

# ABM Resources NL: Old Pirate Test Work - Exceptional Gravity Gold Recovery

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Perth, Australia (ABN Newswire) - [ABM Resources NL](#) (ASX:ABU) is pleased to announce the latest results of metallurgical test-work from two engineering companies on samples from the Old Pirate High Grade Gold deposit in the Northern Territory, Australia.

Consep Pty PL - Knelson Concentrator Test-Work for Gravity Recoverable Gold; conventional crush and grind.

- 97.3% gold recovered using simple gravity methods in a two pass concentrate with:

- 73.4% in first pass 220 micron grind;

- 23.9% (cumulative to 97.3%) in second pass 113 micron grind.

- 15.1 kilograms of gold per tonne in concentrate product.

- Calculated head-grade from 30kg sample = 143g/t gold.

Gekko Systems - Gekko Python / Pressure Jig Amenability Test-Work for Gravity Recoverable Gold with coarse crushing using low-energy / low-water requirement Vertical Shaft Impactor\*.

- 88.4% gold recovered using simple gravity methods in a separated concentrate using 600 micron crush. Can be increased to 92.9% using a higher mass yield.

- 0.637 kilograms of gold per tonne in concentrate product.

- Calculated head-grade from 30kg sample = 40.32g/t gold.

\*Gekko work considered interim as further flotation work and processing / tail reconciliation is underway.

## All results:

- These results exceeded expectations and are considerably better than the preliminary work conducted in 2011, which showed 85.4% gravity recovery from 3.35mm crush and 80 micron grind.

- Both sets of test results indicate that Old Pirate could be processed to very high recoveries with a simple gravity circuit, at relatively coarse grind sizes, and without the expense of a conventional cyanide leach circuit.

Darren Holden, Managing Director, said, 'This is an important step on ABM's path to development of the Old Pirate gold deposit. The latest metallurgical results reinforce the potential for a low capital expenditure and a low cost mining operation using extremely simple gravity extraction methods. This process has extracted the gold from a composited collection of samples from various parts of the Old Pirate vein system. The recovered grades of 143g/t and 40.32g/t gold also demonstrate the high grade nature of this deposit.'

## Gravity Recoverable Gold Test-Work

ABM's Old Pirate scoping study (refer release 15/05/2012) focused on developing a mine with low upfront capital requirements. As a result, the Company is currently investigating the potential to extract the gold using low-cost gravity methods. In order to advance this process ABM commissioned two companies who specialise in different products / methods for the extraction of free gravity recoverable gold.

Each company was provided with approximately 100 kilograms of quartz vein material. The samples

provided to the two companies were composited from 11 different surface locations from the main Old Pirate area, Old Pirate South and the East Side vein (Figure 2). Given the coarse gold at Old Pirate it is not possible to know exactly the grade of the samples before the work was undertaken. However, previous assay results in the vicinity of the 11 locations of the composited sample range from less than 1g/t gold to over 150g/t gold.

### **Consep Pty Ltd - Knelson Concentrator Test-Work**

Consep Pty Ltd ('Consep') is a Western Australia-based company and provides innovative solids concentration and separation solutions for mineral processing plants including gold, base metals and coal. Consep is the Australian supplier for Knelson Concentrators. Knelson Concentrators are utilised for free heavy mineral recovery in over 1000 locations around the world.

Consep split the ~100kg sample provided by ABM Resources, taking a 30 kilogram sample and grinding it to three different sizes for concentration using a laboratory-sized Knelson Concentrator. The summary of results is as follows:

1. Calculated head-grade of the sample is 143g/t gold.
2. First pass concentrate passing 220 micron recovered 73.4% of the gold.
3. Second pass concentrate passing a 113 micron grind recovered a further 23.9% of the gold.
4. Third pass concentrate passing a 67 micron grind recovered a further 0.4% of the gold.
5. The combined first and second pass results are considered the optimal results with:
  - a) a total of 97.3% of gold recovered in concentrate.
  - b) an overall mass yield (the percentage of ore converted to concentrate in two passes) of 0.61%.
  - c) a grade of 15.1 kilograms of gold per tonne of concentrate.

The full details of the Consep Knelson Concentrator test-work are provided in Appendix 1, see link below.

### **Gekko Systems - Gekko Python / Pressure Jig Amenability Test-Work for Gravity Recoverable Gold**

Gekko Systems Ltd ('Gekko') is a company based in Ballarat, Victoria. Gekko specialises in the design, development and distribution of innovative mineral processing equipment and systems with a particular focus on gravity separation.

One of Gekko's products is a modular gold extraction plant called 'Python'. Python is a small scale and highly portable system using Vertical Shaft Impactors (a method of crushing rock using no water and lower energy requirements than a traditional ball mill) and pressure jigs to extract the material.

Gekko split the sample provided by ABM into a 30 kilogram sample. This sample was crushed to 600 microns using the Vertical Shaft Impactor and then concentrated using a wave-table into five individual concentrates. The remnant material is assayed to calculate gold losses.

#### **Summarized results of the Gekko work are:**

1. The calculated head grade of the sample is 40.32g/t gold.
2. Concentrate 1 yielded 47.3% recovery of gold.
3. Concentrate 2 yielded 41.1% recovery of gold for a cumulative total of 88.4% recovery.
4. Concentrates 3, 4 and 5 yielded a combined further 4.5% recovery only indicating that Concentrate 1 and 2 combined is optimal.
5. The mass yield of the concentrate is 5.6% of the original product.
6. Grade is 0.637 kilogram of gold per tonne of concentrate.

Concentrate from the Python can be converted into gold bars using in-line leach reactors. These results are considered interim only. Gekko is also testing the extraction of further gold using flotation.

The full details of the Gekko work are provided in Appendix 2, see link below.

### **Comparing the Two Methods Presented and Impact on Scoping Study**

Both the Knelson Concentrator test-work and the Gekko Python amenability test-work conclude that the Old Pirate material is able to yield extremely high gravity gold recoveries. Both companies have commented on the high quality of this material.

Whilst the Knelson Concentrator work will yield a higher grade concentrate and greater recovery of gold it involves finer grinding and the likely need for a mill. The Gekko test work resulted in lower recoveries but has the advantage of a coarse crush using a Vertical Shaft Impactor which has lower energy and water requirements than a conventional ball mill. Until further studies are complete it is not possible to rank one process over the other.

ABM has not contracted either Consep or Gekko to construct a gravity processing plant. The Company remains in discussions with several parties for possible plant construction. Furthermore, the Company is continuing discussions with Tanami Gold NL for possibly processing of Old Pirate material at the nearby Coyote Gold Mine.

ABM's scoping study on the preliminary economics of the Old Pirate Gold Deposit modelled an optimised open pit extracting 261,000 ounces gold using an 85% recovery (refer release 15/05/2012).

These latest test-work results will likely have a financially positive impact on the cash flow, cash costs and amount of gold produced. For example, if the same optimisation and assumptions were applied but using a 95% recovery rate (rather than 85%) an additional 31,000 ounces would be recovered from the open pit design used in the scoping study. This would bring the total production based on the scoping study to 292,000 ounces.

If ABM proceeds to construct a processing plant the final plant design may differ significantly from those simulated in the test-work. Further economic studies are on-going.

### **About the Old Pirate High Grade Gold Deposit**

The Old Pirate Gold Deposit is a high grade system with current resources of 427,400 ounces of gold averaging 7.95g/t gold (top cut) or 565,000 ounces averaging 10.95g/t gold (uncut) (refer Appendix 3).

Gold at Old Pirate is coarse and has a coarse gold effect. Gold bearing quartz veins range from a few centimetres to over 4 metres in width and extend over an area approximately 800 metres by 400 metres. Quartz veins are hosted in a folded interlayered sandstone / shale sequence. In addition ABM recently discovered the Golden Hind prospect located 800 metres to the south of Old Pirate.

View the complete ABM Resources announcement including Figures and Appendix, please click the link below:

<http://media.abnnewswire.net/media/en/docs/ASX-ABU-602844.pdf>

### **About ABM Resources NL:**

[ABM Resources](#) (ASX:ABU) is an exploration company developing several gold discoveries in the Tanami-Arunta region of the Northern Territory of Australia. The Company's assets include the Twin Bonanza Gold Camp including the large scale / bulk tonnage Buccaneer Porphyry Gold Deposit which has several new extensional zones discovered in 2011 and the Old Pirate High-Grade Gold Prospect where the Company recently announced 726 metres of combined vein strike length averaging 24.01g/t gold from surface trenching (refer announcement dated 8/2/2012). In addition, regionally the Company has discoveries at the Hyperion Gold Project and the Kroda Gold Project and is also focused on unlocking the potential of one of the largest blocks of exploration licenses in Australia.

### **Contact:**

ABM Resources NL

T: +61-8-9423-9777

F: +61-8-9423-9733

WWW: [www.abmresources.com.au](http://www.abmresources.com.au)

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