# Koka Project Stands to be a Highly Profitable Gold Mine: Scoping Study

Chalice Gold Mines Limited ABN 47 116 648 956

30 October 2009

## Highlights

- Scoping Study finds Koka deposit at the Zara Project in Eritrea has the potential to be financially robust based on a gold price of US$800 an ounce
- Koka forecast to produce an average of 110,000 ounces a year at a cash cost of US$424 an ounce
- Total production of 677,000 ounces over six years from 944,000 ounce current resource with potential to expand current resource base through further drilling
- Capital costs estimated at US$97.8 million
- Feasibility Study to be completed by mid-2010
- Potential to significantly improve project economics by further optimising pit design based on planned geotechnical drilling

**INVESTMENT HIGHLIGHTS**

**High grade gold deposit (944,000 oz @ 5.8 g/t)**

**Scoping study completed**

**Feasibility study by Mid-2010**

**Medium term production potential**

**Large underexplored ground position with potential for discovery of additional resources**

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Chalice Gold Mines Limited (ASX: CHN – "Chalice") is pleased to announce that an independent Scoping Study has found that its Koka Gold Deposit ("Koka" or "the Project") within the Zara Project in northern Eritrea (Chalice 80% and Dragon Mining Limited 20%) has the potential to underpin a highly profitable gold mining operation.

Chalice will now proceed with a full Feasibility Study, which it expects to complete by mid-2010, based on forecast annual production of 110,000 ounces at a cash cost of US$424 an ounce over a six-year life.

"The Scoping Study shows that Koka has the potential to be a lucrative project – and that's based on a much lower gold price than is currently the case," said Chalice Executive Chairman, Tim Goyder.

"The cash costs will be low by world standards and the mining will be relatively straightforward, making Koka an extremely attractive project."

"There is also significant potential to increase the size of the project by drilling the numerous exploration targets we have at Zara."

## 1. Scoping Study Outcomes

The Scoping Study, which was undertaken by Lycopodium Minerals, estimates that the Koka Project will have capital costs of US$97.8 million and average cash operating costs of US$424 per oz over a project life of approximately six years, with annual production averaging approximately 110,000 oz per annum.

Key parameters of the Project as outlined in the Scoping Study are as follows:

| Parameter | |
|---|---|
| Average gold production | ~110,000 oz per annum |
| Life of mine | ~ 6 years |
| Total capital costs | US$97.8 million |
| Total cash costs | US$424 per oz |
| Total gold mined | 712,000 oz |
| Gold recoveries | 95% |
| Gold produced | 677,000 oz |
| Plant capacity | 500,000 tpa |
| Mining costs | US$241 per oz |
| Processing costs | US$169 per oz |
| G&A costs | US$14 per oz |
| Total mined | 45.3 million tonnes |
| Ore milled | 3.4 million tonnes |
| Strip ratio | 12.4 |

**Table 1: Scoping Study Parameters**

The parameters exclude any funding costs, taxation and royalties.

The Project is 80% owned by Chalice and 20% owned by Dragon Mining Limited. The Government is entitled to a 10% free carried interest. In addition, the Government has the right to purchase up to a further 30% in the Project on financial terms to be agreed and which is payable to the joint venturers in consideration of diluting their respective interests.

## 2. Scoping Study Assumptions

### Resource

The Scoping Study was based on the previously released resource estimate completed by Coffey Mining (May 2009) which has not been updated for this study (Table 2). A 5,000m in-fill diamond core drill program is about to commence to improve resource confidence and this will be incorporated into a new model prior to completion of the Feasibility Study.

| | Tonnes (million) | Au (g/t) | Ounces (koz) |
|---|---|---|---|
| Indicated | 4.55 | 5.9 | 867 |
| Inferred | 0.49 | 4.9 | 77 |
| **Total** | **5.04** | **5.8** | **944** |

**Table 2: Koka Mineral Resource Reported at a 1.2 g/t Au Cut-Off**

## Mining Method

The study evaluated both open pit and underground mining by Sub-Level Caving operations. It concluded that an open pit operation was financially more attractive and a lower risk option based on operating cashflows, the nature of the mineralisation and the additional dilution introduced by the underground mining method.

Open pit design was based on optimised shells from Whittle Four-X software. A small starter pit followed by the final pit was selected as the best balance between ore production and smoothed mining movement. The mining pre-strip requires a movement of some 3.7 million tonnes of waste prior to ore mining and this expenditure is included in the capital estimate.

It was assumed all material would require drill and blast with mining being undertaken by contractor using conventional excavators and haul trucks. A sustainable mining rate of 500,000 tonnes of ore per annum was selected as the most balanced mining schedule.

The Project cash flows are sensitive to pit wall angles due to the steep terrain and high strip ratio. Subject to additional geotechnical drilling, conservative wall angles have been applied and a potential 5 degree improvement in wall angle could add $50 million to the cash flow. Geotechnical drilling will be undertaken over the coming months to improve our knowledge of ground conditions at Koka and potentially allow the re-optimisation of the pit shells to incorporate steeper pit walls.

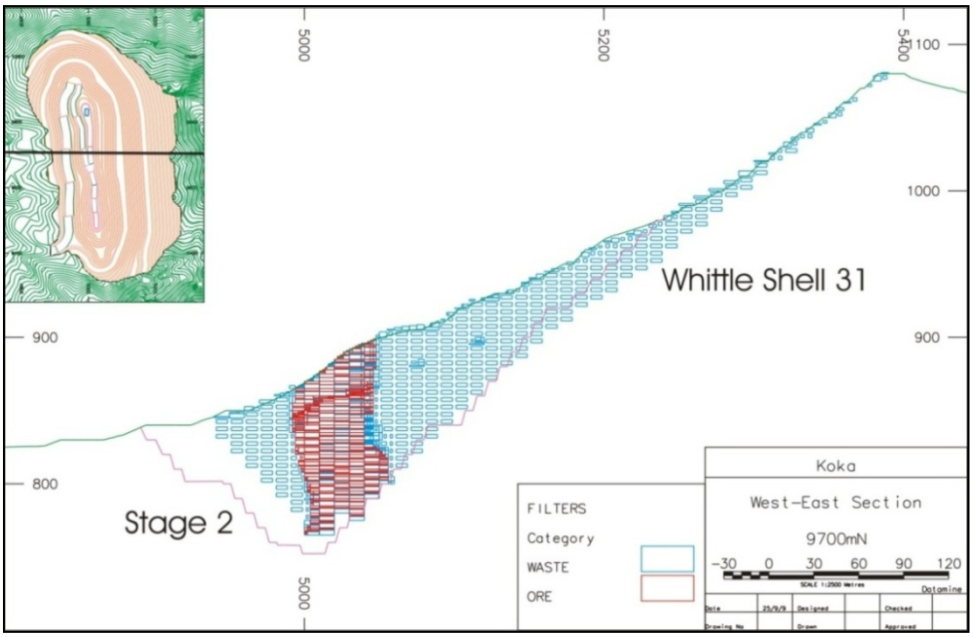


**Figure 1: Koka Pit Design and Whittle Shell**

**Processing Facilities**

The process flow sheet is based on preliminary metallurgical test work and incorporates:

- Two stage crushing followed by ball milling to 106 microns.
- Gravity concentration with intensive cyanidation of concentrate.
- Pre-leach thickening before carbon-in-leach.
- Pressure Zadra stripping circuit.
- Cyanide destruction before tailings thickening and disposal

A suitable site close to the mine is available for tailings to be retained behind a compacted earth wall constructed from mine waste.

Preliminary water drilling in the Zara catchment has confirmed that significant quantities of water are contained within the alluvial gravels. While final pump testing and modelling is still in progress, the initial results are indicative of a bore field meeting the Project's needs.

Project infrastructure involves the upgrading of some 70 kilometres of access road to provide all weather site access and the construction of an airstrip to service the mining operations.

The overall project implementation schedule estimates a total duration of 16 months from approval to commissioning.

Baseline data collection for the Social and Environmental Impact Assessment is progressing as scheduled and an agreement on the appropriate Terms of Reference for this assessment is being requested with the submission of the Scoping Study to the Department of Energy & Minerals.

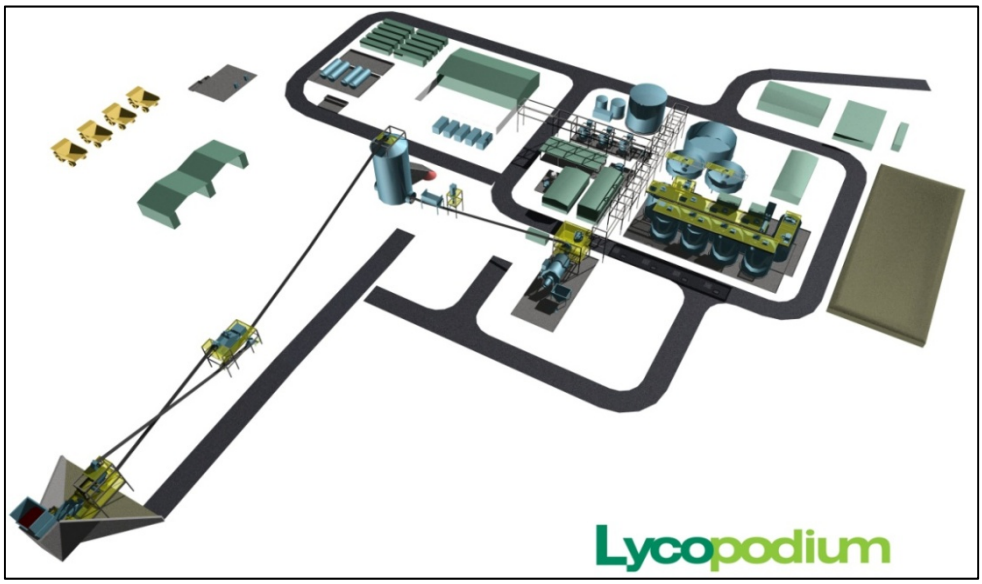


**Figure 2: Schematic of Conceptual Process Plant**

Dr Doug Jones
Managing Director

30 October 2009

**Competent Persons' Statement**

The information in this report that relates to Exploration Results is based on information compiled by Dr Doug Jones, a full-time employee and Director of Chalice Gold Mines Limited, who is a Member of the Australasian Institute of Mining and Metallurgy and is a Chartered Professional Geologist. Dr Jones 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.

The Independent Resource Estimate for the Koka deposit was prepared by Mr Brian Wolfe, whilst employed as a Specialist Resource Geologist for Coffey Mining Pty Ltd. Mr Wolfe, who is a Member of the Australasian Institute of Mining and Metallurgy, has sufficient experience in the field of Resource Estimation 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.