

**ASX/Media Announcement** 

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# ASX Code

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# **Fox Resources Limited**

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# RESULTS OF SCOPING STUDY FOR RADIO HILL HEAP LEACHING OPERATION

**Fox Resources Limited** (ASX: FXR) today announced the preliminary economic results of its Scoping Study on the 100%-owned Radio Hill and Sholl Heap Leaching Projects in the Pilbara region of Western Australia.

The Study has produced a preliminary technical cashflow model highlighting that the proposed heap leaching operation is an attractive project with expected total revenues of \$867 million over nine years and net operating cash flow of \$157 million. The project is robust and retains significant upside.

The Study reviewed a number of processing options, with the preferred route providing strong returns with an indicative Net Present Value (NPV) of \$95 million (8% discount rate) and an indicative Internal Rate of Return (IRR) of 39%.

Given these positive results, the Board of Fox Resources has made the decision to proceed with funding initiatives in order to recommence production and develop this portfolio of assets into a profitable operation.

Fox Resources' Managing Director, Mr Bruno Seneque, said the heap leach operation would deliver strong returns.

"Radio Hill is ideal for this sort of operation – humid conditions, heat, and an extremely active indigenous bacterial culture all promote successful heap leaching," said Mr Seneque. "Best of all, is the low acid consumption of the ore which means fast start-up rates, high recoveries and stronger economics."

The Study was completed under Fox management with contributions from Newexco Pty Ltd, Snowden Mining Industry Consultants Pty Ltd (Snowden), AMMTEC Laboratories Ltd and Senders Consulting Pty Ltd.

# Key highlights from the study include:

- Indicative NPV of \$95 million
- IRR of 39%
- Estimated operating cash surplus before tax and capital of \$219 million
- Total pre-production capital estimated at \$25 million
- Potential upside from drilling identified targets is anticipated to add to early resource upgrades

## **Resources**

Fox plans to mine its inventory of 6.17 million tonnes of mineralisation containing weighted average grades of 0.59% nickel and 0.78% copper. Radio Hill and Sholl Complex Global Resources as estimated by Snowden Mining Industry Consultants is:

Deposit	Mineralisation	Classification	Tonnes	Ni %	Cu %
Radio Hill <sup>1</sup>	Primary Sulphide	Indicated	1,980,000	0.61	1.04
Radio Hill <sup>1</sup>	Primary Sulphide	Inferred	2,040,000	0.42	0.73
Sholl B2 <sup>2</sup>	Primary Sulphide	Indicated	2,260,000	0.59	0.71
Sholl B2 <sup>2</sup>	Primary Sulphide	Inferred	3,520,000	0.51	0.64
Sholl A1 <sup>3</sup>	Primary Sulphide	Inferred	1,305,000	0.47	0.64
Sholl B1 <sup>3</sup>	Primary Sulphide	Inferred	1,865,000	0.43	0.49
Total			12,970,000	0.51	0.71
Total Contained Metal (tonnes)				66,147	92,087

1 2009 estimate (Snowden) Cutoff Grade 0.5% Ni in Ni dominant material, and 0.5% Cu in the Cu dominant hanging wall

2 2010 estimate (Snowden) Cutoff Grade 0.3% Ni Equivalent (=Ni + Cu/3)

3 2010 estimate (Snowden) Cutoff Grade 0.3% Ni Equivalent (=Ni + Cu/3.3)

#### Cautionary statement regarding inferred and indicated resources

The production targets, and the revenue and valuation information based on those targets, set out in this announcement are currently conceptual in nature and relate to future production goals based on Fox's current inferred and indicated resources. While the resources are adequate to support these production targets, the resources are not ore reserves within the meaning of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) and, therefore, it is uncertain whether they can be mined in an economically viable manner in order to achieve those targets. There remains at present insufficient certainty with respect to whether economically mineable mineralisation exists to reliably estimate future production rates.

# **About Heap Leaching**

The process of heap leaching has been used since the mid-20th century, particularly to extract gold and copper from low-grade ore.

Mined ore is crushed and stacked on an impermeable plastic lined leach pad where it is irrigated with an acidic bacterial solution to leach the valuable metals. Irrigation of the heaps with the leach liquor takes place via sprinklers or more often, dripper lines which minimise solution lost due to evaporation.

The solution percolates through the heap and extracts the base metals. The pregnant leach solution (PLS) containing the dissolved metals is then collected and delivered to the process plant where the metal is recovered from the PLS.

## **Bacterial Heap Leaching at Radio Hill**

A major advantage for Fox establishing a bacterial heap leach operation at Radio Hill is the existing conditions and infrastructure already in place, including granted mining leases, operating licences, offices, buildings, accommodation, underground mine, tailings dam, grid power, mains water and roads. The existence of such established infrastructure results in a much quicker project ramp-up, coupled with lower start-up capital costs and ongoing operating costs.

The cost of extraction of metals from ore by heap leaching is more economical than the conventional 'crush, grind, float' process. The recovery of metals from the heap leach is higher than the historical recoveries from the flotation plant and the end sale product contains a higher metal content, and hence higher value, than conventional concentrate material. Table 1 summarises these results. The smaller volume of product also reduces handling and transport costs.

The material feed for the initial year of production at Radio Hill will be derived from the existing surface stockpiles (Figure 1), representing a significant saving in mining costs and leading to further cost savings for the project.



#### Figure 1: Existing surface stockpiles

Table 1: A summary comparing conventional concentrate production at Radio Hill to the heap leach operation.

Process Route	Concentrate Production (2008)	Heap Leach
Annual throughput (tpa)	350,000	400,000 – 900,000
Recovery Ni (%)	55 – 65	80
Recovery Cu (%)	70 – 75	55
Product grade Ni (%)	5	40 - 45
Product grade Cu (%)	7 – 8	50 - 55
Operating cost (A\$/t)	A\$124/t	A\$97/t (average)

The planned Radio Hill operation will process material within a range of 400,000 – 900,000 tonnes per annum and will be operated in two phases. Phase 1 will involve processing material that is on surface at Radio Hill and comprises scats, disseminated material, partially oxidised massive sulphides and some tailings. Phase 2 will involve leaching disseminated material that will be mined from the Radio Hill underground mine, Sholl B2 underground mine, Sholl A1 underground, Sholl B1 open pit and the Radio Hill Tailings Storage Facility 1 (TSF1). There is further potential to increase mine life from Sholl A1, B1, West Whundo and Whundo.

## **Capital Cost**

The following tables summarises the estimated capital costs for the projects:

RADIO HILL PROJECT - PRE-PRODUCTION CAPITAL			
Area	Capital (A\$M)		
Leach Pads and Ponds	8.05		
Acid Storage Area	1.28		
Process Plant	10.39		
Precipitation Plant	4.29		
Reagents Area	0.98		
Total Capital Costs	24.99		

SHOLL PROJECT - EXPANSION CAPITAL YEAR 3				
Area	Capital (A\$M)			
Leach Pads and Ponds	11.05			
Acid Storage Area	1.28			
Process Plant	14.84			
Precipitation Plant	4.29			
Reagents Area	0.98			
Other (Power, buildings etc)	5.00			
Total Capital Costs	37.45			

### **Operating Costs**

Mining, leaching and secondary processing costs are estimated at an average of \$96.58/tonne.

Mine operating, project administration and material treatment costings are based on historical cost information on the Radio Hill Project, previous experience of management on similar processing projects or unit costs obtained from contractors/ suppliers. The following table summarises the estimated operating costs for the projects:

AREA	A\$/t (Average)	
Mining Costs	39.75	
Treatment Costs	44.57	
Administration Costs	2.94	
Shipping Costs	3.51	
State Royalty Costs	5.81	
Total Site Operating Costs	96.58	

## **Revenues & Financials**

Estimated revenues averaging \$96 million per annum are based on assumed metal prices for the life of the mine of US\$10.26/ Ib nickel, US\$3.70/Ib copper and an exchange rate (A\$:US\$) of 0.93. These parameters are estimates made for the purpose of the scoping study and should not be regarded as reliable forecasts.

Based on the above, an estimated operating cash surplus before tax and capital of \$219 million, NPV of \$95 million (8% discount) and a IRR of 39%.

The financial projections are based on achieving production targets, capital and operating cost estimates and the commercial terms assumed for product off-take. Negotiations with potential off-take partners have commenced and are continuing.

#### Forward looking statements

This announcement includes forward looking statements. All statements other than statements of historical facts included in this announcement, including, without limitation, those regarding Fox's plans, objectives, estimates and targets in relation to the Radio Hill Heap Leaching Operation (including development plans and objectives relating to production forecasts), are forward looking statements. Such forward looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Fox to be materially different from any future results, performance or achievements expressed or implied by such forward looking statements.

Such forward looking statements are based on numerous assumptions regarding Fox's present and future business strategies and the environment in which Fox will operate in the future. Among the important factors that could cause Fox's actual results, performance or achievements to differ materially from those in the forward looking statements include, among others, levels of actual production during any period, levels of demand and market prices, the ability to produce and transport products profitably, the impact of foreign currency exchange rates on market prices and operating costs, operational problems, political uncertainty and economic conditions in relevant areas of the world, the actions of competitors, activities by governmental authorities such as changes in taxation or regulation and such other risk factors. Forward looking statements should, therefore, be construed in light of such risk factors and undue reliance should not be placed on forward looking statements.

## **Project Approvals and Permitting**

The Radio Hill Project has been intermittently operated over the past 20 years by different mining companies. It is situated on granted Mining Leases and possesses all the necessary approvals, permits and licences to operate from the various regulatory bodies.

As with all new or modified extraction processes, there is a requirement to submit appropriate documentation to the authorities for approval before the project can be constructed. It is envisaged that there will not be any major issues to be encountered during the approval process.

Approval for dewatering the underground workings and discharging has already been granted by the Department of Environment and Conservation. Planning and start-up activity is now underway to commence the dewatering program.

#### Schedule

The major goals of the first half of 2011 are:

- 1. Determine the best funding initiative in order to recommence production
- 2. Conclusion of process optimisation work for end-product definition
- 3. Completion of all approvals for project construction
- 4. Continue dewatering of the underground mine in order to recommence underground mining at Radio Hill

## For further information, please contact:

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#### **Competent Persons Consent**

The information in this announcement which relates to the Sholl Mineral Resource estimate has been reviewed and approved for release by Mr Ivor Jones, who is a Fellow of the Australasian Institute of Mining and Metallurgy and Chartered Professional. Mr Jones is a full-time employee of Snowden Mining Industry Consultants Pty Ltd and has sufficient experience in relation to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined by the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Jones has consented to inclusion in this announcement of this information in the form and context in which it appears.

Information in this announcement that relates to Radio Hill Mineral Resources is based on information compiled by Mr Jeremy Peters, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Peters is a full-time employee of Snowden Mining Industry Consultants Pty Ltd. Mr Peters 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 as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code). Mr Peters consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.