



ASX/Media Release – 30 November 2010

## DARGUES REEF GOLD PROJECT FEASIBILITY STUDY: ROBUST GOLD MINE CONFIRMED

**50,000oz per annum GOLD MINE CONFIRMED  
DEVELOPMENT TARGETED TO COMMENCE 2011**

### HIGHLIGHTS

- **Positive Feasibility Study confirms viability of Phase 1 underground mining operation at Dargues Reef Gold Project, NSW**
- **Key Phase 1 outcomes include:**
  - Ore production rate of **330,000tpa**
  - Average annual production of **50,000oz pa**
  - Production of **248,900 recovered ounces** over an initial **6-year mine life**
  - Estimated average life-of-mine **cash operating cost of A\$628/oz** (excluding royalties and contingencies)
  - Maiden mining inventory of **1.58Mt @ 5.12g/t Au for 248,900oz**
  - First year capital requirement **A\$42 million**
  - Estimated gross **sales revenue of +A\$300 million over Phase 1 life of mine**
  - Life-of-mine pre-tax **operating profit of \$80 million**
  - **Pre-tax NPV<sub>8%</sub> of A\$47 million and IRR of 30%** using a **A\$1,250/oz gold price**
  - **Pre-tax NPV<sub>8%</sub> of A\$75 million and IRR of 42%** using current spot price of **A\$1,400**
- **40% increase in recovered metal compared with Scoping Study – 248,900oz of gold and 73,144oz of silver**
- **A\$42 million pre-production capital cost estimate includes establishment of the box-cut and 6 months underground development, plant construction (including paste plant) and tailings dam construction**
- **Excellent proximity to local infrastructure including roads and grid power – upgrade in progress**
- **Mining Permit and concentrate off-take expected to be completed Q1 of calendar 2011**



### COMPANY DETAILS

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**ASX CODE:** CRC, CRCO

**Corporate Information**  
(31 October 2010)

Shareholders	~2,000
Shares on Issue	196M
Options (CRCO)	35M
Options (Unlisted)	11M

### PROJECTS

**Majors Creek (NSW)**  
**Eugowra (NSW)**  
**Christmas Gift (NSW)**  
**Booths Reward (NSW)**



- **Targeting commencement of construction in Q2 of calendar 2011**
- **Targeting first ore production in Q1 of calendar 2012**
- **Phase 2 expansion opportunities from near-mine exploration targeted to add ounces per vertical metre, increased production rate and/or increased mine life:**
  - *Recently discovery Ruby Lode (12.6m @ 9.9g/t gold from 112 metres) located 150m north of Dargues Reef - well within development range of Dargues Reef infrastructure*
  - *Depth and strike extensions to Dargues Reef*
  - *Other near-mine and regional targets including Chinaman's, Hughan, Copper Ridge*

Australian gold company Cortona Resources Limited (ASX: **CRC**) ("Cortona" or "the Company") is pleased to report the completion of a positive Feasibility Study confirming the viability of the proposed development of the **Dargues Reef Gold Project**, part of its 100%-owned Majors Creek Gold Project located 60km east of Canberra in south-east NSW.

The Feasibility Study, which was independently prepared by Mining Plus Pty Ltd with participation and contribution from various other parties, has confirmed the technical and economic viability of the Dargues Reef Gold Project, paving the way for development of an average 50,000oz per annum gold mining operation (annual range 36,000oz to 65,000oz) with forecast low cash operating costs and an initial 6 year mine life.

This Phase 1 operation is expected to generate strong cash flows and robust economic returns, providing an excellent foundation for Cortona to continue its aggressive near-mine and regional exploration programs targeting additional resources within the broader Majors Creek Project, which are expected to extend the life of the operation, potentially increase annual gold production rates and ultimately enhance economic returns. To this end, two rigs are currently on-site.

Recent exploration has already confirmed the high prospectivity of the near-mine environment, resulting in the discovery of the Ruby Lode (*12.6m @ 9.9g/t gold from 112 metres*), located 150 metres north of the proposed Dargues Reef underground mine. Resource drilling is continuing at the Ruby Lode targeting an initial JORC resource estimate by early next year. This recent exploration success has not been incorporated in the Feasibility Study.

### **Key Feasibility Outcomes**

The Feasibility Study has confirmed the economic and technical viability of a proposed compact and efficient underground mining operation at Dargues Reef, with ore to be partially processed in a state-of-the-art 330,000tpa treatment facility located on site.

Production will commence at 270,000tpa in 2012 and ramp up to 330,000tpa in 2013, resulting in total production of 248,900oz of gold and 73,144oz of silver over a 6-year period. This mining inventory does not include the recently discovered Ruby Lode, potential depth and strike extensions at Dargues Reef, or other near mine opportunities that will offer potential to extend the Phase 1 mine life and potentially increase annual production rates.

The Dargues Reef operation will produce a combination of gravity gold and a gold concentrate which will be transported off site. No cyanide will be used on site.



Key parameters and economics of the operation are summarised below (A\$1,250/oz).

**Table 1: Key parameters and economics resulting from the Feasibility Study**

<b>Ore production</b>	330,000tpa
<b>Mining inventory</b>	1.58Mt
<b>Avg head grade over life of mine</b>	5.1g/t Au
<b>Recovered gold</b>	248,900oz
<b>Recovery</b>	95.7%
<b>Cash cost per ounce (excluding royalties and contingencies)</b>	\$628/oz
<b>First year capital expenditure</b>	A\$42 million
<b>Assumed gold price</b>	A\$1,250/oz
<b>IRR</b>	30%
<b>NPV<sub>8%</sub></b>	\$47 million
<b>Earnings Before Income Tax</b>	\$80 million
<b>Mine Life</b>	6 years

*\* All numbers are pre-tax and financing costs*

*“The Feasibility Study is a very robust document which paves the way for the development of a highly efficient underground mining operation at Dargues Reef which we expect to form the cornerstone of a long-term gold business at Majors Creek,”* said Cortona’s Managing Director, Mr Peter van der Borgh.

*“Key highlights of the Feasibility Study include the high grade mining inventory, with an average forecast head grade of over 5g/t and the low estimated cash operating costs of A\$628/oz, which would position Dargues Reef towards the lowest quartile for Australian gold producers”* he added.

*“This underpins the robust economics of the operation, which is expected to generate strong cash flows and economic returns, providing a solid foundation for us to continue with our planned exploration programs aimed at increasing our resource base, extend the life of the operation, and potentially increase annual gold production rates”* Mr van der Borgh said.

*“Our recent success in discovering the near-surface Ruby Lode, located just 150 metres north of the proposed underground infrastructure at Dargues Reef, highlights the prospectivity of the near-mine environment. We have numerous promising exploration opportunities within economic transportation distance of the proposed treatment facility, and in addition to that the Dargues Reef Gold resource remains open at depth and along strike.”*



*"We expect to be operating at Majors Creek for many years to come and we are confident that the Phase 1 operation represents just the first stage of what we believe will be a long-life gold mining business in this area, bringing new employment and many economic benefits to communities in the region,"* Mr van der Borgh added.

The Dargues Reef Gold Mine is expected to provide long-term employment for 80 people.

Over the coming few months, Cortona will continue to progress mine permitting approvals and concentrate off-take discussions, with a view to finalising each of these key outstanding matters in Q1 of calendar 2011. This will allow for project financing, in respect of which Cortona is in discussions with a number of potential parties. Concurrently, Cortona will continue to aggressively progress its near-mine and regional exploration programs with a view to adding additional gold resources for Phase 2 expansion opportunities.

The Company's current development timetable is to commence mining of the box-cut in Q2 of calendar 2011, subject to environmental approvals and completion of an appropriate project financing package. Underground development is targeted to commence in Q3 of calendar 2011 with first ore production planned for Q1 of calendar 2012, with full ore production scheduled for Q2 of calendar 2012.

### **Project Background**

The Dargues Reef Gold Project is located in south-eastern New South Wales, approximately 60km south-east of Canberra. It forms part of the greater Majors Creek Project.

The Dargues Reef Gold Project was acquired by Cortona in 2007 from Moly Mines Limited. Following successful drilling results Cortona commissioned a Scoping Study on the Project which was completed in September 2009. The positive Scoping Study indicated that additional work be undertaken to better define the Project and increase the levels of accuracy.

A Feasibility Study for the Dargues Reef Gold Project was commissioned in January 2010 and completed in November of the same year. The results of the Feasibility Study are the subject of this release.

**Table 2: Feasibility Study Contributors**

<i>Component</i>	<i>Responsibility</i>
Project management and mine design	Mining Plus Pty. Ltd.
Geology and resource definition	Runge Limited
Geotechnical	Geohart Consultants Pty. Ltd.
Environmental	R. W. Corkery & Co. Pty. Ltd.
Metallurgy	Independent Metallurgical Operations Pty. Ltd.
Process plant design and costing	Arccon Pty. Ltd.
Tailings storage facility design	Knight Piésold Pty. Ltd.
Electricity connection and negotiations	Hill Michael Associates Consulting Pty. Ltd.
Financial analysis of the project	Penrita Pty Ltd



The Study has confirmed the economic viability of the Dargues Reef Gold Project based on technical information generated by a number of independent consulting firms (**Table 2**).

The Feasibility Study defines an operation based on underground mining using a sublevel open stoping technique, along with milling and processing on site to provide gravity gold and gold in concentrate. The Phase 1 mine will operate at a production rate of approximately 330,000 tonnes per annum, producing over 248,900 ounces of gold over a 6 year mine life.

## Geology and Resources

The majority of ore identified in the Dargues Reef orebody is located in Main lode and Plums lode. The current interpretation of in-situ resources, as provided by Runge Limited (June 2010), is shown in the table below (**Table 3**). The Mineral Resource estimate complies with recommendations in the Australasian Code for Reporting of Mineral Resources and Ore Reserves (2004) by the Joint Ore Reserves Committee (JORC).

**Table 3: Statement of Mineral Resources (2.0g/t cut off)**

Type	Measured		Indicated		Inferred		Total		
	Tonnes (t)	Au (g/t)	Tonnes (t)	Au (g/t)	Tonnes (t)	Au (g/t)	Tonnes (t)	Au (g/t)	Au Ounces
Transitional			2,000	4.0			2,000	4.0	300
Fresh	378,000	7.2	816,000	6.8	420,000	4.5	1,613,000	6.3	327,000
<b>Total</b>	<b>378,000</b>	<b>7.2</b>	<b>818,000</b>	<b>6.8</b>	<b>420,000</b>	<b>4.5</b>	<b>1,615,000</b>	<b>6.3</b>	<b>327,300</b>

The Main lode ranges from 150-200 metres along strike and extends to at least 580 metres below the surface. The Main lode is steeply dipping, generally between 80°-90°. Typical mineable resource widths range from 3m to 5m. In the central area there are closely spaced stacked lodes which allow a mineable resource width of up to 20m.

The Plums lode is ~150m to the east, approximately 40 metres in strike length, and has been drill tested to approximately 300m. The lode is vertical, and averages 5m in thickness.

The resource was classified as Measured, Indicated, and Inferred. The Measured portion of the resource was predominantly defined by drill spacing of less than 20m by 20m where the continuity of mineralisation was robust and kriging efficiencies were predominantly greater than 75%. The Indicated portion of the resource was defined where the drill spacing was less than 30m by 30m and lode continuity was good. The Inferred Resource included areas of the resource where sample spacing was greater than 30m by 30m.

The deposit was estimated by Runge Limited using Ordinary Kriging (OK) grade interpolation, constrained by resource outlines based on mineralisation envelopes prepared using a nominal 1g/t Au cut-off grade and a minimum downhole length of 1m. In addition silver (Ag), copper (Cu) and sulphur (S) were estimated using Inverse Distance Squared (ID2) interpolation.

The modeled Dargues Reef deposit represents substantial zones of medium to high grade gold mineralisation. Importantly, high grade mineralisation within the deposit occurs relatively close to surface, providing early cash flow for the Project.





## Mining Method and Ore Reserves

The mining method selected for the Dargues Reef orebody is Sub-Level Open Stopping (SLOS). SLOS is a high production, bulk mining method most applicable to large steeply dipping and regular ore bodies. The application for Dargues Reef is planned to be top-down, continuous retreat stopping with pastefill. This methodology reduces development metres and provides quick access to ore, requiring minimal capital to be spent upfront whilst maximising recovery of the ore body. Mining voids will predominantly be filled with paste-fill, and rock fill will be used when available. A conservative dilution factor of 30% accommodates both planned and unplanned dilution, and has the potential to be lowered during mine production as the orebody becomes better understood.

Table 4: Statement of Ore Reserves and Mineral Inventory

Category	kt	Au g/t*	Ag g/t*	Au koz	Ag koz
Proven	476	5.32	2.63	81	40
Probable	913	5.16	2.37	152	70
<b>Proven + Probable</b>	<b>1,389</b>	<b>5.21</b>	<b>2.46</b>	<b>233</b>	
Inferred	191	4.42	1.46	27	9
<b>Total</b>	<b>1,580</b>	<b>5.12</b>	<b>2.34</b>	<b>260</b>	<b>119</b>

\*Diluted Head Grades

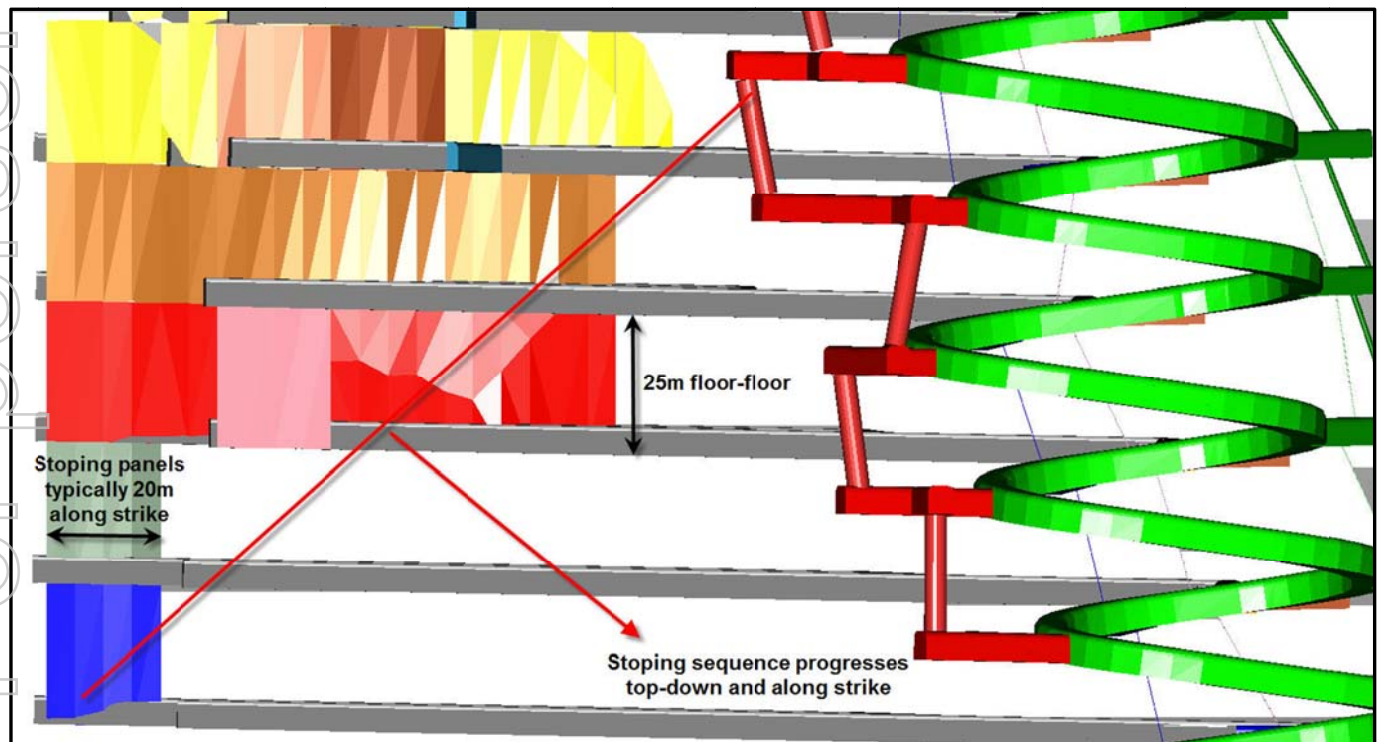


Figure 1: Longitudinal view of typical Dargues Reef stopping sequence



## Mineral Processing

Construction of the 330,000 tonnes per annum processing plant and underground development are scheduled to commence in Q2 2011. The plant comprises conventional jaw and cone crushers, primary and regrind ball mill, gravity recovery and flotation circuits, concentrate thickening and filtering, and paste plant:

- **Crushing and Ore Storage:** ore extracted from the mine will be trucked to the surface and delivered to the ROM pad where it will be stockpiled and blended. It will then be fed through a two stage crushing process. The Primary Crusher will be a single toggle jaw crusher with the Secondary Crusher being a cone crusher.
- **Grinding:** crushed ore will be ground using a 3.7 metre diameter primary ball mill, with a regrind ahead of cleaner flotation.
- **Gravity Recovery:** primary and regrind gravity recovery will be used to recover the gravity gold via a centrifugal concentrator.
- **Rougher flotation:** comprises a bank of five, 16m<sup>3</sup> forced air mechanically agitated cells.
- **Cleaner flotation:** comprises a bank of four, 4.25m<sup>3</sup> forced air mechanically agitated cells.
- **Concentrate Dewatering:** concentrate from the cleaner circuit is pumped to the 3.5m diameter high rate concentrate thickener followed by concentrate filtration to produce a damp cake for transport.
- **Tailings Disposal:** A valley fill tailings storage facility has been designed for the project, with a capacity to hold ~65% of the tailings, with ~35% being returned underground as paste fill.
- **Total Recovery:** approximately 48% of gold will be recovered from gravity and 47.7% will be recovered from the concentrate, giving an overall recovery of 95.7%.

## Infrastructure

Site infrastructure for Dargues Reef is required to be established during the construction phase. Major elements of infrastructure including internal roads, office buildings, site earth works and boxcut have been quoted for by appropriate suppliers and contractors.

Power for the mine will be sourced from the existing 22kV Braidwood feeder that connects to the Captains Flat 66/22kV Zone Substation. The mine supply will be reticulated across Cortona owned land to the processing plant and underground mine.

## Permitting

The Dargues Reef Gold Project is considered a Major Project under Section 3A of the NSW EP&A Act. Approvals are currently being sought under this Act and are progressing in line with the project schedule. The public consultation period for the Environmental Assessment of the Project has recently been completed and responses to the submissions are currently being prepared.

Modification to the current Mining Lease (ML103) has been submitted to the Department of Planning and Infrastructure. The mining lease is expected to be approved in line with the approval of the Environmental Assessment.

The approval process to construct and operate the Tailings Storage Facility (TSF) is advancing with the NSW Dam Safety Committee.



## Capital Costs

The capital cost estimate provided in **Table 5** includes all on-site components of the project, as well as the indicative capital items required for offsite CIL processing.

The capital cost incurred in the first year of the project is approximately \$42 million, with capital expenditure declining steadily over years 2 – 4 of the project; this is largely driven by underground development. Total capital cost for the project, including contingency, is \$75 million over the LOM. No capital expenditure occurs after year 4 following the completion of the decline. All other major capital items have largely been expensed during the first year of the project.

**Table 5: Capital Cost Breakdown (Life of Mine)**

Facility / Element	Cost A\$M
Underground Mining	\$36
Process Plant	\$26
Infrastructure	\$8
Environmental Bonds	\$2
Pre-Production Opex	\$3
<b>Total (including Contingency)</b>	<b>\$75</b>

## Operating Costs

Operating costs for the Dargues Reef Gold Project (**Table 6**) have been estimated using indicative pricing received from several prospective mining contractors undertaking the underground mining operation, 330,000tpa processing plant feed rate operated by Cortona, and includes indicative transport and off-site treatment costs for the gold concentrate.

**Table 6: Shows key operating cost components**

Area	Cost A\$M
Underground Mining	\$94
Processing	\$51
Off-site Costs	\$8
Admin Costs (including royalty)	\$13
<b>Total (including contingency)</b>	<b>\$166</b>

## Financial Analysis

The Feasibility Study used a long term Australian Dollar gold price of \$1,250 an ounce. Given the current strong outlook for gold the Company considers the Dargues Reef Gold Project to be financially attractive, with a Net Present Value (NPV) of \$47 million and an internal rate of return (IRR) of 30%. A financial summary of the project is provided below in **Table 7**.





**Table 7: Financial Summary of the Dargues Reef Project**

	<b>Feasibility Study A\$M</b>
Total Revenue	\$313
Total Operating Costs	\$166
Total Capital Cost	\$75
Salvage Value (plant, land and Infrastructure)	-\$8
Net Operating Margin	\$80
NPV (8%)	\$47

The financial analysis uses real dollars and NSW I & I Royalties. A percentage contingency has been carried on capital and operating costs. All large cost items have indicative quotes supplied and the accuracy of the study is to a feasibility study requirement.

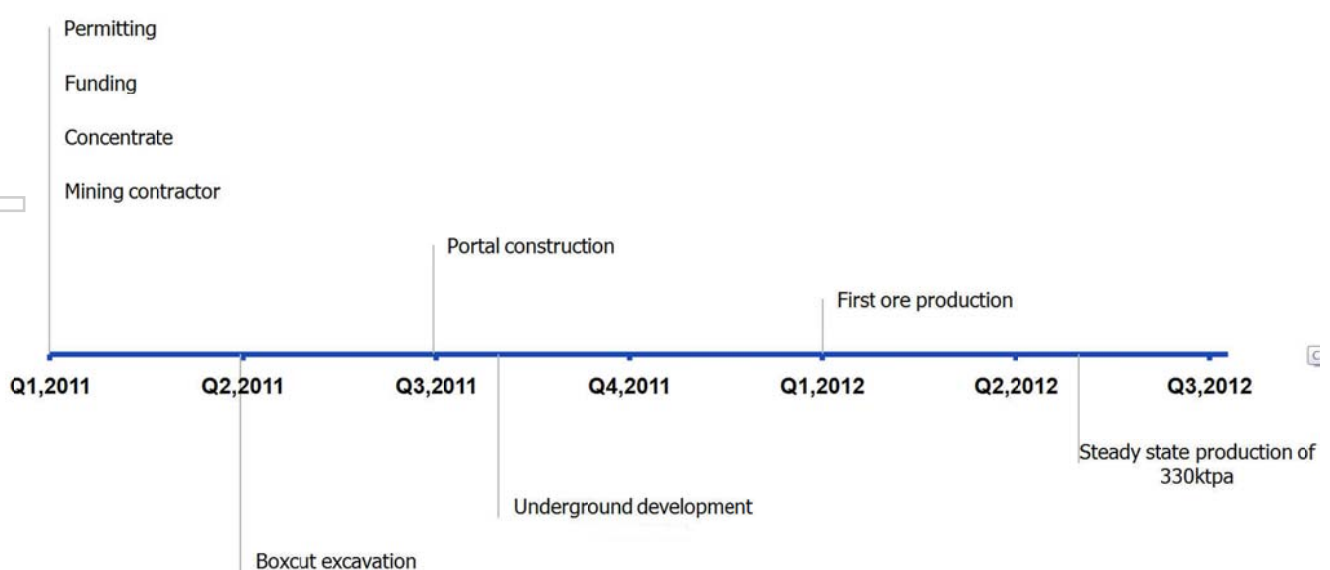
#### **Development Timing**

The Dargues Reef Gold Project is ready to be progressed to the mine development stage following the granting of the relevant approvals, execution of concentrate off-take agreement and project financing.

Mining of the boxcut is scheduled to commence in Q2 of calendar 2011, with underground development commencing in Q3 of the same year. First ore is expected in Q1 of calendar 2012 with full ore production being reached in Q2 of calendar 2012.

The critical path for the Project is the commencement of underground development. Key milestones for this development are shown in 2.

#### **Cortona Dargues Reef Pre-production Project Milestones**



**Figure 2: Dargues Reef Project, Major Milestones (Underground Development)**



## Closing Statement

The Dargues Reef Feasibility Study has been managed by Cortona and conducted by industry expert consultants. The study confirms the viability of an underground gold mining operation at Dargues Reef with a negligible environmental footprint. Concentrate off-take and mine Permitting are at advanced stages and expected to complete in Q1 2011.

This initial phase of mining at Dargues Reef is expected to provide an excellent springboard for increases in annual production and future mine life as additional Resources and Reserves are identified. Cortona believes that this upside is achievable following the discovery of several high grade lodes within development range of the current mine design, most notably the recent discovery of the Ruby Lode.

Yours Faithfully

Peter van der Borgh  
Managing Director

For further information please contact:

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**ABOUT CORTONA**

*Cortona is an emerging Australian gold company which is focussed on the exploration and development of its 100%-owned Majors Creek Project, located 60km east of Canberra in New South Wales, where it is currently completing a Definitive Feasibility Study (DFS) on the Dargues Reef Gold deposit.*

*Majors Creek was the largest historic alluvial goldfield in NSW producing more than 1.25 million ounces. The Dargues Reef deposit is expected to be the Company's first operating mine following positive Scoping Study results indicating average annual production of 45,000 ounces over an initial mine life of 5 years.*

*The Definitive Feasibility Study is on schedule to be completed on time and on budget in November 2010, paving the way for project financing and development to proceed in 2011, with a target of first gold production by the end of next year.*

*Cortona's multi-pronged plan is to progress the Dargues Reef DFS in conjunction with aggressive near-mine and regional exploration programs to underpin a long-term gold production business.*



### **Competent Person's Statement**

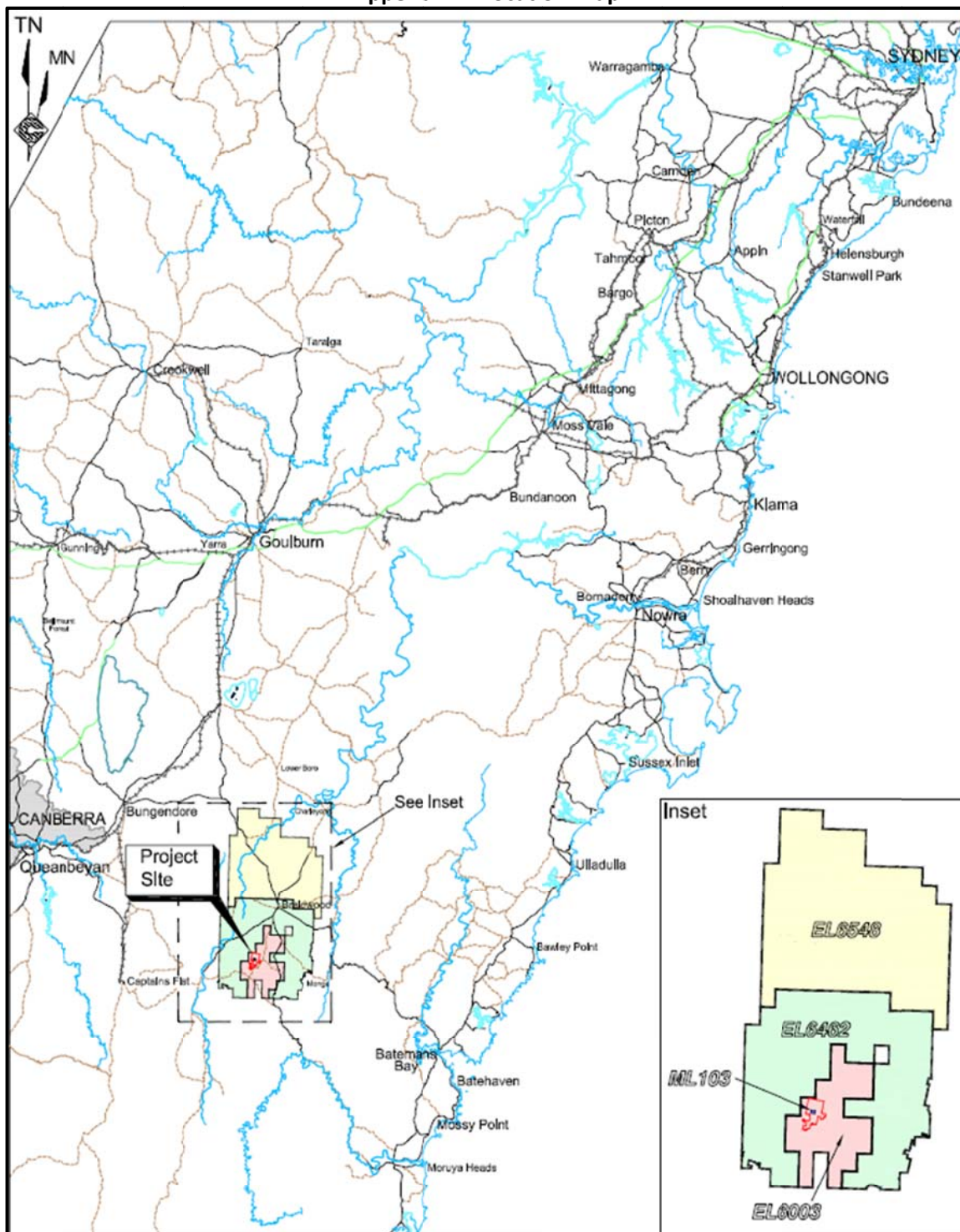
*Information in this report relating to Mineral Resources has been completed by Mr. Aaron Green of Runge Ltd., who is a member of the Australasian Institute of Mining and Metallurgy. Mr. Green has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a 'competent person' under the 2004 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Mr. Green consents to the inclusion of the data in the form and context in which it appears. The contents of this report that relate to geology and historical exploration are based on information compiled by Mr Peter van der Borgh, who is a Professional Geologist and Fellow of the Geological Society. He has sufficient experience relevant to the style of mineralisation and types of deposit under consideration and to the activity being undertaken to qualify as a 'Competent Person' as defined in the 2004 Edition of the JORC Code. Mr. van der Borgh consents to the inclusion in this report of the matters compiled by him in the form and context in which they appear.*

*The information in this report that relates to Majors Creek – Dargues Reef Gold Project mining section ore reserves estimates is based on information compiled by Mr. Ken Larwood who is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the mining method undertaken to qualify as a Competent Person as defined in the JORC Code (2004). Mr. Ken Larwood is a full time employee of Mining Plus Pty Ltd and consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.*

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### Appendix 1: Location Map



- REFERENCE
- Project Site Boundary
  - Major Road
  - Minor Road
  - Railway
  - Creek / River

SCALE 1:1 250 000



Mineral Authority Source: Blg Island Mining Pty Ltd

LOCALITY PLAN

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### Appendix 2: Dargues Reef Site Layout Plan

