



## ASX ANNOUNCEMENT

1 March 2013

# POSITIVE MATILDA METALLURGICAL TESTWORK

- **Overall Matilda Plant Gold Recovery 93%**
  - **Oxide ore recovery 99%**
  - **Transitional ore recovery 91%**
  - **Fresh ore recovery 86%**
- **Standard Gravity Concentration / Carbon in Leach (CIL) Plant Design**

Blackham Resources Ltd (ASX Code: **BLK**) is pleased to report the completion of the Matilda preliminary feasibility metallurgical testwork and Process Design Criteria (PDC). The completed work is the second phase of metallurgical study which was supervised and undertaken by Independent Metallurgical Operations Pty Ltd. The **overall plant recovery** from the process design criteria report based on the Matilda mining scoping study feed profile was **92.8%**. This is significantly better than the 89.9% average recovery assumed in the Matilda scoping study announced in November 2012.

The pre-feasibility investigation was conducted to characterise the Matilda ore with the aim of determining head grade, comminution response plus testing the response to gravity separation and precious metal recovery by cyanide leaching. A total of 616 meters of diamond drill core was submitted for laboratory testing. The Pre-Feasibility work builds on the scoping testwork by increasing the confidence through further work on flowsheet validation and variability testing including comminution (crushing and grinding) characteristics.

The outcome from the programme suggests the **resource could be economically treated using standard Gravity Concentration / Carbon in leach (CIL) cyanidation technology**. Table 1 & 2 outline the PDC project summary and testwork results.

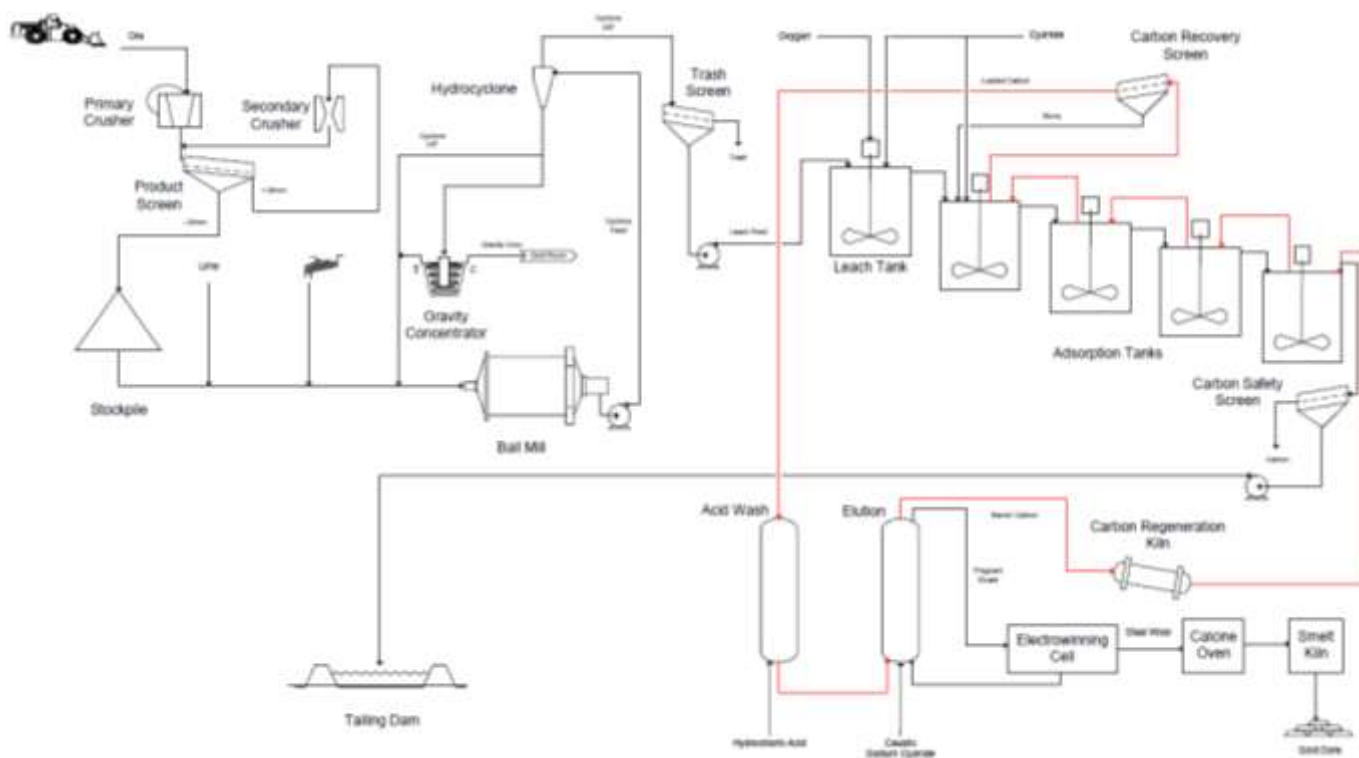
Table 1: Matilda PDC Summary	Units	Value
Ore treated per year	Mtpa	1.2
Plant Feed Grade, as Au, Design	g/t	2.1
Overall Plant Gold Recovery	%	92.8
Total Plant Production, as Au (Leach + Gravity)	oz/pa	74,900

Table 2: Gravity & CIL Recoveries	
Oxide	99.0 %
Transitional	91.2 %
Fresh	86.4 %

The process design criteria was completed to provide Blackham with a block flow process diagram (see Figure 1) and major equipment list for a standalone gold plant at Matilda. The PDC report is also a pre-cursor and major information reference point for the consideration and evaluation of any

second-hand equipment procurement, toll treatment or other plant purchase options that may be under consideration by Blackham.

The Figure 1 flowsheet outlines the Block Flow Process Diagram which includes crushing, grinding, gravity concentration, leaching, carbon adsorption, elution, gold room, reagents, water and air.



**Figure 1: Block Flow Process Diagram**

The comminution testwork involving impact crushing work index and unconfined compressive strength testing of samples showing them to be soft across the three ore types tested. Bond suite testwork results for the master composite samples showed that both the oxide and transitional composites were soft while the fresh composite was moderately hard in comparison to typical Yilgarn ores. All of the samples tested produced low abrasion index numbers.

Additional metallurgical work will be done in conjunction with the 30,000 meter drilling program currently underway at the Matilda Project to help build additional confidence in preparation for future feasibility studies.

Blackham's Managing Director stated "We are very pleased with the results of the metallurgical testwork and the Process Design Criteria which will help us evaluate our processing options going forward. This is another significant step in de-risking the Matilda Gold Project."

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**About Blackham Resources Ltd**

*Blackham is focused on exploration and development at the Matilda and Williamson Gold Mines in the Wiluna gold belt of Western Australia. The Matilda Gold Project contains resources of 24.5Mt @ 1.90g/t for 1.50Moz gold. The tenure package covers 50km of strike along the Wiluna Mine sequence and Coles Shear which has produced over 4Moz of gold. Blackham have the largest landholding (>500km<sup>2</sup>) in the Wiluna goldfield, one of Western Australia's major Archaean greenstone belts. Blackham aims to delineate a multi-million ounce gold resource and targeting conversion of resources to reserves in the near term.*

**Competent Persons Statement**

*The information contained in the report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information reviewed by Mr Greg Miles, who is an employee of the Company. Mr Miles is a Member of the Australasian 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 Persons as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Miles has given consent to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

**ENDS**