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EL 2/74 ANNUAL REPORT 1986

KING RIVER DELTA PROJECT,

MACQUARIE HARBOUR,

TASMANIA

November 24, 1986.

Constellation Mining
Corporation Ltd.

MICROFILMED

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SUMMARY

The June - July 1986 auger drilling comprised 26 holes for 174.4 metres (see map 1) of which assays of 85m have been received to date, i.e. about 48% of the samples collected. Assays to date indicate:

1. The mean grade of the 85 metres assayed is < 0.06 g/t Au. for unground material. The gold is thought partly free and partly combined with pyrite, of overall grade 100 to 150 mg/ton.
2. Grades are lower on the inland margins on both north and south sides of the river mouth (see map 1)
3. There is no sample distribution of value with depth, with some holes having "high" grades only at the top and base of the same hole.
4. Grades do not apparently diminish seawards, and there is no evidence (to date) that the submarine delta is lower grade than the dry delta.

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Appendix 1. - Method for Fire Assay for Gold

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SAMPLING

Hand auger and baler drilling began on the dry portion of the King Delta tailings deposit on 24th June 1988 and was completed in mid July.

Total drilling statistics for this project were 26 holes for 174.4 metres of alluvium, with total sample weight about 2,300kg.

The samples were delivered to the Dept. of Mines Metallurgical Laboratory in Launceston for assay and subsequent ore dressing tests. After some experimentation with sample preparation methods (see Appendix 1) and fluxes, a sample representing each one metre interval was fire assayed for gold using 100gm charges. This work is so far incomplete at this time.

RESULTS

KING DELTA ASSAYS (g/t Au)

Drill Hole no:	KDA Sample no:	Au: g/ton
3	006	0.07
	007	0.12
	008	0.03
	009	<0.01
	010	<0.01
	011	<0.01
	012	<0.01
4	013	<0.01
	014	0.13
	015	0.06
	016	0.01
6	017	<0.01
	028	0.04
	029	0.03
	030	0.02
8	042	0.05
	043	<0.01
	044	<0.01
	045	<0.01
	046	<0.01

RESULTS

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

Drill Hole no:	KDA Sample no:	Au: g/ton
9	050	<0.01
	053	<0.01
	054	<0.01
	055	<0.01
10	061	<0.01
	062	0.02
	063	<0.01
11	064	0.08
	065	0.06
12	071	0.10
	072	0.06
	73, 74 composite	0.10
13	076	0.13
	77	0.08
	78	0.08
	79	0.05
	80	0.10
	81	0.08
	82, 83, 84 composite	<0.01

RESULTS

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	0.11
	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

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RESULTS

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

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

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RESULTS

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

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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EXPENDITURE

To the end of October 1986, the financial commitment for the calender year 1986 has been:

1.	Consultants Fees	\$ 7,556.40
2.	Analytical tests on drill samples	2,906.16
3.	Vehicle Hire	2,660.03
4.	Maps - Copied	316.40
5.	Travel/Accommodation	2,581.14
6.	Supplies	1,988.18
7.	Field Wages	1,650.00
8.	Freight and Cartage	1,566.44
		<hr/>
	TOTAL	21,224.75

This figure to date still falls within the budgeted figure for Stage 1 evaluation programme (i.e. - preliminary sampling and assaying, the latter is still uncompleted by the Launceston Laboratory).

PROPOSED 1987 EVALUATION PROGRAMME

The delta tailings resource is seen as a large but low grade deposit in which gold is the main item of value with minor credits possibly available from barite and cobalt. The gold is thought to be partly free and partly combined with pyrite, of overall grade 100 to 150mg/ton, while the cobalt is probably in solid solution in pyrite and the barite mineralogy is unknown. A representative bulk sample will be required.

The data derived from assaying of the hand drilling will be used to determine composition of the bulk sample used in the next stage, and this sample will be assayed for all practical elements.

The next few stages of the evaluation programme will probably be:

Stage 2 : Gravity concentration starting with perhaps a 500kg bulk sample to yield various density fractions, but particularly a free gold concentrate and a pyrite concentrate, both for assay and mineralogical examination. Mode of occurrences of Au, Ba and Co is critical, and may need X-ray probe work.

As Stage 1 represented only 20% of the total resource, it will be necessary to undertake offshore sampling and assaying of the Delta (80% of the total resources) by drilling, with samples collected over one metre intervals. However, offshore drilling will pose problems and will not be undertaken until testing of onshore samples is completed. This includes the first phase of Stage 2.

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Stage 3 : Cyanide leaching tests on the pyrite concentrate and some research into barite and cobalt recovery.

Stage 4 : Preliminary Feasibility Study and start of environmental data collection programme.

The expenditure commitment for Stages 2 and 3 of the evaluation is about \$50,000. A financial analysis and decision at each Stage will be made before proceeding to the next stage.

CONCLUSIONS

Advice sought from a number of expert metallurgists and project managers on the way to approach this deposit, suggests it cannot support a complex and costly extraction process. It is suspected that profitable extraction of the gold could only proceed by suction dredging to feed a gravity concentrator from which a free gold product would be derived, followed by cyanide leaching of the pyrite fraction to recover some of the gold in the pyrite lattice. Extraction of saleable barite and cobalt products needs much further investigation.

D.A. BERKMAN

Manager - Exploration

Fire Assay for Gold.

Initially some problems were experienced in fluxing, due mainly to the variable amounts of sulphide in the samples. The reducing nature of the sulphides resulted in varying sizes of lead buttons some of which were too large for direct cupellation, and others too small for reliable gold collection.

In addition, the generation of sometimes large amounts of sulphur dioxide gas caused very frothy melts which were difficult to contain in the crucibles.

It was decided to do the assays by the "iron mail" method. An alkaline flux is used with an iron track spike placed in the crucible.

The iron combines with the sulphur to produce a fusible Ferrous sulphide matte in the slag and the reducing effect of the iron provides a reasonably sized lead button in the time taken to complete the fusion.

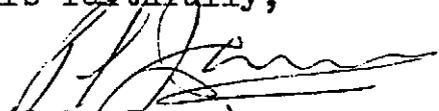
The melt is relatively quiet in the sense that not much gas is produced to cause foaming.

The method gives somewhat low results for silver which is slightly soluble in the matte but is excellent for gold.

A small amount of silver is added to the charge so that the resultant prill can be more easily seen and handled without risk of loss.

Finishing is by solution of the prill in aqua-regia and measurement by A.A.S.

Yours faithfully,



(P.L. James)

Acting Chief Chemist & Metallurgist

EL 2/742
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5.00 W

4.00 W

3.00 W

16.00 N

GRID NORTH
MAG. NORTH
approx. 14°

15.00 N

14.00 N

13.00 N

5 cm

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

4 Metres Assayed
7 Metres Drilled

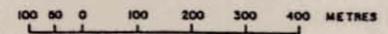
0.02 Average Assay
g/ton

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

MAP. 1;

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

