



**CHALICE**  
GOLD MINES LIMITED

# CHALICE GOLD MINES LIMITED

## HIGHLIGHTS

### Quarterly Report to 31 December 2006

#### Eastern Goldfields

- Higginsville
- Chalice

- An Induced Polarisation (IP) survey has defined five coherent chargeability anomalies south of the Chalice mine.
- An additional gold target area (Cowan Mission Fault) has been outlined on Lake Cowan, Higginsville Project.
- Partial leach sampling at Yandearra has defined a new gold anomaly at the West Yule Prospect.
- Project and investment assessment continued to identify acquisition and joint venture opportunities.

#### West Pilbara

- Yandearra

#### Murchison

- Gnaweeda

#### Laverton

- Wilga

#### CAPITAL STRUCTURE

##### Issued Capital:

Shares	72,800,000
Options	5,825,000

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## 1.0 HIGGINSVILLE

At Higginsville, a program of regional target review has been undertaken during the quarter.

This work highlights the Nawock and greater Lake Cowan area as the priority target area for the forward exploration focus.

Previous exploration in the area is limited and comprises broad spaced east-west traverses over the interpreted southern extension of the Zuleika Shear Zone (Poseidon Thrust) and Mission Fault (a splay off the Zuleika Shear that runs down through the Norseman gold camp). Both the Zuleika Shear Zone and the Mission Fault are considered important regional structures closely associated with several large gold camps (including Norseman and Higginsville).

A program of regional target review has been completed during the quarter. The historical geology, geochemical and geophysical datasets were reviewed together with the recently acquired multi-element geochemistry and SAM (sub-audio magnetics) data to generate priority gold targets in the greater Lake Cowan area.

This work has identified a new target area, named Cowan Mission Fault (CMF) Prospect, which is located approximately 2km south of the Nawock Prospect. The CMF Prospect is defined as a structurally complex area along the interpreted position of the Mission Fault.

A strong north-northeast trending SAM anomaly locally transgresses the interpreted stratigraphy and is largely coincident with the area of interpreted structural complexity. Limited broad spaced, shallow historical drilling in the area has returned zones of alteration and foliation, but has not provided a definitive test of the target area. The presence of porphyry within the target area, which provides a rheological contrast, further enhances the prospectivity of the target area.

In addition to this newly defined target, the regional review has also confirmed the prospectivity of the four pre-existing priority targets in the greater Lake Cowan area, which include Nawock and Nawock East. A plan showing the defined target areas is presented in figure 1.

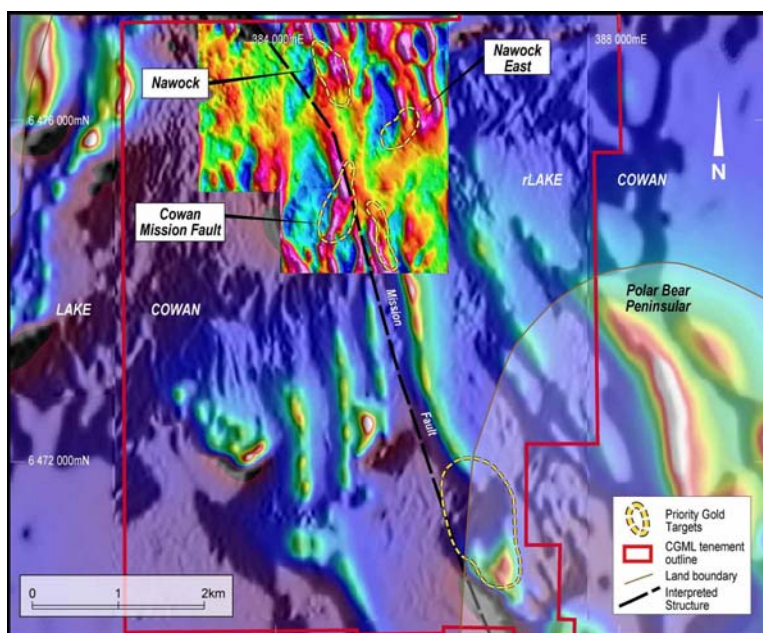


Figure 1: Lake Cowan area showing defined target areas on image of MMR superimposed on aeromagnetics.

## 2.0 CHALICE

A 3D IP survey was undertaken during the quarter to delineate further targets in the near mine environs, south of the Chalice Mine. The Minsys4 prospect is located south of the open pit where the regionally NNW trending greenstone sequence swings into a northerly trend, the amphibolite package thickens compared to material along strike, and broad zones of alteration and gold anomalism are developed in drilling. The area around MinSys4 has potential for deeper blind targets. The 3D IP survey was designed to locate gold mineralisation associated with disseminated sulphides within the mine sequence likely at moderate depths (below 100m from surface).

Preliminary interpretation of the modeled 3D IP data has identified at least five coherent chargeable anomalies to the south of the Chalice mine (Figure 2). The chargeable anomalies are sited between 100m to 300m vertical depth. The northern most IP anomaly is partially coincident and immediately to east of the Minsys 4 prospect and potentially represents a zone of increased sulphide intensity peripheral to the historical drilling.

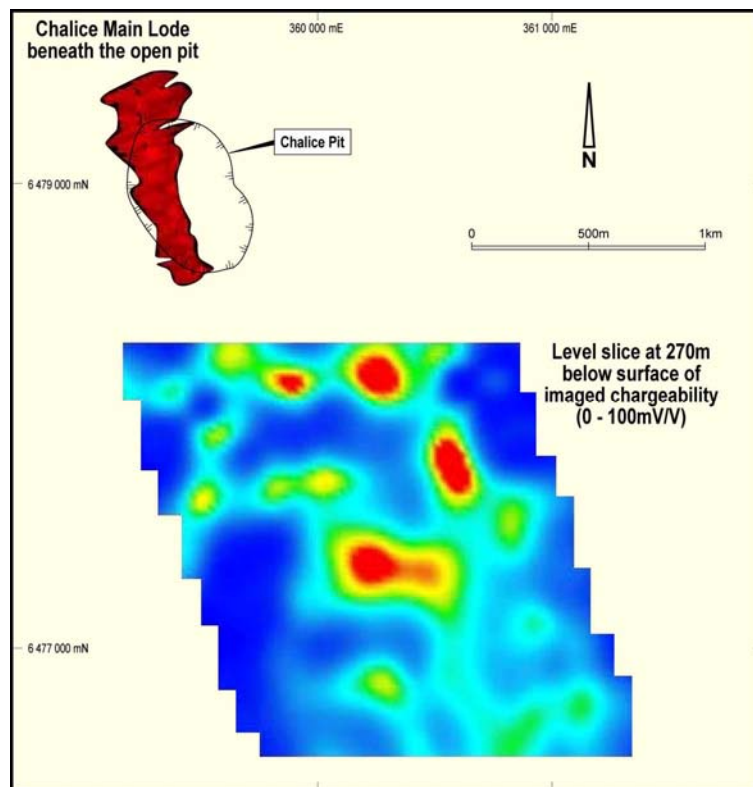


Figure 2: Plan view of the Chalice open pit and a level slice at 270m below surface of the imaged chargeability from the 3D IP survey.

Further south four additional coherent chargeability anomalies have been defined predominantly in the footwall of the Chalice mine sequence. All of these southern chargeability anomalies are untested by previous drilling.

The 3D IP anomalies will be integrated with the existing geochemical, geological and geophysical datasets to prioritise targets for RC and/or diamond drill testing.

### 3.0 YANDEEARRA

During the quarter final assay results were received from aircore drill testing at the Woomerina Prospect and from regional surface geochemical sampling programs in the West Yule area (Figure 3).

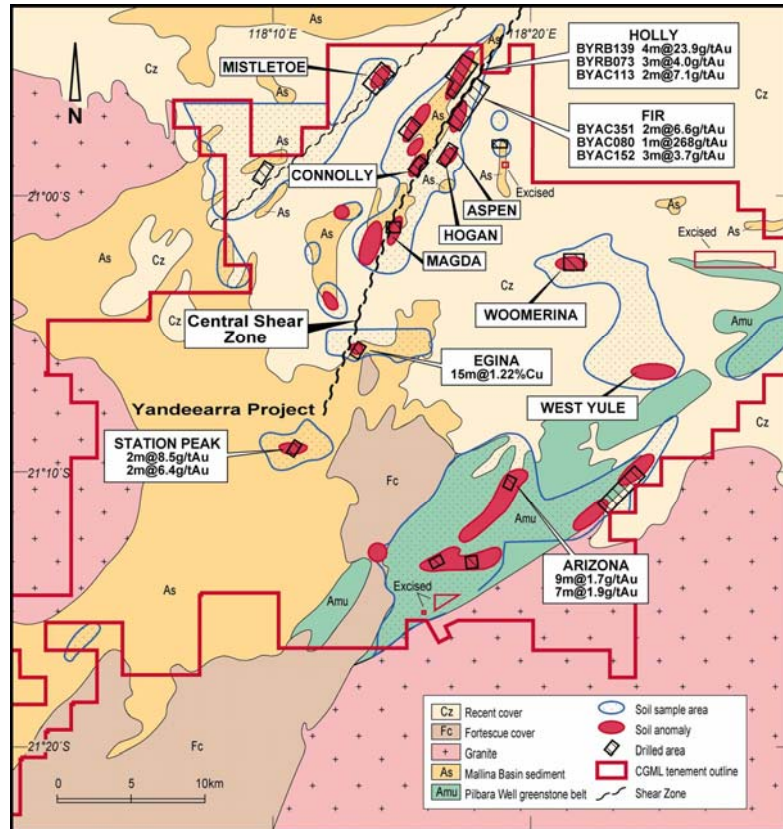


Figure 3: Yandeearra Project - surface geochemical anomalies and historical drill results

At Woomerina, drilling tested a 1km X 500m gold and arsenic vacuum sample anomaly, in an area of largely shallow cover. The anomaly is situated over an east-west orientated structure, parallel to the Mallina Shear Zone to the north.

Drilling returned low level gold anomalism in several drillholes, associated with variably quartz veined zones in a sequence of sandstone and siltstone. The best result of 5m @ 0.80g/t Au from 4m (including 1m @ 2.25g/t Au from 8m) was hosted in a quartz veined siltstone in CYAC197. Anomalous assay results are tabulated in Table 1.

Prospect	Hole_Id	North	East	Width	Interval	Grade (ppm Au)	Comments
WOOMERINA	CYAC197	7672027	641605	5m	4-9m	0.80	Quartz veined siltstone
			<i>incl</i>	<i>1m</i>	<i>8-9m</i>	<i>2.25</i>	
WOOMERINA	CYAC198	7672050	641601	1m	7-8m	0.78	Lower saprolite
WOOMERINA	CYAC201	7672135	641600	1m	37-38m	0.57	Sandy siltstone
WOOMERINA	CYAC202	7672159	641600	2m	8-10m	0.92	Medium grained siltstone

Table 1. Anomalous assay results, Woomerina Prospect  
Analysed by aqua regia technique.  
Based on 0.50 g/t Au lower cut off and minimum 1m internal waste.

A partial leach sampling program has outlined a new area of gold and arsenic anomalism southeast of the Woomerina Prospect extending to the western limits of the Yule River. The anomaly, named West Yule, is a broad, coherent, 5km long northeast trending area of gold and arsenic anomalism in an area of transported sand cover.

The defined target areas within the Yandearra Project will now be prioritised for appropriate follow up exploration.

#### 4.0 GNAWEEDA

Teck Cominco Australia Ltd (“Teck Cominco”), as project manager, reported that results from a geochemical sampling program over the southern extension of the Fairway Magnetic Package (FMP) outlined a weak southeast trending gold anomaly associated with the existing Central Bunarra Prospect. Additional geochemical sampling is planned beyond the current area.

#### 5.0 WILGA

Results from a program of soil geochemical sampling completed in the previous quarter have been received. The program has outlined two separate >25ppb gold in soil anomalies coincident with a semi-continuous banded iron formation (BIF) horizon in the central portion of the project (Figure 4). Limited historical shallow drilling in this area has previously returned narrow intervals of gold mineralisation associated with variably quartz veined BIF.

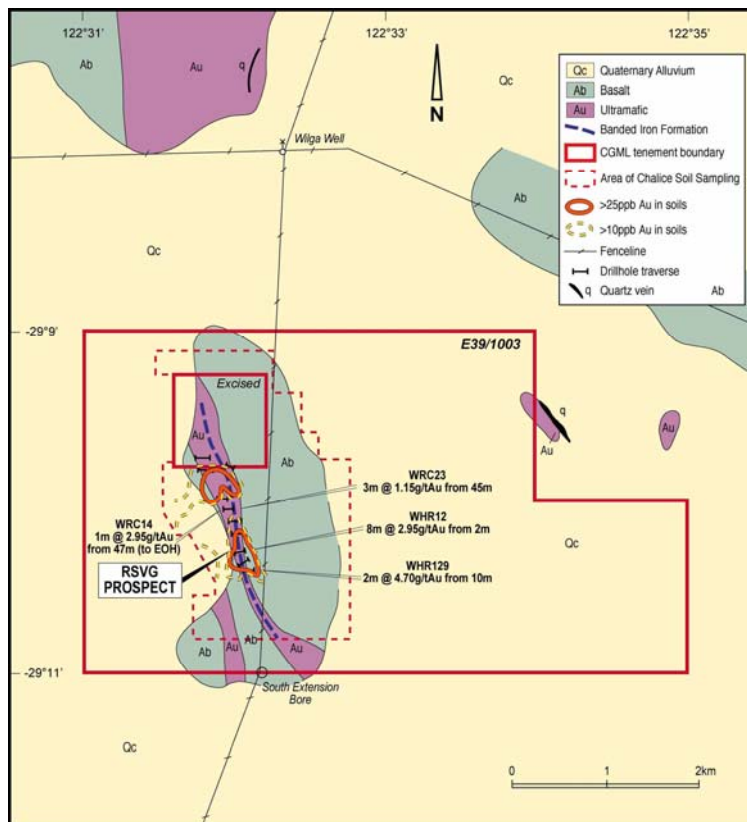


Figure 4: Plan view of the Wilga Project showing the recently defined gold in soil anomalies

The defined soil geochemical anomalies remain open to the west on several traverses. A program of soil sampling and auger/vacuum drilling is proposed to test to the area to the west and east of the defined anomalies, where thin cover could potentially be masking mineralisation at depth.

Targets areas defined by these ongoing programs will be assessed and prioritised for further exploration.



ANDREW BANTOCK  
Executive Chairman

The information in this report that relates to Exploration Results is based on information compiled by Mr Bryan Alexander, a full-time employee of Archaean Exploration Services Pty Ltd, who is a Member of the Australian Institute of Mining and Metallurgy. Archaean Exploration Services Pty Ltd consults to Chalice Gold Mines Ltd. Mr Alexander has sufficient experience in the field of activity being reported to qualify as a Competent Person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves, and consents to the release of information in the form and context in which it appears here.