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ALCASTON MINING N.L.

EL 55/83 ANNUAL REPORT

YEAR 4, ENDING 23/11/1987

**OPEN FILE**

87-2750

December 1987

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TENEMENT INFORMATION

EL 55/83 is a 185 km<sup>2</sup> block located in the Mangana-Mathinna area of northeastern Tasmania (Fig. 1). The EL was granted on 24/11/1983 to Mr K.A. White, and transferred to Alcaston Mining N.L. in 1987. To date none of the area has been relinquished.

SUMMARY OF PREVIOUS EXPLORATION

## 1. Hard Rock Targets

In March 1984 an assessment of the hard rock gold potential of EL 55/83 was completed by Summons Geoservices Pty Ltd. Known mineralisation occurrences were classified according to quartz vein, stringer system and disseminated styles. The report recognised that major blind mineralised quartz vein deposits probably remain to be discovered, but that the difficulty of locating such bodies combined with their small-to-moderate likely tonnages render such targets only moderately attractive. In contrast, the potential for discovering larger, lower grade ore bodies of the stringer systems and/or disseminated in country rock styles, suitable for open cut mining, was higher and such deposits are more attractive targets.

The 1987 Alcaston Propsectus (Appendix 1) includes a summary of the size, attitude and grade of all known reef deposits.

## Placer Targets

Gully deposits at Mangana and Mathinna have been trenched and bulk sampled. Average recovered grades of approximately 0.3 g Au per bank m<sup>3</sup> were obtained at Majors Gully, Mangana and at Black Horse Gully, Mathinna, the average recovered grade was approximately 0.2 g/bank m<sup>3</sup>. The Majors Gully deposit is now held under Mineral Lease by Alcaston and a treatment plant has been built on site.

Preliminary bulk sampling of an extensive potential dredging target, on the South Esk River flats, has been carried out. These sediments are gold mineralised at lower grade than the gully alluvial deposits. Insufficient work has been done on the South Esk prospect to estimate an average grade and tonnage.

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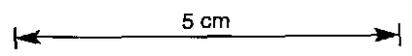
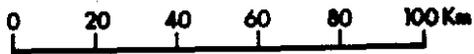
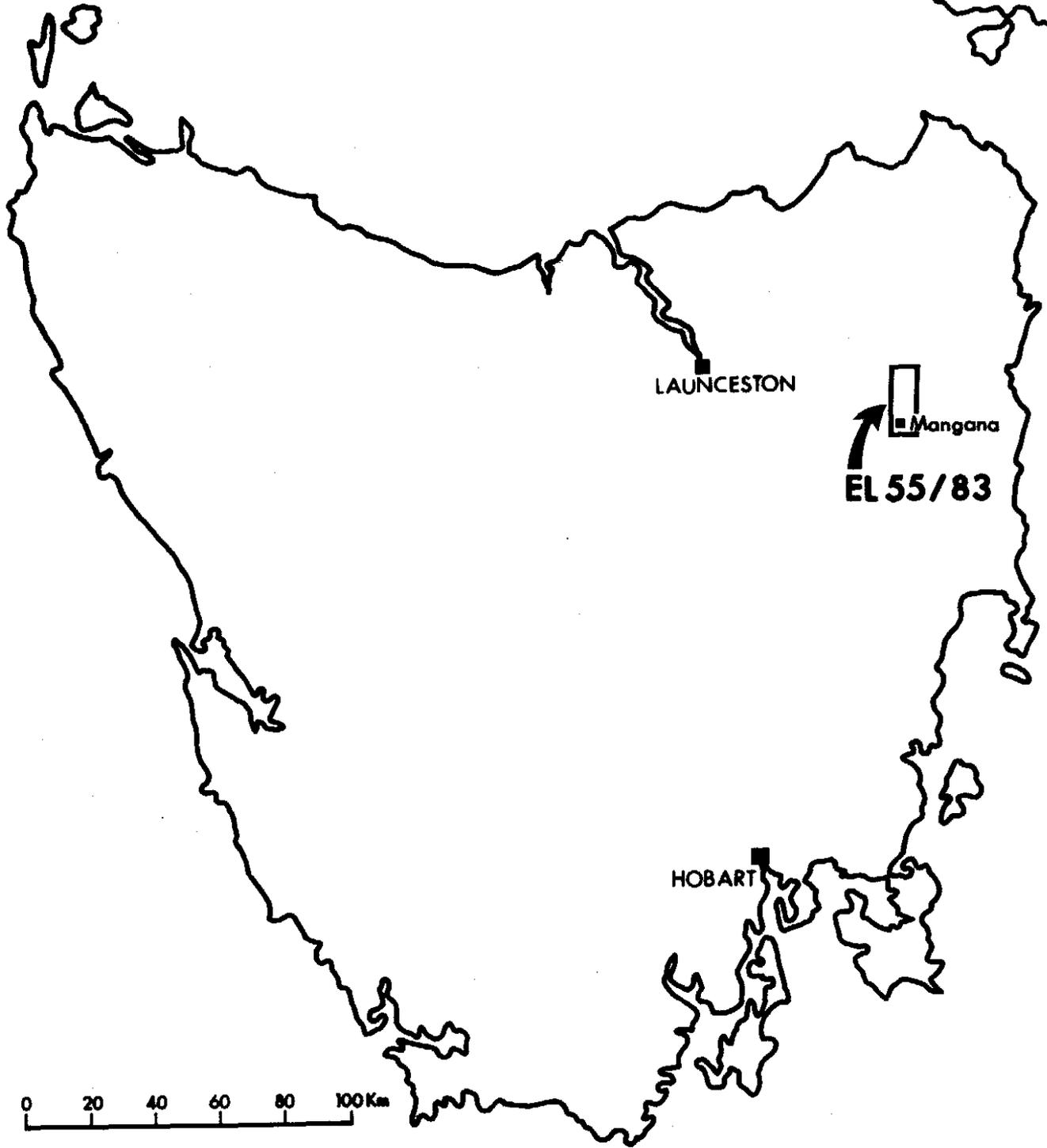
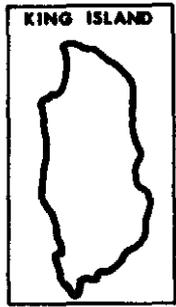


Fig. 1. EL 55/83 Location Map

WORK COMPLETED IN YEAR 4

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The main effort by the Company in 1987 was the successful listing on the Main Board of the Australian Stock Exchange (Melbourne) Limited. An issue of 8 000 000 25¢ ordinary shares and 8 000 000 1¢ options was fully subscribed and raised \$2 080 000. This assures adequate funds for exploration in the foreseeable future.

A copy of the July 1987 Prospectus is enclosed (Appendix 1). A geological report by Engineering Geology Specialists Pty Ltd was prepared as part of the Prospectus. The report shows the main alluvial prospects, their upside potential and the work done to date. A summary of all known hard rock occurrences is included.

In October 1987 a review of the economic geology of the alluvial targets, and recommendations for their exploration and development, was prepared by K.C. Morrison Pty Ltd. A copy of the report is enclosed (Appendix 2). In summary this report concluded that the Majors Gully deposit at Mangana was a test case for small (100 000 to 1 000 000 cubic metres) deposits suitable for working with a fixed location plant. If ground averaging 0.3 g Au/bank m<sup>3</sup> recoverable can be mined profitably then several other gullies inside the EL will be explored by trenching and bulk sampling. If Majors Gully is unsuccessful, then the only worthy alluvial target is the high volume (>2 000 000 cubic metres) lower grade South Esk River flats dredging target. In any case the latter target should be explored and it is intended to do so in Year 5.

CONCLUSIONS AND RECOMMENDATIONS

1. The Company has been successfully floated to the public and funds have been raised to fully explore EL 55/83.
2. Stockwork and disseminated hard rock targets with open cut potential are attractive and should be explored in Year 5.
3. The South Esk River flats near Mathinna represent a high volume-low grade dredging target and should be partially explored in Year 5.
- 4) Majors Gully is a test case for the smaller gully-confined alluvial deposits. If that deposit can be mined profitably, several others of similar size in the Mathinna and Mangana areas should be explored by bulk sampling, using the Majors Gully plant. A demonstration of mineability at Majors Gully and exploration of the main hard rock targets are the main priorities for 1988.

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FUTURE WORK

At the end of Year 5, 50% of EL 55/83 must be relinquished. Although the areas of alluvial potential have been defined (see Appendices 1 and 2), the many reef occurrences on the EL have not been explored adequately to prepare for relinquishment. The major effort in Year 5 will be to explore at least one of the hard rock targets fully and the remainder to a level whereby half the tenement can be downgraded.

Exploration on the alluvial targets will be tied to the success or otherwise of the Majors Gully mine. Regardless of the results of this mine, the South Esk dredging target will be bulk sampled.

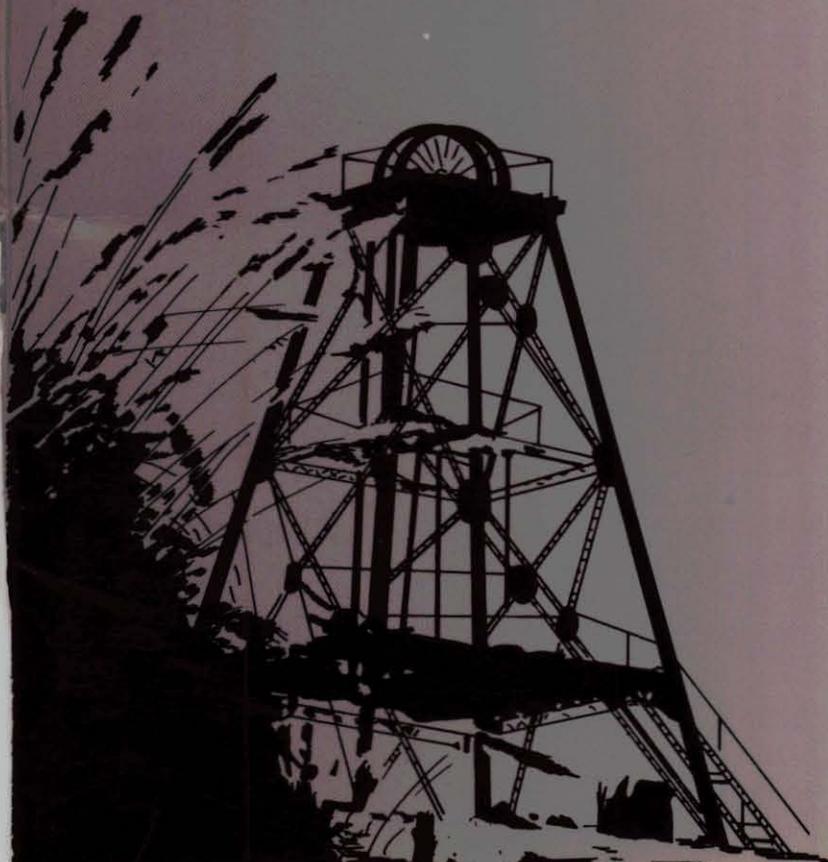
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**ALCASTON MINING N.L.**  
**PROSPECTUS**

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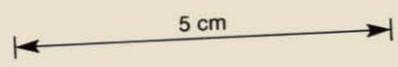
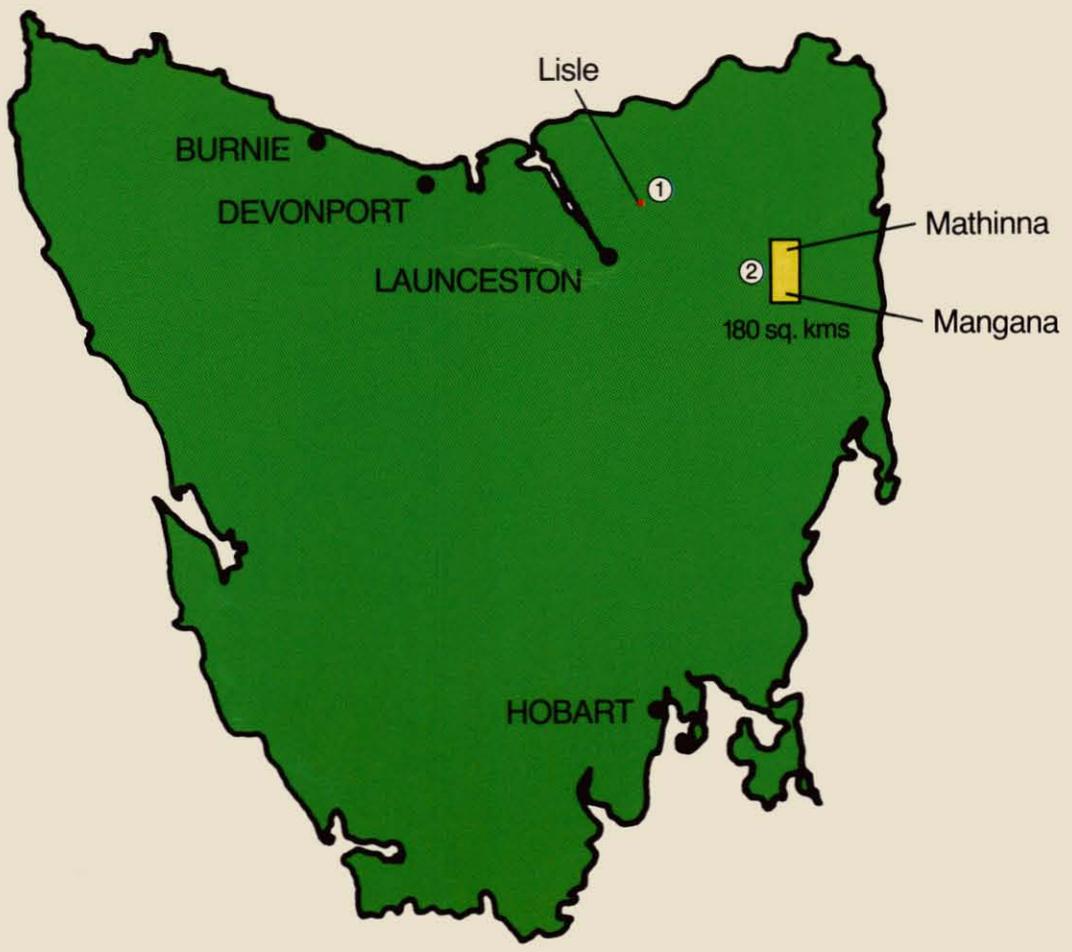


**UNDERWRITERS**  
AND SPONSORING BROKERS TO THE ISSUE  
**FALKINER COLLINS & CO.**  
351 Collins Street, Melbourne, Victoria, 3000.  
Members of the Australian Stock Exchange Limited

The properties detailed in this Prospectus are at the exploration stage only and thus the shares and option offered herein are of a speculative nature. All Mining Tenements the subject of this Prospectus require the consent of the Honourable Minister for Minerals & Energy before Transfer can be effected to the Company.

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- POPULATION CENTRES
- ① LISLE
- ② MANGANA and MATHINNA

SCALE:  
1 cm = 40 km.

# Tasmania – with location of Mining Tenements

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The Prospectus is dated the 6th day of July, 1987 and expires on the 6th day of January, 1988.

A copy of this Prospectus has been lodged with and registered by the Commissioner for Corporate Affairs for the State of Victoria as delegate of the National Companies and Securities Commission.

Neither the Commissioner for Corporate Affairs for the State of Victoria nor the National Companies and Securities Commission takes any responsibility as to the contents of this Prospectus. It is proposed to issue, circulate and distribute this Prospectus in the States of New South Wales, Queensland, South Australia, Victoria, Western Australia, Tasmania and the Australian Capital Territory.

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## INVESTMENT HIGHLIGHTS

### THE COMPANY

Alcaston Mining N.L. was incorporated on the 24th February, 1987.

### FINANCIAL BACKGROUND

The Vendors financed the exploration and acquisition of Exploration Licence 55/83 together with the Lisle properties and were allotted 3,999,995 fully paid shares of 25 cents each and 4,000,000 options in consideration therefore. These securities will be held in escrow for at least 36 months from the date on which the securities issued by the Company to the public have been granted Official Quotation.

Refer pages 2 - 3.

### COMPANY'S ACTIVITIES

The Company has acquired mining tenements at two locations in Tasmania, Mathinna/Mangana and Lisle. Previous exploration of these properties is detailed in the Consulting Geologist's Report commencing on page 19. It is the intention of the Company to complete the exploration of these properties and following evaluation to establish mining operations if economic reserves are proved.

### THE ISSUE

The Company is seeking to raise \$2,080,000.00 by the issue of 8,000,000 ordinary shares of 25 cents each payable in full on application together with 8,000,000 attaching negotiable options at 1 cent per option.

### THE PROPERTIES

The Company acquired the properties at Mathinna/Mangana and Lisle for the allotment of 3,999,995 Vendor shares and 4,000,000 options. The Directors commissioned Engineering Geology Specialists Pty. Ltd., Consulting Geologists, to evaluate the properties on completion of the preliminary exploration programmes. Refer page 11.

### PURPOSE OF THE ISSUE

The purpose of the issue is to fund the exploration and development of the Mathinna Mangana and Lisle properties, the future acquisition of mining properties with potential for mineral resources and to provide ongoing working capital.

Refer pages 8-9.

### NET TANGIBLE ASSET VALUE

The Net Tangible Asset Value per share on completion of the issue will be 24.5 cents. The Net Tangible Asset Value is made up of cash (15.8 cents) and exploration properties at directors' valuation (8.7 cents) - Refer to page 42.

### MINIMUM SUBSCRIPTION

The minimum amount which, in the opinion of the Directors, must be raised by the issue of shares and options offered for subscription by this Prospectus is \$2,080,000.00.

Refer page 51 (Clause 15.1).

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## INVESTMENT HIGHLIGHTS Contd.

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### BOARD OF DIRECTORS

The Board of Directors brings to the Company expertise in the mining, financial and legal fields. The Directors are Mr. Michael Jacques Roet, Mr. Nicholas Andrew Kostos and Mr. Terrence Ernest Brown.

### DIRECTORS BENEFITS AND CONTROL

Two Directors of the Company and an Associate Company have a substantial beneficial interest by receiving shares and options as vendors. On completion of this issue they will jointly hold 27.5% of the issued capital.

Mr. M.J. Roet, a Director of the Company, is a vendor to the Company directly and owns 12.5% of the issued capital of the Company.

Mr. N.A. Kostos, a Director of the Company is a Director of Animus No. 3 Limited which is a vendor to the Company directly. The beneficial owners of the issued capital of Animus No. 3 Limited include Mr. N.A. Kostos who thereby indirectly owns 15% of the issued capital of the Company.

### INDEPENDENT VALUATION

An independent valuation of the tenements the subject of this Prospectus has been carried out by Engineering Geology Specialists Pty. Ltd. In the opinion of this Geological Consultant the Vendor consideration in shares and options is fair and reasonable.

### VENDORS AND HOLDERS OF VENDORS SECURITIES

By agreement dated the 1st day of April, 1987 Animus No. 3 Limited was allotted 1,799,999 vendor shares and 1,800,000 options in the Company. Michael Jacques Roet was allotted 1,499,998 vendor shares and 1,500,000 options in the Company and Keith Alexander White was allotted 699,998 shares and 700,000 options in the Company. The shares and options were allotted in consideration for the purchase by the Company of the 100% interest held by the Vendors in Exploration Licence 55/83 and the Mining Leases at Lisle. Refer page 16.

### VENDOR SECURITIES

Vendors to the Company, in compliance with the Listing Requirements of the Australian Stock Exchange Limited, have agreed not to sell, transfer or assign their shares for a period of at least 36 months following official quotation of the shares and options offered by this Prospectus. Options issued to vendors and employees will also be subject to vendor restrictions in accordance with the Listing Requirements of the Australian Stock Exchange Limited and will not be eligible for official quotation.

Refer page 50 (Clause 7).

### THE UNDERWRITERS AND SPONSORING BROKERS

This issue has been fully underwritten by Falkiner Collins & Co. who are the sponsoring Brokers to the issue.

Refer pages 14 and 52 (Clause 18).

### DISCLAIMER

The information detailed above is a summary only of the contents of this Prospectus. Prior to making an investment decision the Prospectus should be examined in full and professional advice sought.

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## ALCASTON MINING N.L.

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Incorporated in Victoria under the Companies (Victoria) Code on the 24th day of February, 1987.

### **PROSPECTUS STATEMENT**

Prospectus for an issue of 8,000,000 ordinary shares of 25 cents each at par and payable in full on application, together with 8,000,000 attaching negotiable options at 1 cent each.

### **SHARE OPTIONS**

For every 1 ordinary share of 25 cents each offered for subscription by this Prospectus there will be attached, for a further consideration of 1 cent, 1 option. Each option so issued shall entitle the holder to apply for and be allotted on payment of 25 cents, 1 ordinary share of 25 cents each at par in the capital of the Company on the terms and conditions as set out on page 15 of this Prospectus.

**COMPANY PARTICULARS****DIRECTORS:**

Michael Jacques Roet LL.B.(Hons.)  
6 Scotsburn Grove,  
Toorak. Victoria. 3142.  
Nicholas Andrew Kostos, B.Comm., LL.B.  
61 Grange Road,  
Toorak. Victoria. 3142.  
Terrence Ernest Brown,  
"Cameron Vale Lodge",  
Lot 18 Lynne Court,  
Gisborne South. Victoria. 3437.

**COMPANY SECRETARY:**

Michael Jacques Roet, LL.B.(Hons.)  
6 Scotsburn Grove,  
Toorak. Victoria. 3142.

**REGISTERED OFFICE AND  
ADMINISTRATION OFFICE:**

Suite 3, 6th Floor,  
2 Collins Street,  
Melbourne. Victoria. 3000.

**SHARE REGISTRY:**

Peat, Marwick, Mitchell & Co.,  
Chartered Accountants,  
7th Floor, 520 Collins Street,  
Melbourne. Victoria. 3000.

**AUDITORS:**

Peat, Marwick, Mitchell & Co.,  
Chartered Accountants,  
500 Bourke Street,  
Melbourne. Victoria. 3000.

**BANKERS:**

National Australia Bank Ltd.,  
Stock Exchange Branch,  
85 Queen Street,  
Melbourne. Victoria. 3000.

**SOLICITORS:**

Kennedy & Cahill,  
2nd Floor, Collins Gate,  
377 Little Collins Street,  
Melbourne. Victoria. 3000.

**UNDERWRITERS & BROKERS  
TO THE ISSUE:**

Falkiner Collins & Co.,  
351 Collins Street,  
Melbourne. Victoria. 3000.

**HOME EXCHANGE:**

Australian Stock Exchange (Melbourne) Limited,  
351 Collins Street,  
Melbourne. Victoria. 3000.

**CONSULTING GEOLOGISTS:**

Engineering Geology Specialists Pty. Ltd.,  
Lot 1 Tasman Highway,  
St. Helens. Tasmania. 7216.

**INVESTIGATING  
ACCOUNTANT:**

Nicholas S. Barnett,  
Peat, Marwick, Mitchell & Co.,  
500 Bourke Street,  
Melbourne. Victoria. 3000

**COMPANY ACCOUNTANT:**

L. Wabnik & Co.,  
135 High Street,  
Prahran. Victoria. 3181

## SUMMARY OF ISSUE AND DETAILS OF CAPITAL STRUCTURE

### ALCASTON MINING N.L. (Incorporated in Victoria on the 24th day of February, 1987)

#### PROSPECTUS

For an issue of 8,000,000 ordinary shares of 25 cents each at par payable in full as to 25 cents per share on application. Subscribers will receive one option for every one cent subscribed (being 8,000,000 options) at an issue price of 1 cent.

<u>160,000,000</u>	<b>Authorised Capital</b> Ordinary Shares of 25 cents each par value	<u>\$40,000,000</u>
4,000,000	<b>Issued and Paid up Capital</b> Ordinary Shares of 25 cents par value each credited as fully paid. These shares will be treated as Vendor Shares.	\$1,000,000
8,000,000	<b>Shares Now Offered for Subscription</b> Ordinary Shares of 25 cents par value each payable in full on application	\$2,000,000
<u>148,000,000</u>	<b>Unissued Capital</b> Ordinary Shares of 25 cents each	<u>\$37,000,000</u>
<u>160,000,000</u>		<u>\$40,000,000</u>
4,000,000	<b>Options On Issue</b> Options to be issued to vendors Options to purchase one only 25 cent fully paid ordinary share exercisable after 1st July 1988 and before 1st May 1990.	\$40,000
8,000,000	<b>Options to be Issued</b> Options to purchase one only 25 cent fully paid ordinary share exercisable after 1st July 1988 and before 1st July 1990.	\$80,000
200,000	<b>Options to be issued to the Underwriters as further explained on Page 13</b> Options to purchase one only 25 cent fully paid ordinary share exercisable after listing of shares in the Company on the Australian Stock Exchange Limited and before 1st May, 1990.	\$2,000
<u>12,200,000</u>		<u>\$122,000</u>

#### SHARE OPTIONS

**Unissued:**

The Directors have been authorised to reserve 3,000,000 options to subscribe for shares at par in the Company on payment of 1 cent per option. ("Employee Options") these options shall be granted at the discretion of the Directors to existing Directors (a total of 1.2 million options) and to other Directors, Consultants (being Geologists or Mining Engineers) and full time employees of the Company (a total of 1.8 million options). These 3,000,000 options to be allotted not later than 1st July 1988 and exercisable before 1st May 1990 will not be eligible for official quotation.

The terms and conditions attaching to these options are set out in the Details of Issue of the Prospectus.

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**DIRECTORS**

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**Michael Jacques Roet** LL.B (Hons.)

Chairman and Managing Director.

Mr. Roet is aged 49, is an Honours Graduate in Law from Melbourne University and has been professionally associated with the Gold Mining Industry since 1982. During 1983-85 he was Chief Executive of South Eastern Petroleum N.L. (now Montague N.L.). During that period he negotiated the purchase of a major alluvial Gold mine in Queensland and also a controlling interest in tenements at Jonesville W.A. where an open pit Gold mining operation is planned. Prior to 1980, he practised as a solicitor with a commercial firm in Melbourne. He has been actively involved in locating and testing Exploration Licence 55/83 the lead property in this Prospectus.

**Nicholas Andrew Kostos** B.Comm, LL.B.

Mr. Kostos has degrees in Law and Commerce from the University of Melbourne. Having practised law for some 3 years, in 1983 he joined the leading Melbourne stock-broking firm of McIntosh Hamson Hoare Govett. Mr. Kostos was made a Director of McIntosh's in 1984 specializing in debt structuring and capital markets. In 1986 he left McIntosh's to pursue private interests.

**Terrence Ernest Brown**

Mr. Brown brings to the Board twenty years experience in the financial securities industry. After 15 years at the Commercial Bank of Australia he moved to Australia United Corporation Ltd. From 1982-85 he was engaged as a Financial Consultant with Stockbrokers McIntosh Hamson Hoare Govett. His experience in Gold-related options, futures and forward markets will be of benefit to the Company.

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## DIRECTORS' STATEMENT

This Statement has been prepared by the Directors of Alcaston Mining N.L. for inclusion in this Prospectus for the issue of 8,000,000 ordinary shares of 25 cents each at par and 8,000,000 attaching negotiable options at 1 cent per option.

The Company has an experienced Board of Directors who intend to pursue the acquisition of further exploration properties provided expert evaluation of those properties establishes good potential.

### INTRODUCTION

Alcaston Mining N.L. ("Alcaston") was incorporated in the State of Victoria on the 24th day of February, 1987.

The authorised capital is \$40,000,000 divided into 160,000,000 ordinary shares of 25 cents each. At the date of this Prospectus the following shares and options have been issued:

Five ordinary shares of 25 cents each fully paid.

3,999,995 vendor shares of 25 cents each

4,000,000 vendor options.

Alcaston was incorporated to acquire and evaluate gold prospects.

### OBJECTIVES AND EXPLORATION PHILOSOPHY

The principal and main objective of the Directors of Alcaston is to bring gold deposits into profitable production at the earliest feasible date. Accordingly the Company has acquired properties in Tasmania one of which offers immediate drilling targets on mineralised zones proved to contain gold by earlier exploration. The property in this category is the hard rock area of Exploration Licence 55/83. (Refer page 30).

Three targets for drilling have been identified on this Exploration Licence from old mining reports and plans. The Directors intend that all these targets be drilled within the first two years after listing.

In addition to these hard rock targets, proven areas of auriferous alluvial wash at Mathinna and Mangana exist and a much greater volume of wash, contiguous to the proven areas at Mangana and Mathinna remains to be fully tested. Testing will be effected with a gravity plant equipped with spirals to endeavour to recover the fine gold. At Lisle, in addition to Probable Reserves of 355,000 m<sup>3</sup> a volume of wash approximating 2,000,000 m<sup>3</sup> remains to be tested. When the size of these deposits is known, an evaluation will be made.

Recognized specialists will be engaged to address the issues of development and treatment of these areas, both alluvial and hard rock. These specialists will advise on equipment to be acquired by purchase or otherwise and its application to the circumstances at Mathinna, Mangana and Lisle. Of particular interest will be the suitability for dredging of alluvial ground at each of these three locations. Expert advice will be sought in this regard.

## DIRECTORS' STATEMENT Cont.

### APPLICATION OF FUNDS

The Company proposes to use the funds to be raised by this issue to further the proposed exploration of the tenements comprised in this Prospectus which exploration will include:

#### Mangana - Alluvial

- Detailed photogeological interpretation and mapping utilizing enlarged aerial photographs
- Geophysical surveys to accurately outline channels and check for hidden wash deposits
- Backhoe trenching of the alluvial deposits and treatment of the samples in a gravity plant

#### Mathinna - Alluvial

- Photogeological interpretation using aerial photographs
- Drilling of alluvial wash
- Treatment of samples in gravity plant at Mangana
- Evaluation of deposit

#### Lisle - Alluvial

- Bulk sampling of wash
- Evaluation of deposit for dredging

#### Exploration Licence 55/83

- upon which are the previously mined areas at Mathinna, Mangana and Tower Hill

- Dewatering of old workings and rehabilitation of one or more of the shafts to gain access to these workings
- Survey, geologically map and sample the old workings to outline and determine the grade of remaining mineralized quartz reef
- Diamond drilling to explore for reef repetitions below and within existing workings
- Preparation of a comprehensive feasibility study on the viability of a mining operation

The Directors believe that the Company offers investors a unique opportunity to participate in the revival of the gold mining industry in Tasmania and to share in the exciting developments which they believe will result from the successful exploration and development of the Company's mining tenements.

### PROPOSED EXPLORATION EXPENDITURE

#### Estimated Year One: Ending 30 June 1988

Explore old workings	\$25,000
Mathinna Alluvials - Testing	\$ 50,000
Mangana Alluvials - Testing	\$ 50,000
Tower Hill Mine	\$25,000
Buckland Alpine Cardinal Mines	\$50,000
Mangana Gold Reefs Mine	\$30,000
Golden Gate Extensions	\$25,000
Lisle Alluvials - Testing	\$25,000
	<u>\$280,000</u>

#### Estimated Year Two:

Mathinna Alluvials	\$100,000
Mangana Alluvials	\$150,000
Tower Hill	\$75,000
Buckland-Alpine-Cardinal Mines	\$75,000
Lisle Alluvials - Testing	\$25,000
	<u>\$425,000</u>

#### Estimated Year Three:

Tower Hill	\$75,000
Buckland - Alpine - Cardinal Mines	\$75,000
Mangana Gold Reefs Mine	\$75,000
Golden Gate Extensions	\$75,000
Old Workings - further exploration	\$50,000
	<u>\$350,000</u>

## DIRECTORS' STATEMENT

### INCOME FROM FUNDS

Pending their use, surplus funds will be invested in the short term money market, Government Bonds, the purchase of bills of exchange or on deposit with banks, building societies or merchant banks or the purchase of gold related contracts, futures and options equity investments or in other investments approved by the Directors.

### PROFESSIONAL ADVICE

Independent Consulting Geologist E.J. Minty has a mineral and industry background of 35 years. He is available to consult in respect of the evaluation of both the hard rock prospects and the alluvial ground. A Mining Engineer will supervise the drilling at Tower Hill Mine, Mangana Gold Reefs Mine and the Buckland prospect. Where other specific expertise is required on a short term basis, consultants will be utilized.

### PREVIOUS GEOLOGICAL SURVEYS

To the knowledge of the Directors all results of previous geological surveys, exploration and development concerning the area within both, EL 55/83 and the Lisle tenements which would, if omitted, cause the prospectus to be misleading, have been included.

### RIGHT TO MINE

The Company has the right to mine the areas covered by Mining Lease Applications, and has the right to test the area in respect of which Exploration Licence 55/83 has been granted.

### OTHER INTERESTS

The Directors, after having made reasonable enquiry, have ascertained that there is no interest whatsoever in the mining or prospecting rights held by any other person over the Mining Tenements acquired by the Company.

### IMPEDING OF OPERATIONS

There are no other circumstances known to the Directors which may impede the proposed operations of the Company as stated in this Prospectus in respect of the Mining Tenements acquired by the Company.

### CONSENT OF MINISTER

The Minister of Mines has given his consent in respect of the transfer of 55/83. There are no other requirements of the Minister in respect of the mining sub-lease and the mining lease applications.

### ACQUISITION OF TENEMENTS

The Directors know of no other circumstances which, when determined, may result in the Company failing to acquire the mining tenements.

### VIABILITY

A gold price of not less than A\$500 is assumed for both the alluvial and reef prospects. The continuance of government taxation incentives has not formed part of viability assumptions. The proposals are conditional upon compliance with the usual requirements of the Mines Department and the Department of the Environment.

### "EXPENDITURE"

The work done by or on behalf of the vendors on prospecting the mining tenements at Mathinna Mangana and Lisle is described in the Report of Engineering Geology Specialists Pty. Ltd. (Refer Pages 20-28). Monies expended by the vendor in prospecting the tenements are as follows:

Wages	\$68,000
Fuel	\$40,000
Cost of Transport	\$25,000
Machinery Hire and Repairs	\$40,000
Title Searches	\$1,100
Fees to Mines Department	\$1,000
Caravans, Accommodation - Hire	\$20,000
	<u>\$195,100</u>

## SUMMARY OF PROPERTIES

### EXPLORATION LICENCE 55/83 - INCORPORATING MINING LEASE APPLICATIONS 1266P/M AND 1273P/M - MATHINNA AND MANGANA, TASMANIA

(Refer Figs. 1, 4, 5 and 2 on pages 19, 22, 28 and 18 of this Prospectus).

- (a) Mining activity at these two locations during the second half of the 19th Century produced upwards of 250,000 ounces of gold. Gold grades were initially high and some 40 mines were established including Mangana Gold Reefs Mine, Tower Hill Freehold, Alpine, Buckland, Cardinal, Old Boys, Horseshoe, Eldorado, Jubilee, Pincher, Golden Entrance, Golden Gully, Fingal Mine, The Miner's Dream and City of Hobart. Most of the old mines in this area are located on Exploration Licence 55/83. Drilling Targets identified from old geological reports include

#### **Mangana Gold Reefs Mine**

Rock remaining in this mine is expected to be mineralised. (Refer Fig. 1 page 19 of this Prospectus).

#### **Cardinal, Buckland, Alpine group of Mines**

Drilling to intersect these reefs at depth will assist in evaluation of this prospect. (Refer Fig. 1 page 19 of this Prospectus).

#### **Tower Hill Mine**

Bulk testing of quartz stringers will determine grade. (Refer Fig. 1 page 19 of this Prospectus).  
Exploration Licence 55/83 is referred to in Solicitors Report on page 46 of this Prospectus.

- (b) The alluvial flats at both Mathinna and Mangana have been tested with grades established for a total of .8 million cubic metres of wash. A programme of testing is planned to evaluate the remaining areas.

(Refer Fig. 4 page 22 and Fig. 5 page 28 of this Prospectus).

### MINING SUB-LEASE 5M/81 AND MINING LEASE APPLICATIONS 66M/85, 67M/85 AND 68M/85 - LISLE

The Lisle alluvial area will be tested to establish its suitability for dredging.  
(Refer Fig. 6 page 26 of this Prospectus).

Alcaston has acquired these highly prospective gold prospects and it is the intention of the Board to develop these prospects in accordance with the recommendations of the Company's consulting Geologist Engineering Geology Specialists Pty. Ltd., as set out on pages 20-37 of this Prospectus.

The Directors see the role of the Company as an aggressive mineral explorer with a policy of carrying out exploration in its own right. Further it may elect to enter into joint venture or farm-in arrangements with major mining companies.

## SCHEDULE OF MINING TENEMENTS TASMANIA

#### **Mining Sub-Lease:**

No. 5M/81 in respect of 66 ha at Lisle for all minerals held by K.A. White for 6 years from 1st May, 1984.  
(Refer Fig. 6 page 26).

#### **Exploration Licence:**

No. EL 55/83 in respect of 180 sq/ k.m. at Mangana/Mathinna for all minerals held by K.A. White and renewed for period 9.8.83 to 23.11.87. (Refer Fig. 1 page 19, Fig. 4 page 22, Fig. 5 page 28, Fig. 2 page 18).

**SUMMARY OF PROPERTIES****Mining Lease Applications:**

<u>No.</u>	<u>Area</u>	<u>Location</u>	<u>Mineral</u>	<u>Applicant</u>
66M/85	68 ha	Lisle	Gold	K.A. White*
67M/85	39 ha	Lisle	Gold	K.A. White*
68M/85	96 ha	Lisle	Gold	K.A. White*
1266P/M	12 ha	Mangana	Gold	Fred White +
1273P/M	15 ha	Mangana	Gold	M.J. Roet +

\* Refer Fig. 6 page 26.

+ Refer Figs. 1, 4, 5 & 2

## DETAILS OF THE ISSUE

### Shares offered for Subscription

A total of 8,000,000 ordinary shares of 25 cents par value each paid to 25 cents per share on application and 8,000,000 attaching negotiable options at 1 cent per option are offered for subscription by this Prospectus.

### Options

With every ordinary share offered for subscription at an issue price of 1 cent there will attach one option to subscribe for one additional ordinary 25 cent share in the Company, to be allotted on the following terms:

- (i) The option shall expire on 1st July, 1990.
- (ii) The option shall be exercisable wholly or in part after 1st July 1988 by notice in writing to the Directors of the Company.
- (iii) Shares subscribed for pursuant to the options will be payable at the election of the option holder in full on the exercise of the option, by the payment of 25 cents per share.
- (iv) Separate option certificates will be issued.
- (v) Options may be transferred at any time prior to their expiry.
- (vi) The options will not carry any inherent right to participate in new issues of capital which may be offered to shareholders during the currency of the options. Option holders will, however, be notified of any such new issues prior to the date on which entitlements to such new issues are determined so that they may exercise their options prior to that date.
- (vii) Shares issued pursuant to the exercise of the options will be allotted following receipt of all relevant documents and payment and will rank equally with the then issued ordinary shares of the Company save that such shares will be entitled to a proportionate part only (calculated from the date of the exercise) of any dividend declared or paid on the ordinary shares of the Company in respect of the financial year in which the options are exercised. The Directors will forthwith after allotment make application for the listing of such shares to the Australian Stock Exchange Limited (the ASX). The fact that the ASX have admitted the Company to their Official List is not to be taken in any way as an indication of the merits of the Company or of the securities now offered for subscription.
- (viii) One option per share at an issue price of 1 cent will be offered in consideration of the subscription of each share offered for subscription pursuant to this Prospectus.
- (ix) In any reduction of capital or change of nominal value to existing shares of the Company then the option holders shall take such proportional change in the number of options in accordance with the reduction of capital or change in nominal value as is appropriate.

### Options to be issued to Underwriter

A total of 200,000 options shall be issued to the Underwriter to expire on 1st May 1990 and otherwise on the above terms. Such options to be held in escrow for 12 months from the date on which the securities issued by the Company to the public have been granted official quotation.

### Unissued Options

The Directors have been authorised to reserve 3,000,000 options to subscribe for shares at par in the Company to be granted at their discretion to existing Directors (a total of 1.2 million options) and to other Directors, Consultants (being Geologists and Mining Engineers) and full time employees of the Company (a total of 1.8 million options). These 3,000,000 options shall be allotted no later than 1st July 1988 upon payment of 1 cent per option ("Employee Options") and shall be held in escrow for at least 36 months from the date on which the securities issued by the Company to the public have been granted official quotation.

The Company will not seek to have these options granted quotation on the Australian Stock Exchange Limited. The options may be exercised by notice in writing to the Company received at any time during the period commencing 1st July, 1988 and expiring 1st May, 1990 inclusive ("exercise period").

Other terms and conditions of these options shall be determined by the Directors at the time the options are issued.

## DETAILS OF THE ISSUE Cont.

### Application for Shares and Options

All applications for shares and options offered by this Prospectus must be made on the application form issued with and forming part of the Prospectus. This form should be lodged together with the application money with:

Falkiner Collins & Co.,  
Stockbrokers of  
351 Collins Street, Melbourne

Applications shall be for a minimum of 2000 shares and 2000 options and any additional applications shall be in multiples of 2000 shares and options.

### Opening and Closing of the Issues

Application lists will open at 9.00 a.m. Eastern Australian Standard time on 8th July 1987 and will remain open until 5.00 p.m. Eastern Australian Standard time on 31st July 1987 subject to the right of the Board of Directors of the Company to close the issue at an earlier date without prior notice. Any interest paid on application moneys held by the Company shall be for the account of the Company. Surplus application moneys refunded will not carry interest. Excess moneys will be returned to unsuccessful applicants no later than 30 days after the closing of the subscription lists.

### Applications shall be regarded as Invalid unless:

- (i) Where the applicant is a corporation (unless accepting under power of attorney) its common seal has been affixed to the application form in accordance with its articles of association of constitution;
- (ii) where the applicants are joint holders, each applicant has signed the form; and
- (iii) where an applicant is accepting through an attorney under power, the power of attorney has not been revoked, is validly executed and empowers the attorney to sign the form and the attorney so signs the form.

### Underwriting and Brokerage

The whole of this issue of 8,000,000 ordinary shares of 25 cents each payable in full on application and 8,000,000 attaching negotiable options at 1 cent per option has been underwritten by Falkiner Collins & Co. for an underwriting fee of 1.50 cents per share (\$120,000.00) and the free issue of 200,000 1 cent options, to purchase shares at par in the company. The terms and conditions attaching to these options are set out in the Details of Issue of the Prospectus. Out of this underwriting commission a handling fee of 0.25 cents per share will be paid to members of recognised Stock Exchanges in Australia or to other intermediaries approved by the Underwriters in respect of those shares allotted pursuant to applications lodged or procured by them and bearing their stamp or other evidence acceptable to the Underwriters as to the source of the application.

The Underwriters reserve the right to nominate the allottees of all shares and options offered for subscription by this Prospectus.

### Stock Exchange Listing

Permission has been granted for the Company to be admitted to the Official List of the Australian Stock Exchange Limited (ASX). Application has been made and approval given for the shares and options offered by this Prospectus to be granted official quotation, by the ASX. The fact that the ASX has admitted the Company to its Official List is not to be taken in any way as an indication of the merits of the Company or of the shares and options now offered for subscription. Quotation of the shares and options offered by this Prospectus will commence as soon as practicable after the issue of security certificates to the respective allottees. The ASX takes no responsibility for the contents of this Prospectus including any Expert's Report which it may contain.

## DETAILS OF THE ISSUE Cont.

### Allotments

The Directors will proceed to the allotment of shares and options as soon as possible after the minimum subscription as set out in paragraph 15 on page 51 of this Prospectus is reached. In the event that the minimum subscription has not been subscribed within four (4) months after the issue of this Prospectus, application moneys will be returned in full to the applicant.

Where no allotment or issue is made, the amount tendered on application will be returned in full. Where the number of shares allotted is less than the number applied for, the surplus application moneys will be returned to the applicant within seven (7) days of the closing of the subscription list.

### Shares and Option Register

The Company will maintain a Share and Option Register at:  
Peat, Marwick, Mitchell & Co.  
Chartered Accountants  
7th Floor, 520 Collins Street, Melbourne.

### Terms and Conditions of Existing Options

The existing options may only be exercised by the registered holders for the time being of the options by notice in writing to the Company received at its registered office at any time after 1st July 1988 and before expiry on 1st July, 1990 accompanied by the relevant option certificate(s) which shall be cancelled by the Company. Shares subscribed for pursuant to the options will be payable at the election of the option holder in full on exercise of the option.

The options do not carry the right to participate in any new issues of capital which may be offered to shareholders during the currency of the options, but option holders will be notified of any such new issues prior to the date on which entitlements to such new issues are determined.

The date of exercise of an option shall be deemed the date on which notice of the exercise of the option is received by the Company. The shares to be issued following the exercise of the options will be entitled to a proportionate part only (calculated from the date of exercise) of any dividend declared or paid on ordinary shares of the Company in respect of the financial year in which the options are exercised.

The options may, after the expiration of the period of twelve months from the date of the listing of the Company, be transferred at any time prior to their expiry on 1st July, 1990.

In the event of the holder assigning a lesser number of options than the number of shares referred to in any option certificate held by him, the Company will, upon production of evidence satisfactory to it of such assignment together with the relevant option certificates for cancellation split such certificates.

In any reduction of capital or change of nominal value to existing shares of the Company then the option holders shall take such proportionate change in the number of options in accordance with the reduction of capital or change in nominal value as is appropriate.

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## DETAILS OF THE ISSUE Cont.

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### **Vendor Securities**

The 4,000,000 ordinary shares of 25 cents each and the 4,000,000 existing options held by the current shareholders of the Company are classified as vendor shares and vendor options and as such these shares are not eligible for official quotation until at least 36 months from the date of listing of the Company and the options are not eligible for official quotation. The employee options shall not be listed.

The holders of these shares and options have agreed that they will not sell, assign or transfer any of such shares or options for the period of 36 months after the date of listing of the Company. The issue shall be conditional upon an agreement being entered into between the vendors and the Company providing for breach of these conditions being enforceable by the Company.

The holders of the options issued to the underwriters have agreed that they will not sell, assign or transfer any of such options for the period of twelve months after the date of listing of the Company. Any shares in the Company issued as the result of the exercise of any of the vendor options will be treated as vendor shares and will be subject to the same restrictions as the vendor shares.

### **Balance Date**

The accounts of the Company and any subsidiaries will be made up to 30th June annually.

### **Dividends**

The Directors are not able to formulate any policy in respect of future dividend payments at this stage as this will depend upon the earnings and future financial position of the Company.

### **Taxation**

It is anticipated, subject to the listing of the shares and options offered by this Prospectus for quotation on the ASX that the Company will be a public company for the purposes of the Income Tax Assessment Act 1936.

023

2nd Floor  
275-281 George Street  
SYDNEY N.S.W. 2000

# Engineering Geology Specialists

PTY LTD

Phone (02) 29 1451  
Geological Consultants

Home Office:  
"WYBALENNNA"

Tasman Highway  
P O Box 188  
ST HELENS  
Tasmania 7216  
Phone (003) 76 1611

## INDEPENDENT ASSESSMENT OF VENDOR CONSIDERATION

The Directors,  
Alcaston Mining N.L.  
Suite 3, 6th Floor,  
2 Collins Street,  
Melbourne Vic. 3000

20th June, 1987.

Dear Sirs,

This report has been prepared for inclusion in a Prospectus to be dated 6th July 1987 relating to the issue by Alcaston Mining N.L. of 8,000,000 ordinary shares of 25 cents each to be issued at par payable in full on application together with one option for every one share subscribed at an issue price of 1 cent per option.

The tenements described in the independent Geologists Report on pages 20 to 37 of this Prospectus consist of proven alluvial ore, alluvial prospects and hard rock prospects.

In respect of the proven alluvials, recovered grades of approximately 0.3 g/m<sup>3</sup> at Mangana and 0.2 g/m<sup>3</sup> at Mathinna have been obtained. Refer pages 22-24 and 25-27. Large volumes of possibly auriferous alluvium exist adjacent to and downstream from these proven areas.

At Lisle, recovered grades have approximated 0.2 g/m<sup>3</sup>. Some 2,000,000 m<sup>3</sup> of "possible" ground remains to be tested.

The "possible" category of alluvial prospects comprises alluvial ground at Lisle, Mathinna and Mangana within which mineralisation has been identified.

Whilst these areas are considered prospective, they are subject to exploration risk. The sheer volume of alluvial material at Mathinna makes it a potential prospect for dredging.

Three hard rock targets are detailed on pages 30 to 31 of my report. Other prospects will emerge from an examination of the old mines which are identified on the Exploration Licence Plan (Figure 1).

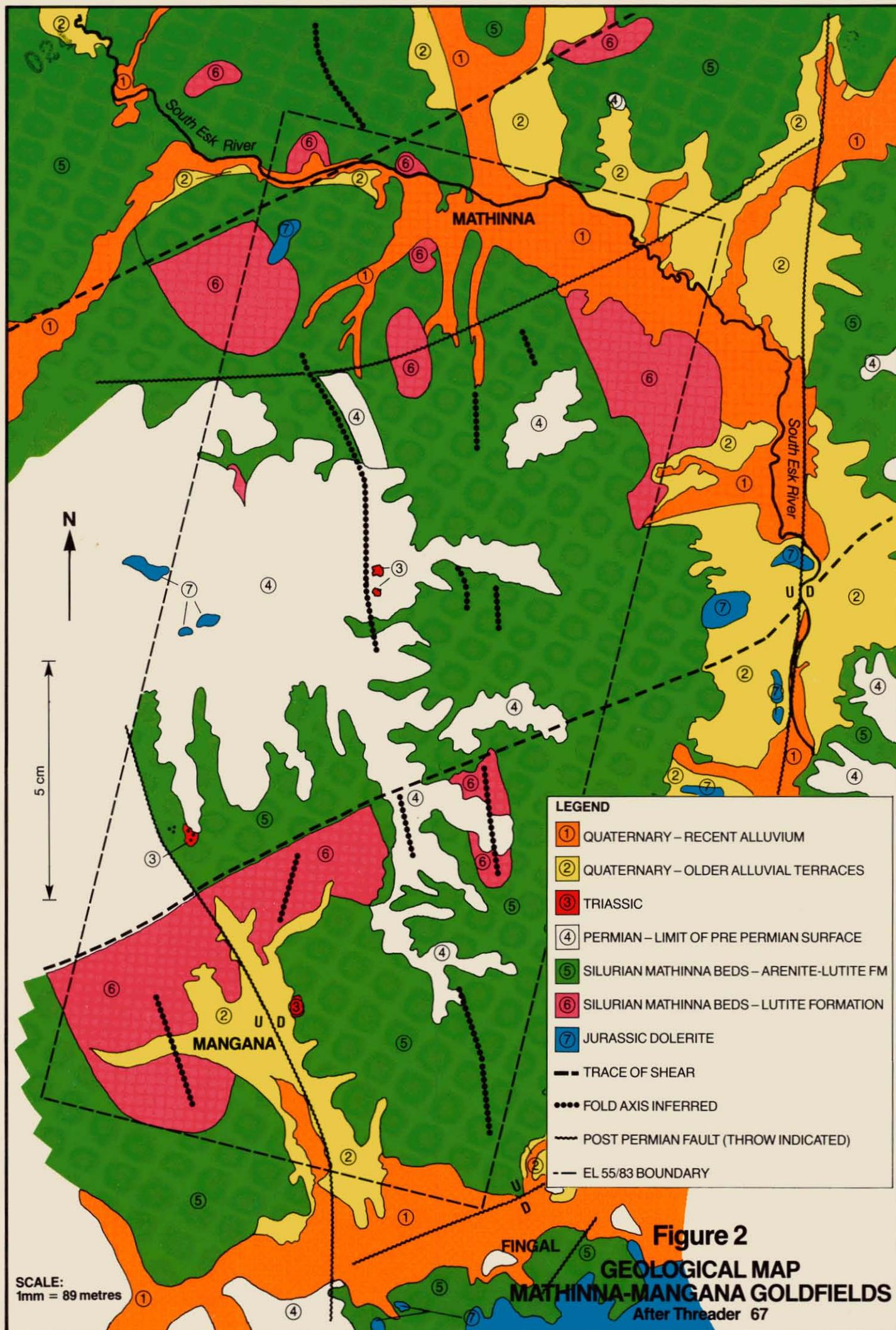
These prospects warrant expenditure of substantial amounts of exploration capital and are regarded as a reasonable exploration risk.

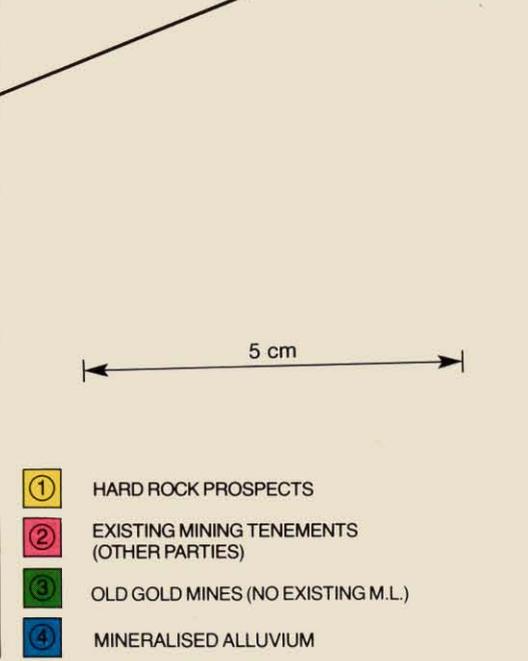
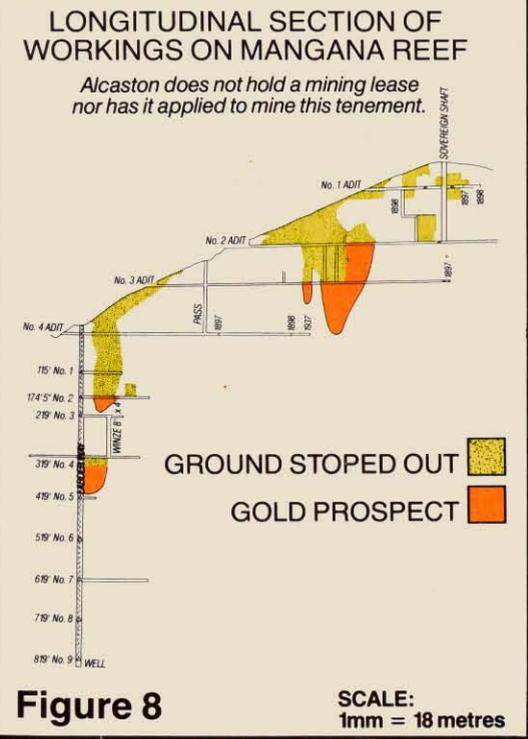
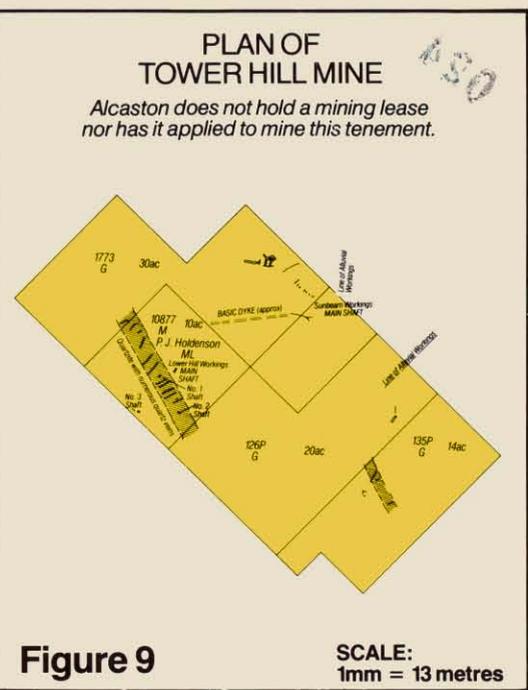
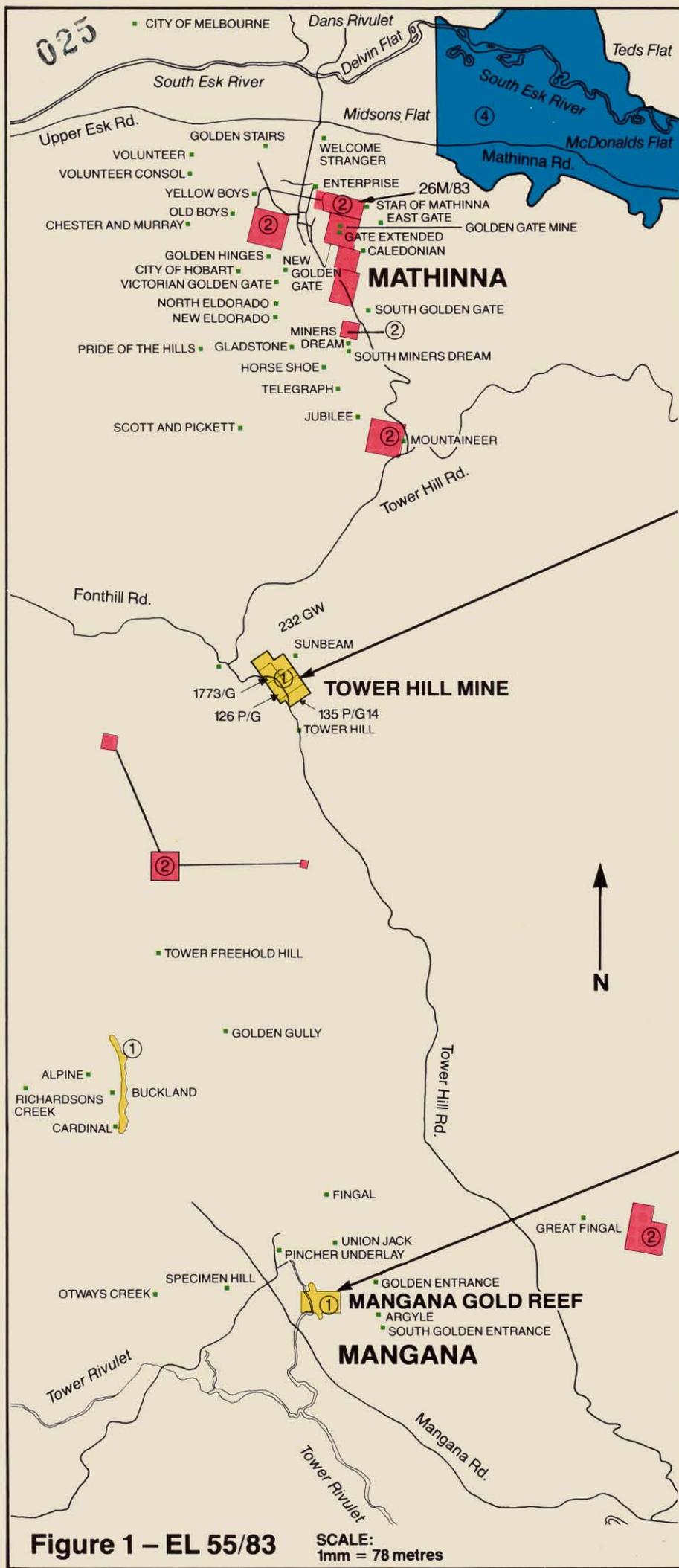
Having regard to the above factors and by comparison with similar transactions, the vendor consideration of 3,999,995 vendor shares and 4 million options is regarded as fair and reasonable.

Yours faithfully,



E.J. Minty  
DIRECTOR





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2nd Floor  
275-281 George Street  
SYDNEY N.S.W. 2000

# Engineering Geology Specialists

Phone (02) 29 1451  
Geological Consultants

PTY LTD

Home Office:  
"WYBALENNNA"

Tasman Highway  
P O Box 188  
ST HELENS  
Tasmania 7216  
Phone (003) 76 1611

The Directors  
Alcaston Mining N.L.  
Suite 3, 6th Floor,  
2 Collins Street,  
Melbourne Vic. 3000

20th June, 1987.

Dear Sirs,

## RE: EXPLORATION LICENCE AREA 55/83 AND MINING LEASE APPLICATION

This report has been prepared by Engineering Geology Specialists Pty. Ltd. for inclusion in the Prospectus dated 6th July 1987 for the issue by Alcaston Mining N.L. to the public of 8,000,000 ordinary shares of 25 cents each at par payable in full on application together with one option for every one share subscribed at an issue price of 1 cent per option.

The data in this report is drawn principally from Mines Department of Tasmania records including the annual report on Exploration Licence 55/83 for Tasmanian Alluvials by Keith Alexander White (now General Manager of Alcaston Mining N.L.). The report by T.G. Summons (1984) is held in the office of Alcaston Mining N.L. and is referred to in relation to the Tower Hill Mine. The data on the prospecting of the Lisle Goldfield has not been reported upon previously, but is included in this report.

Aerial photographs used are parts of Government aerial photographs.

### INTRODUCTION

The E.L. 55/83 encloses most of the old Mangana and Mathinna goldfields. This E.L. lies north of the Esk Main Road and east of Ben Lomond Range in north eastern Tasmania, and covers 180 square kilometres.

The extent of E.L. 55/83 is shown on the map included as fig. 1 of the Prospectus. The mining leases granted to other groups are set out clearly and the names and general locations of old gold mining areas are printed on the map. The latter are available for prospecting.

Gold was first discovered at Mangana in 1852 and this is believed to be the first place where it was obtained by crushing gold bearing quartz in Tasmania.

Alluvial and quartz reef gold mining was later begun at Mathinna. By 1884 it was almost deserted but came into prominence again in 1887 when a gold reef was found in an abandoned mine by A. Loane. The New Golden Gate Mine was worked to a depth of 580 metres and produced 7895 kg. (253,865 ozs) of gold.

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## ENGINEERING GEOLOGY SPECIALISTS PTY. LTD. REPORT Cont.

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Economic conditions in the 1980s have seen a resurgence of interest in gold mining in Australia.

For three years Prospector Alex White has been undertaking large scale testing of alluvial fields at Mathinna, Mangana and Lisle by means of costeans and actual recovery in a half scale plant. In order to validate the data in the annual report of Tasmanian Alluvials I have examined the assay reports from Engelhardts of Melbourne and those from the Government Analyst. Only a general inspection of the areas was possible in the time available, but the extent of the alluvial ground is clear from a study of aerial photographs. Prospecting is summarised under "Exploration programme results".

The information in this report is based on published data, unpublished company reports and field inspections of the prospects where required.

A separate section deals with future alluvial exploration under the heading "Alluvial Prospecting Proposals".

Whilst it is not uncommon for large areas to be granted for mineral exploration it is unusual to find large areas of two old goldfields in one E.L.A. with relatively few encroachments from existing mining leases.

Excellent road systems and accessibility, together with readily available services such as water and electricity ensure cheaper costs. The co-operative Government attitude facilitates exploration. Nearly all requirements can be obtained from Launceston 1½ hours away. Provisions are available from towns 15 minutes from any part of the site. Not only do these considerations assist with cost control and speed of operations, but make possible the bulking of a number of smaller deposits at a central mill, for processing.

It is suggested that nowhere in Australia do all these advantages coexist at one exploration area with such obvious impact as here.

Figure 2 is a geological map of the rocks underlying the alluvials and other surficial deposits together with the alluvium. The major structural trend in the north east of Tasmania is N.N.W.-S.S.W. The map is based on V. Threader's University thesis, obtained from the Geological Survey of Tasmania.

Topographically the area is dominated locally by East Tower Hill which is dolerite and approximately 1117 metres above sea level. The minor streams flow into the South Esk River which rises to the north of the E.L. area then enters and flows eastwards across the northern part of the E.L. area. Leaving the E.L. area the South Esk River flows southwards around the eastern boundary and enters the E.L. area again briefly in the south eastern corner near Mangana.

Targets for gold exploration below the surficial deposits are discussed under the heading "Mineralisation". Locations where gold has been found within the "Mathinna beds" (these rocks were originally sediments but have subsequently been slightly metamorphosed), lie close to a line joining Mathinna, Tower Hill crossroads and Mangana township. This line approximates to the local structural trend apparent on the map for faults and anticlinal structures. However as observed by Finucane in 1935 the anticlines and synclines are intensely sheared along the main portion of the gold bearing belt. Consequently whilst the gold belt generally follows the major axis of folding the quartz veins have wandered away laterally along joints in the rock mass.

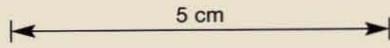
A summary detailing the grades of old mines in the Mathinna and Mangana areas is included as an appendix to this report. It is taken from a University thesis by V. Threader (1967) and is a clear indicator of the wide potential for exploration for gold within these two established goldfields.

The section on "Recommendations" summarises the Consultant Geologist's opinion of the E.L. prospects and comments on the future proposals for mining resulting from consideration of the numerous potential targets for deep exploration of the hard rock in the vicinity of old mine workings.

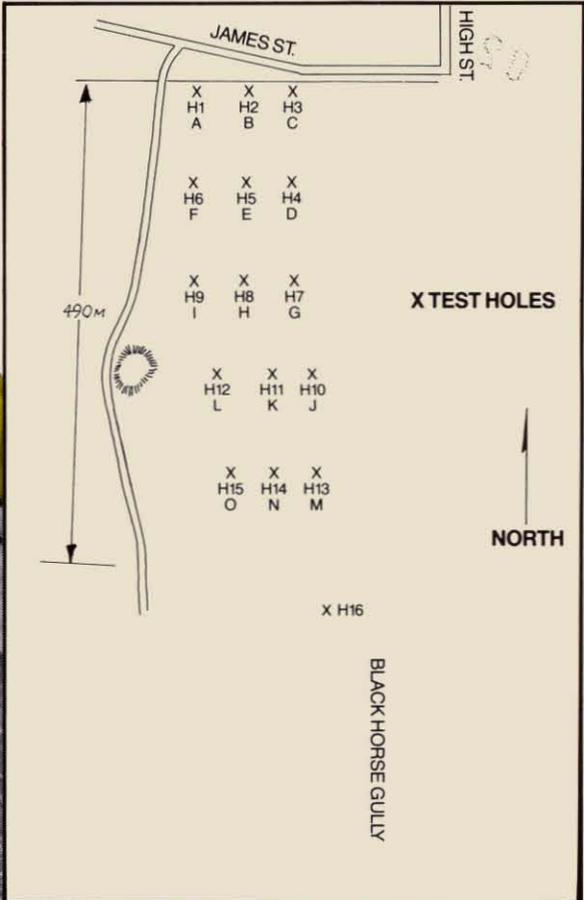
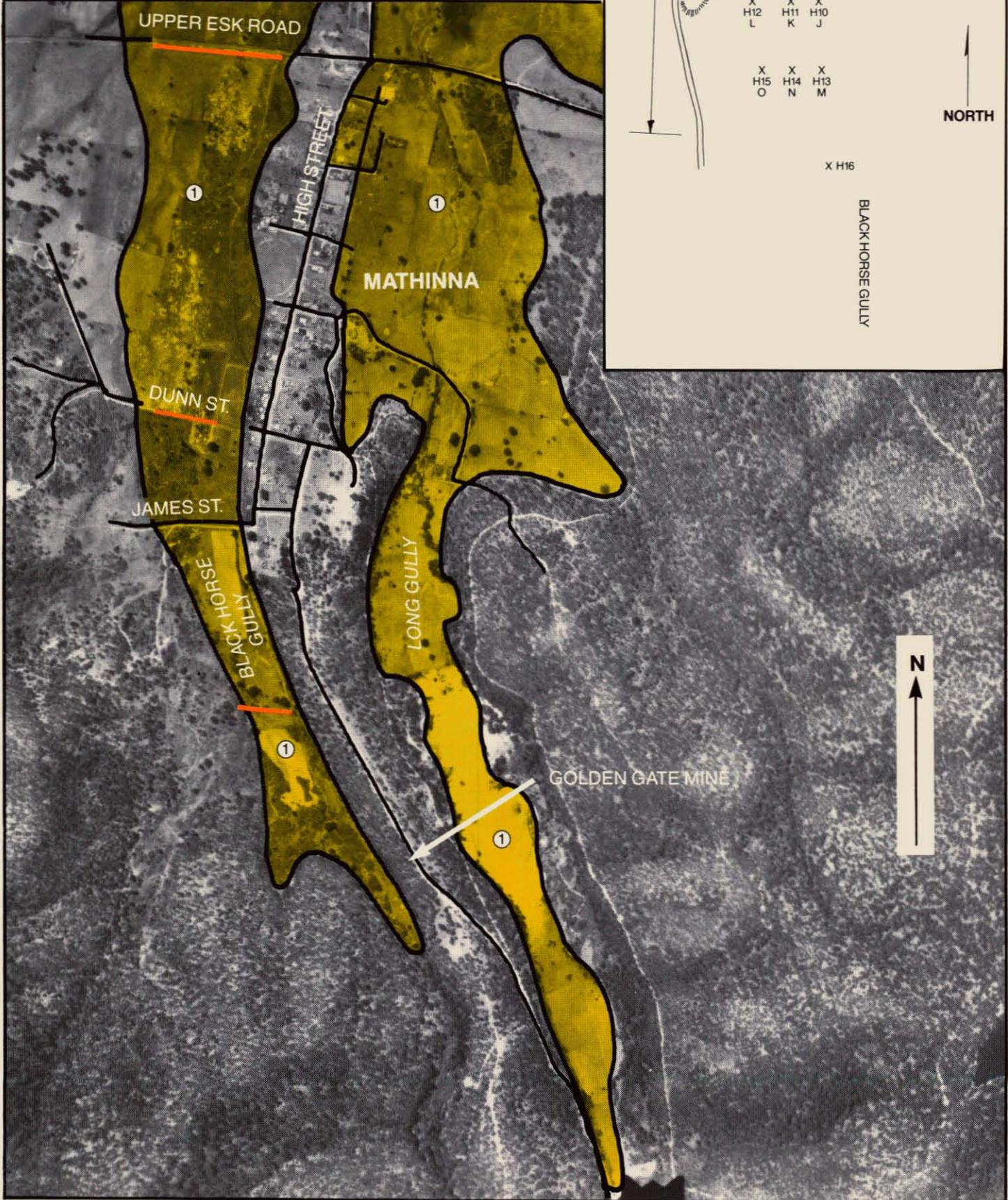
**Figure 4**

**ALLUVIAL PROSPECTS AT MATHINNA**

SCALE:  
1mm = 15metres



- 1 GOLD PROSPECTS
- COSTEANS



## ENGINEERING GEOLOGY SPECIALISTS PTY. LTD. REPORT Cont.

### EXPLORATION PROGRAMME RESULTS

Work carried out by Alex White as reported in the annual report on Exploration Licence area 55/83 concentrated on two areas, namely Black Horse Gully at Mathinna and Majors Gully at Mangana. Both of these gullies are in close proximity to known gold mines. The latter mining ceased in the 1920s.

The data for both these two prospects and also the Lisle Goldfield has been examined and the following summaries set out the conclusions formed by the geologist.

### BLACK HORSE GULLY (MATHINNA)

#### Prospecting Operations

Sixteen holes were sunk to determine the distribution of the gravel in the alluvium and the results are set out in Table I.

Three costeans were dug using an excavator and 382m<sup>3</sup> (500 yd<sup>3</sup>) was taken from each costean and treated as separate bulk samples. The whole sample was processed in the washing plant at Lisle operated by Tasmanian Alluvials. Care was taken to clean out the plant after each test was run. Table II sets out the measurements of the soil profile and the amount of ground tested. The latter represents the width of the alluvial body.

#### Grade of Ore Body

A total of 1147m<sup>3</sup> (1500 yd<sup>3</sup>) was removed from the three costeans from which the recovered gold totalled 254.3 grams indicating 0.22 g/m<sup>3</sup> as the grade of the alluvium.

The annual report states that the grades varied for each costean as follows:

Costean No. 1 (Dunn Street) 0.1841 g/yd<sup>3</sup> = 0.24g/m<sup>3</sup>  
 Costean No. 2 (Upper Esk Rd) 0.1197 g/yd<sup>3</sup> = 0.16g/m<sup>3</sup>  
 Costean No. 3 (750m from Dunn St) 0.2048 g/yd<sup>3</sup> = 0.27 g/m<sup>3</sup>  
 Average = 0.222g/m<sup>3</sup>

The grades are diminishing in the downstream direction

#### Reserves

The average depth of alluvium proved by the data on holes set out in Table I gives an average thickness of gravel of 2.36m. This is in the central part of the area prospected.

An average depth calculated from the three costeans is 1.56m of gravel (sometimes including clay) which was the material treated in the plant to recover gold. The average depth adopted for calculations was the average of the depth obtained from the two series of measurements

$$\text{i.e. } \frac{2.36 + 1.56}{2} = 1.96 \text{ average depth.}$$

## ENGINEERING GEOLOGY SPECIALISTS PTY. LTD. REPORT Cont.

The width of the alluvial body was taken from the costeans (see Table 11) but the Dunn St. measurement was reduced to 178m since the air photo showed some encroachment by houses. Widths taken were –

Upper Esk Road Costean	–	370m
Dunn Street Costean	–	178m
750m from Dunn St. Costean	–	<u>155m</u>
Average		234m

The length of the alluvial body within the area prospected shown on the aerial photograph is 2046m. From the above data allowing for variations in thickness of the wash, existence of old alluvial workings within the alluvial body and also encroachment by Public Reserves the volume of auriferous gravels is estimated at 500,000m<sup>3</sup> – see figure 4.

**TABLE I – DATA FOR INVESTIGATION HOLES IN BLACK HORSE GULLY (see fig. 3)**

Hole No.	Overburden	Gravel*	Sandstone Bedrock	Thickness of Gravel
H 1	0-0.30m	0.30-2.60m	2.60m +	2.3m
H 2	0-0.67m	0.67-2.00m	2.00m +	1.33m
H 3	0-0.67m	0.67-2.00m	2.00m +	1.33m
H 4	0-0.80m	0.80-1.80m	1.80m +	1.00m
H 5	0-0.30m	0.30-3.60m	3.60m +	3.3m (0.30-1.80m clayey gravel)
H 6	0-0.30m	0.30-2.10m	2.10m +	1.80m
H 7	0-0.67m	0.67-2.30m	2.30m +	1.63m
H 8	0-0.30m	0.30-2.10m	2.10m +	1.80m
H 9	0-0.30m	0.30-2.40m	2.40m +	2.10m
H10	0-1.20m	1.20-3.90m	3.90m +	2.70m
H11	0-0.45m	0.45-3.50m	3.50m +	3.05m
H12	0-0.80m	0.80-3.90m	3.90m +	3.10m
H13	0-0.45m	0.45-3.50m	3.50m +	3.05m (0.45-1.65m clay)
H14	nil	0.00-4.70m	4.70m +	4.70m
H15	0-0.30m	0.30-2.10m	2.10m +	1.80m (0.30-2.10m clay)
H16	0-0.30m	0.30-3.00m	3.00m +	2.70m
*Sometimes contains clay pockets as noted				
Averages:	0.49m Overburden	–	2.84m Total depth	2.36m Thickness of gravel

**TABLE II – COSTEAN MEASUREMENTS (see fig. 4 Black Horse Gully Mathinna)**

Number	Overburden Thickness	Location	Total Depth of Costean	Thickness of "wash" gravel	Length
1	0.77m	Dunn St.	2.04m	1.27m	345m
2	1.06m	Upper Esk Rd	2.12m	1.06m	370m
3	0.29m	750m from Dunn St.	2.65m	2.36m	155m
	Av. 0.71m		Av. 2.27m	Av. 1.56m	

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## ENGINEERING GEOLOGY SPECIALISTS PTY. LTD. REPORT Cont.

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### Quantity

The quantity of gold in the proven alluvial body is estimated as follows:-

$$\begin{array}{rcl} \text{Volume} \times \text{Recovered Grade} & = & \text{Yield} \\ 500,000 \times 0.222 & = & 111,000\text{g of gold @ } 31.10\text{g/oz this is} \\ & & \text{equivalent to } \underline{3569\text{ozs}} \end{array}$$

### LISLE GOLDFIELD ALLUVIALS

The location of Mining Lease Application areas within the Lisle Goldfield are shown on figure 6.

Discovered late in 1878 the Lisle Goldfield is reported to have produced 250,000 ozs. of gold.

The geology of the area is shown in figure 7. (Twelvetrees 1909).

### Prospecting Operations

Four MLA areas 66M85, 67M85, 68M/85 and 5/M/81 are marked on figure 6 which have been sampled by test holes or costeans to obtain bulk samples. The latter have been processed in a washing plant to recover any contained gold.

### Grade of Ore Body

Samples from pits submitted for assay on the 7/12/1984 and 12/4/1985 were reported by H.K. Wellington, chief Chemist and Metallurgist of the Mines Department Tasmania as containing  $0.33\text{g/m}^3$  and  $0.27\text{g/m}^3$ .

The prospecting operation by means of costeans indicated a lower grade of actual recovery around  $0.20\text{g/m}^3$ .

### Reserves

The depths of holes and costeans indicated depths of alluvium between 9 and 12 feet. Assuming an average of 2.75m depth (9 feet) and taking the total area underlain by alluvium within the lease application areas as  $927600\text{m}^2$ , the probable reserves are about  $355,000\text{m}^3$  being the alluvium contiguous with and close to these costeans. The balance of approximately  $2,000,000\text{m}^3$  is considered to be possibly auriferous.

### MAJORS GULLY PROSPECT (MANGANA)

#### Prospecting Operations

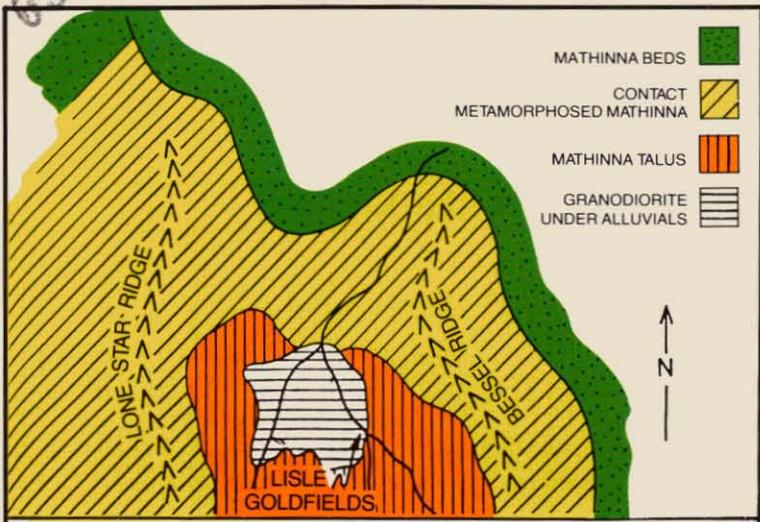
Four Costeans were dug and the "wash" (alluvial ore) was transported directly to the gold recovery plant during 1986-87 by Alex White.

The proved section of Majors Gully measures 2,000m up from the treatment plant to the junction of Maudwit and Golden Gullies. See fig. 5.

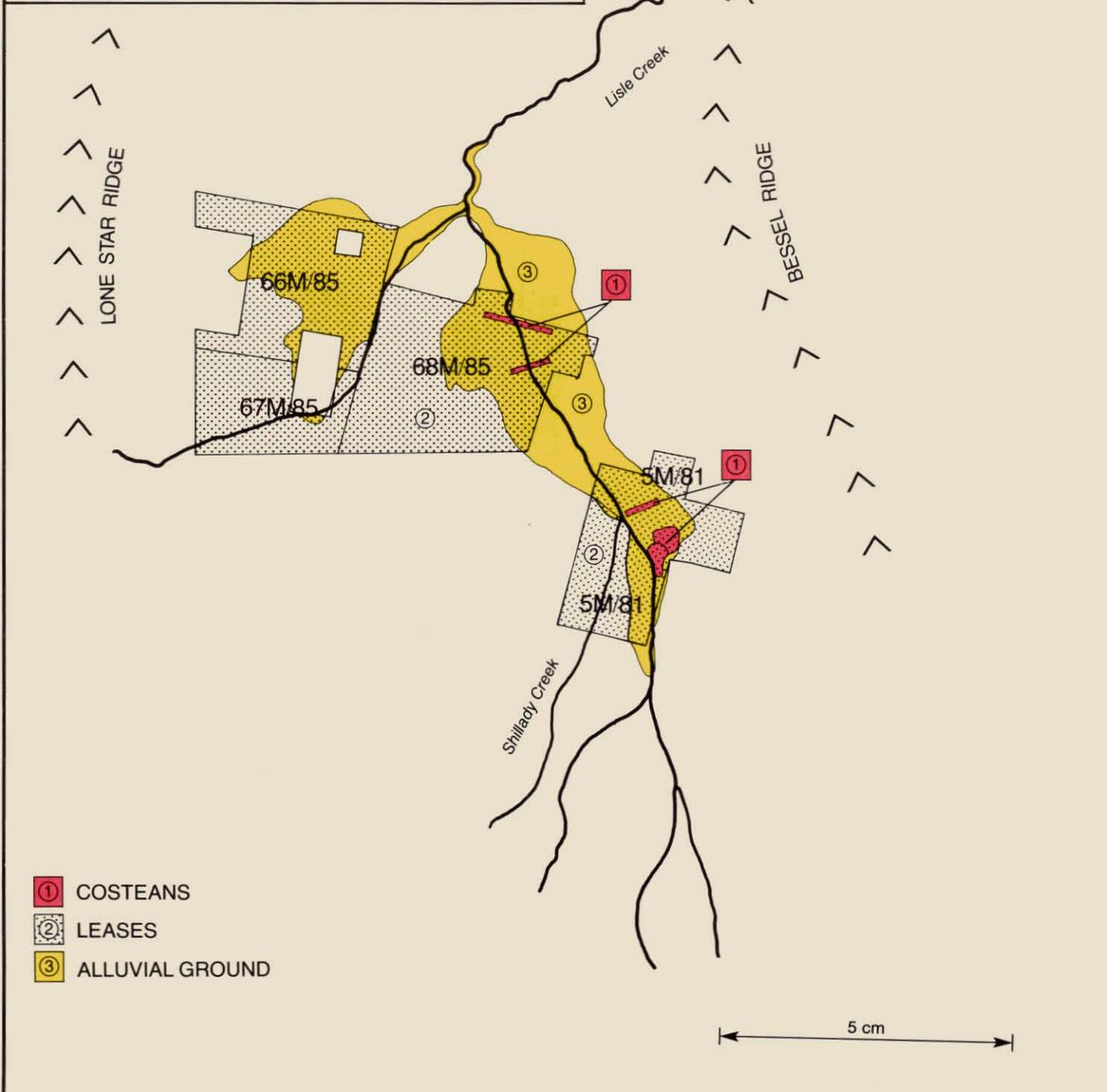
The width was taken at a total of seven places, the average being 54.86m at locations A-G on Fig. 5 diagram.

The volume of alluvial ore is estimated as  $301,000\text{m}^3$  at an average recovered grade of  $0.307\text{g/m}^3$ . See Tables III and IV.

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**Figure 7 Lisle Goldfield** SCALE: 1mm = 92 metres



**Figure 6 Lisle Goldfield Alluvial Leases** SCALE: 1mm = 33.4 metres

## ENGINEERING GEOLOGY SPECIALISTS PTY. LTD. REPORT Cont.

## MAJORS GULLY PROSPECT – Mangana

TABLE III – DATA FROM COSTEANS: Locations are shown on fig. 5

Costean No.	Treated Volume m <sup>3</sup>	Gold grade g/m <sup>3</sup>	Part of profile
1	76	0.073	"Overburden"
1	714	0.305*	Wash
2	84	0.362*	Wash
3	87	0.266*	Wash
Total excluding 1A	885		
Average	295	Average 0.307g/m <sup>3</sup> *	

TABLE IV – ESTIMATION OF DEPTH AND WIDTH OF ALLUVIUM – See fig. 5

Location	Width	Average Depth	Overburden	Wash*
A	59m	5.1m	2.36	2.74
B	68m	3.4m	0.66	2.74
C	30m	3.0m	0.10	2.90
D	54m	3.6m	0.86	2.74
E	41m	4.6m	1.86	2.74
F	59m	3.2m	0.46	2.74
G	54m	6.0m	3.26	2.74
Averages	55m	4.13m	1.38	2.74m

\* Alluvial ore body (Average depth – overburden)

Length of Majors Gully = 2000m

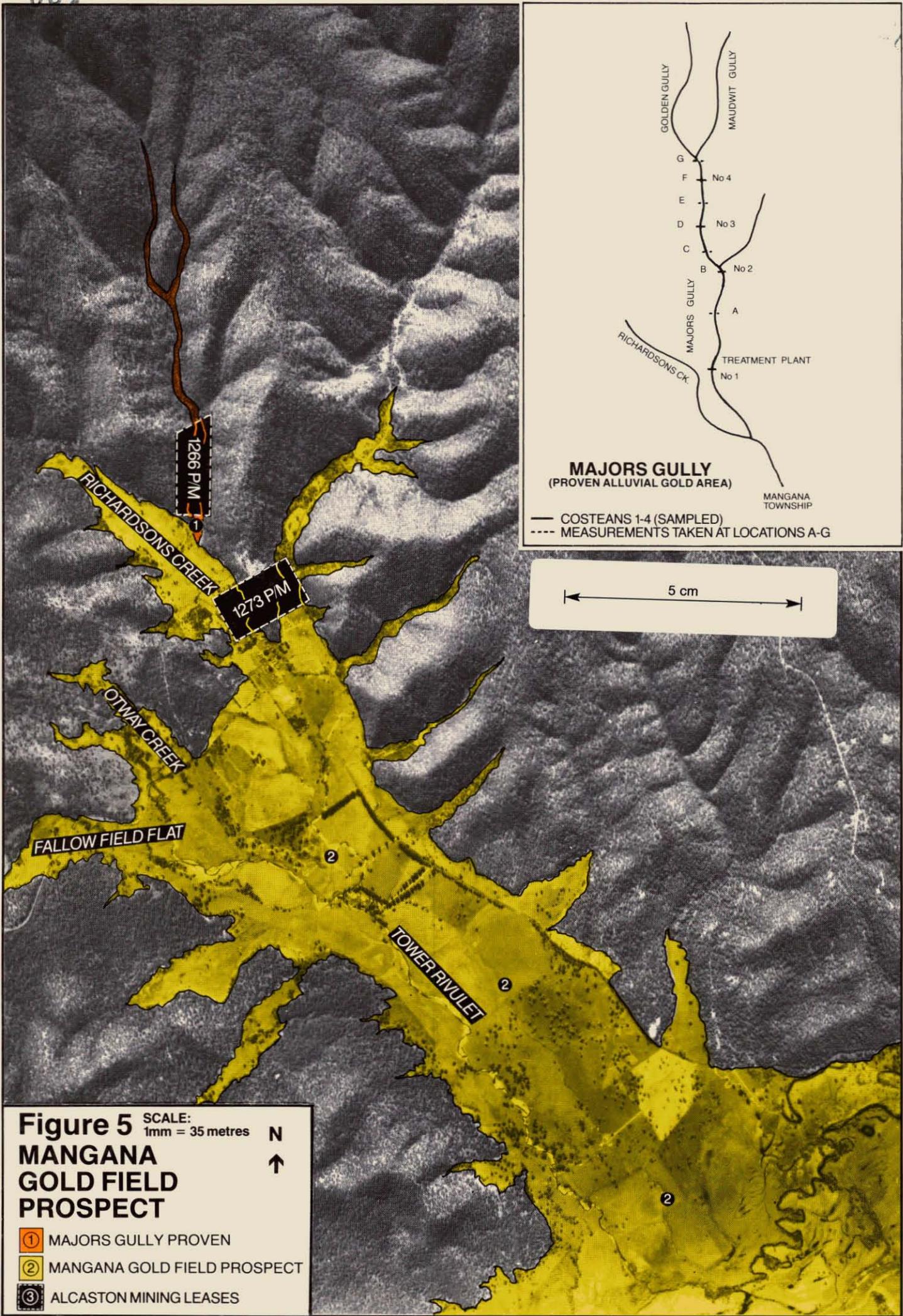
Volume = Length (2000m) x Width (55m) x depth (2.74)

∴ Volume = 301400m<sup>3</sup>

∴ Gold content = Volume x Grade = Yield

301400 x 0.307g = 92.53 Kg

Since 1 Troy oz = 31.1 g, 92.5Kg = 2975 Troy ozs.

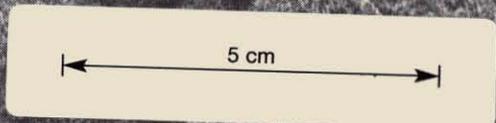


**Figure 5** SCALE: 1mm = 35 metres N ↑  
**MANGANA GOLD FIELD PROSPECT**

- ① MAJORS GULLY PROVEN
- ② MANGANA GOLD FIELD PROSPECT
- ③ ALCASTON MINING LEASES

**MAJORS GULLY**  
 (PROVEN ALLUVIAL GOLD AREA)

— COSTEANS 1-4 (SAMPLED)  
 - - - MEASUREMENTS TAKEN AT LOCATIONS A-G



## ENGINEERING GEOLOGY SPECIALISTS PTY. LTD. REPORT Cont.

### OTHER PROSPECTIVE ALLUVIAL AREAS

#### Mathinna Goldfield

- (a) The most potential remains in the **Long Gully** between Lease 26M/83 and the Upper Esk Road. In this vicinity an area of about 392000m<sup>2</sup> is available which at a probable depth of 2m could yield 784,000m<sup>3</sup> of "wash". This area is fed from ground near the Golden Gate Mine.
- (b) **The Midsons Flat area** is part of an old flood plain and has received alluvium from both Long Gully and the proven ground along Black Horse Gully. Since the South Esk River cut through the gold bearing reefs which trend N.N.E. from the old Golden Gate Mine it is to be expected that the downstream part of the South Esk flood plain would be a worthwhile alluvial gold prospecting area.

The Australian Anglo American Searches Pty. Ltd. company made a report on E.L. 22/80 for work done up to 28/2/82. Part of this was on the McDonalds Flat area of the South Esk River further downstream and therefore less likely to be mineralised than the area now proposed. The depths of alluvium are from 6 to 14 metres of which the top two are generally less significant. Assuming an average depth of 4m of possibly mineralised ground the amount of alluvium of interest near Mathinna covers 640000m<sup>2</sup> and has a volume of 2.6 million m<sup>3</sup>. It lies north of the Upper Esk Road and south of South Esk River.

- (c) **Delvin Flat** on Dan's Rivulet lies along or close to the predicted line of lode of the old gold mines of the Mathinna Goldfield. Consequently 240000m<sup>2</sup> of ground is worth prospecting in that area. Assuming a depth of 2m this adds 480000m<sup>3</sup>.
- (d) The total volume of alluvium in this area considered to be most worthwhile prospecting is estimated as 3,864,000m<sup>3</sup>.
- (e) The latter estimate does not include 16,662,000m<sup>2</sup> (66 million m<sup>3</sup>) of the South Esk between Mathinna and the McDonalds Flat area, and coloured blue on Figure 1.

#### Mangana Goldfield Alluvials (See fig. 5)

In the vicinity of the Majors Gully ground proven by Tasmanian Alluvials prospecting, there is **Otway Creek, Fallowfield Flat and Richardsons Creek** which all flow into the **Tower Rivulet**. The future areas for prospecting along the creeks and rivulet are estimated to cover about 2.7 million m<sup>2</sup>. Assuming a depth similar to that in Majors Gully the probable volume of mineralised alluvium in the streams named is about 7.4 million m<sup>3</sup>. Of this quantity 1,000,000 m<sup>3</sup> is deemed more prospective, the balance (6.4 million m<sup>3</sup>) is in the possible category.

Once again the predicted line of lode of the old gold mines is considered to intersect the Tower Rivulet. Consequently it is a worthwhile target for exploration.

#### SUMMARY - ALLUVIAL

Three alluvial goldfields are included in this Prospectus, Mathinna, Mangana and Lisle. Reserves are calculated at .8 million m<sup>3</sup> of auriferous alluvium. In addition some 77 million metres<sup>3</sup> of alluvium exists at Mathinna (69,864,000 metres<sup>3</sup>) and Mangana (7,400,000 metres<sup>3</sup>).

Although these latter prospects are categorised as "possible", the potential at both goldfields provide attractive targets for dredging.

### MINERALISATION

The geological map (after Threader 1967) included in this report as figure 2 shows the faults and folds which are considered to be a controlling feature in the gold mineralisation of the area. The appendix to V. Threader's Thesis (1967) includes a summary of the gold output and reef characteristics. The sections dealing with the Mangana and Mathinna Goldfields have been reproduced as an appendix to this report.

The modes of occurrence of gold mineralisation in the Mathinna and Mangana Goldfields include both **quartz veins** bearing gold associated with slate and quartzite and a **disseminated** mode in the Mathinna Beds (country rock). In the latter mode, slate was the host in the Mangana Gold Reefs and Golden Entrance Mines whilst quartzite was the host in the Pincher Mine.

The **Mangana Gold Reef Mine** (fig. 8, inset in fig. 1) has clearly not been worked out and is an excellent exploration target as stoping does not appear to extend to the No. 3 adit level whilst mineralisation probably does extend below the No. 4 adit level, as illustrated.

The **Tower Hill deposit** consists of numerous short and narrow quartz veins (2mm to 30 cm wide) contained in a band of quartzites 30m wide with a minimum strike extent of 250m (T.G. Summons 1984). The grade of this deposit has not been thoroughly tested but of 63 samples taken during 1929-30, 54 yielded traces of gold and the remainder yielded 1.5 to 15 g/t of gold (Finucane 1935).

In the Tower Hill deposit an in situ tonnage estimated by Summons (1984) as possibly 500,000 tonnes with some of the quartz stringers ranging up to 15 g/t appears an attractive exploration target assuming an average grade of 2 g/t is achieved. A plan of Tower Hill Mine is included as fig. 9, inset in fig 1.

The **Buckland-Alpine** mines have not been worked out. On the longitudinal section of the Buckland Mine at Mangana the Alpine mine boundary is shown and "good stone" is noted rising and going down from just above an inclined "rise". Also the note "new make of stone" is written below the intersection of the lowest drive with a winze near the Alpine boundary. It is considered that "good stone" and "new make of stone" meant mineralisation and that diamond core drilling to about 65m depth could prove the viability of extending mining operations in the Buckland-Alpine mine areas. This is clearly an excellent prospecting target as the grades in the Buckland Mine are recorded as 18 dwt per ton and about 500 oz. of gold was won from the Alpine mine (V. Threader 1967). Reef widths varied from 1 to 6 feet.

### Recommendations

#### Alluvium

1. Because of the low evaporation rate in this area during the cooler months which makes excavation difficult it is recommended that consideration be given to the use of a small dredge when mining operations commence. The use of dredging is also indicated as worthy of consideration by the relatively large areas of alluvial ground available to the company.
2. In order to obtain a proper profile of the alluvium it is recommended that a series of seismic lines be run across the prospect. This will facilitate choosing the best locations for future prospecting of the alluvial areas.
3. Testing of alluvium at Mathinna, Mangana and Lisle is estimated to cost a total of \$125,000 in the year to 30 June 1988 and to cost a further \$275,000 in the following year as set out in the Table of Proposed Exploration Expenditure on Page 9 hereof.

## ENGINEERING GEOLOGY SPECIALISTS PTY. LTD. REPORT Cont.

### Reef Prospects

4. Costeaming of the **Tower Hill Prospect** is recommended as a possible open cut operation. It will be necessary to take large samples and arrange for crushing in order to obtain a proper assessment by facilitating the taking of sub-samples for assay purposes.

In year ended 30th June 1988 exploration, sampling, crushing and assaying will probably cost about \$25,000. In year ended 30th June 1989 diamond drilling to explore for reef repetitions below existing workings and the preparation of a comprehensive feasibility study on the viability of a mining operation will cost about \$75,000.

5. Dewatering of old workings and rehabilitation of shafts at **Buckland-Alpine** will enable access to these workings. Diamond core drilling of this Prospect will be needed to determine its viability. Initially \$26,000 should be allowed for drilling and \$4,000 for geological supervision and assaying. A further \$20,000 may be required for dewatering and rehabilitation in the year to 30th June 1988. In the following year diamond drilling of this extensive prospect and the preparation of a feasibility study is estimated to cost \$75,000.
6. **Geochemical and geophysical prospecting is recommended across the axis of folding and faulting** as a logical approach to locating any extensions of the **Golden Gate Mine** missed last century or left unmined to the present. The initial exploration would cost in the vicinity of \$25,000 for geophysics and geochemistry on the hard rock area between The Golden Gate and the Golden Entrance Mine near Mangana. The detailed mapping provided by V. Threder 1967 provides a sound basis for planning further exploration.
7. Survey, geologically map and sample old workings (excluding those dealt with specifically in this section) to outline and determine grade of remaining mineralised quartz reef – initial expenditure \$25,000.
8. Dewatering of Mangana Gold Reef Mine and diamond drilling to determine its viability for an open cut operation. Initial costs are allowable at \$30,000

### QUALIFICATIONS AND EXPERIENCE OF REPORTING GEOLOGIST

This geological report on Alcaston Mining N.L.'s proven alluvial areas, future alluvial prospects and hard rock prospects was prepared by the undersigned, E.J. (Tim) Minty, B.Sc., Dip. Ed., M.Sc., F.I.Q., F.I.G., M.G.S.A., A.M. Aust. I.M.M. The writer has been a professional geologist for 35 years, five of which were spent as company geologist for Blue Metal Industries Limited, nine years as a senior consultant and 21 years as a government geologist, three as a senior geologist and seven at Principal Geologist Level. His exploration experience extends across Australia into every state having had management responsibility for mineral exploration over 1900 square miles in New South Wales and 3500 square miles in north Queensland.

### ENGINEERING GEOLOGY SPECIALISTS PTY. LTD.



E.L. Minty  
DIRECTOR

**ENGINEERING GEOLOGY SPECIALISTS PTY. LTD. REPORT Cont.****REFERENCES & BIBLIOGRAPHY**

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**APPENDIX**  
(A Summary of Mine Workings)

V. THREADER 1967

Goldfield	Reef	Summary of Mine Workings	Strike	Dip	Reef Details		Grade Oz. Dwt/ Ton	Remarks
	Name				Width Ft. In.	Length Ft.		
Mangana	Tower Hill Freehold	3 adits	NW	80SW	1 to 5ft	1060	up to 2 oz/ton	
	Golden Gully	54ft. vertical shaft and 247 ft. adit and surface stope	138	40 to 70E	1 to 6ft 10'6"	430	1	
	Alpine		NW	60W	1 to 2ft	630		Valued at £2378 which represents about 500 oz
	Richardson's Creek	No information available other than position of reef						
	Buckland	25ft. adit with drive and winze with 2 levels also surface		NW	65SW	1'6"		18
	Cardinal	270ft. line of shafts and trenches	154	73SW	1'0"	270	13	117/output
	Fingal	Shallow inclined shafts on reef	175 158	40E 48E	2'6" 1'3"			317 oz output
	Union Jack	Adit, tunnel and shallow shafts					10	10 oz output
	Pincher Reef	85ft. adit and surface workings	133	80E	2'0" to 12'0"	470	1	10 oz output
	Specimen Hill	Position only						
	Otways Creek	150ft. adit and 2 reef drives	294	63SW	av. 1'0" and 22'0"	300	2ozs 1ozs	11.1
	Underlay	3 shallow inclined shafts on reef, an adit and several trenches	350	35E				6
	Golden Entrance	3 adits on reef, a tunnel and 4 shafts	321	80E	3" to 7'0"	1100	2	2392 oz output
Mangana Gold Reefs	4 adits at 100ft. intervals and a main shaft and stopes at 5 levels. Total depth 1600ft.	315	68SE	var. up to 20ft.	1150	6	791 oz output	

Goldfield	Reef	Summary of Mine Workings	Strike	Dip	Reef Details		Grade		Remarks
	Name				Width Ft. In.	Length Ft.	Oz.	Dwt/ Ton	
	Argyle	3 adits and several trenches and surface stopes	310	50W 60NE	2 to 5ft		15		These reefs are continuations of Nos. 13 & 14
	Abbotsford	195ft. and 435ft. adits 700ft. tunnel and some reef development and stoping	020	Vert.	2'0"				5 dwt/ton at outcrop but only 1 dwt/ton av.
	Hit or Miss	400ft. shaft	NW 210	Vert. 80N					Payable down to 200ft.
	West Miami	165ft. shaft and 2 adits with some reef development	NW	Vert.			7		7.3 oz in 1941 output
	Miami (Salmon Syndicate)	400ft. shaft and 2 adits	278	75S	2ft				
	Daylight	60ft. shaft and connecting adit.	NE	80SW	9"	-			
	Great Fingal	2 x 30ft. shafts and a 90ft. surface stope to 23 ft.				90			
Mathinna	Welcome Stranger	40ft. and 20ft. shafts. No information other than position of lodes.							
	Golden Stairs	53ft., 30ft and 48ft. shafts and a main shaft app. 250ft. with 2 levels.	350	70W	7'0"				
	Volunteer	4 shallow shafts, main shaft 418ft. small adit and several surface stopes.	045	70W	3'0"		7		2550 oz output
	Enterprise (Hen and chickens) (Gold Estates) (Golden Spur)	76ft. inclined shaft with reef development and 50ft. shaft with 2 levels.	NE 325	68NW 80W	8"		2	6	
	Yellow Boys	115ft. shaft and numerous surface workings	065	80S	2'6"	400	7		60oz (1904) output
	Volunteer Consols	90ft. shaft and 450ft. shaft with 4 levels.	045	87NW	7"	58	15		1185oz output

Goldfield	Reef	Summary of Mine Workings	Strike	Dip	Reef Details		Grade Oz. Dwt/ Ton	Remarks
	Name				Width Ft. In.	Length Ft.		
	El Dorado New	171ft. shaft with reef development and adits, trenches and 150ft. surface stopes	295	65S	6 in. to	2 ft.	1 2	10 from 535 ton 1886-1892 5 from 61 tons in 1906
	Miners Dream	150ft. inclined shaft with reef drive and stopes	202 350	35E 65S			2	433 oz output
	Miners Dream (South)	403ft. adit	(Several small low grade reefs recorded.)					
	Section 359G	Adit with some development but no stoping	140		3"			
	Gladstone	40ft. shaft and surface workings.	290	S	2"		10	30 oz output
	Pride of The Hills	70ft. shaft and surface workings	342		6 in. to 3 ft.	1100		
	Horseshoe	Shallow workings and adit with stopes saddle reef					13	42 oz output overall average only 4 dwt/ton
	Telegraph	161ft. adit, shaft and trenches	NW		1'0"			
	City P.A.	4 adits	355	85E				
	Jubilee	272ft. shaft with 2 levels	Derby reef 300 Flat reef 328	65SW 20SE		700		Variable values with rich patches near faults
	Mountaineer	2 adits	128	V				
	Commercial	Shallow shaft	28	80N	3 in. to 3 ft.	10	1 to 6	dwt
	Scott and Pickett	Main shaft, 2 adits and surface workings	027	80NW	10 in. to to 3ft. followed for 112ft. on dip	30		8(1907)38 oz output 3(1908)9 oz output

Goldfield	Reef	Summary of Mine Workings	Strike	Dip	Reef Details		Grade		Remarks
	Name				Width Ft. In.	Length Ft.	Oz.	Dwt/ Ton	
	Old Boys (Brock Bros)	375ft. main shaft with 3 levels	NE	(several small lodes worked)				7	
	Caledonian (Gate extended) (Golden Ladder) (Star of Mathinna) (Reece and Lawson)	317ft. stoped in part, numerous surface workings adjoins the Caledonian 157 shaft	093 020 136 126 130 078	80N 80E 65W 70E 45E 60E					Several lodes worked over distances up to 200 ft. All values were low.
	Chester and Murray (Hatherton)	350ft. shaft with 3 levels and surface stopes	128 340	72S W		150 9" 100		12 7	30 oz output
	City of Hobart	2 shafts 100ft. and 660ft. and an adit	015 NW	W	3'0" 3"	500		1 13	16,000 oz output
	Golden Hinges	274ft. adit - Irregular masses of barren vein quartz in sheared and contorted slate.							
	New Golden Gate	Main working consisted of a main shaft to 1963ft. with levels at 100ft. intervals		Most important reefs were Loans, Main, Lower West and East, striking N-S with dips from 65E to vertical, width up to 20ft. and strike length over 1000 ft. Each of these reefs persisted for approx. 800ft. down dip.				16	253,865 oz output
	Tas. Consols	1600ft. main shaft with 11 levels - the mine worked the northerly extension of the Golden Gate reefs.						9	10,115 oz output
	South Golden Gate	Prospect shaft to 400ft. with 2 levels but no lodes							
	El Dorado North	20ft, 110ft. and 121ft. shafts and surface workings.	280	80S					
	Victorian Golden Gate	241 adit and one other adit with stopes and surface workings	114	63SW	4'0"				

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10-24-10

Goldfield	Reef	Summary of Mine Workings	Strike	Dip	Reef Details		Grade Oz. Dwt/ Ton	Remarks
	Name				Width Ft. In.	Length Ft.		
	Twilight	200ft. shaft, 3 shallow shafts and surface stopes.	025	80W	1 in. to 2 ft.	590		
	Tower Hill	3 shafts - the mineralised ground consisted of a group of low grade quartz veins in a massive barren quartzite bed 60ft. to 100ft. wide and shown on Finucane's map as 40 yds long on strike.						
	Sunbeam	2 shafts	290	70W	4'0"	220		

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## GLOSSARY OF TECHNICAL TERMS

**ADIT:** A nearly horizontal passage from the surface by which a mine is entered and dewatered, sometimes called a tunnel.

**ALLUVIAL:** Referring to unconsolidated or moderately consolidated sediments of relatively young geological age.

**ANTICLINAL AXIS:** The line that joins points of maximum curvature of an anticline.

**ANTICLINE:** A fold in layered rocks that is convex upwards.

**ARENITE:** Consolidated rock of sandy composition.

**AURIFEROUS:** Containing gold.

**AXIS:** In relation to folded strata; a line where the folded bed shows the maximum curvature.

**BASALT:** A fine grained basic volcanic rock.

**BED:** A homogeneous layer of stratified rock.

**BEDROCK:** The solid rock underlying soil and alluvium etc.

**CHANNEL:** The deeper portions of a stream bed which may become filled with sediments.

**COSTEAN:** A channel cut in the surface of the ground to determine the nature of the underlying material.

**COUNTRY ROCK:** The rock formation containing or surrounding a mineral deposit or mineralized formation.

**CROSSCUT:** An underground passage that occurs across the trend of nearby reefs and veins.

**CUT-OFF:** The lowest grade of mineralized material that qualifies as ore in a given deposit.

**DEFORMATION:** Any change in the original form or volume of rock masses produced by large scale earth movements such as folding and faulting.

**DEVONIAN:** A geological period from 405 to 345 million years ago.

**DIAMOND DRILLING:** A method of drilling rock using a diamond tipped cylinder to recover core specimen of rock.

**DIP:** The angle at which a stratum or any planar feature is inclined from the horizontal.

**DRIVE:** An underground passage that follows or is parallel to a vein.

**ELUVIAL:** Weathered rock which has not been moved significantly from the site of the original host rock.

**EXPLORATION LICENCE - TASMANIA:** A mining tenement which allows exploration for minerals but restricts mining. The area and term are determined by the Minister.

**FAULT:** A fracture in rocks along which rocks on one side have moved relative to rocks on the other side.

**FOLD:** A bend in layered rocks or any planar surface.

**FOLD AXIS:** The line that joins points of maximum curvature of a fold.

**FORMATION:** A distinctive group of rock strata.

**GRADE:** A term used to describe the quality of ore.

**GRANODIORITE:** An igneous rock similar to granite.

**GREYWACKE:** A type of sandstone rock containing a high proportion of clay in the matrix.

**HINGE:** The line of maximum curvature of a synclinal or anticlinal fold.

**HOST ROCK:** The rock containing mineralization.

**INTERSECTION:** A zone of mineralization in a drill hole.

**INTRUSIVE:** A body of rock that has penetrated into or between other rocks.

**JURASSIC:** The geological period following the Triassic.

**LEAD:** A body of potentially auriferous sediment filling a stream channel.

**LEVEL:** A horizon at which an ore body is opened up and from which mining proceeds. It covers all horizontal working on that horizon i.e. No.1 level, No.2 level and so on.

**LIMB:** One of the sides of an anticline or syncline on either side of the axis.

**LODE:** A mineral deposit consisting of a vein or zone of veins in consolidated rocks.

**LUTITE:** Sedimentary rock consisting principally of clay sized particles.

**METAMORPHISM:** The process by which rocks are altered in composition, texture or internal structure by pressure, heat and or the introduction of new chemical substances.

**METASEDIMENTS:** Partly metamorphosed sediments.

**MINERALIZED:** Containing a concentration of minerals which may be of economic interest.

**MINING LEASE - TASMANIA:** A mining tenement allowing mining over areas of 80 acres with the consent of the Governor. Renewable.

**NOSE:** A term used to describe the point of maximum curvature of a fold.

**ORE:** A naturally occurring aggregate of minerals from which one or more valuable constituents may be recovered and which is of sufficient economic interest to warrant estimate of tonnage and grade.

**ORE RESERVES:** Means proven ore reserves, or probable ore reserves whether recoverable reserves or in situ reserves.

**PERMIAN:** The period of geological time following the Devonian and Carboniferous.

**POSSIBLE ORE (not reserves):** That category for which quantitative estimates are based largely on broad geologic characteristics of the deposit and for which there are few samples or measurements.

**PHOTOGEOLOGICAL INTERPRETATION:** The geological interpretation of aerial photographs.

**PLUNGE:** The amount and direction of slope of a fold axis, or other linear feature, measured from the horizontal.

**PROBABLE ORE RESERVES:** Cover extensions near at hand to proved ore where the conditions are such that ore will probably be found but where the extent and limiting conditions cannot be as precisely defined as for proven ore.

**PROSPECT:** An area of geological or mining interest that has not yet been fully evaluated.

**PYRITE:** A mineral composed of iron and sulphur.

**PYRITIC:** Containing Pyrite.

**QUATERNARY:** The period from the end of the Tertiary until and including the present.

**QUARTZ:** The commonest of rock forming mineral containing silicon and oxygen.

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## GLOSSARY OF TECHNICAL TERMS

**QUARTZITE:** A granulose metamorphic rock consisting essentially of quartz.

**REEF:** A vein of quartz and other minerals which may be auriferous.

**SCHIST:** A medium or coarse-grained metamorphic rock with subparallel orientation of the micaceous minerals which dominate its composition.

**SEDIMENTS:** Rocks formed by the settling of solid material from suspension in air, water or ice.

**SEQUENCE:** A term used to describe a series of adjacent rocks.

**SHAFT:** An excavation of limited area compared with its depth, made for finding or mining ore or coal, raising water, ore, rock, or coal, hoisting and lowering men and lowering men and material, or ventilating underground workings.

**SHEAR:** A fracture in rock similar to a fault.

**SILICEOUS:** Containing silica.

**SILURIAN:** A geological period from 425 to 405 million years ago.

**SILT:** Sediment particles which are between 1/16 and 1/256 mm in diameter.

**SILTSTONE:** A very fine-grained consolidated clastic rock composed predominantly of particles of silt grade.

**SLATE:** A fine grained metamorphic rock possessing a degree of fissility. A shale which has been slightly metamorphosed.

**SPUR:** A type of quartz vein which has a wedge shape. May be auriferous.

**STOPE:** An excavation from which ore has been extracted either above or below a level, in a series of steps.

**STRIKE:** The course of bearing of a bed or layer of rock measured in the horizontal plane.

**STRUCTURE:** The sum total of structural features of an area.

**SULPHIDES:** Minerals consisting of a chemical combination of sulphur with metal.

**SYNCLINE:** A fold in layered rocks that is concave upwards.

**SYNCLINAL AXIS:** The line that joins points of maximum curvature of a syncline.

**TALUS:** A sloping mass of fragments.

**TRIASSIC:** The early part of the Mesozoic era.

**TERTIARY:** A geological period from 65 to 1.8 million years ago.

**WASH:** Alluvial gravel which may be auriferous and commonly occurs as the bottom or lower layer of stream sediments, lying immediately above bedrock.

**WINZE:** A vertical or steeply sloping shaft sunk down from the floor of a drive or a crosscut.

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Peat, Marwick, Mitchell & Co.  
Chartered Accountants  
500 Bourke Street  
Melbourne, Victoria 3000  
Telephone: (03) 609 7711  
Telex: AA32168 PEATMEL  
Fax (03) 602 2775

The Directors,  
Alcaston Mining NL,  
Suite 3, 6th Floor,  
Alcaston House,  
2 Collins Street,  
MELBOURNE. VIC. 3000

20th June, 1987.

Gentlemen,

1. This report has been prepared for the inclusion in a prospectus to be dated 6th July, 1987 relating to the issue by Alcaston Mining NL of 8,000,000 ordinary shares of 25 cents to be issued at par and payable in full on application and 8,000,000 options at an issue price of one cent each, exercisable at 25 cents each at any time on or before 1st July, 1990.

**Background**

2. The company was incorporated on 24th February, 1987 as Alcaston Mining NL with an authorised capital of \$40,000,000 made up of 160,000,000 ordinary shares of 25 cents each and an issued capital of five ordinary shares of 25 cents each fully paid.
3. On 1st April, 1987 3,999,995 ordinary shares of 25 cents each, fully paid, and 4,000,000 options at 1 cent per option were issued to the vendors of Exploration Licence 55/83 and the Mining Leases at Lisle details of which are more fully set out on page 11 of the prospectus.
4. Peat Marwick Mitchell & Co., were appointed as auditors of the company on 2nd March, 1987.
5. The first financial period of the company will be for the period from the date of incorporation to 30th June, 1987. No financial statements have been made up in respect of the company since the date of its incorporation.
6. No dividend has been paid or declared since incorporation.

**Statement of Assets and Liabilities**

7. The pro forma statement of assets and liabilities set out below prepared to show the financial position of the company as at 24th February, 1987 had the following events occurred as at that date.
  - (i) the issue and allotment of five ordinary shares of 25 cents each, fully paid, to the subscribers.
  - (ii) the issue and allotment of 3,999,995 ordinary shares of 25 cents each, fully paid, and 4,000,000 options at one cent per option to the vendors of Exploration Licence 55/83 and the Mining Leases of Lisle.
  - (iii) the issue and allotment of 8,000,000 ordinary shares of 25 cents, fully paid, and 8,000,000 options at an issue price of one cent each.
  - (iv) the payment of the costs of the issue of \$180,000 inclusive of the issue of 200,000 options at one cent per option to the underwriters.



## Pro forma Statement of Assets and Liabilities

### Authorised Capital

160,000,000 ordinary shares of 25 cents each \$ 40,000,000

### Share Capital and Reserves

Issued Capital 12,000,000 ordinary shares  
of 25 cents each fully paid \$3,000,000  
Share Option Reserve (12,200,000 options of one cent each) 122,000

Total Share Capital and Reserves \$3,122,000

### Current Assets

Cash \$1,902,001

Exploration Expenditure and Mining Tenements 1,039,999

### Intangible Assets

Formation and share issue costs 180,000

\$3,122,000

## Significant Accounting Policies

### 8. Basis of Preparation of the Statement of Assets and Liabilities

The above pro forma statement of assets and liabilities has been prepared on an historical cost basis. Under this basis, the amounts shown for assets do not purport to be the amounts that would have been realised had the assets been sold at the date of the accounts or at the date of this report. Rather, the amounts shown are expected to be recouped through use or sale of the assets in the normal course of business.

### 9. Support of Another Corporation.

Support of another corporation or an unrelated entity has not been assumed.

### 10. Exploration Expenditure and Mining Tenements

Acquisition and exploration expenditure of mining tenements have been recorded at cost and carried forward for each area of interest where tenure of the area of interest is current and where:

- (i) such amounts are expected to be recouped through successful development and exploitation of the relevant area of interest, or alternatively by its sale; or

- (ii) exploration and/or evaluation activities in the area have not yet reached a state which permits a reasonable assessment of the existence or otherwise of economically recoverable reserves, and active and significant operations in, or in relation to, the area are continuing.

#### 11. Formation and Share Issue Costs

Formation and share issue costs have been carried forward in the balance sheet as an intangible asset and will be amortised over future periods in which future revenues are expected to be derived by the company.

#### Options

12. The 8,000,000 options to acquire ordinary shares are exercisable at 25 cents each at any time on or before 1st July, 1990 whilst the 4,200,000 Vendor options are exercisable on or before 1st May, 1990. In addition to the options referred to in paragraph 7 above the directors have been authorised to reserve an additional 3,000,000 options which may be granted at their discretion no later than 1st July, 1988, upon the payment of one cent per option, to existing Directors (a total of 1.2 million options) and to other Directors, Consultants (being Geologists and Mining Engineers) and full-time employees of the Company (a total of 1.8 million options), ("Employee Options"). These Employee Options to subscribe for shares in the Company at 25 cents per share will be exercisable between 1st July, 1988 and 1st May, 1990.

#### Net Tangible Asset Backing

13. The net tangible asset backing per share (including the amount shown for exploration expenditure and mining tenements) based on the pro forma statement of assets and liabilities set out in paragraph 7 is 24.5 cents per share.

#### Events Subsequent to Incorporation

14. To the best of my knowledge and belief, other than the matters already included in my report, there have been no material items, transactions or events subsequent to the incorporation of the company which would cause reliance on the figures shown in this report to be misleading.

Yours faithfully,

Nicholas S. Barnett,  
Registered Company Auditor,  
Partner,  
Peat Marwick Mitchell & Co.

# ZEEMAN KABLE & PAGE

BARRISTERS & SOLICITORS

68 PATERSON STREET,  
LAUNCESTON  
TASMANIA

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WILLIAM PETER ZEEMAN, LL.B.  
HERBERT JOHN KABLE, LL.B.  
PHILIP RAYMOND PAGE, LL.B.  
KIM BRUCE PATERSON, LL.B.  
CHRISTOPHER NOEL DOCKRAY, LL.B.  
IAN NORMAN ELLIOTT, LL.B.

#### Associates

ROY WALDON, LL.B.  
DARRELL GEORGE GREY, LL.B.  
ANDREA TREZISE, LL.B.

Our Ref:

Your Ref:

The Directors,  
Alcaston Mining NL,  
Suite 3, 6th Floor,  
Alcaston House,  
2 Collins Street,  
MELBOURNE. VIC. 3000

20th June, 1987.

Dear Sirs,

This report has been prepared for inclusion in the prospectus to be dated the 6th day of July 1987 for the issue by the company of 12 million shares of 25¢ (twenty five cents) each at par, and 12 million attaching negotiable options at 1¢ (one cent) each.

We confirm that we are the solicitors to the company in Tasmania.

We report as follows:

- (a) We have caused searches to be conducted at the Department of Mines in Tasmania of the mining tenements listed in the Schedule 1 hereto, which searches disclose the information set forth in that Schedule.
- (b) We have inspected the documents referred to in Schedule 2 and Schedule 3 which relate to the tenements listed in Schedule 1.
- (c) The agreement referred to in Schedule 2 hereto is of no effect insofar as it affects an exploration licence until it obtains the approval in writing of the Minister under Section 15J of the Mining Act 1929 that consent was given on 3rd April, 1987.
- (d) The transfer of an exploration licence is subject to Ministerial consent in writing under Section 15H of the Mining Act 1929 that consent will not be sought until the transfer is effected pursuant to the agreement referred to in Schedule 2 (c) hereof.
- (e) The transfer of a sub-lease is subject to the consent of the Minister under Section 49 of the Mining Act 1929 and the Head Lessor. Those consents will not be sought until the transfer is effected pursuant to the agreement referred to in Schedule 2 hereof.
- (f) An applicant may transfer a mining lease application but the ultimate grant of the lease is in the discretion of the Minister.
- (g) We confirm your instructions to proceed to have the agreement referred to in Schedule 2 hereto lodged with the Director of Mines for Ministerial approval and to have the mining tenements transferred into the company's name. The required transfers will be lodged at the Mines Department upon execution thereof. The agreement referred to in Schedule 2 hereto has been lodged with the Director of Mines and we have been informed by the Acting Registrar of Mines that it was forwarded to the Minister for approval on 30th March, 1987.

- (h) None of the tenements are on private land requiring the consent of the owner or the occupier, except for the tenements specified in Schedule 4. Compensation is payable to the private land owners pursuant to Section 73 of the Mining Act 1929. In the event that compensation under Section 73 of the Mining Act 1929 is not finally agreed, a Warden or Warden's court may determine the amount thereof under Section 74 of the said Act. Other than the two land owners referred to in Schedule 4 there are no parties from which consents are required. We are instructed that compensation has been agreed with the two land owners referred to in Schedule 4 and formal agreements are awaiting execution.
- (i) In respect of the mining tenements specified in Schedule 1 there are no competing applications.
- (j) On the basis of the information derived from these searches and our inspection we confirm that the particulars of the status of the mining tenements as set out in Schedule 1 hereto are as described therein.
- (k) A summary of the rights and limitations and restrictions of such rights in respect of the mining tenements set forth in Schedule 1 are set forth in Schedule 5.

#### SCHEDULE 1

##### Mining Sub-Lease:

No. 5M/81 in respect of 66ha at Lisle for all minerals held by K. A. White for 6 years from 1st May, 1984.

##### Exploration Licence:

No. EL55/83 in respect of 180sq km at Mangana for all minerals held by K. A. White for period 23.11.83 to 23.11.84 renewable annually, for a maximum period of ten years and currently renewed till 23.11.87, (i.e. it is due for relinquishment on 23.11.93) provided that from 23.11.88 the area must be reduced by 50%.

##### Mining Lease Applications:

No.	Area	Location	Mineral	Applicant	Remarks
66M/85	68ha	Lisle	Gold	K. A. White	A mining inspector has recommended a lease for ten years.
67M/85	39ha	Lisle	Gold	K. A. White	A mining inspector has recommended a lease for ten years.
68M/85	96ha	Lisle	Gold	K. A. White	A mining inspector has recommended a lease for ten years.

1266P/M	12ha	Mangana	Gold	Fred White	The grant of a ten year lease has been recommended by a mining inspector subject to the Department of the Environment approving the environmental impact study provided by the applicant and the provision of a compensation agreement with the owner of the land.
1273P/M	15ha	Mangana	Gold	M. J. Roet	The grant of a ten year lease has been recommended by a mining inspector subject to the Department of the Environment approving the environmental impact study provided by the applicant and the provision of a compensation agreement with the owner of the land.

#### SCHEDULE 2

- (a) Agreement dated 27th February, 1987 between Keith Alexander White, Nicholas Kostos and Michael Jacques Roet providing for (inter alia) the sale by the said Keith Alexander White and the said Michael Jacques Roet of a 45% interest in the mining tenements set forth in Schedule 1 hereto to the said Nicholas Kostos and further providing that the parties thereto would sell to the Company and would cause the Company to purchase the said mining tenements.
- (b) Agreement dated 2nd March, 1987 between Nicholas Kostos as vendor and Animus No. 3 Limited as purchaser for the sale of a 45% interest in the mining tenements set forth in Schedule 1 hereof.
- (c) Agreement dated 1st April, 1987 between Keith Alexander White, Animus No. 3 Limited and Michael Jacques Roet as Vendors and the Company as purchaser for the sale by the Vendors to the Company of the interests of the Vendors in the mining tenements set forth in Schedule 1 hereto for the sum of \$999,998.75 to be satisfied by the issue to the Vendors of 3999995 fully paid 25c ordinary shares in the company and 4000000 options over an additional 4000000 unissued shares. The completion of this agreement is conditional upon
- (1) The minimum subscription being met pursuant to page 51 paragraph 15.1 hereof.
  - (2) All consents required under the provisions of the Mining Act 1929 have been obtained.

#### SCHEDULE 3

Declaration of trust dated 1st April, 1987 by Fred White declaring that mining lease application 1266P/M was made by him as agent for the said Keith Alexander White and is held by the said Fred White in trust for the said Keith Alexander White.

#### SCHEDULE 4

- (a) Mining lease application 1266 P/M is partly over Crown land and partly over private land owned and occupied by H. McKenzie. We are instructed that compensation has been agreed at \$1.00. We have prepared the agreement and are awaiting its execution.

- (b) Mining lease application 1273 P/M is over private land owned and occupied by the trustees of the estate of L. J. Street deceased. We are instructed that compensation has been agreed at \$500 p.a. for 5 years. We have prepared the agreement and are awaiting its execution.

#### SCHEDULE 5

- (a) The provisions of the Mining Act 1929 confer and impose the following rights and limitations and restrictions of such rights in respect of the mining tenements set forth in Schedule 1:

1. **Applications for mining leases**

- (a) The grant of a lease is in the absolute discretion of the Governor, although the applicant may have complied with all the requirements of the Mining Act 1929 in relation thereto.
- (b) Any lease granted and issued is required to contain and be subject to such of the covenants and conditions referred to in sub-section 46(1) of the Mining Act 1929 as are appropriate to the kind of lease granted together with such other covenants as the Minister may think fit.
- (c) An applicant for a lease may transfer his application at any time during the pendency thereof.

2. **Mining Sub-lease**

The Mining Act 1929 prohibits a lessee from granting a sub-lease of a mining lease except with the written consent of the Minister, and requires the lessee to file the sub-lease in the office of the Director of Mines within 7 days of its grant and to pay the prescribed fee. The Act contains no other provisions expressly dealing with sub-leases.

3. **Exploration Licence**

- (i) An exploration licence authorizes the holder thereof, subject to the observance of the terms and conditions thereof and to the provisions of the Mining Act 1929, to enter upon and pass over or across Crown Lands and subject to statutory restrictions, private lands within the area to which it relates, and to prospect and search thereon for such mining products specified therein, and to do all such other acts and things as may reasonably be necessary to enable the holder to engage in large-scale exploration work.
- (ii) The holder must engage to the satisfaction of the Minister in such aerial geological or geophysical surveys and exploration as the Minister may direct or approve.
- (iii) The holder must furnish the Director of Mines with such periodical reports and returns as the Minister may direct or approve.
- (iv) The holder must keep an adequate record of all operations and at all reasonable times permit authorized officers to examine those records and inspect any specimens or materials contained in the course of the operations.
- (v) An exploration licence may not be transferred without the consent of the Minister.
- (vi) A legal or equitable interest in or affecting an exploration licence is not capable of being created, assigned, affected, or dealt with, whether directly or indirectly, except by instrument in writing approved in writing by the Minister.
- (vii) An exploration licence may be surrendered with the approval of the Minister.
- (viii) An exploration licence may be revoked, varied or altered as to the area of land or the mining products if the holder contravenes or fails to comply with any of the provisions of the Mining Act 1929 or any of the terms and conditions to which the licence is subject.

- (b) Exploration licence EL55/83 extends to all minerals excluding coal and oil and in addition includes the following conditions:
1. That the licensee shall carry out investigations as may be necessary to determine the mineral potential of the area, and in particular will carry out a program of costeaning and sampling of alluvial deposits.
  2. That the licensee shall employ such technical and other staff and equipment as may be necessary effectively to carry out such investigations.
  3. That the licence shall apply to all minerals excluding coal and oil.
  4. That the licensee shall notify the owner and occupier of private land, in writing, at least three days before entering such land.
  5. That the licensee shall be liable to pay the cost of any work carried out to remedy any damage arising from any breach of the conditions of the licence.
  6. That the licensee shall conduct operations so as not to disturb the environment except insofar as this may be necessary to undertake the programme of exploration required by this licence; and in particular shall:
    - (a) Not use a bulldozer for costeaning, trenching or clearing without first having obtained the approval in writing of the Director of Mines;
    - (b) Not use other mechanical excavators without first having obtained the approval in writing of the Director of Mines who shall be advised of the type of equipment to be used, the work on which it will be engaged, the location and particulars of the topography and vegetation;
    - (c) Not clear any natural vegetation or make excavations beyond that necessary for actual sampling;
    - (d) Discuss with the local Municipal Council any proposal to clear areas of natural vegetation and shall comply with the reasonable requirements of such Council.
  7. That when no longer required, all excavations shall be filled in, or otherwise made safe, in accordance with the Mines Inspection Act, 1968, and reasonable rehabilitation measures taken to the satisfaction of the Director of Mines.
  8. That at the termination of the licence or at any time at the option of the licensee all drill core and samples required by the Director of Mines shall be delivered in core boxes 1070 millimetres long and 470 millimetres wide to the Department of Mines' Drill Store at Hobart at the cost of the licensee unless the Director of Mines notifies the licensee in writing that such core or samples are not required. All boxes to be end storage not side storage.
  9. That the licensee shall notify the relevant District Forester of the Forestry Commission before entering on a State Forest and shall comply with the reasonable requirements of such officer in operations on any such State Forest.
  10. That where any aboriginal relic or objects of historic interest are discovered, operations shall be conducted so as not to damage or interfere with such site or object and the licensee shall report details of such discovery to the Director of the National Parks and Wildlife Service and shall otherwise observe the provisions of the Aboriginal Relics Act, 1975.
- (c) Sub lease 5M/81 includes the following obligations on the part of the sub-lessee:
1. To bear pay and discharge all existing and future rates, taxes, assessments, duties, impositions, outgoings and burdens whatsoever imposed or charged upon the sub-tenement or the produce thereof or any buildings, machinery or works thereon.
  2. At all times by the most efficient and approved means to work deposits of alluvial gold in, upon or under the sub-tenement so and in such manner as to render the same as fruitful and productive as reasonably may be and in accordance with the method of working similar deposits which shall from time to time be adopted and approved in the locality.

3. To keep and maintain so far as necessary and practicable upon the whole surface of the sub-tenement all existing walls, fences and boundary marks.
  4. From time to time as may be required by the Government inspector or the public authorities well and effectually to fence off and enclose or otherwise secure and keep fenced off and enclosed or otherwise secured all open quarries, pits, trenches, drains and other works in or upon the sub-tenement or any part thereof and indemnify the Lessor against all claims by any public authority or by any person or persons in consequence or by reason of the same or any of them being left unfenced, unenclosed or unsecured.
  5. To permit the Lessor, his agent, surveyors, assistants and workmen or such other person or persons as he shall in that behalf appoint during the term from time to time and at all reasonable times and at their will and pleasure to enter upon the sub-tenement and every of them and into all the workings now or at any time hereafter to be formed within, under or upon the same and to afford all necessary assistance with workmen and appliances to the person or persons so entering as aforesaid in descending and ascending exploring, viewing, surveying and examining the said workings and in returning therefrom but so that no unnecessary delay or obstruction be thereby occasioned to the said workings or to the workmen employed therein.
- (d) Mining lease 5M/81 in respect of which the said sub-lease was granted includes the following obligations on the part of the Lessee which by virtue of the said sub-lease are imposed upon the sub-lessee during the term thereof:
1. To extract as large a percentage of the minerals and stone in the land hereby demised as is possible consistent with safety. Provided that if any question shall arise as to whether a greater amount of the minerals and stone has been left unworked than is necessary the matter shall be decided by the Director of Mines, whose decision shall be final.
  2. To pay royalty at the prescribed rate for all sand and gravel won from the land hereby demised.
  3. To rehabilitate concurrently with mining operations all working areas to the satisfaction of the Director of Mines.
  4. Not to remove any vegetation screening the mining operations on the demised land except with the written consent of the Director of Mines.
  5. To dispose of within the demised land to the satisfaction of the Director of Mines all tailings from mining operations.
  6. To rehabilitate the surface of the demised land to a condition satisfactory to the Director of Mines.
  7. To remove and stack separately all surface soils and spread such over mined out areas to the satisfaction of the Director of Mines who may also require the planting of grasses or other vegetation.
  8. To plant and maintain growing trees or other vegetation for the purpose of screening mining operations on the demised land as may be required by the Director of Mines.
  9. To meet the cost of the survey required for the better ascertainment of the demised land and for this purpose to lodge with the Director of Mines when required by him such deposit as the Director of Mines shall reasonably require to cover that cost and to pay any balance when required by the Director of Mines in accordance with Regulation 27 (4) of the Regulations under the Act.
  10. Upon the receipt of a notice of intention from the Director of Mines to locate the marking out notice erected on the demised land or to make a survey, the lessee will attend either personally or through his representatives at the appointed time and will point out the position of the notice and provide other information necessary to determine the location of the land to be surveyed in accordance with Regulation 27(9) of the Regulations under the Act and will otherwise comply with the requirements of Regulation 27.

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11. Not to remove any Pinus radiata without the written consent of the District Forester, Scottsdale.
12. Not to light fires on or adjacent to the lease demised without the permission of a Forest Officer, Forestry Commission and to observe the conditions of the Fire Services and Forestry Acts as amended.
13. To allow free access to roads and tracks running through the land demised to Forest Officers for Forestry purposes.
14. To repair any damage to roads and tracks maintained by the Forestry Commission to the satisfaction of a Forest Officer if damage is caused by mining operations.
15. To pay compensation at a rate determined by the Forestry Commission for removal of trees under Clause (11) or for damage to plantations on, or adjacent to the land demised.

Yours faithfully,

ZEEMAN KABLE & PAGE

Per:

W. P. M. ZEEMAN

## ADDITIONAL STATUTORY INFORMATION

### ALCASTON MINING N.L.

1. There are no founder, management or deferred shares.
2. There are no shares fixed by the Articles of Association of the Company as the qualification of a Director.
- 3.1 The provisions in the Articles as to the remuneration of Directors are as follows:-

AS remuneration for their services the Directors shall be paid out of the funds of the Company such sum in each year as the Company in general meeting may from time to time authorise which shall be divided between the Directors in such proportions and manner as they may determine and in default of such determination in any year equally provided that such remuneration may be reduced or increased from time to time by the Company in general meeting. Specific notice of intention to propose any increased remuneration shall be given to shareholders in the notice convening the meeting. The Directors (other than a Managing or other executive Director) shall not be paid as part or whole of their remuneration a commission on or percentage of the profits or turnover and in the case of a Managing or other executive Director shall not be by a commission on or percentage of turnover. The remuneration of a Director shall be deemed to accrue from day to day.

EACH Director (including an Alternate Director) shall be paid all his travelling hotel and other expenses reasonably incurred by him for the purpose of attending meetings or otherwise in or about the business of the Company and if any Director (including an Alternate Director) being willing shall be called upon to perform extra services or to exercise any special qualifications or to make any special exertions in going from his usual residence or residing abroad or otherwise for any business or purpose of the Company he shall be paid all his travelling and out-of-pocket expenses.

- (a) SUBJECT to the Companies Code no Director shall be disqualified by his office:
  - (i) From holding any other office or place of profit with or being otherwise interested in the Company or from being or becoming a Director, officer or member of or holding any other place of profit with or being otherwise interested in any other corporation promoted by the company or which is a subsidiary of the Company or of which the Company is a member or in which the Company is otherwise interested; or
  - (ii) from contracting or entering into any arrangement with the Company or with any other corporation as aforesaid whether as vendor, purchaser, guarantor or otherwise howsoever; or

(iii) from taking part in the negotiation or fulfilment of any contract or arrangement between the Company and any other corporation as aforesaid;

nor by reason only of his fiduciary relationship to the Company shall any contract or arrangement as aforesaid or any contract or arrangement entered into by or on behalf of the Company in which any Director is in any way directly or indirectly interested be avoided nor shall any director be liable to account to the Company for any profit arising therefrom.

- (b) Any Director may act by himself or his firm in a professional capacity for the Company or any other corporation as aforesaid and he or his firm shall be entitled to remuneration for professional services as if he were not a Director PROVIDED THAT nothing herein contained shall authorise a Director or his firm to act as an Auditor for the Company.
- 3.2 In accordance with the Articles the remuneration of the Directors has been determined by the Company in general meeting to be a total of \$50,000.00 per annum.
4. The names, descriptions and addresses of all Directors of the Company are set out on page 5 of this Prospectus. There are no proposed Directors of the Company.
5. The amount payable on application for each share is 25 cents. No previous offer of shares has been made to the public.
6. No option has been given to any person or persons to subscribe for shares in or debentures of the Company other than those which are detailed on page 3.
- 7(a) Other than is mentioned below, no other shares have been issued or agreed to be issued as fully or partly paid up otherwise than in cash within the two years preceding the date of this Prospectus and no debentures have been issued or agreed to be issued as fully or partly paid up otherwise than in cash within the two years preceding the date of this Prospectus.

The following shares were issued by the Company as fully paid ordinary 25 cent vendor shares:

(1) Michael Jacques ROET	1,499,998 vendor shares
(2) Keith Alender WHITE	699,998 vendor shares
(3) Animus No. 3 Limited	1,799,999 vendor shares

- 7(b) The beneficial owners of the shares in Animus No. 3 Limited as at the time of the Sale of the mining tenements to the Company were:
  - Nicholas Andrew Kostos
  - John Hanna Corrie
  - David Charles Joseph Scarf
  - John George Mellick
  - Charles Alexander Edward Scarf

**ADDITIONAL STATUTORY INFORMATION Cont.**

8. Other than is mentioned below no property has been purchased or acquired by the Company or by any subsidiary of the Company, nor does the Company propose to so purchase or acquire any property, which is to be paid for wholly out of the proceeds of the issue offered for subscription by this Prospectus, or the purchase or acquisition of which has not been completed at the date of the issue of this Prospectus, and no contract for the purchase or acquisition of property was entered into by the Company in the ordinary course of business in contemplation of the issue offered in this Prospectus and the issue offered in this Prospectus was not made in consequence of such contract.

The Company entered into the agreement referred to in paragraph 18(b) hereof to purchase from Michael Jacques Roet, Animus No. 3 Limited and Keith Alexander White the mining tenements mentioned in that agreement at the price therein set out.

9. No amount, apart from underwriting commission and brokerage both set out in paragraph 18(a) hereof, has been paid within the two years preceding the date of this Prospectus or is payable as a commission for subscribing or agreeing to subscribe or procuring or agreeing to procure subscriptions for any shares in or debentures of the Company and no Director, promoter or expert of the Company has received or is entitled to receive any such commission.

10. The amount or estimated amount of the expenses of the issue is \$180,000 and the persons to whom any of those expenses are paid or payable are: Peat Marwick Mitchell & Co., Falkiner Collins & Co., Kennedy & Cahill, Engineering Geology Specialists Pty. Ltd., Zeeman Kable & Page, Davey Graphics.

11. No amount or benefit has been paid or given within the two years preceding this Prospectus nor is any amount or benefit intended to be paid or given to any promoter.

12. The Auditors of the Company are Peat Marwick Mitchell & Co. of 500 Bourke Street, Melbourne, Victoria.

13. The capital of the Company is not divided into different classes of shares.

14. The Company has carried on business since the 24th day of February, 1987.

15.1 The minimum amount which, in the opinion of the Directors, must be raised by the issue of the shares offered for subscription by this Prospectus in order to provide the sums required in respect of each of the following items is:

- (a) the preliminary expenses payable by the Company, and any commission so payable to any person in consideration of his agreeing to subscribe for, or his procuring or agreeing to procure subscriptions for any shares in the Company. \$180,000

- (b) Working capital. \$1,900,000
- \$2,080,000

15.2 No amounts will be provided in respect of any of the matters aforesaid otherwise than out of the proceeds of the issue.

16. (a) No Director or expert has any interest in the promotion of or in the property proposed to be acquired by the Company and no Director or expert is a partner in any firm with such an interest; and no sums have been paid or agreed to be paid to any Director or expert or to any such firm in cash or shares or otherwise by any person in the case of a Director either to induce him to become or to qualify him as a Director or otherwise for services rendered by him or by the firm in connection with the promotion or formation of the Company except as set forth below:

Mr. M.J. Roet who is a Director of the Company is a beneficial owner as to thirty-seven and one half per cent of the mining property.

Mr. N.A. Kostos who is a Director of the Company is also a Director of Animus No. 3 Limited which is a beneficial owner as to forty-five per cent of the mining property.

After the issue is fully subscribed the Directors will directly and indirectly jointly hold 27.5% of the issued capital of the Company.

16. (b) No shares will be allotted or issued on the basis of this Prospectus later than six months after the date of the issue of this Prospectus.

17. The vendors respectively acquired the mining tenements or an interest in the mining tenements in the following manner:

- (a) On 1st May 1984 the vendor, Keith Alexander White purchased from R.C. Synfield Sublease 5M/81 at Lisle for the sum of \$35,000 which amount has been paid.
- (b) In 1983 K.A. White applied for and was granted E.L. 55/83.
- (c) In 1985 K.A. White applied for Mining Leases 66 M/85, 67 M/85 and 68 M/85 (all at Lisle).
- (d) In 1986 Fred White (in Trust for K.A. White) applied for Mining Lease 1266 P/M at Mangana.
- (e) In 1986 the vendor, M.J. Roet applied for Mining Lease 1273 P/M at Mangana.
- (f) Pursuant to an Agreement made 1st July 1985 the vendor M.J. Roet purchased from K.A. White a one half interest in the Lisle tenements for \$75,000 and a one half interest in EL 55/83 for \$30,000 both of which amounts have been paid in full.
- (g) Pursuant to the Agreement and for the consideration referred to in Clause 18(b) hereof the vendor acquired a 45% interest in the mining tenements which interest was subsequently transferred to Animus No. 3 Limited. The consideration cannot be finalized in full until after listing of the Company.

## ADDITIONAL STATUTORY INFORMATION Cont.

18. The date of and parties to and general nature of every material contract (not being a contract entered into in the ordinary course of business) carried on or intended to be carried on by the Company or a contract entered into more than two years prior to the date of the issue of this Prospectus are:
- (a) An underwriting agreement with Falkiner Collins & Co. for the underwriting of the subscription of the shares and options offered by this Prospectus, the terms of which are as follows:  
An underwriting Agreement dated 27th February, 1987 between Alcaston Mining N.L. (the Company) and Falkiner, Collins & Co. (the Underwriter), pursuant to which the Underwriter has fully underwritten the issue of 8,000,000 shares and options referred to in this Prospectus, for a fee of 1.50 cents per share (\$120,000) and the issue of 200,000 1 cent options.  
\* The Underwriting Agreement is subject to the following conditions:
- (1) The Underwriter may without cost or liability to it by notice in writing terminate its obligations under this Agreement –
- (a) at any time after the happening of any one or more of the following events:
- (i) subject to sub-clause (3) a default by the Company in the performance of any of its obligations under this Agreement,
  - (ii) a contravention in a matter of substance by the Company of any provision of its memorandum or articles of association, the Companies (Victoria) Code or any securities industry legislation of any State or Territory or any of the Listing Requirements of the Australian Stock Exchange Limited,
  - (iii) a statement, report, representation, matter or thing of a material nature contained in the Prospectus is found to be untrue or a material matter is found not to have been disclosed in the Prospectus,
  - (iv) the outbreak of hostilities (whether war has been declared or not) involving any one or more of Australia, the United Kingdom, the United States of America, the Union of Soviet Socialist Republics the People's Republic of China or the Republic of Indonesia,
  - (v) subject to sub-clause (3) a statement in a certificate delivered under sub-clause 4 (1) being or becoming untrue or incorrect,
  - (vi) the withdrawal by a Member Exchange of The Australian Stock Exchange Limited of permission granted to admit the Shares to the official List,
  - (vii) an application is made, or a meeting is convened to consider a resolution for, the winding up of the Company,
  - (viii) the Company is placed under official management or in receivership,
  - (ix) subject to sub-clause (3) without the prior consent of the Underwriter a contract (other than the Agreement) specified in paragraph 16 of the additional statutory information section of this Prospectus is terminated (whether by breach or otherwise), rescinded, altered or amended or any such contract is found to be void or voidable,
  - (x) subject to sub-clause (3) a change occurs in the financial or trading position of the Company, or,
  - (xi) there is introduced into the Parliament of the Commonwealth of Australia, a tax on gold mining or new taxation on profits derived from mining operations,
- (b) at any time before twelve noon on the closing date –
- (i) the Gold Index of the Australian Stock Exchange Limited falls below 1750;
  - (ii) the price at which gold is fixed at any time in London or the closing spot quotation for gold on the New York Commodity Exchange falls below US\$350 per ounce; or
  - (iii) the Perth Mint Gold Price per fine ounce falls below A\$550.
- (2) The Underwriter shall specify in a notice given under sub-clause (1) the event or events as the consequence of the happening of which the notice is given.
- (3) The Underwriter may not terminate this Agreement by reason of –
- (a) a default referred to in sub-paragraph (1)(a)(i);
  - (b) an outbreak of hostilities referred to in sub-paragraph (1)(a)(iv);
  - (c) a statement in a certificate delivered under sub-clause 4(1) being or becoming untrue or incorrect;
  - (d) the happening of an event contemplated by sub-paragraph (1)(a)(ix); or
  - (e) a change referred to in sub-paragraph (1)(a)(x);
- unless the Underwriter has reasonable grounds to believe that the default, outbreak of hostilities, untrue or incorrect statement, happening or change (as the case may be) has or is likely to have a materially adverse effect on the outcome of the Issue.
- (4) If the Underwriter terminates this Agreement pursuant to sub-clause (1) it shall forthwith notify the Company's home exchange of the termination but failure so to give notice pursuant to this sub-clause does not give rise to any claim or right of action on the part of the Company against the Underwriter.

## ADDITIONAL STATUTORY INFORMATION Cont.

- (b) An Agreement dated 27th February, 1987 between M.J. Roet, N.A. Kostos and K.A. White providing for the incorporation of the Company and the sale of the leases to the Company and further that:
- (1) N.A. Kostos shall:
- (a) Discharge the liabilities of White and Roet of approximately \$55,615.
- (b) Pay to White a salary of \$600 per week until 6/6/1987 or the date of listing of the Company.
- (2) The Company shall employ White as Manager pursuant to a service agreement of \$600 per week net after tax for a period of two years.
- (3) In the event of an employee option scheme the Company shall grant White and Roet an equal number of employee options.
- (c) An Agreement dated 2nd March 1987 between Nicholas Kostos as Vendor and Animus No. 3 Limited as Purchaser for the sale of a 45% interest in the mining tenements set forth in Schedule 1 hercof.
- (d) An Agreement dated the 1st day of April, 1987 between Michael Jacques Roet, Animus No. 3 Ltd. and Keith Alexander White as Vendors and the Company as purchaser which agreement provides THAT:
- (i) The Company shall issue to M.J. Roet, 1,499,998 vendor shares and 1,500,000 options to Animus No. 3 Limited 1,799,999 vendor shares and 1,800,000 options and to K.A. White 699,998 vendor shares and 700,000 options. The Company has since issued these vendor shares and options.
- (ii) M.J. Roet, Animus No. 3 Limited and K.A. White shall transfer to the Company all their right title and interest in and to the following tenements:
- |                                   |                  |
|-----------------------------------|------------------|
| <u>Mining Sub-Lease:</u>          |                  |
| No. 5M/81                         | Lisle            |
| <u>Exploration Licence:</u>       |                  |
| No. EL55/83                       | Mathinna/Mangana |
| <u>Mining Lease Applications:</u> |                  |
| No. 66M/85                        | Lisle            |
| No. 67M/85                        | Lisle            |
| No. 68M/85                        | Lisle            |
| No. 1266P/M                       | Mangana          |
| No. 1273 P/M                      | Mangana          |
- (iii) The completion of the contract is conditional upon:
- (a) The minimum subscription being met pursuant to paragraph 15.1 hereof.
- (b) All consents required under the provisions of the Mining Act 1929 have been obtained.
19. (a) Engineering Geology Specialists Pty. Ltd. has given its written consent to the issue of this Prospectus with its report included in the form and context in which it is included and has not withdrawn its consent before delivery of this Prospectus for registration.
- (b) Mr. N. Barnett of Peat Marwick Mitchell has given his written consent to the issue of this Prospectus with his report included in the form and context in which it is included, and has not withdrawn his consent before delivery of this Prospectus for registration.
- (c) Mr. W. Zeeman of Zeeman Kable & Page has given his written consent to the issue of this Prospectus with his report included in the form and context in which it is included, and has not withdrawn his consent before delivery of this Prospectus for registration.
20. No expert whose report appears in this Prospectus has:
- (a) any shareholding in the Company;
- (b) the right (whether legally enforceable or not) to subscribe for securities in the Company; or
- (c) the right (whether legally enforceable or not) to nominate persons to subscribe for securities in the Company.
21. The Directors of the Company report that after due enquiry by them in relation to the interval between the 24th February, 1987 being the date of incorporation of the Company and 3rd July, 1987 being a date not earlier than fourteen days before the issue of this Prospectus:
- (a) There have not in our opinion arisen any circumstances which have or will adversely affect the trading or profitability of the Company or the value of its assets;
- (b) there are no contingent liabilities of the Company additional to those contingent liabilities appearing in this Prospectus; and
- (c) the Company has not been taxed either as a private company or a public company since its incorporation.

Dated the 6th day of July, 1987.

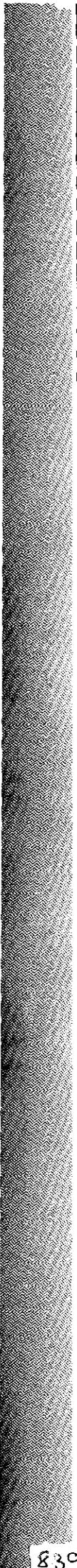
Signed:

M. J. Roet

N. A. Kostos

T. E. Brown

Copies of the agreements referred to in this paragraph, the Memorandum and Articles of Association of the Company, and certified copies of the consents referred to in paragraph 19 hereof may be inspected during normal business hours at the offices of the Company Solicitors, Kennedy & Cahill, 2nd Floor, 377 Little Collins Street, Melbourne.



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BROKERS STAMP

**APPLICATION FORM**

**ALCASTON MINING N.L.**

**IMPORTANT: THIS APPLICATION FORM MUST NOT BE HANDED ON UNLESS ACCOMPANIED BY THIS PROSPECTUS BEARING DATE 6th JULY, 1987.**

Issue of 8,000,000 Ordinary Shares of Twenty Five (25) cents each at par payable in full on application together with 8,000,000 Options at an issue price of one cent for every one share subscribed.

**APPLICATION FOR SHARES AND OPTIONS**  
Neither Shares nor Options can be applied for separately.

**To: The Directors**  
**ALCASTON MINING N.L.**

Mr/Mrs/Miss .....  
Given Names (BLOCK LETTERS PLEASE) Surname

Address .....  
Number Street  
City/Town State Postcode

NUMBER OF SHARES AND OPTIONS APPLIED FOR ..... (.....)  
WORDS FIGURES

Applications shall be for a minimum of 2000 shares and 2000 options and any additional applications shall be in multiples of 2000 shares and options.

TOTAL APPLICATION OF MONEYS (Number of shares and options applied for at 26 cents per share and option).  
\$. .....

CHEQUE \*ENCLOSED FOR TOTAL APPLICATION MONEYS

\*Please complete: DRAWER .....  
BANK .....  
BRANCH .....

I/We whose full name(s) and address(es) appear above hereby apply in terms of the Company's Prospectus dated 6th July, 1987 for the number of shares and options shown hereon (or such lesser number as may be allotted to me/us by the Company in respect of this application).

I/We agree to be bound by the Memorandum and Articles of Association of the Company.

If this application is signed by an Attorney, the Attorney states he has no notice of revocation of the Power of Attorney under which authority this application is signed.

**Important.** Before signing the application form applicants should read the Prospectus to which the application relates.

Usual Signature(s) ..... Date / /1987.

All payments must be made in Australian currency and all cheques made payable to Alcaston Mining N.L. and be crossed "Not Negotiable" and forwarded with this application to Falkiner Collins & Co. at the addresses shown on the reverse side hereof.

Applications should be completed and lodged in accordance with the instructions on the back of this form.

## APPLICATION FORM

### INSTRUCTIONS TO APPLICANTS

1. In a case of joint applications each applicant must sign.
2. Where the applicant is an incorporated body its common seal and attestation clause is to be affixed and the attestation clause signed by its authorised signatory.
3. If this application is signed by an Attorney, the Attorney states he has no notice of revocation of the Power of Attorney under which Authority this application is signed.
4. Applications may be lodged at any time after the issue of this Prospectus. Applications must be accompanied by payment in Australian currency of Twenty-six (26) cents for each share. Cheques should be made payable to Alcaston Mining N.L. and crossed "Not Negotiable". Receipts will not be forwarded. Excess moneys will be returned to unsuccessful applicants no later than thirty (30) days after the closing of the subscription lists.
5. Completed application forms and cheques must be returned to:

Falkiner Collins & Co.,  
351 Collins Street,  
Melbourne. Vic. 3000.

Application lists will open at 9.00 a.m. Eastern Australian Standard Time on 8th July, 1987 and will remain open until 5.00 p.m. Eastern Standard Time on 31st July, 1987 subject to the right of the Board of Directors of the Company to close the issue at an earlier time or date without prior notice. Applications may be lodged prior to the opening of the Subscription Lists.

6. Table of amounts payable: (Examples)

Number of shares and options	Total Amount of Application Money –
	\$
2000 _____	520
4000 _____	1040
6000 _____	1560
8000 _____	2080
10000 _____	2600

**NOTE:** Applicants must take a corresponding number of options to the number of shares applied for on each application. Separate applications for shares only or options only will not be accepted.

This Prospectus expires on 6th January, 1988. No debentures (or shares) will be issued on the basis of this Prospectus after that date.

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87-2750  
APPENDIX 2

ALCASTON MINING N.L.

ASSESSMENT OF ALLUVIAL GOLD PROSPECTS

MATHINNA, MANGANA AND LISLE

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INTRODUCTION

The main factors limiting the viability of any deposit are

- 1) the grade and reserve in the deposit;
- 2) the difference in unit price of the commodity and the unit cost of mining and processing that commodity; and
- 3) the rate at which the saleable commodity can be produced by the mining and processing operation.

These factors are all inter-related and in practice, some elements of each factor can be quantified, some can be estimated and some require judgement based on experience and even intuition.

The Alcaston alluvial gold prospects at Lisle, Mathinna and Mangana are typical Tasmanian Cainozoic placer gold deposits. Their origin and nature is reasonably well understood - adequate to enable their size, shape and grade variability to be estimated using orthodox exploration methods to a level of confidence accepted by the exploration and mining industry.

This report contains a review of the work done to date on the three prospects and an assessment of their prospectivity. Recommendations are made for future exploration and mining. The report is based on data supplied by Mr M. Roet, Alcaston Mining N.L., data from the Alcaston Mining 1987 Prospectus, from verbal information obtained by phone from Mr A. White, Innisfail and from the writer's knowledge of the areas discussed.

MANGANA

In the Alcaston Prospectus, E. Minty defines the Mangana alluvial prospect as all sediments associated with Tower Rivulet and its tributaries, i.e. a probable volume of 7.4 million cubic metres of mineralised sediment. In practical terms, Majors Gully is the only part of the area which has been shown to carry significant gold. Majors Gully should be considered as a separate entity, a test case for small relatively rich bodies of sediment which can be mined and treated with a fixed plant, like the one at Majors Gully.

The Majors Gully prospect is probably the smallest and richest of the Alcaston properties. It has been fairly thoroughly tested by Alex White and his methods and results are summarised below. Four costeans and seven prospect holes were dug with an excavator to hard rock basement. The

064 costeans and holes are evenly spread along Majors Gully (Fig. 1). Depth to basement and width of the sediment body was measured. The depth measurements are accurate and the width measurements are conservative extrapolations from the excavations. Initial panning in the costeans and pits indicated that significant gold mineralisation is restricted to a lower gravel layer and that an upper layer of fine grained sediment is essentially barren. The two layers can be differentiated visually by concentrations of dark coloured metal oxide/hydroxide cement which roughly corresponds to the interface of the two layers. For mine planning purposes, the two layers became known as "overburden" and "wash". To check the gold content of the overburden, approximately 76 bank cubic metres of overburden from Costean 1 was treated in a plant built by Alex and Fred White and located a short distance down gully from Costean 1. (This plant was later re-built at the top of the ridge immediately east of Majors Gully, thus the same plant was used for testing and for mining.) The overburden from Costean 1 yielded 0.073 g/bank cubic metre recovered, confirming its status as overburden.

Subsequently, 885 cubic metres of wash from Costeans 1, 2 and 3 were processed, returning an average grade of approximately three g/bank cubic metre. At a gold price of \$Australian 600 per troy ounce, the sampling on Majors Gully indicates that the deposit would return to the miner about \$6 per bank cubic metre, less costs. Such a return would normally be considered as nicely profitable for that style of deposit, with mining and processing costs expected to be around \$3 per bank cubic metre.

// No. 11  
300mg  
m.

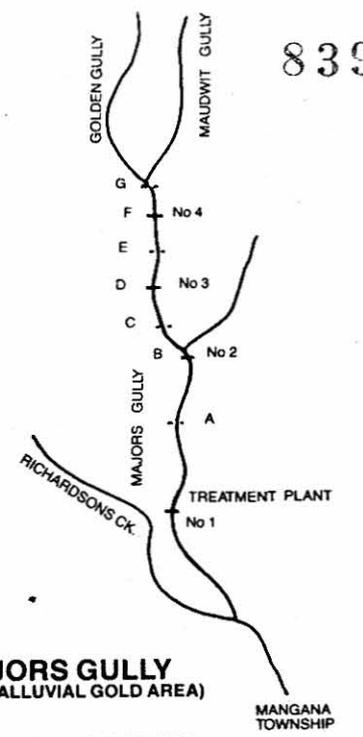
Why did the full scale mine not operate profitably?

Although the same plant was used for testing and mining, there were significant differences between the two operations.

- 1) The plant was moved several hundred metres uphill, to the east of the mine site, increasing transport cost and requiring considerable water lift to the plant.
- 2) Plant throughput was increased from 50 loose cubic yards per hour to 100 loose cubic yards per hour. The water pump was unable to supply a constant flow adequate to properly wash 100 cubic yards per hour and further gold losses resulted.
- 3) A new excavator operator was used, and as the ore transport was by a trucking contractor, and the target production rate of the plant had doubled, it is likely that quality control at the mine decreased and some gold in the rich basal section of the ore horizon was not recovered. It is possible that some overburden was also included

Figure 1 - From Alcaston Prospectus

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**MAJORS GULLY**  
(PROVEN ALLUVIAL GOLD AREA)

— COSTEANS 1-4 (SAMPLED)  
- - - MEASUREMENTS TAKEN AT LOCATIONS A-G



SCALE:  
1mm = 35 metres N  
↑

**MANGANA  
GOLD FIELD  
PROSPECT**

- MAJORS GULLY PROVEN
- MANGANA GOLD FIELD PROSPECT
- ALCASTON MINING LEASES

5 cm

with the ore, thus diluting the head feed grade.

The above problems could account for the disappointing results from the mine, and given the apparent viability of the deposit as indicated by the testing, it is worth trying to rectify them.

The problems of losses at the plant would probably be rectified by modifying or replacing the existing water pump and by changing the screens. The dam and the pump must both be big enough to supply a constant flow of de-slimes water from the cyclone to the spirals, adequate for the optimum throughput. The optimum throughput of the plant may be less than the desired 100 loose cubic yards/hour. This can be determined by trial and error once the above modifications have been made, and may be the critical factor in determining whether the mine is viable.

A more difficult question to evaluate is whether the plant should remain on the hill or whether the economics would be significantly improved by locating the plant in Majors Gully. This question is linked to the need to improve the recovery of the gold residing directly on the hard rock basement. According to Alex White, the main reason for locating the plant outside Majors Gully was because of Department of the Environment prohibition on dirty water seepage into Richardsons Creek. This problem could probably be avoided by locating a large clay-lined tailings dam at the lower end of Majors Gully and if necessary, applying a flocculant which would not chemically pollute the water.

The Majors Gully deposit is too small and too dry (at least for part of the year) and the basal cobbles and boulders are probably too large to operate a suction cutter dredge. The deposit is also far too small on its own to repay the cost of a dredge. If it were not for these problems the suction cutter dredge would recover more of the basal gold than would an excavator. The problem with the excavator is that the bucket will not cut into the hard, jagged Mathinna Group basement and therefore cracks and depressions filled with gold-enriched gravel cannot be recovered. Given that a dredge is out of the question, it will be necessary to either pump out or ground sluice the residual basal sediment prior to backfilling. These methods will also require some experimentation and this should be done in conjunction with trials on the modified washing plant. Therefore the plant should not be moved, at least until after the mine and plant trials have been completed. It may be that the plant should not be moved at all.

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- 1) An orebody of approximately 250 000 bank cubic metres with a recoverable grade of approximately 0.3 g/bank cubic metre exists in Majors Gully. Overburden thickness varies from approximately zero to greater than three metres.
- 2) The mine should be restarted on a trial basis, with modified water pumps and screens on the plant, and with a determined attempt to improve recovery of basal sediments in the mine. After several weeks of trial mining, a decision should be made to either (a) continue mining with the plant in its present location; (b) relocate plant on skids in Majors Gully and continue mining, working progressively up the gully; (c) abandon mining.
- 3) If mining can be demonstrated to be viable under either option 2(a) or 2(b), and assuming a production rate of 50 bank cubic metres per hour can be sustained and assuming that the mine can be operated for 250 ten-hour days per year, then the deposit would be worked out in two years.

If we allow for some negative fluctuation in grade, water availability, mining costs and gold price, the average gross profit (i.e. gold sales minus operating costs) of the mining operation is \$2 per bank cubic metre, then the mine would pay \$500 000 profit in two years. Under optimum conditions (which, in practice, rarely occur) the mine would pay over \$750 000 gross profit.

If option 2(c) is concluded after the trial period, then it is very unlikely that any of the other gullies in the Tower Rivulet system could support a mine using the fixed plant operation. If 2(c) is concluded, it is recommended that larger, lower grade dredging targets are the only alluvial deposits worth further exploration.

#### MATHINNA

There are two main alluvial prospects available to Alcaston in the Mathinna area: Black Horse Gully and the South Esk River flats. The most prospective part of Long Gully, including the tailings sands from the Golden Gate Mine, is covered by Mineral Leases held by other parties.

### 1) Black Horse Gully (Fig. 2)

In 1986, three costeans and sixteen holes were excavated on this prospect. Approximately 380 bank cubic metres of gravel (soil and overburden were prestripped) was taken from each costean, trucked to Lisle and processed through the plant which had been used to mine the Lisle deposit. To obtain a grade estimate of this material the gold-rich concentrate was judged to be 80% gold, the remainder being heavy mineral contaminants in the concentrate, plus metal contaminants alloyed with the gold. Results of the test programme were that recovered grade averaged 0.22 g/bank cubic metre, ranging from 0.16 g/m<sup>3</sup> at the lower end of Black Horse Gully to 0.27 g/m<sup>3</sup> at the upper end. The volume of gravel in this deposit depends on the cut-off grade to be used, the area to be excluded due to settlement and Municipal Reserve and the area to be excluded (if any) due to tenements held by other parties. The available volume of mineralised gravel probably ranges from 200 000 bank cubic metres to approximately 1 million bank cubic metres. The prospect is of lower grade, and because of its location on cleared land at the edge of Mathinna, may require more expensive rehabilitation than Majors Gully. It is therefore recommended that no further work be done until the Majors Gully prospect has been fully tested. If Majors Gully can be profitably mined, then at least the upper portion of Black Horse Gully may be viable. If it is, then the lower portion of Long Gully could be explored.

### 2) South Esk River Flats

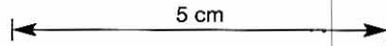
This is the upstream extension of the dredging target extensively explored by Australian Anglo American Prospecting Pty Ltd in 1981-82.

Anglo drilled 285 holes, defining several million bank cubic metres of Quaternary gravels with an inferred average growth of 0.05 g/bank cubic metre and an average thickness of about 6 metres. Their exploration area extended up to, and included, McDonalds Flat (Fig. 4). The grade of this material is clearly uneconomic and Alcaston would require a fivefold increase in grade over several million cubic metres of the Midsons Flat area, in particular where Long Gully and Black Horse Gully join Midsons Flat. Midsons Flat may be richer than McDonalds Flat, as the former is more proximal to the probable sources of the alluvial gold in the South Esk River flats.

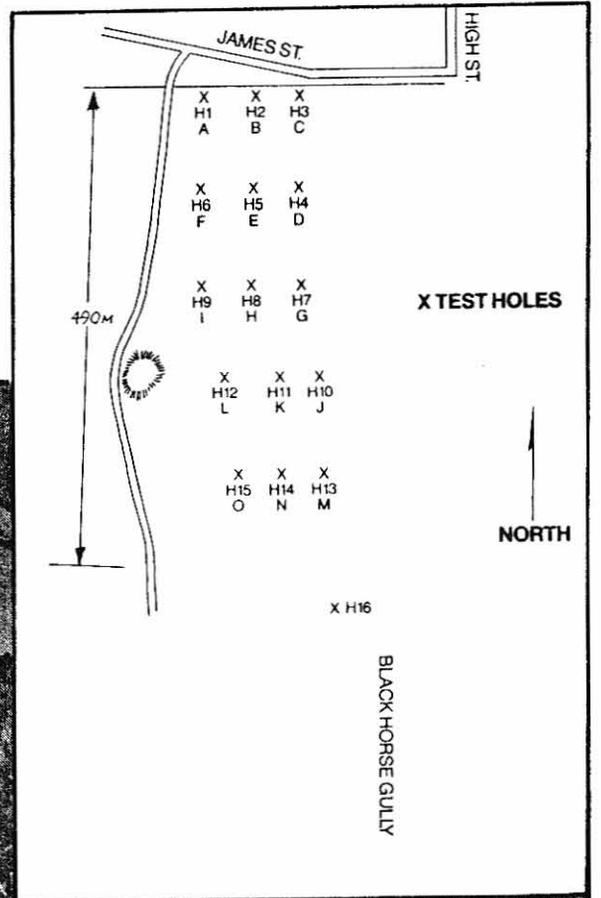
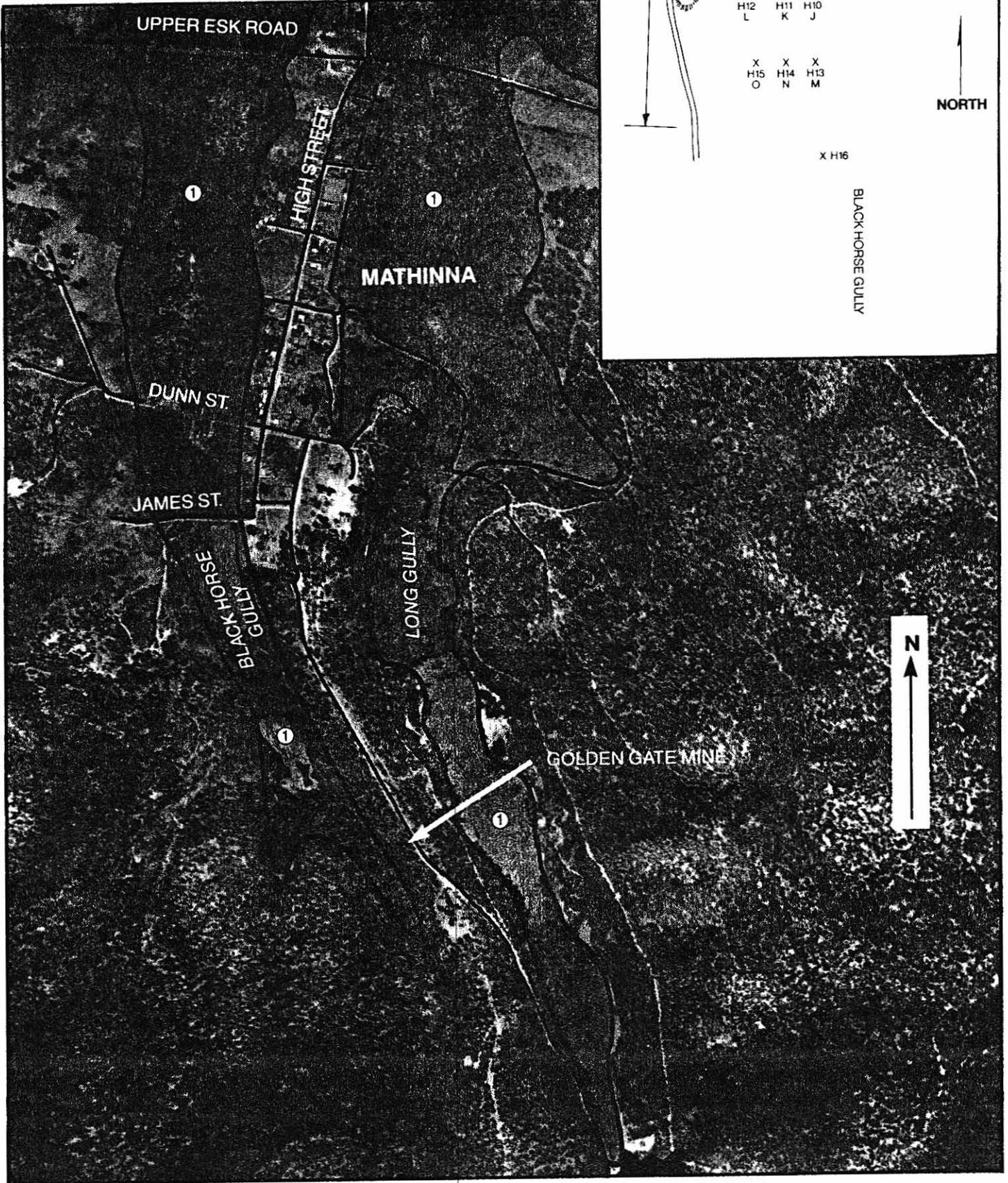
The question of mineral rights and compensation to landowners needs to

# ALLUVIAL PROSPECTS AT MATHINNA

SCALE:  
1mm = 15metres

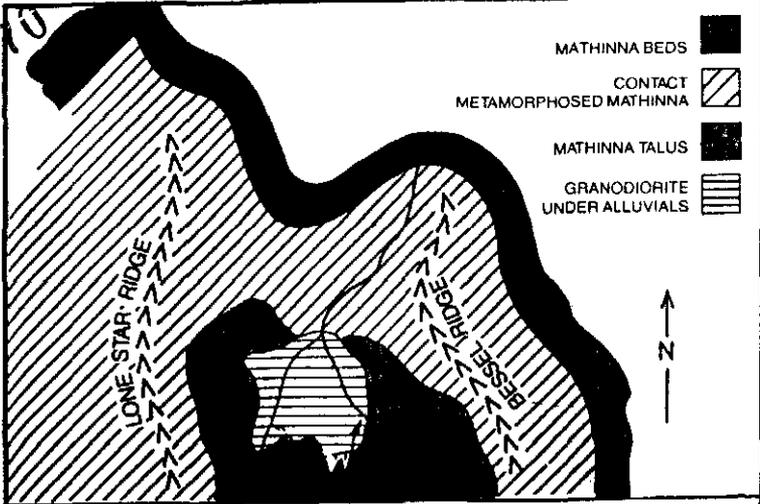


① GOLD PROSPECTS  
— COSTEANS



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**Lisle Goldfield** SCALE: 1mm = 92 metres

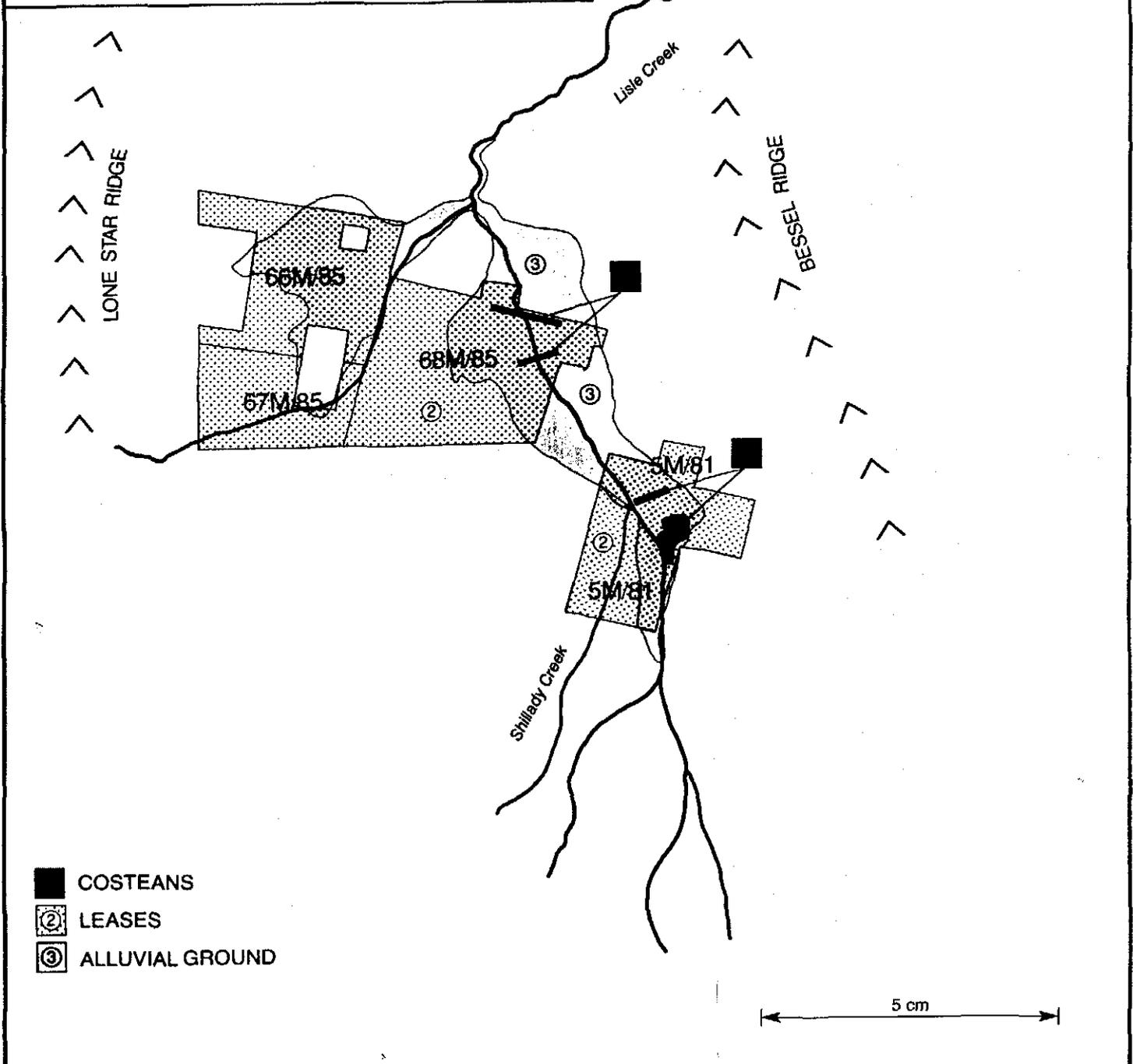


Figure 3

**Lisle Goldfield Alluvial Leases**

SCALE: 1mm = 33.4 metres

From Alcaston Prospectus



be addressed on this prospect as much of the river flats will be deemed by the landowners to have high value as agricultural land and may be part of early Tasmanian land grants. Compensation may be a critical factor in the economics of this prospect.

#### Conclusions

It is recommended that the legal questions be clarified firstly and assuming that the gold is owned by the Crown and that mining rights can be obtained if required by Alcaston, then the prospect should be explored by excavating costeans and transporting the gold-bearing sediment to Majors Gully where it can be tested in the existing plant. This can be done during the mining of the Majors Gully deposit, or if Majors Gully is shown to be uneconomic, the plant can be used to test Midsons Flat without any interruption to the mining operation at Majors Gully.

Royal  
Mined  
around  
by Crown

#### LISLE

The Lisle alluvial deposit (Fig. 3) has been prospected extensively and partly mined by Alex White. The results of this work are not properly covered in the Alcaston Prospectus. Alex estimates that the overall recovered grade of material mined was 0.2 g per loose cubic yard. Assuming 20% volume expansion during mining, this represents 0.16 g/bank cubic yard or approximately 0.2 g/bank cubic metre. Alex claims that in dry weather when trucks from the mine could supply the plant with 1000 to 1200 loose cubic yards per day, the operation was profitable, but the frequent wet weather at Lisle resulted in many days when the trucks could not climb the hill from the mine to the plant. The only reasonable way of solving that problem is by dredging the deposit.

#### Conclusions

Because Lisle is a relatively small dredging target (perhaps 1 million bank cubic metres), because part (and possibly the richest part) of the deposit has been mined, and because part of the deposit may be rehabilitated and re-forested within the next year, it is recommended that no further work be done at Lisle until after the South Esk dredging target has been evaluated. In the event that South Esk is demonstrated to be a viable

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deposit for dredging, then Lisle should be re-assessed for the purpose of being dredged after South Esk has been mined.

If South Esk cannot be demonstrated as an economic deposit, then no further work should be done at Lisle.