



**BLACKHAM**  
Resources Limited

ASX Announcement  
4 March 2015



**EcoTech Mining Limited**

(ABN: 99 153 025 628)



**BOARD OF DIRECTORS**

**Paul Murphy**  
(Non-Executive Chairman)  
**Bryan Dixon**  
(Managing Director)  
**Alan Thom**  
(Executive Director)  
**Greg Miles**  
(Non-Executive Director)

**ASX CODE**  
BLK

**CORPORATE INFORMATION**

178.2M Ordinary Shares  
20.3M Unlisted Options

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## Blackham and EcoTech work to improve Wiluna ore processing

### Highlights:

- **Successful bench scale testwork using the EcoGold®Process has confirmed improved gold recoveries for Wiluna ores**
- **Ecotech will now perform pilot scale test work on Wiluna ores through its Sydney pilot plant with a view to optimising recoveries**
- **Ecotech intends to use the pilot scale testwork to complete a bankable feasibility study (“BFS”) within the next 6 months for a 10,000tpa demonstration plant at Wiluna**

Gold developer, Blackham Resources Ltd (Blackham) and EcoTech Mining Limited (Ecotech) have signed a Memorandum of Understanding (MOU) with a view to improving the metallurgical ore recoveries and processing costs at the Wiluna Mine in Western Australia. Following a successful bench scale test program on Wiluna ore using Ecotech’s EcoGold®Process, the parties have committed to a pilot scale test programme through Ecotech’s existing pilot plant facility. The Wiluna Mine hosts refractory gold resources of **22Mt @ 4.6g/t for 3.3Moz** Wiluna Mine forms part of the Matilda Gold Project which is 100% owned by Blackham.

Ecotech has exclusive licensing rights to the EcoGold®Process capable of recovering gold and other value metals from refractory deposits. Ecotech is investigating deposits on a global basis to assess the viability of applying its EcoGold®Process to improve recovery of gold and other value metals from such refractory gold deposits.

This MOU will permit the Parties to participate in the study of Wiluna ore through Ecotech’s existing pilot plant.

Ecotech plans to complete a bankable feasibility study (“BFS”) from the pilot plant test work to support a decision to build a 10,000tpa demonstration plant at Wiluna. Ecotech will provide Blackham with a copy of the feasibility report outlining the potential of the demonstration plant at Wiluna.

Blackham and Ecotech will both bear the costs of their own activities during the BFS period. Under instruction from Ecotech, Blackham will deliver sufficient sample of appropriate quality suitably representative material for pilot plant test work.

On both parties being satisfied with the results of the pilot plant work and the BFS, the parties will discuss and develop an agreement to progress construction of the Wiluna demonstration plant.

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The existing Wiluna plant has a floatation and biox process that over the last 10 years has averaged recoveries of 82%. The Wiluna refractory circuit has operated successfully for more than 25 years. Blackham intends to further review the floatation circuit with a view to optimising the recoveries on the existing plant.

Blackham is interested in whether the EcoGold® Process can provide higher gold recoveries and lower costs. The opportunity for Blackham is:

- Potential to increase throughput
- Potential to reduce process operating costs
- Single step process
- Potential to stabilize and increase recovery;
- Significantly reduced gold inventory in circuit; and
- Potential to recovery base metal by products from Wiluna ores.

### Bench Scale EcoTest Results

A preliminary bench scale EcoTest program has been conducted on stockpile samples of Wiluna material provided by Blackham. The 3.0g/t Au sample was tested under a number of parameters and results showed metallurgical recoveries up to 88%. Past Ecotest work performed by Ecotech for previous owners of the Wiluna Mine saw high grade samples result in recoveries in the +90% range.

### Planned Pilot Scale EcoGold® Process Testwork

The Pilot Scale testwork will include the following activities:

- Wiluna site inspection and supply of detailed process plant layout plan at Wiluna Plant;
- Selection and collection of suitable ore samples for next stage of EcoTech for pilot plant testing;
- Pilot testing of Wiluna ore in the existing EcoTech 20/kg per hour pilot plant;
- Laboratory research and development testing for flow sheet selection.



### Wiluna Demonstration Plant Bankable Feasibility Study

Ecotech plans to complete a bankable feasibility study to support a decision to build a 10,000tpa demonstration plant at Wiluna within the next 6 months. The Wiluna BFS supervised by EcoTech and undertaken by a bankable engineering organisation acceptable to both parties will establish the costs of a demonstration plant. This BFS will be based on Wiluna refractory ore at the process plant site or readily mined from the existing nearby Wiluna mine to support at least 2 years of demonstration plant operation at a throughput rate of 10,000tpa.

Ecotech will generate new data by undertaking and analysing pilot plant and laboratory test work. Evaluating flow sheet



options that maximize the value delivered from the treatment of Wiluna refractory ore.

The BFS will contain the following:

- Outline of processing options to maximize the financial outcome by using the EcoGold® Process to produce gold and other secondary products from refractory Wiluna ores;
- Results of pilot testing and ore processing;
- Completion of detailed bankable feasibility study to define cost estimates of capital and operating costs and timelines to progress the construction of a Wiluna demonstration plant and production of gold and other secondary products from Wiluna refractory ore.

Ecotech will provide Blackham with a copy of the feasibility report outlining the potential of the Wiluna demonstration plant. Commercial terms between the Parties will be agreed following the successful completion of the BFS to construct and operate the Wiluna demonstration plant.

### **About Ecotech Mining Ltd**

Ecotech is the owner of an Innovative Chlorination Process (EcoGold® Process) to treat refractory and oxide ores. A Chlorination Process which provides for:

- Better recovery and extraction of refractory base precious metals (Au, Ag) and base metals (Cu, Pb, Zn, Co, Ni, etc.) often greater than 90% extraction;
- Safe removal off site of environmentally hazardous metals associated with refractory ores;
- Totally enclosed recycling system with no hazardous discharges;
- Anticipated competitive cost compared to conventional processing;
- Ability to treat wide range of feed materials including oxides, sulphides, mixed ores, slags, tailings, etc.

Ecotech has seven years of extensive research and development at a laboratory and pilot plant scale. The EcoGold® Process has been proven at bench scale and pilot scale for treatment of refractory or non-refractory oxide, transition, sulphide, silicate ores, concentrates, tailings, slag and other materials. .

EcoTech Chairman, Gary Cochrane commented:

“Through a process of successful bench top and pilot plant trials over the last 7 years EcoTech has now developed a successful technical process to treat a wide range of refractory ores containing gold, copper, lead, zinc etc. The process has achieved high metallurgical recoveries and can also neutralise environmentally hazardous materials like arsenic tailings associated with conventional treatment of these types of refractory ores. The MOU with Blackham now provides an exciting opportunity for EcoTech to demonstrate commercial viability of the EcoTech process through eventual installation and operation of a 10,000 tpa demonstration plant. This will also have the potential benefit of adding significant value at Wiluna by allowing a re-evaluation of the Wiluna ore bodies.”

Blackham’s Managing Director, Bryan Dixon commented:

“Up until now Blackham has focused its efforts on the exploration and development of the free milling deposits at the Matilda Gold Project. Work undertaken in conjunction with Ecotech potentially allows the process optimisation of its Wiluna refractory ores which total 22Mt @ 4.6g/t for 3.3Moz. If the bench scale testwork can be reproduced on a pilot scale it could lead to a processing revelation in re-evaluating the Wiluna orebodies. A relatively small improvement to cost and recovery has the potential to bring a very large amount of resources into the mine plan.”

For further information on Blackham please contact:

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Blackham has total resources of **44Mt @ 3.3g/t for 4.7Moz Au** all within a 20km radius of its 100% owned gold plant. Measured and indicated resources now total **18Mt @ 3.7g/t for 2.1Moz**.

<b>Mining Centre</b>	<b>Measured</b>			<b>Indicated</b>			<b>Inferred</b>			<b>Total 100%</b>		
	<b>Mt</b>	<b>g/t Au</b>	<b>Koz Au</b>	<b>Mt</b>	<b>g/t Au</b>	<b>Koz Au</b>	<b>Mt</b>	<b>g/t Au</b>	<b>Koz Au</b>	<b>Mt</b>	<b>g/t Au</b>	<b>Koz Au</b>
<b>Matilda Mine</b>	0.1	2.4	9	4.7	2.0	300	8.2	1.7	450	13	1.8	<b>760</b>
<b>Williamson Mine</b>				2.7	1.7	150	3.6	1.7	200	6.3	1.7	<b>350</b>
<b>Regent</b>				0.7	2.7	61	3.1	2.1	210	3.9	2.2	<b>270</b>
<b>Galaxy</b>				0.2	3.3	25	0.3	2.6	26	0.6	2.9	<b>51</b>
<b>Golden Age</b>				0.2	8.6	40	0.3	6.8	80	0.5	7.4	<b>120</b>
<b>Bulletin South OP</b>				0.9	3.2	90	1.7	3.5	190	2.6	3.4	<b>280</b>
<b>East Lode</b>				1.0	5.2	170	2.3	4.7	340	3.3	4.8	<b>510</b>
<b>West Lode Calvert</b>				1.4	5.5	240	2.8	5.2	460	4.2	5.3	<b>700</b>
<b>Henry 5 - Woodley - Bulletin Deeps</b>				2.1	5.9	400	0.8	4.6	120	2.9	5.6	<b>520</b>
<b>Burgundy - Calais</b>				1.3	6.0	250	0.3	5.7	60	1.6	6.0	<b>310</b>
<b>Happy Jack - Creek Shear</b>				1.5	5.9	290	1.3	4.8	200	2.9	5.4	<b>490</b>
<b>Other Wiluna Deposits</b>				1.0	3.5	110	1.8	4.0	230	2.8	4.1	<b>340</b>
<b>Total</b>	<b>0.1</b>	<b>2.4</b>	<b>9</b>	<b>18</b>	<b>3.7</b>	<b>2,126</b>	<b>27</b>	<b>3.0</b>	<b>2,566</b>	<b>44</b>	<b>3.3</b>	<b>4,701</b>

*Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location shape and continuity of the occurrence and on the available sampling results. The figures in Table 1 above are rounded to two significant figures to reflect the relative uncertainty of the estimate. See Announcement 9 February 2015.*

#### **Competent Persons Statement**

*The information contained in the report that relates to Exploration Targets and Exploration Results at the Matilda Gold Project is based on information compiled or reviewed by Mr Cain Fogarty, who is a full-time employee of the Company. Mr Fogarty is a Member of the Australian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is being undertaken 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'. Mr Fogarty has given consent to the inclusion in the report of the matters based on this information in the form and context in which it appears.*

*The information contained in the report that relates to Mineral Resources is based on information compiled or reviewed by Mr Marcus Osiejak, who is a full-time employee of the Company. Mr Osiejak, is a Member of the Australian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is being undertaken 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'. Mr Osiejak has given consent to the inclusion in the report of the matters based on this information in the form and context in which it appears.*

*With regard to the Matilda Gold Project Mineral Resources, the Company is not aware of any new information or data that materially affects the information included in this report and that all material assumptions and parameters underpinning Mineral Resource Estimates as reported in the market announcements dated 23rd of January 2014, 20th November 2014, and 9 February 2015 continue to apply and have not materially changed.*

### **Forward Looking Statements**

*This announcement includes certain statements that may be deemed 'forward-looking statements'. All statements that refer to any future production, resources or reserves, exploration results and events or production that Blackham Resources Ltd ('Blackham' or 'the Company') expects to occur are forward-looking statements. Although the Company believes that the expectations in those forward-looking statements are based upon reasonable assumptions, such statements are not a guarantee of future performance and actual results or developments may differ materially from the outcomes. This may be due to several factors, including market prices, exploration and exploitation success, and the continued availability of capital and financing, plus general economic, market or business conditions. Investors are cautioned that any such statements are not guarantees of future performance, and actual results or performance may differ materially from those projected in the forward-looking statements. The Company does not assume any obligation to update or revise its forward-looking statements, whether as a result of new information, future events or otherwise.*