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TASMINEX N.L.

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EXPLORATION LICENCE 17/78FINAL REPORTREPORT SUMMARISING EXPLORATION WORK CARRIED OUTDURING THE FOUR YEAR PERIOD1st NOVEMBER 1978 to 31st OCTOBER 1982

Date of Report: October 1982

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Director, Tasminex N.L.

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TASMINEX N.L.

EXPLORATION LICENCE 17/78

FINAL REPORT

Introduction

Exploration Licence 17/78 was held by Tasminex N.L. over a four year period from 30th October 1978 to 30th October 1982.

The Licence area of 100 square kilometres was 5 km from west to east, and 20 km from north to south, stretching from the South Esk River to just north of Fingal, and embracing the old Mathinna and Mangana goldfields.

The primary interest of the Company in this area was to search for gold, this being the only mineral to have occurred in exploitable amounts.

This final report summarises the exploration and research carried out by Tasminex in respect of this Licence. Details of this work, together with all related data and plans, have been previously reported in Progress Reports to the Mines Department at the end of each licence period. References are made in this summary to particular Progress Reports which cover specific parts of the work programme.

### Preliminary Exploration

During the first six months period of the Licence an initial geological appraisal of the area was carried out by geologist Gustav Wolff. The tailings dumps at the old Golden Gate Mine site were of immediate interest, and a number of samples of the tailings were obtained by auger drilling, and assayed for Au and As at the Mines Department laboratories at Launceston. Two bulk samples of tailings from a dump at Mangana were also assayed.

Tasminex N.L. had envisaged carrying out a long-term search for lode gold, and a programme of stream sediment sampling was commenced as a first step. At the end of the first six months period of the Licence an area of some 35 sq. km had been stream-sediment sampled in the southern half of the Licence area, in the so-called Mangana goldfield.

Although the northern half of the Licence area was considered to have greater potential, it was believed that the much greater extent of mining and prospecting around Mathinna would have caused too much contamination for satisfactory stream-sediment or soil sampling.

All the information obtained during this first six-month Licence period was reported in the Progress Report to the Mines Department dated 12th April 1979. 79-1344

Mr. Wolff terminated his contract with Tasminex in May 1979, and no further work was carried out in the Licence area until January 1980, due to temporary lack of funds.

Testing of Alluvial Deposits

In December 1979 a new issue of shares provided fresh capital for further exploration, and in January 1980 Dr. M. Solomon, Senior Lecturer in Geology at the University of Tasmania was engaged as a consultant to advise the Company on a resumed exploration programme for Exploration Licence 17/78. An experienced geologist Mr. Masood Ahmad was engaged to carry out field work.

At this time the Company was advised to investigate the gold-bearing alluvial deposits at Mathinna and Mangana, as these offered the possibility of an early cash flow to assist in financing more speculative exploration for deep lodes, which would require diamond drilling.

A programme of back-hoe trenching and sampling was commenced in the alluvial deposits in Black Horse Gully and Long Gully at Mathinna, and at Richardsons Creek, Mangana. Results of these tests, and plotting of test line profiles were included in the Progress Report dated 6th November 1980, covering the period 1st May to 31st October 1980.

Results from this alluvial back-hoe sampling proved disappointing, and occurrence of Au very erratic. It was therefore decided to instal equipment to permit the testing of bulk samples of alluvial material from selected locations which back-hoe testing had suggested might be of interest.

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Testing of Alluvial Deposits (continued)

During the Licence period 1st November 1980 to 30th April 1981 a small plant comprising diesel-operated screen, jigs and sluice boxes was erected on the Mining Lease 100M/68 at Mathinna. Nine bulk samples ranging in size from 10 to 160 cu. metres in size, from the Mathinna and Mangana alluvial deposits were tested.

None of these samples indicated any possibility of an economically viable alluvial mining operation, even at the high price which gold was reaching. The whole alluvial testing programme was therefore terminated in December 1980.

Results of the bulk testing of alluvials are included in the Progress Report covering the period 1st November 1980 to 30th April 1981.

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Exploration for Lode Gold

Following completion of the alluvial testing programme geologist Adrian B. Daly carried out an intensive investigation of all known gold mines within the Licence area. This investigation had three objectives:

- (a) The possibility of discovering an old mine which it might be practical and profitable to re-open in view of increasing gold prices.
- (b) The possibility of finding a surface zone containing sufficient gold-bearing veins or veinlets to warrant a low grade opencut operation for treatment by the relatively inexpensive heap-leach cyanidation process proposed for the Mathinna tailings dumps.
- (c) The possibility of identifying locations where sub-surface lodes might occur as extensions of existing old mines, thus providing targets for diamond drilling.

All accessible old mines were entered and sampled, and further research carried out of Mines Department records, particularly in respect of mines which were no longer accessible.

Plans of most of the old mines in the Mathinna and Mangana areas, and results of samples taken, are included in the Progress Report covering the period 1st November 1980 to 30th April 1981.

As the prospects of realising the first two objectives (a) and (b) above, diminished, more attention was directed to the third objective (c).

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Exploration for Lode Gold (continued)

A detailed analysis was made of all available information on the two richest mines in the area, the New Golden Gate and Tasmanian Consols Mines at Mathinna. An assessment was also made of the nature of faulting in the vicinity of these mines, as this was believed to have significance in the formation of the very rich lodes.

A programme for diamond drilling at this location was prepared, and details of this, with appropriate plans and sections, are included in the Progress Report covering the period 1st May 1981 to 31st October 1981.

More tentative proposals were also made for diamond drilling at the Jubilee and City of Hobart Mines, near Mathinna. However, these mines are covered by existing mining leases not held by Tasminex.

Diamond Drilling Proposals

The proposed diamond drilling adjacent to the New Golden Gate and Tasmanian Consols Mines at Mathinna would not be regarded as "wildcat" drilling because definite target zones exist. It is nevertheless speculative, and involves up to four drill holes of at least 300 m length which would cost at least \$100,000. Successful drilling would almost certainly necessitate further drilling to delineate orebodies, and any resulting mining operation would be a high capital cost underground mine.

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Diamond Drilling Proposals (continued)

As the potential overall capital investment is likely to be beyond the means of this Company, a number of attempts have been made to interest other companies in a joint venture operation, to include the initial diamond drilling stage. These attempts have so far been unsuccessful.

Meanwhile, Tasminex has acquired mining leases covering the whole of the tailings dumps adjacent to the New Golden Gate Mine at Mathinna, with the intention of proceeding with heap-leach cyanidation of these tailings. The four proposed diamond drill holes referred to above would actually be collared and drilled within one of these mining leases, 100M/68, and any mine development resulting from this drilling would probably also be within this mining lease.

Tasminex have decided not to renew Exploration Licence 17/78 after its expiry date on 31st October 1982, as they believe they have exhausted all reasonable prospects of finding economically exploitable reserves of gold, with the exception of possible deep lodes near the New Golden Gate Mine, and the tailings dumps at the same location. As stated above, the area of interest here is covered by mining leases already acquired or pending. These are 100M/68, 20M/74 and 32M/81.

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Old Tailings Dumps

At the outset of exploration by Tasminex N.L. on Exploration Licence 17/78, it became obvious that the relatively large tailings dumps at the New Golden Gate Mine at Mathinna might provide an early cash flow to assist in financing the exploration programme, particularly diamond drilling.

The Company obtained the advice of Mr. David Wright, a qualified metallurgist who was successfully treating old gold mine tailings at Bendigo, Victoria, by the carbon pulp cyanidation process. A quantity of the Mathinna tailings was sent to Mr. Wright for testing, with encouraging results, and with Mr. Wright's assistance a scheme was prepared for a pilot plant for the treatment of the Mathinna tailings by the "heap leach" cyanidation process.

Apart from the relatively low capital and operating costs of the heap-leach process, this method (unlike the more widely used "carbon-in-pulp" method) does not produce a liquid tailing containing cyanide, and is therefore likely to be more acceptable from the environmental viewpoint.

Mr. Wright's report on his testing of the Mathinna tailings is included under Appendix "C" of the Progress Report covering the period 1st May 1980 to 31st October 1980, and a copy of the scheme for the pilot plant at Mathinna is included as Appendix "2" in the Progress Report covering the period 1st November 1980 to 30th April 1981.

Old Tailings Dumps (continued)

The most comprehensive data available on the tailings dumps at the New Golden Gate Mine was the detailed survey and sampling carried out by Hughes in 1948. While check sampling by Tasminex and others had in general confirmed the sample results obtained by Hughes, it was believed that over a period of some 30 years wind and water erosion might have depleted the volume of the tailings.

A tacheometric survey of the New Golden Gate tailings dumps was therefore carried out in August 1981, and a check was made of the densities of the various materials comprising the dumps. The tailings dumps were found to contain about 20% less material than indicated by the Hughes survey, and their contents have been calculated as 265,000 metric tonnes.

A number of small tailings dumps were located in other parts of the Licence area, and these were sampled and surveyed for assay and volume calculation.

Details of the surveys of the New Golden Gate and other tailings dumps are included in the Progress Report covering the period 1st May 1981 to 30th October 1981.



Personnel

During the four years of activity by Tasminex on Exploration Licence 17/78 all field work was carried out or supervised by qualified geologists, with field assistants as required varying from one to three or four. The geologists employed, and the periods which they covered are as follows:-

October 1978 to May 1979

Gustav C. Wolff, M.Aus.I.M.M.  
Diploma of Applied Geology, Ballarat School of Mines.

January 1980 to April 1980

Masood Ahmad, Ph.D, University of Tasmania

April 1980 to December 1981

Adrian B. Daly, Bsc.Hon., University of Otago, New Zealand

During the period January 1980 to December 1981 the services of Dr. M. Solomon, Senior Lecturer in Geology at the University of Tasmania, were available to the Company as a consultant in planning work programmes.

Throughout the four years during which Exploration Licence 17/78 was held by Tasminex, the exploration work was directed by E.N. Charlton, M.Aus.I.M.M., a director of the Company.

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Expenditure incurred on Exploration Licence 17/78

Over the four year period from October 1978 to October 1982 during which this Exploration Licence was held by Tasminex N.L. a total expenditure of \$192,151 was incurred in exploration activities.

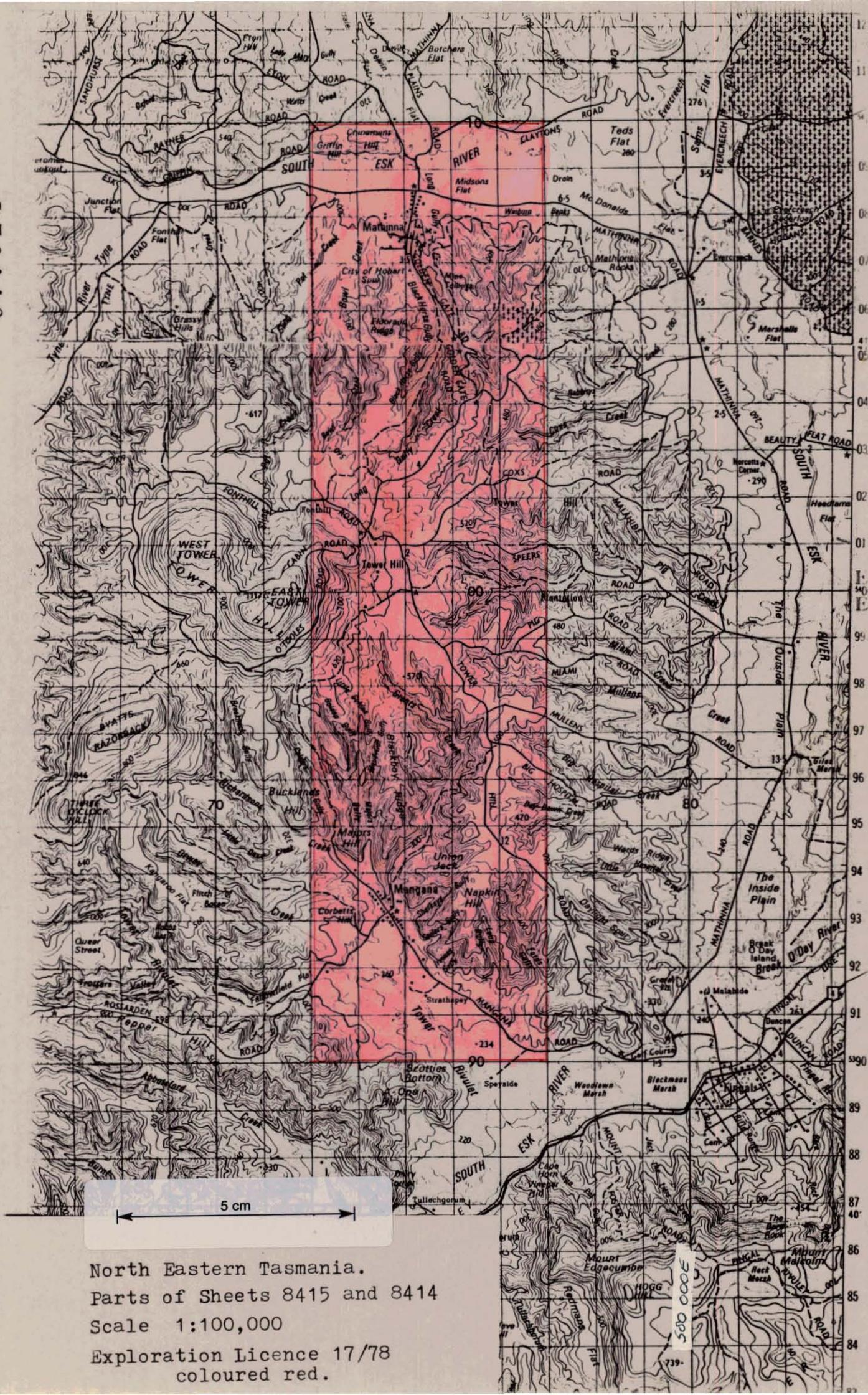
This expenditure may be itemised as follows:-

Wages, Salaries, Fees	\$101,108.26
General Services, Rentals	51,397.53
Transportation	27,792.81
Accommodation	8,381.96
Assays	3,470.70
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	\$192,151.26

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