CAMBRIDGE CONSOLIDATED

Combined Mineral Exploration Report
Exploration Licences 8118, 8119 and 8166
for the period 12 May 1998 to 11 May 1999

Confidential Report lodged under Section 33 (d)
of the Northern Territory Mining Act 1980

Report compiled by:
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OPEN FILE

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1. **TENEMENT SITUATION**

Exploration Licences 8118, 8119 and 8166 cover part of the Victoria and Keep Rivers. All three licences were granted on 12 May 1993. The licences originally comprised 498 blocks, 425 blocks and 113 blocks respectively and collectively form the Victoria River Prospect.

After a number of reductions the area of these tenements is currently 81 blocks, 99 blocks and 22 blocks respectively.

On 30 April 1999 an application for renewal of all three licences was lodged and is being determined by the Department.

2. **EXPENDITURE STATEMENT**

Cambridge has not undertaken any field activities during the last term of the licence. The exploration expenditure on all of the above tenements for the past year amounts to $2,000 on each tenement, covering the costs of data review. Expenditure convenant applications have been also lodged with the Department.

3. **PAST EXPLORATION ACTIVITIES**

A significant amount of exploration has been conducted over the life of the exploration licences and is outlined below.

In August 1991 a seismic line was run over the south western part of EL8166 and the north eastern part of EL8119 as part of a regional shallow seismic reflection program. The interpreted seismic profiles suggested the presence of two generations of palaeochannels in the offshore extensions of the present day Victoria and Fitzmaurice River.

Between May and August 1993 a bulk sampling exploration program to recover diamonds was undertaken within the upstream portion of EL8118. The program was carried out adjacent to the Victoria River on a point bar approximately 28 km north west of Timber Creek. Seventy two diamonds totaling 6.574 carats were recovered. The program succeeded in confirming that diamonds were indeed present in the alluvial sediments of the Victoria River.

The Company was served a summons on 9 March 1994 from the Aboriginal Areas Protection Authority for carrying out work on a sacred site contrary to section 34 of the Northern Territory Aboriginal Sacred Site Act 1989. Following an out of court settlement and admitting no liability, the
Company decided to surrender the blocks of EL8118 within the Victoria River as exploration was deemed too difficult within the area. The blocks were subsequently surrendered in April 1995.

In March 1994, 283 line kilometres of high resolution shallow seismic was surveyed on the three tenements. Spacing between traverses was 5 kilometres. Systematic post processing was undertaken at Elics in France and completed in February 1995. The 1994 data was subsequently interpreted by the Company’s consultant geophysicist and digitised into its computer database.

Based on previous bulk sampling surveys completed by the Company in other tenements within the Joseph Bonaparte Gulf, a conceptual geological model and mining scenario was developed, and from this a mining cost and cut-off grade estimation was calculated. Using the cut-off grade calculations, a minimum drill diameter for the determination of the diamond grade was calculated.

A world-wide search was undertaken to find a vessel and equipment suitable for large diameter drilling. After negotiations with a Joint Venture partner and the construction of a processing plant, a large diameter reverse circulation airlift drilling program commenced in the Berkeley Prospect (Western Australia) in May 1995. The aim of this phase of exploration was to define an alluvial diamond resource within the Berkeley Prospect and to proceed with the drilling of targets in other tenements including ELs 8118, 8119 and 8166. Unfortunately problems with equipment, inclement weather and local sub-marine sediment conditions prevented the successful completion of the program. The drilling program was called to a premature halt in September 1995 before any holes could be drilled in ELs 8118, 8119 and 8166.

In October 1995 an infill seismic and sidescan sonar survey was undertaken, comprising 276 line kilometres of boomer data, 150 line kilometres of chirp data (both seismic reflection techniques), and 276 kilometres of sidescan sonar data. This was followed by a regional baseline environmental survey in November 1995 which included sediment and water sampling, and water clarity measurements within all of the Company’s tenements. The seismic data was interpreted to assess the nature and distribution of the unconsolidated sediment sequences overlying bedrock in ELs 8118, 8119 and 8166, to identify environments of deposition with resource potential, and to define these sequences and environments to enable mapping and quantitative modeling. Sites for follow-up drilling were also recommended.

In early 1996, the Company designed an exploration drilling program to gather geological, geotechnical and resource data. Another worldwide search for a suitable drilling vessel and equipment was launched, followed by successful negotiations to purchase a drill barge from the French Government. The barge was subsequently transported to Singapore for a full re-survey, an
anchor and winch upgrade, and the installation of the processing plant. In preparation for the drilling program, and in the absence of reliable, directly measured meteorological and oceanographic data, the Company commissioned the Special Services Unit of the Bureau of Meteorology to undertake a wind and wave hindcasting study for the Victoria River area.

The *Gulf Explorer* arrived in Australian waters in November 1996, and in January 1997, three reconnaissance holes were drilled in EL8166. Owing to the shallow water nature of the Company’s targets in ELs 8118 and 8199 and the depth limitations of the airlift system, no drilling was attempted in these two tenements.

It was decided in the first quarter of 1997 that a surficial and shallow subsurface sediment sampling program was needed to evaluate the shallow areas of the Victoria River Prospect. A vibrocoring, surficial sediment sampling and water quality assessment was successfully undertaken in April/May 1997 in a number of Cambridge’s tenements including ELs 8118, 8119 and 8166 on the tidal shoals and in the mouths of the Keep and Victoria rivers.

A new Board of Directors was appointed in December 1997 and a comprehensive review of the technical data was initiated.

No field work was conducted in 1998. The geological department’s attention was directed towards the appraisal and reappraisal of all exploration data for each tenement. The reappraisal was not only in terms of the geological potential of the tenements to host diamond bearing targets, but also whether exploration and extraction of these interpreted targets could be economically and technically achieved.

The assessed geological potential of a tenement was based on the interpreted geophysical data and limited drilling results that have also been gathered during past exploration programs. Water depth and the thickness of overburden have been used to further refine the prospectivity of interpreted targets. Allowance has been made in the assessment for the extreme oceanographic conditions that exist in the Joseph Bonaparte Gulf, caused by the strong tidal currents and large tidal ranges.

The results of these assessments will aid in the rationalisation and consolidation of the Company’s tenements within the Joseph Bonaparte Gulf. This information has highlighted areas of exploration potential and redefined targets for follow up investigation. Due consideration has been given to what can be realistically achieved with currently available equipment and technology within a fiscally responsible budget.
Figure 1: Cambridge Consolidated NL - Tenement Holdings (April 1999).
4. PROPOSED EXPLORATION AND EXPENDITURE – YEAR ONE

4.1 Proposed Work Program - Year One

1. Design a geological drilling program and source suitable drilling equipment and a vessel from which to operate;

2. Conduct an aircore reverse circulation drilling program at selected sites to determine the composition of sediments and their stratigraphy.

4.2 Minimum Expenditure on EL8118 - Year One

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<th>Cost</th>
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<tr>
<td>2. Tenement administration and report compilation</td>
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4.4 Minimum Expenditure on EL8166 - Year One

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5. SECTION 6 – PROPOSED EXPLORATION AND EXPENDITURE – YEAR TWO

5.1 Proposed Work Program - Year Two

1. Analysis of samples from the drilling program and interpretation of results.

2. Continued validation of the seismic interpretation in order to refine the geological model.

3. If the results of 1 and 2 above are positive then conduct an infill and detailed geophysical survey.

4. Data processing, interpretation, digitising and computer modeling

5.2 Minimum Expenditure on EL8118 - Year Two

1. Sample Analysis $ 10,000

2. Tenement administration and report compilation $ 5,000

3. Detailed geophysical survey $ 40,000

4. Seismic processing and interpretation $ 10,000

5. Digitisation and computer modeling $ 5,000

6. Sub-total $ 70,000

7. Office Overheads (20%) $ 14,000

Total $ 84,000

5.3 Minimum Expenditure on EL8119 - Year Two

8. Sample Analysis $ 10,000

9. Tenement administration and report compilation $ 5,000

10. Detailed geophysical survey $ 45,000

11. Seismic processing and interpretation $ 10,000

12. Digitisation and computer modeling $ 5,000

13. Sub-total $ 75,000

14. Office Overheads (20%) $ 15,000

Total $ 90,000
### 5.4 Minimum Expenditure on EL8166 - Year Two

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<td><strong>Total</strong></td>
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6. REFERENCES


Warren, S, 1997: Partial Waiver of Reduction on EL8118, 8119 and 8166. CG70.
