

Pre-Feasibility Study Confirms Low Cost, Early Payback, Gold Project at Second Fortune

Exterra Resources Limited ACN 138 222 705

ASX Code: EXC

www.exterraresources.com.au

**Issued Capital:** 

Ordinary Shares: 181.2m Options: 20.0m

Cash (31 March 2014): \$621,000

## **Directors and Management:**

John Davis
Managing Director

Justin Brown

Non-Executive Director

**Gary Morgan** 

Non-Executive Director

**Peter Cole** 

Non-Executive Director

**Dennis Wilkins** 

Company Secretary

24 July 2014

- Projected mine revenue A\$80 million (at current A\$1400/oz Au price)
- Projected net cash flow including all capital and taxes of A\$17.0 million
- Mining Inventory of 61,500 ozs at 9.4 g/t Au
- Production of 56,600 oz of gold over 2.5 year initial mine life
- Low C1 cash operating cost of A\$720/oz of gold recovered
- Low pre-production Capital cost of A\$5 million
- Regulatory Approvals in place to commence mining
- Main Lode open at depth and along strike
- Adjacent Footwall and Hanging Wall lodes contain further Resources of 54,600 ozs

Perth based Exterra Resources Limited (Exterra) is pleased to announce the results of the Pre-Feasibility Study (PFS) into the viability of mining existing gold resources at the Second Fortune underground gold mine at Exterra's 100% owned Linden Gold Project, 220km NNW of Kalgoorlie in Western Australia.

The PFS has confirmed a robust, low capital, low operating cost, gold mining project.



The PFS is based on underground mining of the Second Fortune main lode with ore processed off-site under an Ore Purchase Heads of Agreement with Saracen Gold Mines, with the ore being delivered to Saracen's Carosue Dam processing plant 80km to the south. Exterra has all regulatory Approvals in place to commence mining at Second Fortune.

The project is expected to deliver free cash for Exterra of approximately \$17 million over the initial mine life of 2.5 years. This includes capital pay back, taxes, royalties and other operating costs.

Exterra has said "The results of the PFS are very positive for us as it shows we can establish the project quickly, generate early cash flow and pay back the up-front capital within a short time frame on existing reserves."

"We will continue to expand the Second Fortune Main Lode resource with further drilling at depth and along strike and also determine the viability of mining the Footwall, Hanging wall and West lodes at Second Fortune, which are adjacent to the Main Lode. We will also continue our exploration drilling of a number of high priority prospects and targets on the Linden Project area."

Average annualised production is estimated at 20,000 oz gold.





300 km Wyndham National Highway Kununurra DARWIN National Routes Highways Broome Fitzroy Arterial Roads Other Roads Sandfire Port Hedland Karratha NT Nullagine Newman Pannawonica Western Minilya Australia Carnarvon Meekatharra Overlander SA Mt Magnet averton LINDEN Geraldton ADELAIDE Kalgoorlie Coolgardie Eucla Northam Norseman PERTH Esperance Bunbury Ravensthorpe Albany

**Figure 1: Linden Project Location** 



6,850,000 mN 400,000 mE 350,000 r 500,000 r LAVERTON Mount Morgans **Granny Smith LEONORA** Wallaby 6,800,000 ml Sons of Malcolm Gwalia Sunrise Dam Eucalyptus Red October Zelica • **Butcher Well** Fortitude 6,750,000 mN KOOKYNIE <u> Linden Project -</u> Tin Dog econd Fortune Red October -Safari Bore **Carosue Dam** Deep South **Haul Road Porphyry**▲ 6,700,000 mN Wallbrook Anglo Saxon Carosue Dam 6,650,000 mN Lindsays Kurnalpi LEGEND Kanowna Belle Main Public Roads Red October - Carosue Dam Haul Road 6,600,000 mN KALGOORLIE Saracen Operation Exterra Resources Ltd Project Other Major Gold Projects

**Figure 2: Linden Gold Project Location and Local Access** 



# Key Parameters and Financial Model outputs from the recently completed Pre-Feasibility Study are summarised below:

Second Fortune Gold Project	
Total Ore Mined	204,000 T
Mined Head Grade	9.4 g/t Au
Metallurgical Recovery	95%
Recovered Ounces Gold	56,600 ozs
Mine Life	2.5 years
Pre-Production Capital	\$5 M
Operating Cash Cost (C1) \$/oz	\$720
Total Cash Cost (C3) \$/oz	\$1,016
Gold Price Assumed \$/oz	\$1,400
LOM Revenue	\$80 M
LOM EBIT cash surplus (incl royalties)	\$17.3M
NPV (8%)	\$13.4 M
Project Pay Back (at A\$1,400/oz)	14 months

Note: all currencies are in AUD\$.

# Revenue and cash flow at different gold prices are shown below:

		Current		
Gold Price A\$/oz	\$1,300	\$1,400	\$1,450	\$1,650
LOM Revenue	A\$74M	A\$80M	A\$83M	A\$94M
LOM EBIT cash surplus (including royalties)	A\$12M	A\$17.3M	A\$20M	A\$32M
Pay Back (Years)	1.8	1.2	1.3	1.0

## **Pre-Feasibility Study Summary**

Compilation and completion of the Second Fortune Pre-Feasibility Study has been managed by Exterra with input from a number of key external consultants as listed below:

- Geology resource estimation and QA/QC review: Ravensgate and Q G Consulting Pty Ltd
- Ore Reserves: Intermine Engineering Consultants Pty Ltd
- Underground Mine Design/Financial Modelling: Intermine Engineering Consultants Pty Ltd
- Geotechnical: MineGeoTech Pty Ltd
- Groundwater and surface water: Rockwater Pty Ltd
- Metallurgical test work : ALS Metallurgy Pty Ltd
- Evaporation Pond design: Coffey Pty Ltd
- Environmental: MBS Environmental Pty Ltd
- Geochemical and environmental : MBS Environmental Pty Ltd
- Drilling and geological assay data collection: Exterra Staff



Mining is proposed to be by underground methods with a portal cut in the floor of the current pit and a 4.5m x 4m decline will be developed to the base of the current workings, 62 metres below surface. Level drives will be developed at 20m intervals from crosscuts centrally located along the strike. Mining will be long-hole retreat open stoping with a combination of mechanical and hand held methods, using a single boom jumbo.

The Second Fortune Reserve Inventory is summarised in Table 1a.

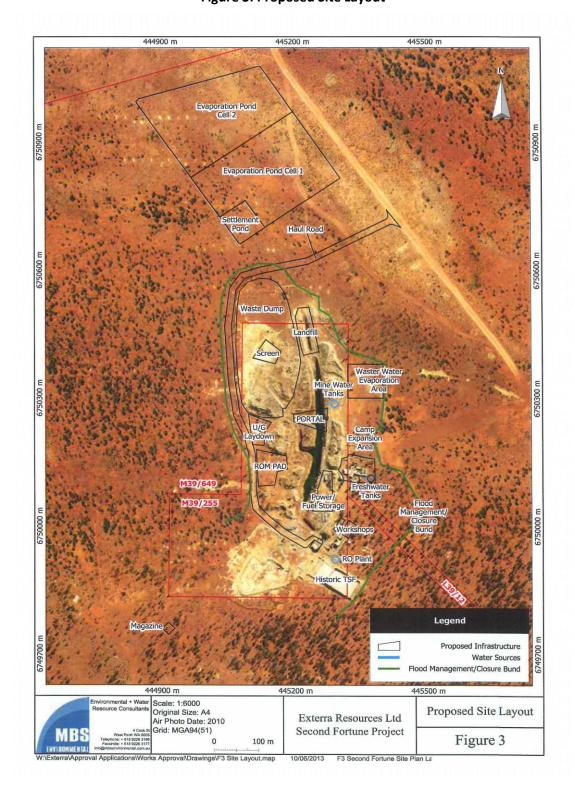
The Total Mining Inventory utilised for the PFS, as shown in Table 1b, includes an additional 5,200oz of existing Main Lode Inferred Resources that are immediately proximal to these Probable Reserves which may reasonably be expected to be mined once the underground infrastructure has been established.

Detailed metallurgical studies have been carried out on diamond drill core to establish gold recovery of +95%. The results of this work carried out by ALS Metallurgy Pty Ltd confirms the Second Fortune ore contains simple free-milling gold amenable to high gold recoveries from a gravity circuit prior to leaching through a standard CIP gold processing plant with low reagent consumption. This confirms reported gold recoveries from the historic mine.

Additional infrastructure to support the operation includes the building of an evaporation dam for mine dewatering and ongoing water management and the upgrading of the current mine camp. Infrastructure from the previous mining operation will be utilised where appropriate including mine buildings and airstrip. Refer Figure 3.



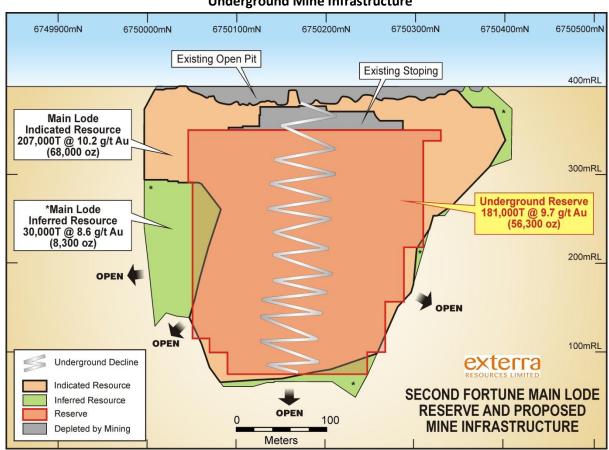
Figure 3: Proposed Site Layout





### **Mineral Resources and Reserves**

Figure 4: Long Section of the Second Fortune Main Lode showing Resources, Mining Reserve and Underground Mine Infrastructure



The Mineral Resources that form the basis of the PFS were released on the 19<sup>th</sup> December 2013 in accordance with the guidelines of the JORC Code (2012 Edition) and are summarised in Appendix A, Table 2).

Table 1a: Second Fortune Ore Reserve Inventory – Main Lode

Lode	Proven				Probable		Total			
	Tonnes	Tonnes Grade Ounces g/t Au		Tonnes	Grade Ounces g/t Au		Tonnes Grade Ounces g/tAu		Ounces	
Main Lode				180,790	9.68	56,265	180,790	9.68	56,265	

Note: Based on 1.0m Min Mining Width diluted Resource at 4.0 g/t Au lower cut-off (Appendix A, Table 2)



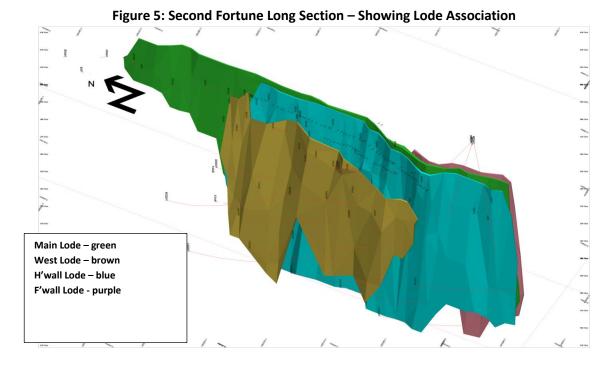
**Table 1b: Second Fortune PFS Total Mined Inventory** 

	Tonnes	Grade (g/t Au)	Ounces
JORC Probable Reserve	180,790	9.68	56,265
Additional Inventory (Inferred Resources Mined)	23,012	7.05	5,200
PFS High Grade Tonnes Mined	203,802	9.38	61,465

Note: Inferred Resources have only been included in the Second Fortune Mine Schedule where immediately proximal to scheduled Reserves and associated infrastructure and have similar modifying factors applied (recovery, dilution) as per the Probable Mining Reserve (Table 1a)

This Main Lode Reserve (Table 1a) forms the basis of the PFS with the adjacent lodes (Table 3, Appendix A) not included in the PFS but will potentially add further Reserve ounces following further drilling from underground.

Figure 5 shows the relationship of the various lodes at Second Fortune.



**Project Funding** 

The Company advises that it is progressing funding requirements for the project and will advise the outcome of these discussions in the near future.



# **Growth and Upside Opportunities**

The Company believes that substantial exploration and development upside exists at Second Fortune, based on:

- The fact that the Second Fortune Main Lode remains open in several directions (Figure 4);
- The fact that the Second Fortune West, H/W and F/W lodes, which contain JORC Resources of 54,600 ozs, occur adjacent to the Main lode, and may be accessible from the proposed underground mine on the Main Lode (Figure 5, Table 3);
- The number of other prospects and targets identified at Linden which have had minimal systematic exploration previously but which provide economic grade intersections in previous drilling (Figure 6).



442,000 mE 444,000 mE 448,000 mE 450,000 mE Geological Survey of WA Mapping **LEGEND** Gold Prospects, Deposits and Historic Mines Tenements Boundaries New Tenement Aquisition M39/5 Metamorphosed Sedimentary Units M39/629 E39/1232 P392976 Lady Edith Reward Wimmera Prospect 1 metre at 7.09 g/t Au 1 metre at 37.1 g/t Au Mount Linden East Ailsa Prospect 12 metre at 1.74 g/t Au 4 metre at 5.26 g/t Au 11 metre at 6.97 g/t Au 2 metres at 1.19 g/t Au M39/794 Marloo Prospect 2 metres at 4.43 g/t Au 2 metres at 13.31 g/t Au 1 metre at 7.98 g/t Au Mafic Units E39/1539 ☆ Carmen Second Fortune Gold Mine 0.3 metres at 46.9 g/t Au 0.6 metres at 44.9 g/t Au 0.6 metres at 24.8 g/t Au 0.7 metres at 44.6 g/t Au 0.6 metres at 10 g/t Au 0.5 metres at 11.9 g/t Au Linden Star West Prospect 5 metres at 4.02 g/t Au A May Pri 2 metres at 4.1 g/t Au 1 metre at 97.4 g/t Au May Prince Prospect 1 metre at 12.4 g/t Au Cuckoo Hawk Prospect 8 metre at 9.52 g/t Au 2 metres at 11.3 g/t Au Linden Project Mines and Prospects Significant Exterra Drilling Results Granitoid Units Felsic Volcanic Units MGA94-51 Scale 1:70000

**Figure 6: Linden Project Tenements and Prospects** 



### For further information:

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#### **About Exterra Resources Limited**

Exterra Resources Limited (ASX:EXC) is a gold exploration and development company based in Perth, Western Australia, with a focus on high grade, high margin gold projects with near term production potential to fund the future growth of the company.

The Company's projects are all located in the Archaean Yilgarn Craton in WA, a world class gold province which has been a prolific producer of gold since the late 1880's and includes the Kalgoorlie "Golden Mile" deposit which has produced over 50 million ounces of gold since discovery in 1893.

Exterra's focus is on the Linden gold project in the North Eastern Goldfields region, within the Laverton Tectonic Zone, which hosts multi million ounce deposits including Sunrise Dam (Anglo Gold) and Granny Smith/Wallaby (Barrick Gold).

The Second Fortune gold mine, at Linden, 220km by road, NNE of Kalgoorlie, is currently the subject of a development study, with all Regulatory approvals received to commence project development of an underground mining operation during 2014.



# Appendix A – Second Fortune Resource Inventory - December 2013

Table 2: Second Fortune Resource Summary – Main Lode – JORC 2012 (QG Consulting)

Lode	Indicated			Inferred			Total		
	Tonnes	Grade g/t Au	Ounces	Tonnes	Grade g/t Au	Ounces	Tonnes	Grade g/tAu	Ounces
Main Lode	206,800	10.2	68,000	30,300	8.6	8,300	237,100	10.0	76,300

Note: 1.0m Min Mining Width diluted Resource at 4.0 g/t Au lower cut-off

Table 3: Second Fortune Resource Summary – Minor Lodes – JORC 2004 (Ravensgate 2012)

Lode	Indicated			Inferred			Total		
	Tonnes	Grade g/t Au	Ounces	Tonnes	Grade g/t Au	Ounces	Tonnes	Grade g/tAu	Ounces
Hangingwall									
Lode				58,200	8.2	15,300	58,200	8.2	15,300
Footwall									
Lode	18,500	8.9	5,400	52,900	7.4	12,500	71,400	7.8	17,700
West Lode	4,200	4.2	600	107,200	6.1	21,000	111,400	6.0	21,600
TOTAL	22,700	8.2	6,000	218,300	7.0	48,800	241,000	7.0	54,600

Note: 4.0 g/t Au lower cut-off



## Appendix B

## **Second Fortune Ore Reserve Report**

### **Notes on Ore Reserve Calculation**

The Second Fortune Ore Reserve is based on a single underground mine design. All Ore Reserves have been evaluated at a gold price of A\$1400/oz.

The Second Fortune deposit has been previously mined by open cut and then selective handheld methods down to the 338mRL, 62m below surface. Old underground workings consist of gallery stopes extending from the352mRl through to the base of the old pit. A handheld development drive at the 338mRL was developed and is linked to the base of the pit by a raise.

Proposed new development will consist of a decline with a portal location in the floor of the open pit. The 4.5H x 4.0W decline at a gradient of 1 in 7 will traverse the strike of the lode before a cross cut is developed into the 338mRL. Subsequent levels will be developed on 20m spacings with crosscuts being centrally located along strike.

Ore drives will be driven with handheld machines using dimensions of 2.4H x 1.2W with back stripping to 4.0m. This will be done in potential 20m lengths before a single boom jumbo would strip the remaining waste out to a 2.5m minimum drive width. This will allow for the remaining 16m vertical panel to be drilled with upholes and retreat longhole stoped. Based on geotechnical recommendation the ground conditions are competent and will require localised pillars either through low grade occurrences or island pillars.

The RAR will be located in the decline and will be developed in 20m intervals along with the second egress ladderway. All services will be centrally located and routed with the crosscuts.

Ore production will be hauled to the surface and stockpiled before been hauled to the Saracen processing facility at Carosue Dam Operations approximately 60km away.

# 1. Underground Evaluation

The study is to a prefeasibility level with indicative pricing and parameters sourced from the following entities:

- Preliminary evaluation and mine schedule from Intermine Engineering Pty Ltd.
- Schedule of Rates from Australian Resource Contracting Pty Ltd.
- Geotechnical report from Minegeotech Geotechnical Consultants.
- Metallurgical test work conducted by ALS Metallurgy Pty Ltd.



The resource model was exported to an Excel spreadsheet where it was summarised into 20m (Northing) x 20m (RL) blocks representative of the proposed level interval and stoping panel. The top 2 panels were shortened to 14 and 18 to account for the previously mined areas.

The resource summary then allows a calculation to determine a diluted drive and stope resource that accounts for minimum mining widths, over break and extraction rates. Parameters used in developing these resources are:

- Drive dimension of 4.0m H X 2.5m W.
- Ore drive over break of 0%.
- Ore drive loss of 5%.
- Stope pane height of 16m.
- Minimum stope width of 1.0m.
- Stope over break of 10% at 0.0g/t Au dilutant grade.
- Stope loss of 5%.
- Physical extraction rate of 95%.

The diluted resources are then evaluated using revenue factors, contractor supplied quotes, processing costs and in-house Exterra and other fixed costs.

All these operational costs are used to determine the viability of each of the  $20 \times 20$  m panels from level to level and involve incremental costs for depth. Cashflow positive panels are then selected and form the basis for the potential mined inventory. If there is a negative cashflow between 2 cashflow positive panels then it will be selected if the net cashflow is still positive when combined.

Capital development costs have then been applied to determine the viability of each level. The capital development metres are not based on a design but on a predicted quantity based on the decline gradient and level interval, proposed crosscut lengths, allowance for stockpiles and sumps, vent access and vertical development to maintain fresh air and second egress.

## **Competent Persons Statement**

Information in this report that relates to estimation, depletion and reporting of Mineral Resources is based on and fairly represents, information and supporting documentation compiled by Mike Job who is a Member of the Australasian Institute of Mining and Metallurgy and a full time employee of QG Consulting Pty Ltd. Mike Job has sufficient experience 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 as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mike Job consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

The information in this report that relates to Ore Reserves has been compiled by Stephen O'Grady, Principal of Intermine Engineering Consultants, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr O'Grady has had sufficient experience in Ore Reserve estimation relevant to the style of mineralisation and type of deposit under consideration to qualify as Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Mineral Resources and Ore Reserves. Mr O'Grady consents to the inclusion in this announcement in the form and context in which it appears.



The information in this report that relates to database compilation, sampling processes, geological interpretation and mineralisation, project parameters and costs and overall supervision and direction of Mineral Resource is based on and fairly represents, information and supporting documentation compiled under the overall supervision and direction of John Davis (Member of the Australasian Institute of Mining and Metallurgy and the AIG). Mr Davis has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Davis consents to the inclusion in the release of the statements based on their information in the form and context in which they appear.

Please note with regard to exploration targets, the potential quantity and grade is conceptual in nature, that there has been insufficient exploration to define a Mineral Resource and that it is uncertain if further exploration will result in the determination of a Mineral Resource.

## **Forward Looking Statements**

Certain statements made during or in connection with this communication, including, without limitation, those concerning the economic outlook for the mining industry, expectations regarding gold prices, exploration costs and other operating results, growth prospects and the outlook of Exterra Resources' operations contain or comprise certain forward looking statements regarding Exterra Resources' exploration operations, economic performance and financial condition. Although Exterra Resources believes that the expectations reflected in such forward-looking statements are reasonable, no assurance can be given that such expectations will prove to have been correct.

Accordingly, results could differ materially from those set out in the forward looking statements as a result of, among other factors, changes in economic and market conditions, success of business and operating initiatives, changes that could result from future acquisitions of new exploration properties, the risks and hazards inherent in the mining business (including industrial accidents, environmental hazards or geologically related conditions), changes in the regulatory environment and other government actions, risks inherent in the ownership, exploration and operation of or investment in mining properties in foreign countries, fluctuations in gold prices and exchange rates and business and operations risks management, as well as generally those additional factors set forth in our periodic filings with ASX. Exterra Resources undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events.