

# CROCODILE GOLD CORP. NI 43-101 REPORT FOSTERVILLE GOLD MINE VICTORIA, AUSTRALIA

## NI43-101 TECHNICAL REPORT

## FOSTERVILLE GOLD MINE, VICTORIA, AUSTRALIA

## PREPARED FOR CROCODILE GOLD CORP

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## IMPORTANT NOTICE

This report has been prepared as a National Instrument 43–101 Technical Report, as prescribed in Canadian Securities Administrators' National Instrument 43–101 ("NI 43–101") for Crocodile Gold Corp ("Crocodile Gold"): The data, information, estimates, conclusions and recommendations contained herein, as prepared and presented by the Authors, are consistent with i) information available at the time of preparation; ii) data supplied by outside sources; and, iii) the assumptions, conditions and qualifications set forth in this report.

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## I EXECUTIVE SUMMARY

This document provides a summary of the key changes in Mineral Resources and Mineral Reserves that have resulted from ongoing exploration and resource definition drilling and as a result of ongoing mine design and evaluation during the period 30 June 2008 and 31 December 2011.

## Location

The Fosterville Gold Mine is located approximately 20km north-east of Bendigo and 130km north of Melbourne in Victoria, Australia.

## **History and Ownership**

Gold was first discovered in the Fosterville area in 1894 with activity continuing until 1903 for a total of 28,000 ounces of production. Mining in this era was confined to the near-surface oxide material. Aside from a minor tailings retreatment in the 1930's, activity resumed in 1988 with a further tailings retreatment program conducted by Bendigo Gold Associates which ceased in 1989. Mining recommenced in 1991 when initially Brunswick Mining NL and then Perseverance Corporation Ltd from 1992 commenced heap leaching operations from shallow oxide open pits. Between 1988 and the cessation of oxide mining in 2001, a total of 240,000 ounces of gold were poured (Roberts et al, 2003).

A feasibility study into a sulphide operation was completed by Perseverance in 2003 with construction and open pit mining commencing in early 2004. Commercial production commenced in April 2005 and up to the end of December 2011 had produced 580,643 ounces of gold. In October 2007, Perseverance announced that it had entered into an agreement with Northgate Minerals Corporation (Northgate) to acquire the company. Full control passed to Northgate in February 2008. The 500,000<sup>th</sup> ounce of sulphide gold production was subsequently achieved in April 2011.

In August 2011 Northgate entered into a merger agreement with AuRico Gold Corporation (AuRico), who assumed control of Northgate in October 2011. However, in March 2012 AuRico and Crocodile Gold Corporation (Crocodile) jointly announced that Crocodile would acquire the Fosterville and Stawell mines. Crocodile ownership of Fosterville was achieved on May 4th, 2012.

## **Geology and Mineralisation**

The Fosterville Goldfield is located within the Bendigo Zone in the Lachlan Fold Belt. The deposit is hosted by an interbedded turbidite sequence of sandstones, siltstones and shales. This sequence has been metamorphosed to sub-greenschist facies and folded into a set of upright, open to closed folds. The folding resulted in the formation of a series of bedding parallel laminated quartz veins. Although visually similar to their mineralised equivalents at Bendigo (20km away), these laminated quartz veins at Fosterville are effectively unmineralised.

Mineralisation at Fosterville is controlled by late brittle faulting. These late brittle faults are generally steeply west dipping reverse faults with a series of moderately west dipping reverse splay faults formed in the footwall of the main fault. Primary gold mineralisation occurs as disseminated arsenopyrite and pyrite forming as a selvage to veins in a quartz–carbonate veinlet stockwork. The mineralisation is structurally controlled with high grade zones localised by the geometric relationship between bedding and faulting. Mineralised shoots are typically 4m to 15m thick, 50m to 150m up/down dip and 300m to 1500m+ down plunge.

| Mineral Resources - Fosterville           |            |          |          |                |           |          |                |          |          |                |
|---|------------|----------|----------|----------------|-----------|----------|----------------|----------|----------|----------------|
| Classification                            |            | Measured |          |                | Indicated |          |                | Inferred |          |                |
|   |            | Tonnes   | Grade    | Insitu<br>Gold | Tonnes    | Grade    | Insitu<br>Gold | Tonnes   | Grade    | Insitu<br>Gold |
|   |            | (kt)     | (g/t Au) | (kOz)          | (kt)      | (g/t Au) | (kOz)          | (kt)     | (g/t Au) | (kOz)          |
| Fosterville Fault Zone Sulphide Resources |            |          |          |                |           |          |                |          |          |                |
| Central                                   | Upper      | 1,968    | 2.3      | 146            | 340       | 1.69     | 18             | -        | -        | -              |
| Area                                      | Lower      | 41       | 6.12     | 8              | 1,333     | 5.44     | 233            | 1,352    | 4.41     | 192            |
| Southern                                  | Upper      | 21       | 3.32     | 2              | 458       | 2.42     | 36             | 545      | 2.24     | 39             |
| Area                                      | Lower      | -        | -        | -              | -         | -        | -              | 295      | 5.59     | 53             |
| Harrier                                   | Upper      | -        | -        | -              | -         | -        | -              | -        | -        | -              |
| Area                                      | Lower      | -        | -        | -              | 1,340     | 5.14     | 222            | 751      | 4.09     | 99             |
| Northern                                  | Upper      | -        | -        | -              | -         | -        | -              | -        | -        | -              |
| Area                                      | Lower      | -        | -        | -              | -         | -        | -              | -        | -        | -              |
| Robbin's Hill Area Sulphide Resources     |            |          |          |                |           |          |                |          |          |                |
| Combined                                  | Upper      | -        | -        | -              | 2,772     | 1.5      | 133            | 1,498    | 1.35     | 65             |
| Combined                                  | Lower      | -        | -        | -              | 55        | 3.72     | 7              | 92       | 3.32     | 10             |
|   |            |          |          |                |           |          |                | -        |          |                |
| Sulphide                                  | Upper      | 1,989    | 2.32     | 148            | 3,570     | 1.63     | 187            | 2,043    | 1.59     | 104            |
| Sulphide                                  | Lower      | 41       | 6.12     | 8              | 2,728     | 5.26     | 461            | 2,490    | 4.41     | 353            |
| Total Su                                  | lphide     | 2,030    | 2.39     | 156            | 6,297     | 3.2      | 649            | 4,533    | 3.14     | 458            |
|   |            |          |          |                |           |          |                |          |          |                |
| Total C                                   | Dxide      | 305      | 1.39     | 14             | 2,898     | 1.13     | 105            | 511      | 1.18     | 19             |
|   |            |          |          |                |           |          |                |          |          |                |
| Total Oxide                               | & Sulphide | 2,335    | 2.26     | 170            | 9,195     | 2.55     | 754            | 5,045    | 2.94     | 477            |

Notes:

- For the Mineral Resource estimate, the Qualified Person is James Llorca. His details and qualifications can be seen in Section 28 of this report.
- The Mineral Resources for the Central and Harrier Areas reported in Table I are exclusive of the Mineral Reserves for the same area (reported in Table 2 below).
- Cut-off grades applied to Mineral Resources are 0.5 g/t Au and 0.8 g/t Au for oxide and sulphide mineralisation respectively above 5050mRL (approximately 100m below surface) which is deemed to be potentially open-pitable. The Mineral Resource cut-off grade applied for material below this point is 3.0 g/t Au.
- Mineral Resources have been rounded to 1,000 tonnes, 0.01 g/t Au and 1,000 ounces. Minor discrepancies in summation may occur due to rounding.

|                           | Proven |          |                 | Probable |          |                 | Total  |          |                 |
|---------------------------|--------|----------|-----------------|----------|----------|-----------------|--------|----------|-----------------|
| Classification            | Tonnes | Grade    | In situ<br>Gold | Tonnes   | Grade    | In situ<br>Gold | Tonnes | Grade    | ln situ<br>Gold |
|                           | (kt)   | (g/t Au) | (kOz)           | (kt)     | (g/t Au) | (kOz)           | (kt)   | (g/t Au) | (kOz)           |
| Underground               |        |          |                 |          |          |                 |        |          |                 |
| Phoenix 4515RL & above    | 264    | 4.96     | 42              | 230      | 4.66     | 34              | 494    | 4.82     | 77              |
| Phoenix 4515RL to<br>4415 | -      | -        | -               | 477      | 4.15     | 64              | 477    | 4.15     | 64              |
| Ellesmere                 | -      | -        | -               | 15       | 3.84     | 2               | 15     | 3.84     | 2               |
| Harrier                   | -      | -        | -               | 929      | 4.14     | 124             | 929    | 4.14     | 124             |
| Surface                   |        |          | •               | •        |          | •               |        |          |                 |
| Johns                     | -      | -        | -               | 43       | 2.66     | 4               | 43     | 2.66     | 4               |
| O'Dwyers South            | -      | -        | -               | 59       | 2.1      | 4               | 59     | 2.1      | 4               |
| Farley's                  | -      | -        | -               | 98       | 1.92     | 6               | 98     | 1.92     | 6               |
| Tailings                  |        |          |                 |          |          |                 |        |          |                 |
| CIL                       | 296    | 8.86     | 84              | -        | -        | -               | 296    | 8.86     | 84              |
|                           |        |          |                 |          |          |                 |        |          |                 |
| Total                     | 560    | 7.02     | 126             | 1,851    | 4        | 238             | 2,411  | 4.71     | 365             |

Notes:

• For the Mineral Reserves estimate, the Qualified Person is Neil Schunke. His details and qualifications can be seen in Section 28 of this report.

- The Mineral Reserve estimate used a gold price of AUD\$1400/ounce. The cut-off grades applied ranged from 1.1 g/t to 3.7 g/t Au for underground sulphide ore depending upon width, mining method and ground conditions.
- Dilution of 10-30% and mining recovery of 70-100% were applied to the Mineral Reserves dependent upon mining method.
- Mineral Reserves have been rounded to 1,000 tonnes, 0.01 g/t Au and 1,000 ounces. Minor discrepancies in summation may occur due to rounding.
- CIL tailings are stated as contained ounces 30% recovery is expected. Recoveries are based on lab and plant test work and operating experience.

## **Current Status**

Since the commencement of commercial gold production in April 2005, the sulphide plant at Fosterville Gold Mine has produced 580,643 ounces of gold up to the end of December 2011. This production was initially sourced solely from open cut mining with underground mining starting to contribute in late 2006. The Harrier open cut was initially completed in December 2007 but then brought back into production for a short period in 2011. It is anticipated that a number of open cuts will be mined in the future to provide a small component of the ore feed to the plant. However, the underground operations are expected to be the major source of ore feed to the plant.

## **Conclusions and Recommendations**

The authors have made the following interpretations and conclusions:

- The understanding of the geological controls on mineralisation at Fosterville is high. Primary mineralisation is structurally controlled with high grade zones localised by the geometric relationship between bedding and faulting. This predictive model has lead to considerable exploration success in following the down-plunge extensions of high grade mineralisation.
- By the same token, this understanding has lead to the development of robust geological and resource models underpinning the Mineral Resource and Mineral Reserve estimates. The

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