BILLITON AUSTRALIA GOLD
ANNUAL REPORT FOR

MCNS 374-375, JONES BROTHERS
and
MCNS 1918-1923 and 3676-3683, HORSESHOE TIN FIELD

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1.0 INTRODUCTION

MCN's 374-375, 1918-1923 and 3676-3683 originally formed part of the Pine Creek Joint Venture between Billiton Australia Gold Pty. Ltd., (50%) and Denehurst Ltd., (50%). Recent negotiations between Billiton and Denehurst have resulted in Billiton acquiring Denehurst's interest in these tenements. The MCNs fall within, or are contiguous to the Mt Todd Project Area. This project is currently a Joint Venture between Billiton (50%) and Zapopan N.L.

MCN's 374-375 cover the Jones Brothers Gold prospect, which is contiguous to the Golf prospect to the north. The area has potential for additional tonnages of gold mineralization and may be exploited given the availability of a plant for the Mt Todd Project.

MCNs 1918-1923 and 3676-3683 cover the Horseshoe Tin Field and the western edge of the Horseshoe Gold Prospect. The Horseshoe Gold Prospect also has potential for a small gold resource given the availability of a plant for the Mt Todd Project.

Figure 1 shows the location of the MCNs.

2.0 REGIONAL GEOLOGY AND MINERALISATION

The Jones Brothers and Horseshoe MCNs are situated in the southern portion of the Early Proterozoic Pine Creek Geosyncline. Rock types in the area include greywackes, shales and siltstones of turbidite affinity assigned to the Burrell Creek and Tollis Formations.

Gold mineralization occurs within the Jones Brothers MCNs, while both tin and Gold occurs within the Horseshoe MCNs.

Tin mineralization occurs within a NNW trending corridor, and includes the Horseshoe Tin Field, figure 4. The mineralization typically comprises cassiterite, quartz, tourmaline, kaolin and haematite bearing assemblages which occur as bedding parallel breccia zones and pipes. The zones are generally narrow, and have been extensively exploited by the Chinese at about the turn of the century. Old workings are generally limited to above the water table. Extensive alluvial tin workings also occur in the Horseshoe Tin field, and a resource of 1.5 million BCM grading 445 g/m³ cassiterite has been estimated for the area (Robinson, 1988).

Gold mineralization occurs as a number of extensive quartz-sulphide vein systems including the Batman, Jones - Golf and Quigleys Resources which are situated with a NW trend, figure 4. Historical government publications indicate gold was initially discovered at the Jones prospect in the late 19th century. Intermittent exploration and mining activities, including the erection of a battery, have occurred since the initial discovery. The Horseshoe prospect was discovered as the result of geological reconnaissance by Billiton geoscientists.
3.0 EXPLORATION CONDUCTED AND RESULTS

3.1 Jones Brothers MCNs 374-375

Exploration on the Jones Brothers prospect has been limited to additional mapping and rock chip sampling. This work has revealed the presence of a number of a narrow bedding parallel lodes in the south on MCN 374 which may persist to the north as a number lodes which parallel the main Jones Brothers lode figure 6. The mapping also indicates stock work style mineralization to the west of the Jones Lode continues to the south of existing drilling.

Additional drilling to test both the stockwork and Jones east mineralization is recommended.

3.2 Horseshoe Tin Field

No additional exploration has been conducted on either the Horseshoe tin or a gold prospects. Additional drilling of the area is recommended pending a decision to proceed with the Mt Todd Project.

4.0 CONCLUSIONS/RECOMMENDATIONS

Both the Horseshoe and Jones Brothers prospects are considered to have potential for small tonnages of gold mineralization, which could be processed at a plant established by the Mt Todd Joint Venture. Additional drill testing leading towards resource and reserve estimation studies is pending a decision to proceed with this project.

5.0 ESTIMATED EXPENDITURE

Expenditure for the period September 1990 to August 1991 for the Jones Brothers and Horseshoe MCN's is estimated as follows:

<table>
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<th>Description</th>
<th>Amount</th>
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<tr>
<td>Staffing and Support</td>
<td>7951</td>
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<tr>
<td>Tenements</td>
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<td>EIS Studies</td>
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<tr>
<td>Administration</td>
<td>1182</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$13728</strong></td>
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STRATIGRAPHIC COLUMN

Daly River Group
- Tindal Limestone
- Antrim Plateau Volcanics

Katherine River Group
- Kombolgie Formation

Cullen Granitoids
Composite I-type Batholith (1840–1780 Ma)

Edith River Group
- Plum Tree Volcanics (mafic to silicic)
  - Phillips Creek Sandstone
  - Zamu Dolerite (+/? Maud)

El Sherana Group
- Tollis Formation

Finniss River Group
- Burrell Creek Formation
  - Mt. Bonnie Formation
  - Gerowie Tuff
  - Koolpin Formation

- Wildman Siltstone
- Mundagie Sandstone

Namoona Group
- Masson Formation

Early–Middle Cambian

Middle Proterozoic

Early Proterozoic
Eastern Workings - Section

Sheeted qtz - Sn veins up to 0.4% Sn over 11m

haematite alteration zone

massive qtz-tourm-kadina-haematite-Sn lode developed along bedding
up to 20% Sn and 7% Cu in grab samples

steep plunge to northwest

Western Workings Sections

sediments

shallow westerly plunge

kaolin-haematite Sn lode

sulphidic breccia

Long Section of Eastern Workings
Along a Typical Line of Lode

Billiton Australia Gold Pty Ltd

PIE CREEK J. V.

HORSESHOE TIN FIELD
SCHEMATIC SECTIONS

Author: DW
Date: 17/89
Scale: None

Designer: SF
Checked: Kath

Drawing No.: Fig. No.: 5