BILLITON AUSTRALIA GOLD PTY. LTD.
MT TODD JOINT VENTURE
ANNUAL REPORT FOR EL 4963

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DATE: DECEMBER 1991      COPY NO:

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1.0 INTRODUCTION

The Mt Todd Joint Venture, between Billiton Australia Gold Pty Ltd., (50%) and Zapopan (50%) commenced 1st February 1987, with Billiton acting as project managers and operators.

Billiton, on behalf of the Joint Venture, entered into an option agreement over EL 4963 with Russell Young on 19/6/91.

This report document all exploration activities conducted by Billiton within the single block exploration licence.

2.0 REGIONAL GEOLOGY

The geology of the region is depicted in figure 2.

The licence area lies on the contact between rocks assigned to the Burrell Creek Formation in the east and the Cullen Batholith to the west, with the majority of the licence area underlain by the Cullen Granite. (See Figure 3)

The Early Proterozoic Burrell Creek Formation is composed of greywacke, siltstone and shaley sediments of turbiditic affinity. The Burrell Creek Formation sediments have been intruded and hornfelsed by the Early Proterozoic post-orogenic Cullen Batholith.

3.0 EXPLORATION AND RESULTS

Work completed by Billiton within the area has included stream sediment sampling, rock chip sampling and the flying of an airborne magnetic and radiometric survey. The eastern edge of the licence area has been partly soil sampled on the edge of a regional larger soil sampling grid.

3.1 Stream Sediment Sampling

A total of fourteen streams in the area have been geochemically sampled (figure 4). 5kg -2mm samples were collected and analysed for gold using the BLEG technique and -80 mesh samples analysed for Cu, Pb, Zn, W, As by AAs and XRF techniques. Gold results are shown in figure 5. Most values obtained were low, however on the eastern edge of the EL one value of 11.8 ppb was obtained which, upon follow-up, appears to be sourced further to the east.

Cu, Pb and Zn results are presented on figure 6 with only low order results being obtained (maximum values: 34, 34 and 140 ppm respectively). Sn, W and As results are presented in Figure 7 and, again, only generally low order results were obtained (maximum values: 450, 120 and 88 respectively). The 450 ppm Sn values appear explained by high background Sn-anomalism in granite samples obtained elsewhere in the surrounding region.
3.2 Soil Sampling Results

2kg -3mm soil samples were taken and analysed for Au using the BLEG technique within the licence area as part of the sampling of a larger grid area further to the east of the licence (See Figures 17, 18). Values are generally low however a single point anomaly of 42 ppb Au, corresponding to a small uneconomic quartz blow, was detected.

-80 mesh samples were also collected and analysed for Cu, Pb, Zn and Sn, Bi, As by AAS and XRF techniques. Results are presented on figures 19 and 20. Results are generally low and no anomalies warranting follow-up were detected.

3.3 Rock Chip Sampling

Two rock chip samples were taken within the licence area and analysed for Au using a 50gm fire assay technique and for Cu Pb and Zn via AAS and for Sb, W and As via XRF techniques. (See Figures 8 to 11).

With the exception of a 210 ppm Sn result (high granite background?) samples are not considered to be base-metal anomalous and the Au values obtained down-grade the areas prospectivity.

3.4 Geophysics

An airborne magnetic/radiometric survey was conducted over the area by Aerodata on behalf of Billiton. Total magnetic intensity, potassium uranium, thorium and total count contours of the respective geophysical data is shown in figures 12 to 16.

Magnetic contours display a flat magnetic response. Potassium, Uranium, Thorium and total count radiometric data defines the contact between the Burrell Creek Formation sediments and the Cullen Batholith.

4.0 CONCLUSIONS

No geophysical or geochemical anomalies warranting additional follow-up have been generated within the licence area. No further work is recommended.
5.0  ESTIMATED EXPENDITURE

Estimated Billiton Expenditure on EL 4963 to end October 1991 was:

- Staffing and Support: 2,490
- Tenement Costs: 1,160
- Admin/Services AHO: 364

Total: $4,014

Mr R. J. Young has verbally advised Billiton that his expenditure prior to Billiton's entry into the option agreement had totalled approximately $2500 consisting of stream panning and associated travelling costs.

Total expenditure to end October, 1991 was therefore approximately $6514.
LEGEND:

+: GRANITE
F: FAULT
LEGEND:

- BAuG BCL Stream Sediment Sample Location
- 99868 - Stream Sediment Sample Location Number
LEGEND:
- BAuG BCL Stream Sediment Sample Location
6,24,125 - Cu, Pb, Zn Results in ppm
LEGEND:

- BAuG BCL Stream Sediment Sample Location
- 90,20,28 : Sn, W, As Results in ppm
- <10 : Below Limit of Detection

Billiton Australia Gold Pty Ltd

MOUNT TODD J. V.
NORTHERN TERRITORY

EL 4963
STREAM SEDIMENT
Sn, W, As (ppm) RESULTS

Author: KK
Date: 1/9/91
Scale: 1:25,000

Drawing No.: KATH
Fig. No.: 7
LEGEND:

250777 - Rock Chip Sample No.

● (5) - Sample of Rock Float or Subcrop (Radius of Area Sampled in Metres)

→ (2) - Composite Sample (Showing Length in Metres)
LEGEND:
- (5) - Sample of Rock Float or Subcrop (Radius of Area Sampled in Metres)
- (1) - Composite Sample (Showing Length in Metres)
0.05 - Au Results in ppm
<0.01 - Below Limit of Detection
LEGEND:

- Sample of Rock Float or Subcrop
- Composite Sample
4,10,10 — Sn, W, As Results in ppm
BLD < 4 — Below Limit of Detection
SURVEY SPECIFICATIONS

AIRCRAFT
VH-ADH Cessna 206g Stationair II

MAGNETOMETER
Split beam cesium scintrex v201
RESOLUTION 0.04 nanotelsa
CYCLE RATE 0.3 second
SAMPLE INTERVAL 15 metres

SPECTROMETER
Geometrics exploranium GR8006
VOLUME 16.78 litres
CYCLE RATE 1.2 seconds
SAMPLE INTERVAL 62 metres

DATA ACQUISITION
8 channel watanabe mc 6700 chart recorder
aerodata digital acquisition system
hewlett packard 9825 computer

FLIGHT LINE SPACING
TRaverse LINES 300 metres
TIE LINES 3000 metres

FLIGHT LINE DIRECTION
TRaverse LINES 090-270 degrees
TIE LINES 000-180 degrees

SURVEY HEIGHT
80 metres - mean terrain clearance

FLIGHT PATH RECOVERY
onto a.m.g. controlled recovery photos
SURVEY SPECIFICATIONS

AIRCRAFT
VH-ADH Cessna 206g Stationair II

MAGNETOMETER
Split beam cesium scintrex v201
RESOLUTION 0.04 nanotesla
CYCLE RATE 0.3 second
SAMPLE INTERVAL 15 metres

SPECTROMETER
Geometrics exploranium GR8008
VOLUME 16.79 litres
CYCLE RATE 1.2 seconds
SAMPLE INTERVAL 62 metres

DATA ACQUISITION
8 channel watanabe mc 6700 chart recorder
aerodata digital acquisition system
hewlett packard 9825 computer

FLIGHT LINE SPACING
TRAVERSE LINES 300 metres
TIE LINES 3000 metres

FLIGHT LINE DIRECTION
TRAVERSE LINES 090-270 degrees
TIE LINES 000-180 degrees

SURVEY HEIGHT
80 metres - mean terrain clearance

FLIGHT PATH RECOVERY
onto a.m.g. controlled recovery photo
AIRBORNE SURVEY SPECIFICATIONS

RECORDING INTERVAL:
- Magnetic: 0.50 second sampling
- Spectrometer: 1.20 second sampling

NOMINAL TERRAIN CLEARANCE: 80 metres mean terrain clearance

NOMINAL LINE SPACING:
- Traverse lines: 300 metres
- Tie lines: 3.0 km
AIRBORNE SURVEY SPECIFICATIONS

RECORDING INTERVAL:
- **Magnetite**: 0.30 second sampling
- **Spectrometer**: 1.20 second sampling

NOMINAL TERRAIN CLEARANCE: 80 metres mean terrain clearance

NOMINAL LINE SPACING:
- Traverse lines 300 metres
- Tie lines 3.0 km

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Billiton Australia Gold Pty Ltd.

**Project:** MOUNT TODD J. V. NORTHERN TERRITORY

**Title:** EL 4963 THORIUM CONTOUR MAP

**Author:** KK
**Date:** 12/91
**Scale:** 1:25,000

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SURVEY SPECIFICATIONS

AIRCRAFT
VH-ADH Cessna 206g Stationair II

MAGNETOMETER
Split beam cesium scintrex v201
RESOLUTION 0.04 nanotesla
CYCLE RATE 0.3 second
SAMPLE INTERVAL 15 metres

SPECTROMETER
Geometrics exploranium GR800B
VOLUME 16.78 litres
CYCLE RATE 1.2 seconds
SAMPLE INTERVAL 62 metres

DATA ACQUISITION
8 channel watanabe mc 6700 chart recorder
aerodata digital acquisition system
hewlett packard 9825 computer

FLIGHT LINE SPACING
TRaverse lines 300 metres
TIE lines 3000 metres

FLIGHT LINE DIRECTION
TRaverse lines 090-270 degrees
TIE lines 000-180 degrees

SURVEY HEIGHT
80 metres - mean terrain clearance

FLIGHT PATH RECOVERY
onto a.m.g. controlled recovery photos
ONGOING WORK

It is my intention in the forthcoming year to revise all the exploration data to define if any ground is worth pegging. This revision will be carried out both in the field & in the administration office.

EXPENDITURE

My expenditure for the next twelve months will be no less than one thousand dollars.