouping of higher gold values along the present main river channel, along the shoreline and in the old SW channel, suggesting concentration of gold values in these areas by water action.
- (c) The average grade of the dry delta sediment from the Constellation drilling is 1330 ppm Cu, 92 ppm Pb, 220 ppm Zn, 61 ppm Co, 2115 ppm Ba and 70 ppb Au. This is in reasonable agreement with the earlier Cottlesloe figures of 1255 ppm Cu, 185 ppm Zn and 87 ppm Co.

- 003
5. A graph is attached (Appendix 2) to show the level of correlation between gold and copper values in the dry delta, which is suggested as about 1000 ppm Cu: 55 ppb Au. As the holes drilled in about 1976 in the submarine delta generally contain less than 1100 ppm Cu, it is considered unlikely that the average grade of the deep delta will be higher than 60 ppb Au.
 6. Considering the low grades and thus value of the copper and gold in the sediment, Constellation have concluded that the metal recovery system could not include grinding or flotation stages. Recent theoretical studies have focussed on a suction dredge producing a Reichert cone "pyrite" concentrate which would be pumped ashore for copper and gold recovery by the SIROSMELT process. This process would recover copper and gold in a button or matte plus tin, lead and zinc as baghouse dusts, but the sulphur, cobalt and barium would be lost in the slag.

Critical parameters in this study are:

- (a) The Reichert cone gravity concentrate (from the earlier Mineral Deposits and AMDEL work) will be about 6% of the raw feed, which will contain 40% of the gold (cons grade 460 ppb) and 12% of the copper (cons grade 3000 ppm).
- (b) Mr. Cross advises that "1987 capital costs for a 3 Mtpy suction dredge - Reichert cone concentrator will be about \$A10M, and operating costs around \$A1 per tonne of sediment treated." Concentrate production will be 180,000 tpy.
- (c) Byron Holdaway states that two SIROSMELT furnaces would be required to smelt 180,000 tpy of concentrate, and could be installed for a total cost of about \$A10M. Operating cost would be about \$A11 per tonne of concentrate smelted or about \$A0.70 per tonne of raw sediment.
- (d) Using the inferred concentrate grades from (a) above, 95% smelter recovery, gold at \$A600/ounce (\$A930/gram) and copper at \$a2.14/kg (May 1987 sale prices), assuming sales of crude products at refined metal prices, and ignoring royalties, then:

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-4-

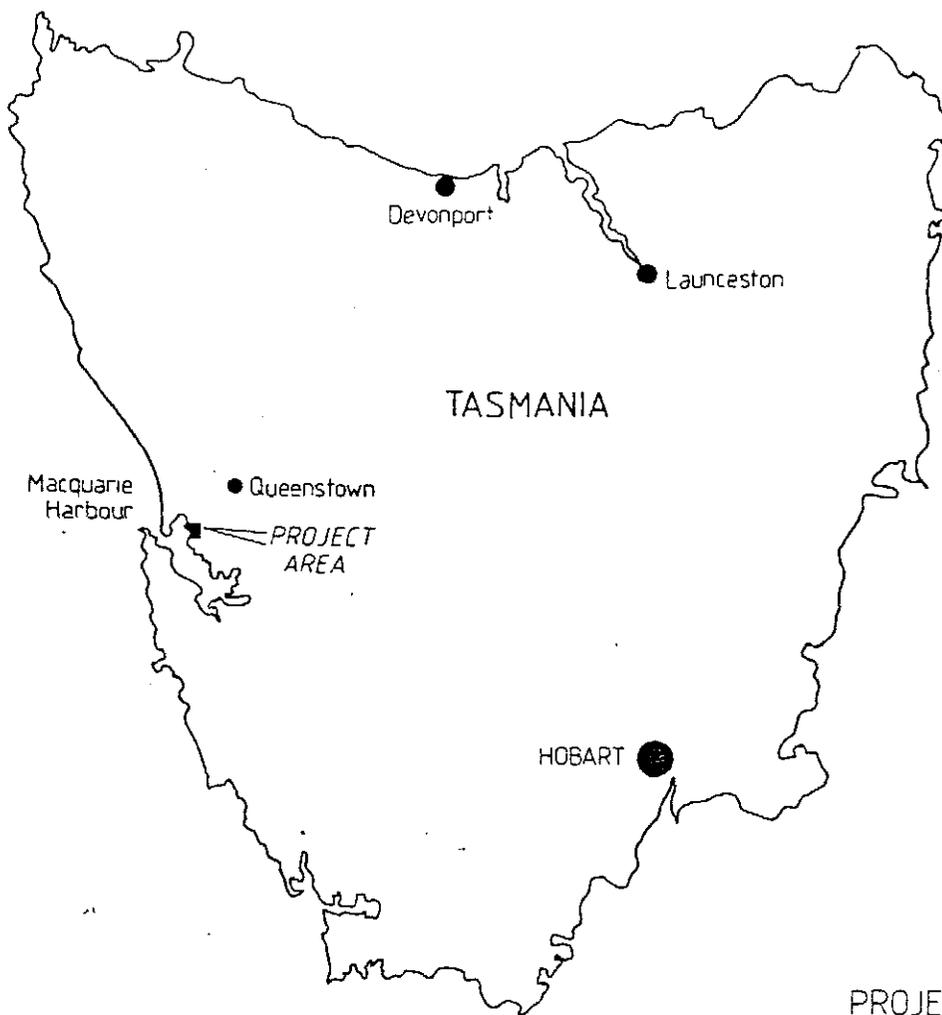
Metal value recovered from each tonne of concentrate is:

Gold	:	0.46 x .95 x 19.30	=	\$A8.40
Copper	:	3 x .95 x 2.14	=	<u>\$A6.10</u>
		TOTAL		<u>\$A14.50</u>

Gross annual value of the metal contained in 180,000 t of concentrate is \$A2.6M.

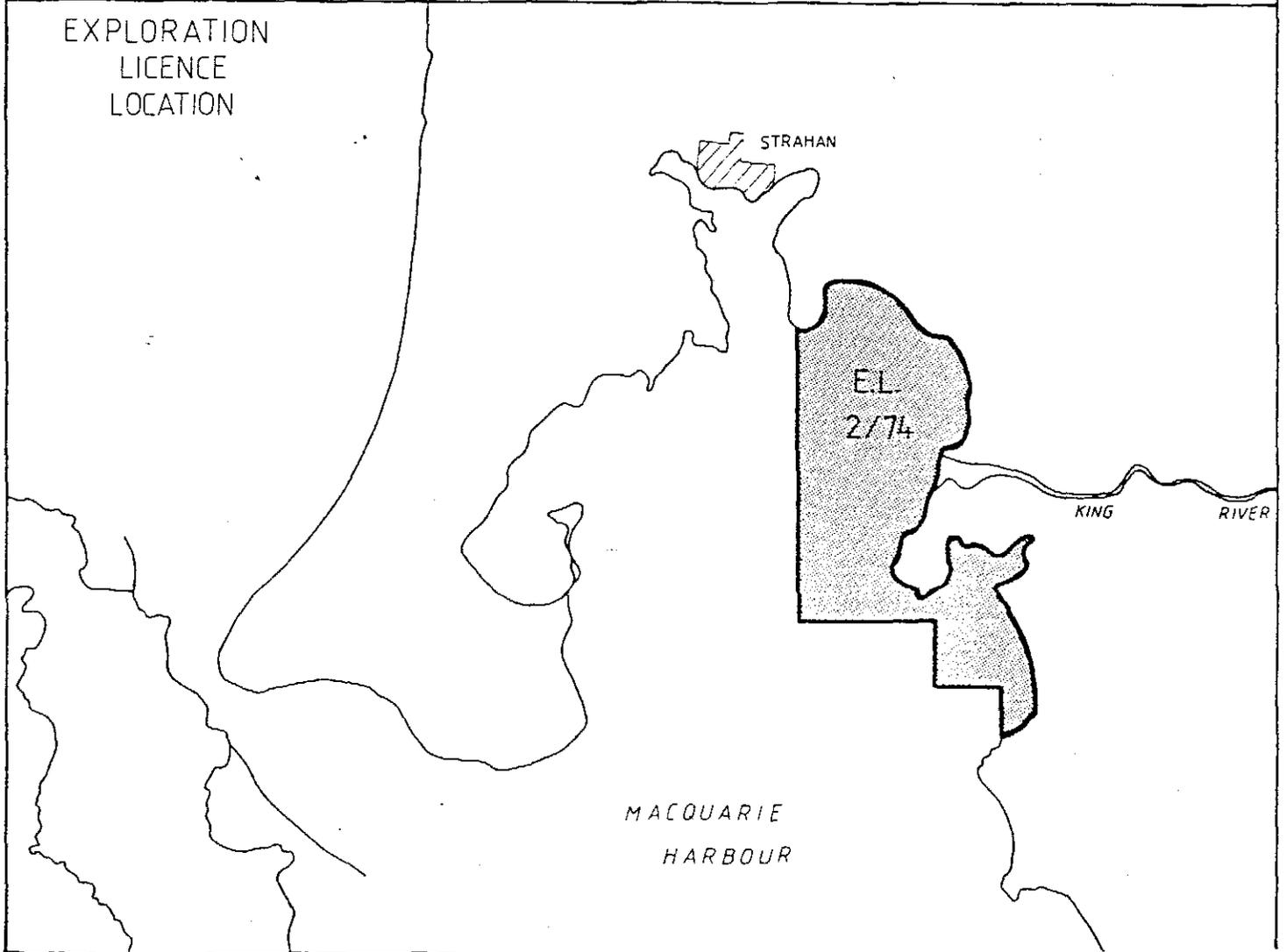
- (e) Annual operating cost is $3M \times \$A1.70 = \$5.1M$, and the value of metal won is substantially less than the operating cost.

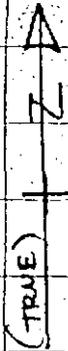
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PROJECT
LOCATION

EXPLORATION
LICENCE
LOCATION





30

30

30

CAPE SCRELL

20

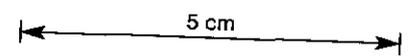
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AMG REFERENCE POINTS ADDED



EL 2/74

SCALE 1:100 000

MACQUARIE

LIBERTY POINT

HARBOUR

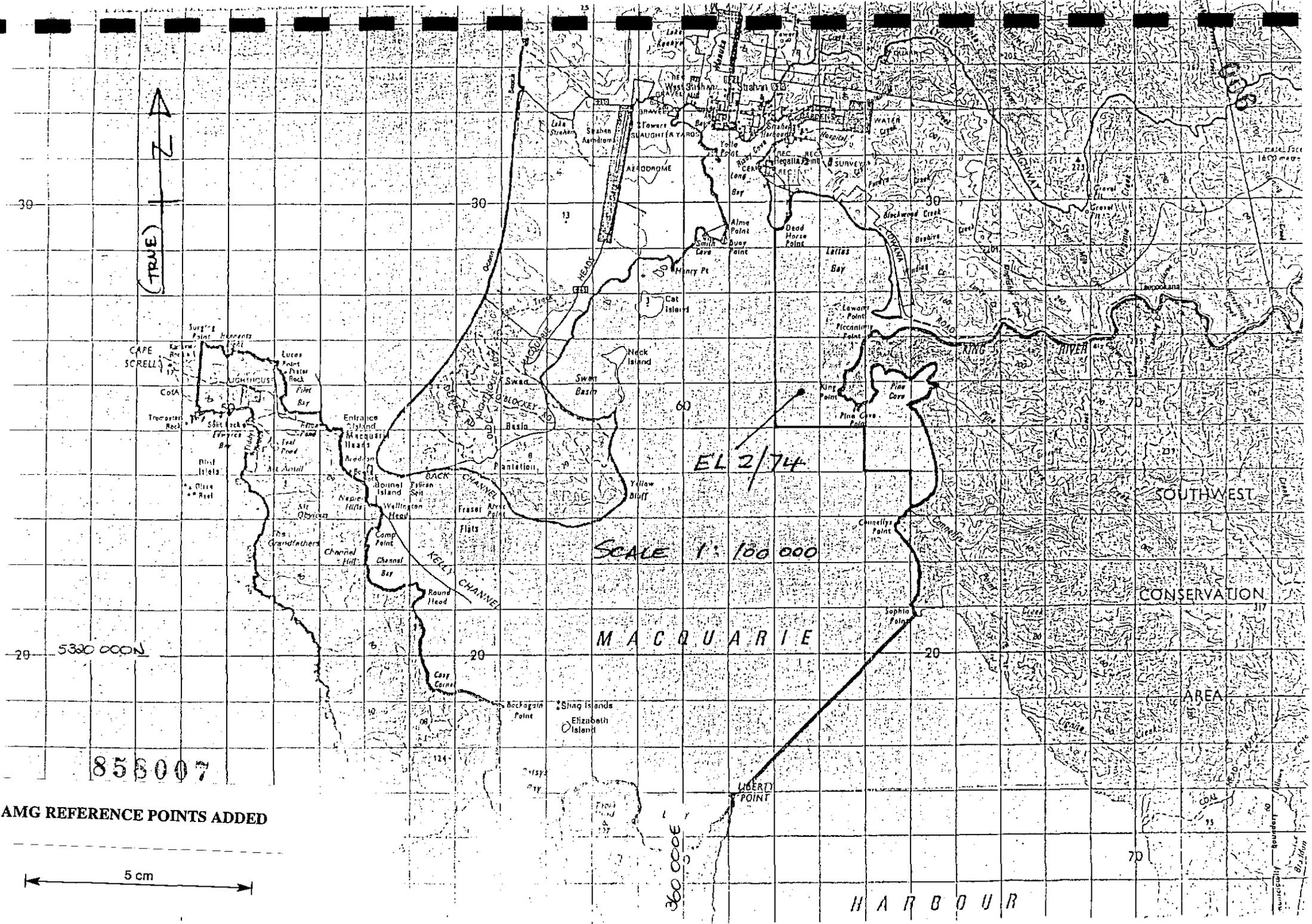
SOUTHWEST

CONSERVATION

AREA

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360 000E



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AMDEL Report GS 6110/84

GOLD IN KING RIVER DELTA SEDIMENTS

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1. INTRODUCTION

Following correspondence between R. Harvey and K. Henley (AMDEL), on further work on King River Delta material stored at AMDEL, a programme of testwork was agreed. The objective of the testwork was to quantify the proportion of mercury-soluble gold in the delta material. The programme was unfortunately delayed for some months because the relevant samples could not be located at AMDEL. However, they were eventually found and this report gives the results of the investigation.

2. PROCEDURE

Two aliquots of ~300 g were riffled out of material from Drum A and separated statically in tetrabromoethane (sp.gr. 2.96); the >2.96 sp.gr. product was then separated centrifugally in Clerici's Solution (sp.gr. 4.3). The >2.96 and 2.96-4.3 sp.gr. products were pulverised and ~10 g and ~25 g aliquots riffled out for Au determination by AAS (Code C3/2) and fire-assay (Code K4/2) respectively. The whole of each of the >4.3 sp.gr. products was analysed for mercury-soluble and mercury-insoluble gold.

3. RESULTS

The distribution of weight and gold is as follows:

Sp.Gr.	Wt %		Au Assay, ppm		Au Distribution, %	
	A	B	A	B	A	B
<2.96	84.48	83.79	0.15	0.03	67.8	23.9
2.96-4.3	9.76	10.28	0.15	0.19	7.8	15.7
>4.3	5.76	5.93	0.79	1.02	24.4	57.6
		Hg-soluble	(0.05)	(0.35)	(1.5)	(19.8)
		Hg-insoluble	(0.74)	(0.67)	(22.9)	(37.8)
Total	100.0	100.0	(0.19)	(0.11)	100.0	100.0

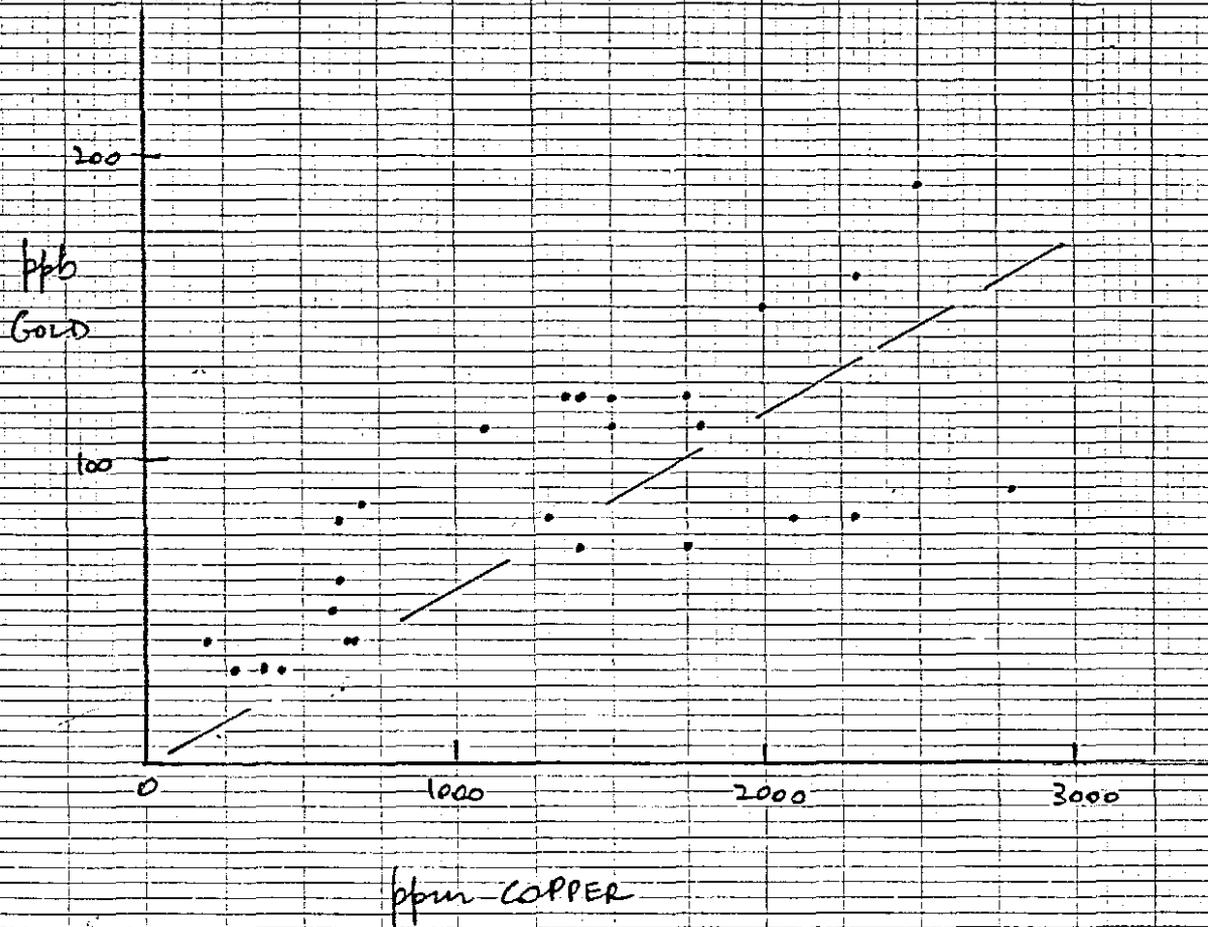
The two aliquots contain 0.1-0.2 ppm gold of which <20% is mercury-soluble. The similarity in values for the mercury-insoluble content of the two >4.3 sp.gr. products (0.74 and 0.67 ppm) suggests that about 0.7 ppm Au is locked up in pyrite - probably in solid solution.

The AAS gold values of the <2.96 and 2.96-4.3 sp.gr. products are as follows:

Sp.Gr.	A	B
<2.96	0.38	0.08
2.96-4.3	0.06	0.08

These values differ slightly for the fire-assay values but the differences are not considered significant.

008



CORRELATION GRAPH, GOLD VS COPPER, IN
 PLANET RESOURCES GROUP SAMPLES 870423 - 870448,
 USING AUSTRALIAN LABORATORY SERVICES P/L FIGURES.

MEAN LINE SUGGESTS 1000 ppm Cu = 55 ppb Au

KING DELTA, TASMANIA, "DRY" TAILINGS. DB 12/5/87

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858010

Expenditure

King Delta EL 2/74

Consultants	2,793.15
Analytical	5,691.90
Equipment Hire	1,270.03
Maps	378.87
Travel	1,037.44
Supplies - Consummables	209.18
Freight	550.06
Exploration Administration	<u>4,630.99</u>
TOTAL	<u>\$16,561.62</u>

011

858011

(87)

CONSTELLATION MINING CORPORATION N.L.

(Incorporated in Victoria)

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87-91 PALMERSTON CRESCENT
SOUTH MELBOURNE, 3205
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FAX: (03) 690 9982

MINES	
File Ref.	EL 2/74
12 OCT 1987	
Doc. Ref.	10
Action Officer	PW
Initials	PW
REG	
Received to	Date

October 7, 1987

The Director
Department of Mines - Tasmania
G.P.O. Box 124B
HOBART TASMANIA 7001

PH,

*are you writing
requesting annual report*

*Peter, this is a
quarterly report,
annual report is not
due until 28/12/87
or until we receive notification
of relinquishment.
PH*

Dear Sir,

Re. EL 2/74 Progress Report for Quarter to June 30, 1987.

During this quarter sample assays for Au, Cu, Pb, Zn, Ag, Co and Ba (Tables 1 and 2) were completed and plots of Au, Cu, Ba (Maps 1 - 3) compared. Simplified contouring indicated higher values along present and past channels, with the higher concentration of heavies due to a natural winnowing agent, namely water action.

There is no convincing evidence for a general increase in gold values in the submarine delta, when compared with the dry delta. It is expected that higher grades associated with the main channel would continue along the seaward extension of this channel.

A gravity concentrate from a composite of the 26 drillhole samples was recommended for a mineragraphic examination and a benchtop scale CSIRO SMELT test by metallurgical consultants.

Data obtained from such tests were used to define parameters for a mining venture. The conclusion was that operating costs exceeded the value of metal (gold and copper) won even when utilising the cheapest and simplest gravity concentration method.

Consequently, Constellation chose not to continue further investigations within EL 2/74.

Yours faithfully,

[Signature]
D.A. BERKMAN

Manager - Exploration

*PH,
Looks like this letter
to be relinquished
PH*

TABLE 1

Au Results for four Laboratories as listed:

LABORATORY AU RESULTS

Drill hole/ Sample No.	Launceston Tasmanian Mines Dept. Average over hole - g/ton	ALS ppm	AMDEL g/ton	SGS ppm	Mean for each DDH (4 Labs) (\bar{x})		
	Range of Values						
1	870423	0.085 - 0.15	0.135	0.15	0.085	0.14	0.13
2	24	0.01 - 0.11	0.096	0.11	0.075	0.01	0.07
3	25	0.01 - 0.05	0.03	0.05	0.030	0.01	0.03
4	26	0.01 - 0.07	0.05	0.07	0.04	0.01	0.04
5	27	0.07 - 0.19	0.10	0.19	0.11	0.07	0.12
6	28	<0.01 - 0.05	0.05	0.04	0.035	<0.01	0.03
7	29	0.01 - 0.03	0.03	0.03	0.03	0.01	0.03
8	30	<0.01 - 0.03	0.02	0.03	0.025	<0.01	0.02
9	31	0.01 - 0.03	0.03	0.03	0.03	0.01	0.03
10	32	<0.01 - 0.04	0.03	0.04	0.03	<0.01	0.03
11	33	0.03 - 0.11	0.08	0.09	0.11	0.03	0.08
12	34	0.05 - 0.09	0.09	0.08	0.07	0.05	0.07
13	35	0.03 - 0.082	0.07	0.07	0.082	0.03	0.06
14	36	0.06 - 0.11	0.08	0.11	0.065	0.06	0.08
15	37	0.06 - 0.12	0.12	0.12	0.11	0.06	0.10
16	38	0.06 - 0.12	0.11	0.12	0.10	0.06	0.10
17	39	0.08 - 0.11	0.07	0.11	0.08	0.03	0.07
18	40	0.04 - 0.08	0.07	0.08	0.06	0.04	0.06
19	41	0.07 - 0.12	0.07	0.12	0.07	0.07	0.08
20	42	0.02 - 0.12	0.07	0.12	0.06	0.02	0.07
21	43	<0.01 - 0.11	0.11	0.08	0.05	<0.01	0.06
22	44	0.02 - 0.06	0.05	0.06	0.03	0.02	0.04
23	45	0.02 - 0.05	0.05	0.04	0.03	0.02	0.04
24	46	0.02 - 0.07	0.05	0.07	0.045	0.02	0.05
25	47	0.05 - 0.08	0.05	0.08	0.05	0.06	0.05
26	48	0.115 - 0.16	0.14	0.16	0.115	0.13	0.14
	Mean (\bar{x})		0.07	0.08	0.06	0.04	

013

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TABLE 2

COMPARISON OF Cu, Pb, Zn, Co, Ba RESULTSCOMPARISON OF Cu (ppm)

Drill hole/ Sample No.	ALS	AMDEL	SGS	Mean for each Drill hole (\bar{x})	
1	870423	2000	1900	2060	1987
2	24	1100	1140	1390	1210
3	25	600	660	760	673
4	26	850	860	990	900
5	27	2500	2560	2200	2420
6	28	650	650	820	706
7	29	440	480	570	497
8	30	370	405	510	428
9	31	280	265	234	260
10	32	200	220	216	212
11	33	2800	2920	2620	2780
12	34	2300	2440	2160	2300
13	35	1400	1520	1610	1510
14	36	1800	1820	1730	1783
15	37	1500	1780	1710	1663
16	38	1400	1560	1610	1523
17	39	1500	1820	1750	1690
18	40	1300	1420	1540	1420
19	41	1350	1460	1480	1430
20	42	1500	1640	1880	1673
21	43	620	630	680	643
22	44	620	650	760	677
23	45	660	690	780	710
24	46	1700	1200	1320	1240
25	47	2100	2320	2030	2150
26	48	2300	2420	2370	2363
Mean (\bar{x})		1282	1324	1376	

014

858014

COMPARISON OF Pb (ppm)

Drill hole/ Sample No.	ALS	AMDEL	SGS	
1	870423	140	135	121
2	24	130	135	100
3	25	60	54	48
4	26	50	48	41
5	27	135	120	105
6	28	130	125	120
7	29	30	18	24
8	30	30	16	18
9	31	35	22	22
10	32	30	18	20
11	33	120	110	92
12	34	100	88	64
13	35	140	135	109
14	36	95	70	49
15	37	115	100	66
16	38	65	50	40
17	39	210	205	156
18	40	185	180	144
19	41	75	56	50
20	42	240	220	170
21	43	35	28	14
22	44	35	28	21
23	45	50	42	28
24	46	130	130	119
25	47	165	190	147
26	48	145	155	126
Mean (\bar{x})		103	95	77

015

COMPARISON OF Zn (ppm)

Drill hole/ Sample No.	ALS	AMDEL	SGS	
1	870423	300	375	400
2	24	230	315	366
3	25	120	160	154
4	26	120	135	137
5	27	220	250	296
6	28	240	320	311
7	29	90	100	94
8	30	65	60	68
9	31	60	56	56
10	32	65	62	75
11	33	310	365	396
12	34	230	275	291
13	35	210	230	230
14	36	200	220	213
15	37	165	190	195
16	38	170	160	158
17	39	175	205	212
18	40	290	370	372
19	41	145	145	170
20	42	280	300	325
21	43	115	110	113
22	44	90	84	92
23	45	110	125	121
24	46	250	330	331
25	47	400	530	510
26	48	400	495	484
Mean (\bar{x})	194	229	237	

016

858016

COMPARISON OF Co (ppm)

Drill hole/ Sample No.	ALS	AMDEL	SGS	
1	870423	115	115	125
2	24	65	58	68
3	25	30	26	18
4	26	40	36	34
5	27	95	88	84
6	28	30	26	24
7	29	25	22	29
8	30	20	18	22
9	31	25	24	17
10	32	25	22	23
11	33	85	86	84
12	34	75	70	47
13	35	60	58	48
14	36	80	72	43
15	37	90	94	67
16	38	100	105	71
17	39	80	80	53
18	40	45	40	37
19	41	80	82	61
20	42	60	54	59
21	43	70	64	51
22	44	30	28	11
23	45	45	36	36
24	46	45	38	28
25	47	65	56	53
26	48	210	220	181
Mean (\bar{x})		68	61	53

017

COMPARISON OF Ba (ppm)

Drill hole/ Sample No.	ALS	AMDEL	SGS	Mean of Drill Holes (\bar{x})	
1	870423	3000	2620	2700	2773
2	24	2350	2000	2100	2150
3	25	1050	880	1100	1010
4	26	1100	970	1200	1090
5	27	3800	3560	4000	3787
6	28	130	1140	1300	857
7	29	700	600	730	676
8	30	910	770	930	870
9	31	900	810	930	880
10	32	850	770	910	843
11	33	2650	2420	2400	2490
12	34	2700	2520	2600	2606
13	35	3600	3380	3600	3526
14	36	2900	2500	2600	2666
15	37	4200	3840	3800	3946
16	38	2950	2640	2700	2763
17	39	3250	3080	3200	3177
18	40	1800	1700	1900	1800
19	41	3200	3000	2900	3033
20	42	2400	2160	2400	2320
21	43	1500	1360	1600	1486
22	44	940	850	1100	963
23	45	840	820	970	877
24	46	2050	1880	1900	1943
25	47	2400	2180	2300	2293
26	48	4550	4040	3900	4163
		—	—	—	
Mean (\bar{x}) =		2181	2019	2145	

EL 2/74

858018

5.00 W

4.00 W

3.00 W

5 cm

16.00 N

GRID NORTH
MAG. NORTH
approx. 14°

16.00 N

14.00 N

13.00 N

Zone where
Average Gold
values > 0.10 g/tm

APPROXIMATE LOWEST TIDE
JUNE/JULY 1988



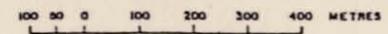
LEGEND

- 18 HAND DRILL HOLE
- CHANNEL/BANK BOUNDARY
- FORMER BANK BOUNDARY
- ▨ EXTENT OF DRY OXIDIZED SURFACE CRUST GENERALLY ABOVE HIGH TIDE
- Average of 4 Labs for each drill-hole
- 0.10 ppm Total Hole Gold Values.

PLANET RESOURCES GROUP N.L.

EL 2/74 KING DELTA TASMANIA

**HAND DRILL HOLES
LOCATION PLAN**



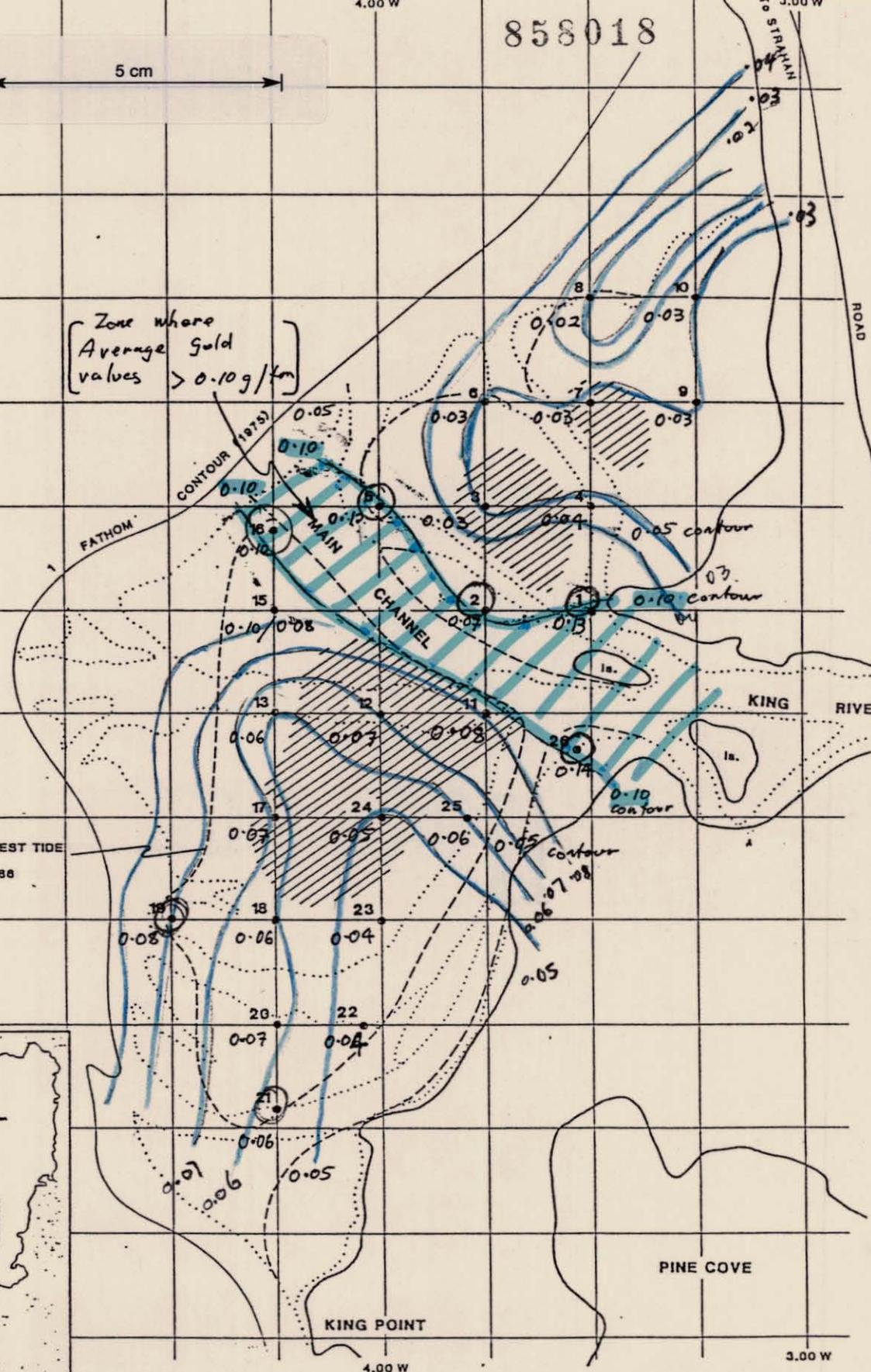
Prepared by J.K.COUPER

Date JULY 1988

Revised

PLAN BASED ON 250m GRID and MAP at 1:10 000 by CITIES SERVICES INT., 1975

MAP 1.



019
EL 2/74

858019

5.00 W

4.00 W

3.00 W

5 cm

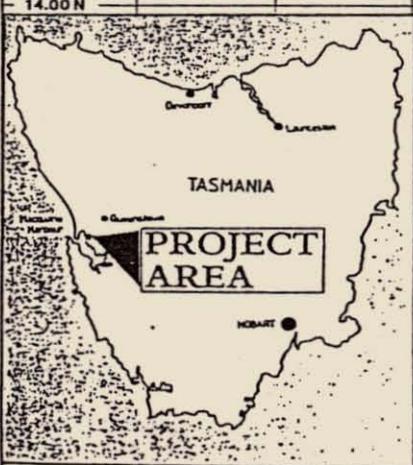
16.00 N

GRID NORTH
MAG. NORTH
approx. 14°

15.00 N

14.00 N

13.00 N



APPROXIMATE LOWEST TIDE
JUNE/JULY 1986

FATHOM
1

CONTOUR (1975)

MAIN CHANNEL

KING RIVER

KING POINT

PINE COVE

4.00 W

3.00 W

LEGEND

○ 18 HAND DRILL HOLE

Total Auger Drill Hole
Averages
for Cu (ppm)

--- CHANNEL/BANK BOUNDARY

..... FORMER BANK BOUNDARY



EXTENT OF DRY OXIDIZED SURFACE CRUST
GENERALLY ABOVE HIGH TIDE

PLANET RESOURCES GROUP N.L.

EL 2/74 KING DELTA TASMANIA

HAND DRILL HOLES

LOCATION PLAN

100 50 0 100 200 300 400 METRES

Prepared by J.K.COUPER

MAP 2.

020
EL 2/74

858020

5.00 W

4.00 W

3.00 W

5 cm

16.00 N

GRID NORTH
MAG. NORTH
approx. 14°

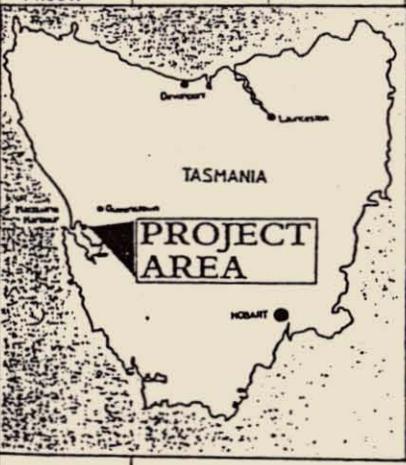
15.00 N

14.00 N

13.00 N

4.00 W

3.00 W



APPROXIMATE LOWEST TIDE
JUNE/JULY 1986

LEGEND

O 18 HAND DRILL HOLE
Total Auger Drill Hole Averages for Ba (ppm)

- CHANNEL/BANK BOUNDARY
- FORMER BANK BOUNDARY
- ▨ EXTENT OF DRY OXIDIZED SURFACE CRUST GENERALLY ABOVE HIGH TIDE

PLANET RESOURCES GROUP N.L.

EL 2/74 KING DELTA TASMANIA

HAND DRILL HOLES
LOCATION PLAN



Prepared by J.K.COUPER

MAP 3.



024

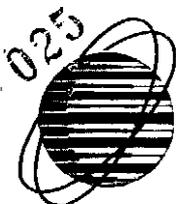
TABLE 1.

Au Results for four Laboratories as listed:

858022

LABORATORY AU RESULTS

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1	870423	0.085 - 0.15	0.135	0.15	0.085	0.14	0.13
2	24	0.01 - 0.11	0.096	0.11	0.075	0.01	0.07
3	25	0.01 - 0.05	0.03	0.05	0.030	0.01	0.03
4	26	0.01 - 0.07	0.05	0.07	0.04	0.01	0.04
5	27	0.07 - 0.19	0.10	0.19	0.11	0.07	0.12
6	28	<0.01 - 0.05	0.05	0.04	0.035	<0.01	0.03
7	29	0.01 - 0.03	0.03	0.03	0.03	0.01	0.03
8	30	<0.01 - 0.03	0.02	0.03	0.025	<0.01	0.02
9	31	0.01 - 0.03	0.03	0.03	0.03	0.01	0.03
10	32	<0.01 - 0.04	0.03	0.04	0.03	<0.01	0.03
11	33	0.03 - 0.11	0.08	0.09	0.11	0.03	0.08
12	34	0.05 - 0.09	0.09	0.08	0.07	0.05	0.07
13	35	0.03 - 0.082	0.07	0.07	0.082	0.03	0.06
14	36	0.06 - 0.11	0.08	0.11	0.065	0.06	0.08
15	37	0.06 - 0.12	0.12	0.12	0.11	0.06	0.10
16	38	0.06 - 0.12	0.11	0.12	0.10	0.06	0.10
17	39	0.03 - 0.11	0.07	0.11	0.08	0.03	0.07
18	40	0.04 - 0.08	0.07	0.08	0.06	0.04	0.06
19	41	0.07 - 0.12	0.07	0.12	0.07	0.07	0.08
20	42	0.02 - 0.12	0.07	0.12	0.06	0.02	0.07
21	43	<0.01 - 0.11	0.11	0.08	0.05	<0.01	0.06
22	44	0.02 - 0.06	0.05	0.06	0.03	0.02	0.04
23	45	0.02 - 0.05	0.05	0.04	0.03	0.02	0.04
24	46	0.02 - 0.07	0.05	0.07	0.045	0.02	0.05
25	47	0.05 - 0.08	0.05	0.08	0.05	0.06	0.05
26	48	0.115 - 0.16	0.14	0.16	0.115	0.13	0.14
Mean (\bar{x})			0.07	0.08	0.06	0.04	



PLANET

RESOURCES GROUP NL
(Incorporated in Victoria)

87-91 Palmerston Crescent, South Melbourne, 3205.
Telephone: (03) 699-5366. Telex: METEOR AA33144. Fax: (03) 690 9982.
Share Office: C/- Registrars Limited,
99 Queen Street, Melbourne, Vic. 3000.

File 210 ~~232~~ B (82)

Appendix 1

2nd April, 1987.

858023

Dr Robin Harvey
C/- Cottesloe Corporation
3828 Quakerbridge Road
Mercerville
New Jersey
U.S.A.

Dear Robin,

Re: King Delta Auger Sample Analysis

A composite sample for each hole was made from each of the 26 hand auger holes drilled in the dry delta last year, and a split of each of the 26 samples was sent to three laboratories for assay. Methods used were:

Australian Laboratory Services Pty Ltd (Brisbane)

Method G001 for Cu, Pb, An, Ag, Co : 5 g sample digested in HC10₄ at 220°C, then AAS determinations.

Method XRF 1 for Ba - 15 g sample briquetted.

Method PM 210 for gold : 10 g sample, aqua regia digest, AAS finish.

AMDEL (Adelaide)

Method A1 for Cu, Pb, Zn, Co : 5 g sample digested in HC10₄ then AAS determination.

Method A2 for silver : 5 g sample - special precautions "to ensure the solubility of silver", AAS finish.

Method PM3/4 for gold : 50 g sample, fire assay with lead collection, solvent extraction and AAS determination of solvent.

2/....



PLANET
RESOURCES GROUP N.L.
(Incorporated in Victoria)

82 1

858024

-2-

SGS Pty Ltd (Sydney)

Method AAS for Cu, Pb, Zn, Co, Ag; XRF for Ba, fire assay for gold.

The various assay reports are attached. A set of the same 26 samples was sent to Cottesloe, ex Tasmania on March 4.

Regards,

PETER C STREADER

Australian Laboratory Services PTY. LTD.

CONSULTING ANALYTICAL CHEMISTS

LABORATORY REPORT

Brisbane Head Office and Laboratory
 32 Shand Street, Stalford, Q. 4053.
 P.O. Box 66, Everton Park, Q. 4053.
 Phone: (07) 352 5577. Telex: ALS9V 42344
 Fax: (07) 352 5100.

Perth Office and Laboratory
 16 Bassendean Road, Bayswater, WA. 6055
 Phone: (09) 272 2300 Fax: (09) 272 5787.

Townsville Laboratory
 457 Bayswater Road, Garbutt, Q. 4814.
 Phone: (077) 74 5045. Fax: (077) 74 6402.

Incorporated in Queensland



Client: **PLANET RESOURCES GROUP NL**
 Address: **87-91 PALMERSTON CRES,
 SOUTH MELBOURNE,
 VIC. 3000**

Batch Number: 0045

Contact: MR. D. BERKMAN

No. of Samples: 26

Order No. LETTER

Sample Type: PULP

Date Received: 09/03/87

Date Completed: 13/03/87

SAMPLE NUMBER	Element Unit Method	Cu ppm G001	Pb ppm G001	Zn ppm G001	Ag ppm G001	Co ppm G001
870423		2000	140	300	2	115
870424		1100	130	230	2	65
870425		600	60	120	1	30
870426		850	50	120	1	40
870427		2500	135	220	2	95
870428		650	130	240	1	30
870429		440	30	90	1	25
870430		370	30	65	1	20
870431		280	35	60	1	25
870432		200	30	65	1	25
870433		2800	120	310	1	85
870434		2300	100	230	1	75
870435		1400	140	210	1	60
870436		1800	95	200	1	50
870437		1500	115	165	1	90
870438		1400	65	170	1	100
870439		1500	210	175	2	80
870440		1300	185	290	1	45
870441		1350	75	145	1	80
870442		1500	240	280	2	60
870443		620	35	115	1	70
870444		620	35	90	1	30
870445		660	50	110	1	45
870446		1200	130	250	1	45
870447		2100	165	400	1	65
870448		2300	145	400	2	210
Detection Limit:		2	5	2	1	5

Comments:

UNLESS NOTIFIED PULPS WILL BE DUMPED ON 30/09/87 AND SPLITS (IF ANY) ON 30/06/87



This Laboratory is registered by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its terms of registration. This Document shall not be reproduced except in full.

Signatory:



Incorporated in Queensland

Australian Laboratory Services

858026 80 1

PTY. LTD. Brisbane Head Office and Laboratory
32 Ghand Street, Stafford, Q. 4053
P.O. Box 66, Everton Park, Q. 4053
Phone: (07) 352 5577 Telex: ALSEV 42344
Fax: (07) 352 5109

CONSULTING ANALYTICAL CHEMISTS

LABORATORY REPORT

Perth Office and Laboratory
16 Bassenean Road, Bayswater, WA 605
Phone: (09) 272 2300. Fax: (09) 272 5787.
Townsville Laboratory
457 Bayswater Road, Garbutt, Q. 4814.
Phone: (077) 74 5045. Fax: (077) 74 6402.

Client: PLANET RESOURCES GROUP NL
Address: 87-91 PALMERSTON CRES,
SOUTH MELBOURNE,
VIC. 3000

Page 2 of 2

Contact: MR. D. BERKMAN

Batch Number: 0045

No. of Samples: 26
Date Received: 09/03/87
Date Completed: 13/03/87

Order No. LETTER Sample Type: PULP

SAMPLE NUMBER	Element Unit Method	Ba ppm XRF1	Au ppm PN210	Au ppm CHECKS
870423		3000	0.15	
870424		2350	0.11	
870425		1050	0.05	
870426		1100	0.07	
870427		3800	0.19	
870428		130	0.04	
870429		700	0.03	
870430		910	0.03	
870431		900	0.03	
870432		850	0.04	
870433		2650	0.09	
870434		2700	0.08	
870435		3600	0.07	
870436		2900	0.11	0.12
870437		4200	0.12	
870438		2950	0.12	0.13
870439		3250	0.11	
870440		1800	0.08	
870441		3200	0.12	
870442		2400	0.12	0.11
870443		1500	0.08	
870444		940	0.06	
870445		840	0.04	
870446		2050	0.07	
870447		2400	0.08	
870448		4550	0.16	0.18
Detection Limit:		10	0.01	

Comments:



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Signatory:



amdel

technology and enterprise

NATA CERTIFICATE

20 March 1987

Mr D.A. Berkman
Manager - Exploration
Planet Resources Group NL
87-91 Palmerston Crescent
SOUTH MELBOURNE VIC 3205

Amdel
31 Flemington Street,
Frewville, S.A. 5063
Telephone: (08) 372 2700

858027 79

Address all correspondence to:
P.O. Box 114,
Eastwood, S.A. 5063

Telex: AA82520
Facsimile: (08) 79 6623

3/0/0 - AC 3166/87

REPORT AC 3166/87

YOUR REFERENCE: Letter dated 9 January 1987

REPORT COMPRISING: Cover sheet
Page 1
Page G1

DATE RECEIVED: 9 March 1987

Approved Signatory: Alan Ciplys

Manager, Geo-Analytical Services

for Dr William G. Spencer
General Manager
Applied Sciences Group

The report relates specifically to the sample tested and also to the entire batch in so far as the sample is truly representative of the sample source.

hy



This laboratory is registered by the National Association of Testing Authorities, Australia. The test(s) reported herein have been performed in accordance with its terms of registration. This document shall not be reproduced except in full.

ANALYSIS
g/tonne

SAMPLE MARK	GOLD Au
870423	0.085
24	0.075
25	0.030
26	0.040
27	0.110
28	0.035
29	0.030
30	0.025
31	0.030
32	0.030
33	0.110
34	0.070
35	0.082
36	0.065
37	0.110
38	0.100
39	0.080
40	0.060
41	0.070
42	0.060
43	0.050
44	0.030
45	0.030
46	0.045
47	0.050
48	0.115

METHOD: PM3/4

031



858029

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Analysis code A1,A2,X1

Report AC 3166/87

Page G1

NATA Certificate

Results in ppm

Sample	Co	Cu	Pb	Zn	Ag	Ba
870423	115	1900	135	375	<1	2620
870424	58	1140	135	315	<1	2000
870425	26	660	54	160	<1	880
870426	36	860	48	135	<1	970
870427	88	2560	120	250	<1	3560
870428	26	650	125	320	<1	1140
870429	22	480	18	100	<1	600
870430	18	405	16	60	<1	770
870431	24	265	22	56	<1	810
870432	22	220	18	62	<1	770
870433	86	2920	110	365	<1	2420
870434	70	2440	88	275	<1	2520
870435	58	1520	135	230	<1	3380
870436	72	1820	70	220	<1	2500
870437	94	1780	100	190	<1	3840
870438	105	1560	50	160	<1	2640
870439	80	1820	205	205	<1	3080
870440	40	1420	180	370	<1	1700
870441	82	1460	56	145	<1	3000
870442	54	1640	220	300	<1	2160
870443	64	630	28	110	<1	1360
870444	28	650	28	84	<1	850
870445	36	690	42	125	<1	820
870446	38	1200	130	330	<1	1880
870447	56	2320	190	530	<1	2180
870448	220	2420	155	495	<1	4040
Detn limit	(5)	(2)	(5)	(2)	(1)	(10)

032

87 04/02 14:00

02-6983596

SGS SYD

858030

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001

SGS SGS Australia Pty. Ltd.

Report No. LA5513

Minerals

FILE COPY

ANALYTICAL REPORT ON SAMPLES SUBMITTED BY:

PLANET RESOURCES GROUP NL

124-126 Exhibition St
Melbourne
Vic 3000

Tel : 03 6623511 Tlx : AA33144 Fax :
ATTN: D A BERKMAN

Our Ref	LA5513
Your Ref	COMPS-GAND
Date Received	06/03/1987
Date Completed	26/03/1987
Number of Samples	26
Number of Repeats	1
Copy no :	0
This Report consist of one part only	
Page no :	1 of 4



.....
 Issued at Sydney on :
 FRI., 27 MAR., 1987
 SGS Australia Pty Ltd
 74 McEvoy St. Alexandria, Sydney, N.S.W. 2015
 Telephone 699 7625 Telex:SGSSYD AA22395

033

87 04/02 14:01

02-6983596

SGS SYD

858031

75
002

SGS Australia Pty. Ltd.

Report no : LASS13

Minerals

Our ref : LASS13

Page no : 2 of : 4
Order : COMPS-SAND

Analytical Report Results

Sample Reference	Au	Cu	Pb	Zn	Ag	Co	Ba
1 870423	.14	2060	121	400	< LLD	125	2700
2 870424	.01	1390	100	366	< LLD	68	2100
3 870425	.01	760	48	154	< LLD	18	1100
4 870426	.01	990	41	137	< LLD	34	1200
5 870427	.07	3200	105	296	< LLD	84	4000
6 870428	< LLD	820	120	311	< LLD	24	1300
7 870429	.01	570	24	94	< LLD	29	730
8 870430	< LLD	510	16	68	< LLD	22	930
9 870431	.01	234	22	54	< LLD	17	930
10 870432	< LLD	216	.20	75	< LLD	23	910
11 870433	.03	2520	92	394	< LLD	84	2400
12 870434	.05	2160	64	291	< LLD	47	2800
13 870435	.03	1610	109	230	< LLD	48	3600
14 870436	.06	1730	49	213	< LLD	43	2600
15 870437	.06	1710	66	195	< LLD	67	3800
16 870438	.06	1610	40	158	< LLD	71	2700
17 870439	.03	1750	156	212	< LLD	53	3200
18 870440	.04	1540	144	372	< LLD	37	1900
19 870441	.07	1480	50	170	< LLD	61	2900
20 870442	.02	1680	170	325	< LLD	59	2400
21 870443	< LLD	680	14	113	< LLD	51	1600
22 870444	.02	760	21	92	< LLD	11	1100
23 870445	.02	780	28	121	< LLD	36	970
24 870446	.02	1320	119	331	< LLD	28	1900
25 870447	.06	2030	147	510	< LLD	53	2300
26 870448	.13	2370	126	484	< LLD	181	3900

Res. Expressed as	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower L. D.	.01	1.00	2.00	1.00	1.00	2.00	10.00
Method of Analysis	F.A	AAS	AAS	AAS	AAS	AAS	XRF
Analysis Code	N55B	D2(a)	D2(a)	D2(a)	D2(a)	D2(a)	XRF1
Sample Prep. Code	SP4	SP4	SP4	SP4	SP4	SP4	SP4

Member of the SGS Group (Société Générale de S...)

034

Report no : LA5513

Minerals

Our Ref : LA5513

Page no : 3 of : 4
Order : COMPS-SAND

Analytical Report Repeats

Sample Reference	Au	Cu	Pb	Zn	Ag	Co	Ba
1 670446	N.R.	1320	115	336	< LLD	28	N.R.

Res. Expressed as	PPM	PPM	PPM	PPM	PPM	PPM	PPM
Lower L. O.	.01	1.00	2.00	1.00	1.00	2.00	10.00
Method of Analysis	F.A	AAS	AAS	AAS	AAS	AAS	XRF
Analysis Code	A556	D2(a)	D2(a)	D2(a)	D2(a)	D2(a)	XRF1
Sample Prep. Code	SP4	SP4	SP4	SP4	SP4	SP4	SP4

035

Minerals

Our ref : LASS13

Page no : 4 of 4
Order : COMPS-SAND

SAMPLE PREPARATION CARRIED OUT

METHOD OF ANALYSIS USED

ANALYSIS CODE - CXRF13

Pressed powder XRF method with corrections for main interfering elements.
Matrix effects normally corrected for by using Compton Scatter method.
Precision of analysis is +/-10% at 10x LLD.

037

858034

(Z)

CONSTELLATION MINING CORPORATION N.L.

(Incorporated in Victoria)

8TH FLOOR, 124/126 EXHIBITION ST., MELBOURNE, VIC. 3000. TELEPHONE: (03) 662 1511. TELEX: METEOR AA33144.
87-91 Palmerston Crescent, South Melbourne, Victoria 3205.
Telephone: (03) 699 5366

10th April, 1987.

The Director
Department of Mines - Tasmania
G.P.O. Box 124B
Hobart
TASMANIA 7001

EL 2/74
13 APR 1987
295.
P.W
SMCM

Dear Sir,

Re: EL 2/74 Progress Report for Quarter to
December 31, 1986

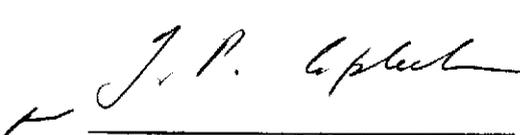
During this quarter assaying of samples continued at the Mines Metallurgical Laboratory in Launceston. Some 48% of the samples were assayed (see Table 1, Map 1).

The mean gold grade of the assayed samples is <0.06 g/ton for unground material. This figure is expected to increase to 100-150 mg/ton when gold combined with pyrite is freed.

The results show no consistent distribution of values with depth.

Our apologies for misunderstanding the separate requirements of Annual and end of year quarterly reports.

Yours faithfully,



DON A BERKMAN

MANAGER - EXPLORATION

Registrars Limited, 99 Queen Street, 5th Floor, Melbourne

SHARE OFFICE: ~~CI~~ REGISTRY MANAGERS (AUST.) PTY. LTD., 351 COLLINS STREET, MELBOURNE, VIC. 3000.

KING DELTA ASSAYS (g/t Au)TABLE I:

Drill Hole no:	KDA Sample no:	Au: g/ton	Drill Hole no:	KDA Sample no:	Au: g/ton
3	006	0.07	9	050	<0.01
	007	0.12		053	<0.01
	008	0.03		054	<0.01
	009	<0.01	055	<0.01	
	010	<0.01	10	061	<0.01
	011	<0.01		062	0.02
	012	<0.01		063	<0.01
	013	<0.01		11	064
4	014	0.13			065
	015	0.06	12	071	0.10
016	0.01	072		0.06	
017	<0.01	73, 74 composite		0.10	
6	028	0.04	13	076	0.13
	029	0.03		77	0.08
	030	0.02		78	0.08
8	042	0.05		79	0.05
	043	<0.01		80	0.10
	044	<0.01	81	0.08	
	045	<0.01	82, 83, 84 composite	<0.01	
046	<0.01				

KING DELTA GOLD ASSAYS (g/t Au) cont'd

Drill Hole no:	KDA Sample no:	Au: g/ton
15	90	0.13
	91	0.14
	94	0.14
	95	0.09
	96	0.10
	97	0.14
	99	0.12
	100	0.09
	101	0.09
	16	119
120, 121 composite		0.12
17	131	0.20
	132	0.14
	133	0.13
	134	0.10
	135	0.08
	137, 138 composite	0.01

858035

8330

Drill Hole no:	KDA Sample no:	Au: g/ton
18	140	0.13
	141	0.06
	142	0.06
	143, 144 composite	0.04
	145, 146 composite	0.06
	147, 148 composite	0.04
19	149	0.12
	150	0.10
	151	0.12
	152	0.16
	155	0.06
	161, 162, 163 composite	0.13
21	176	<0.01
	177	<0.01
22	178	0.09
	180	0.03
	181	<0.01
	182	<0.01
	183	<0.01

Drill Hole no:	KDA Sample no:	Au: g/ton
23	188	<0.01
	189	<0.01
	190	<0.01
24	191	0.08
	192	0.07
	193	0.03
	194	<0.01
	195, 196 composite	0.08
25	198	0.05
	199, 200 composite	0.05

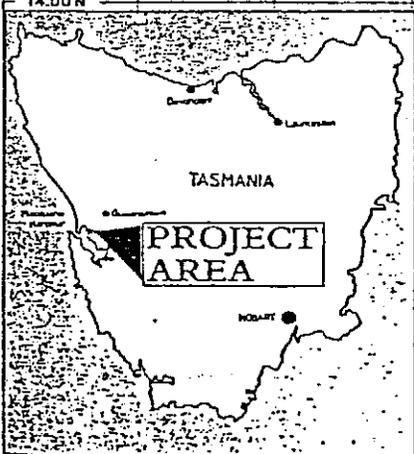
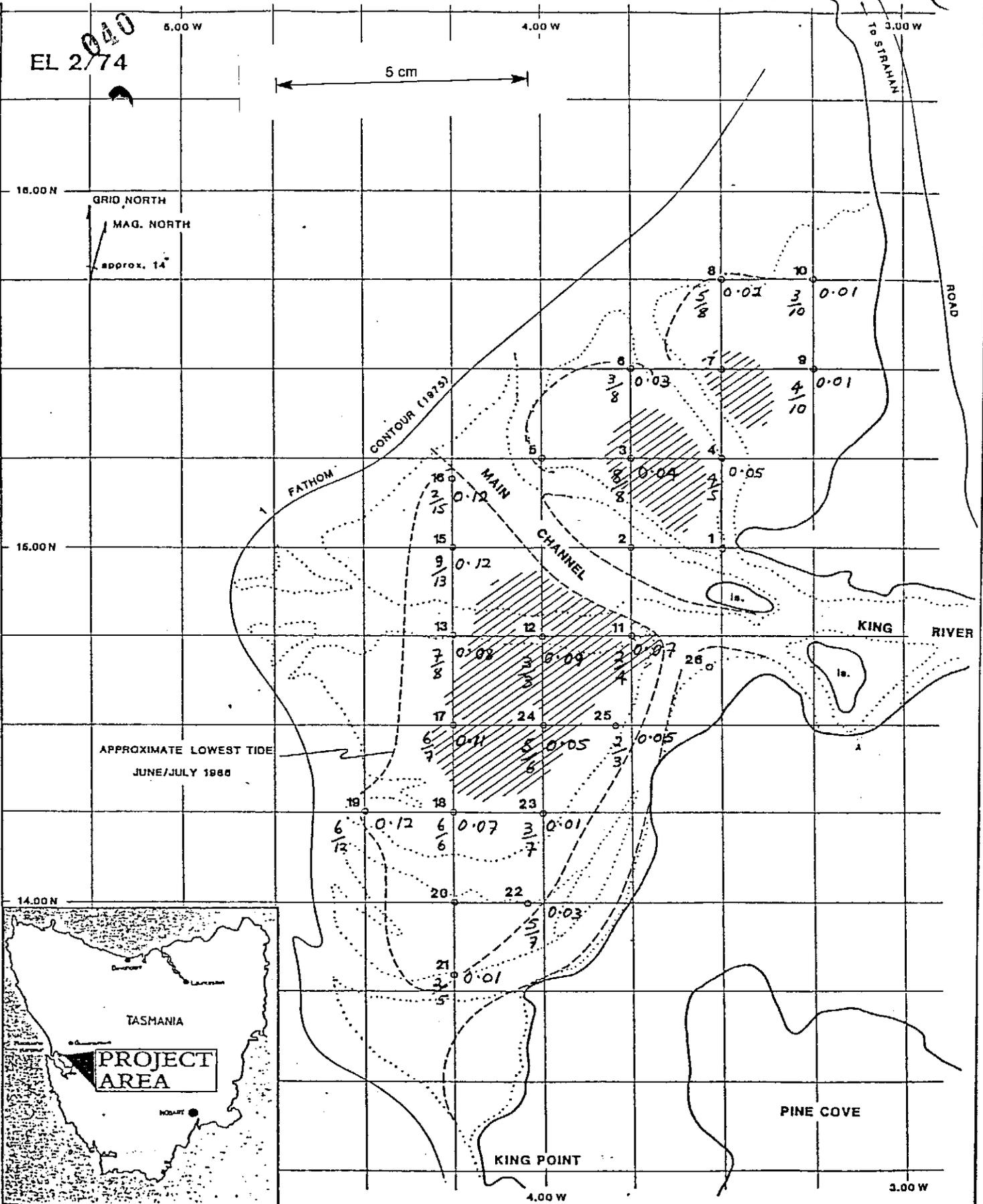
Total Samples = 85 : Total Assay
Weight = 5.25g.

Average = 0.062 g/ton.

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(10)

8580



APPROXIMATE LOWEST TIDE
JUNE/JULY 1988

LEGEND

O 18 HAND DRILL HOLE

--- CHANNEL/BANK BOUNDARY

..... FORMER BANK BOUNDARY

 EXTENT OF DRY OXIDIZED SURFACE CRUST
GENERALLY ABOVE HIGH TIDE

$\frac{4}{7}$ Metres Assayed
Metres Drilled

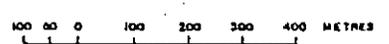
0.02 Average Assay
9/ton.

PLANET RESOURCES GROUP N.L.

EL 2/74 KING DELTA TASMANIA

HAND DRILL HOLES

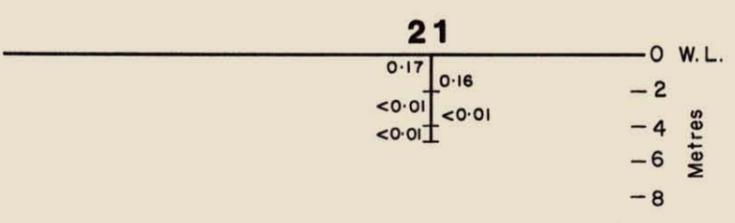
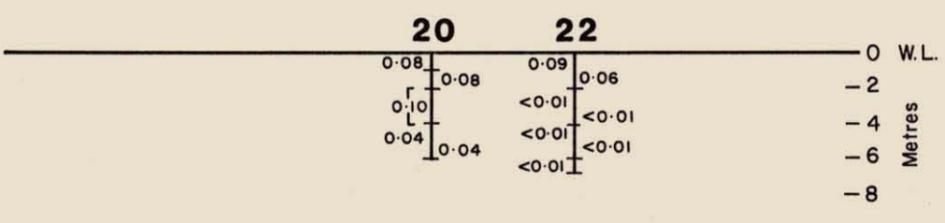
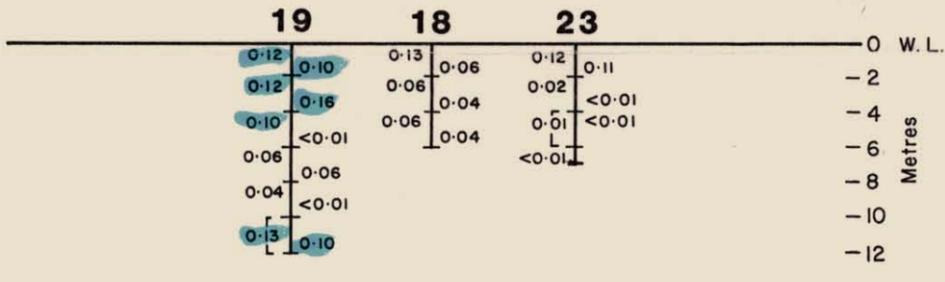
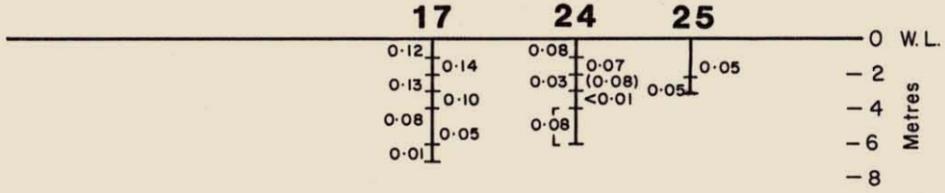
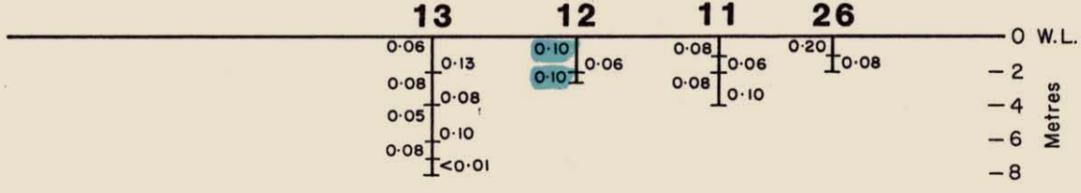
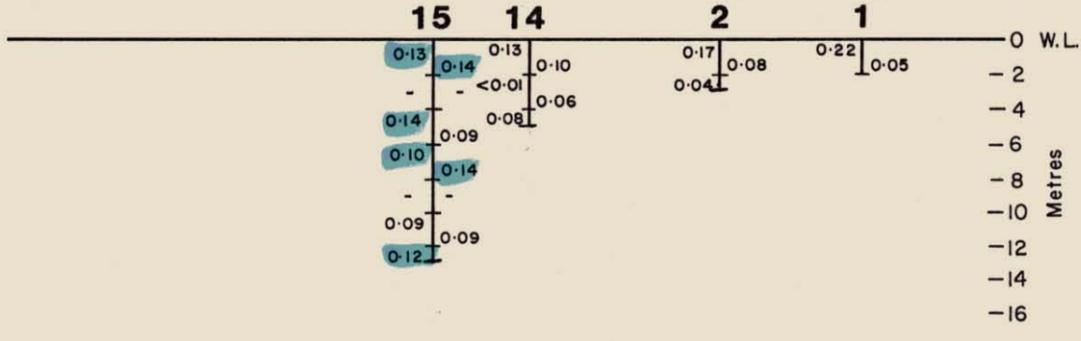
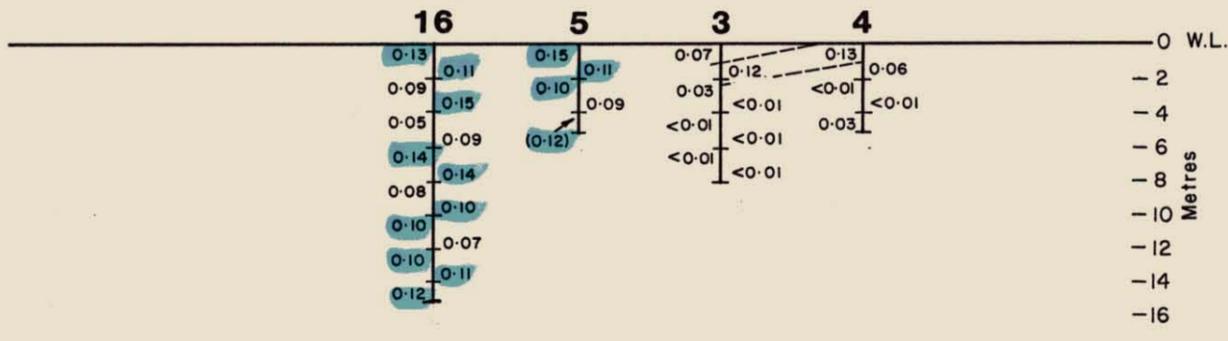
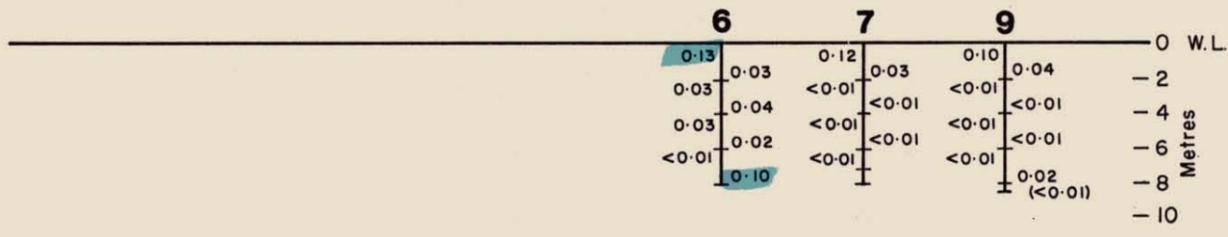
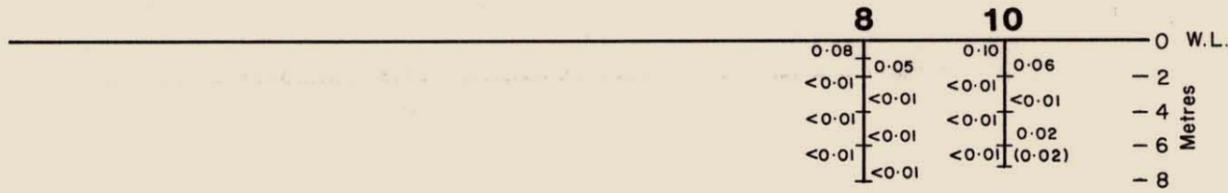
LOCATION PLAN



Prepared by J.K.COUPER

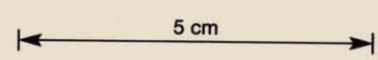
WEST 021

EAST

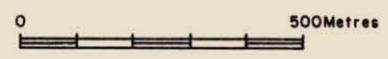


0.12 Gold assays in g/t

26 Auger Drill Hole number



HORIZONTAL SCALE



PLANET RESOURCES GROUP N.L.

TASMANIA
EL 2/74 - KING DELTA

SECTION OF AUGER DRILL HOLES

AUTHOR: JPC DATE: April, 1987
MAP No:

858038