

Regulus Announces that Preliminary Metallurgical Results Indicate Good Gold Recovery is Achievable at the Rio Grande Cu-Au-Ag Project, Argentina

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WATERDOWN, ONTARIO -- ([Marketwire](#) - Dec. 6, 2011) - [Regulus Resources Inc.](#) ("Regulus" or the "Company")(TSX VENTURE: REG) is pleased to announce positive results from preliminary metallurgical work on the Company's 50%-owned Rio Grande copper-gold-silver project in Salta Province, Argentina. The Rio Grande project is a 50/50 joint venture between Regulus and [Pachamama Resources Inc.](#) ("Pachamama") with Regulus acting as the operator.

Mineralization at the Rio Grande project contains significant quantities of both copper and gold and has been completely to partially oxidized to depths of 350m or more with minimal remobilization of copper (please refer to companion news release of even date for the Rio Grande initial resource estimate). Below these depths the mineralization is associated with a chalcopyrite dominant, low pyrite sulphide assemblage. A series of preliminary metallurgical tests have been completed to determine potential for recovery of both metals and thereby provide a context for evaluation of a concurrent initial resource estimate. The test work consists of single and sequential leaching tests for copper and gold, gravity separation tests for gold, and flotation-concentration studies. Test work was completed on both oxidized and primary sulphide mineralization.

The test work was conducted by ALS Chemex in Chile (ALS), Resource Development Inc. (RDI) in Colorado and SGS Minerals Services in Ontario (SGS), all leading analytical and metallurgical firms serving major and junior mining companies with global resource projects. Highlights of the studies include the following:

- Gold responds very well to cyanidation of both oxide and sulphide bearing material with cyanide consumption well within average ranges
- Single stage cyanidation bottle roll tests on oxide material average 91.5% gold recovery
- Sequential sulphuric acid - cyanidation bottle roll tests on oxide material average 86.5% gold recovery and on sulphide material average 92% gold recovery
- The SART (Sulphidation, Acidification, Recovery and Thickening) process recovers a very high percentage of cyanide and cyanide soluble copper and but total copper recovery is limited by the generally low percentage of cyanide soluble copper in the oxide material
- Sequential sulphuric acid - cyanidation bottle roll leach tests on oxide material indicate copper recoveries ranging from 50-84% with an average recovery of 71%. However, acid consumption is very high, ranging from 37-136 kg/t (average approximately 70 kg/t)
- Gravity studies indicate gold recoveries of 13-42% in Gemini concentrates, however the concentrate grades are not high enough for direct smelt. Hence, gravity processing would only be practical if used in the grind circuit along with a conventional flotation process
- Flotation tests on oxidized to partially oxidized samples indicate gold recoveries ranging from 58 to 80% (average 67%); copper recoveries are predictably low in oxidized material (13-15% with sulphidation) and improve to approximately 40% in partially oxidized material; flotation studies for sulphide material are still in progress
- Viable process options have been identified, particularly for gold, and further studies will proceed to better characterize the best alternatives for the project
- The initial resource estimate for the Rio Grande Project is presented in conjunction with these metallurgical studies in a separate news release of the same date

Mr. Wayne Hewgill, President and CEO of Regulus commented as follows:

“We are very encouraged with the results of the initial metallurgical studies at the Rio Grande Project. We are particularly pleased with the gold results which show very good recovery in both oxide and sulphide mineralization. Copper also leaches quite well although overall recoveries may be somewhat lower than normal due to incomplete oxidation and acid consumption will likely be high. The purpose of these studies was to determine if both copper and gold can be recovered utilizing conventional processing technology and these studies indicate that both leaching and conventional flotation/concentration offer pathways to recovery of both metals.

There appear to be two logical process pathways that warrant further investigation and definition. The first will be cyanide leaching combined with the SART process to recover most of the gold and significant quantities of copper. The second process pathway would be conventional flotation/concentration with acid leaching of the concentrate tails for more oxidized material to allow recovery of both copper and gold. Additional test work will be underway shortly with fresh drill core from the current drilling program.”

Summary of Metallurgical Test Work

A series of metallurgical studies were completed on coarse reject samples from diamond drill core holes completed in 2005-2008 at the Rio Grande project (no additional drilling was completed at the project in 2009-2010). The coarse reject samples had been stored in sealed bags in dry conditions. Drilling that is currently underway will provide fresh core sample for future test work. Composite samples were prepared utilizing multiple drill intercepts to produce samples representative of average mineralization grades and degrees of oxidation. The test work was conducted by ALS Chemex in Chile (ALS), Resource Development Inc. in Colorado (RDI) and SGS Minerals Services in Ontario (SGS). The following metallurgical studies were completed in this phase of test work and results are discussed below:

- Sequential acid leach to understand basic copper leaching characteristics - ALS
- Cyanide gold leaching and SART testing - SGS
- Acid copper leaching and preliminary cyanide gold leaching - RDI
- Gravity separation for gold in oxide mineralization - RDI
- Conventional flotation/concentration tests on oxide and transitional mineralization - RDI

Gold Cyanide Leach Tests and SART - SGS

The results of cyanide leach bottle roll tests and SART processing of leach solution at SGS indicate rapid leach time, very good gold recoveries, and good recovery of cyanide soluble copper and cyanide using the SART process. Cyanide bottle roll tests (48 hours, 40% solids, 1g/l NaCN, K80 approximately 75 microns) were conducted on four samples of oxide or transition mineralization and three of these samples were selected for SART testing.

- Very good Au recoveries were achieved from the four bottle roll tests using a standard cyanide leach with recoveries ranging from 88.4 to 95.6% and averaging 91.5%.
- Ag recoveries were typically lower than gold and ranged from 39 to 47%.
- Cu recovery from the cyanide soluble copper in the SART process was excellent ranging from 97 to 100%, but is limited to only the cyanide soluble copper in the deposit. Therefore, net recoveries ranged from 7.4% to 38.3 % Cu depending on the amount of cyanide soluble Cu in the limited number of samples evaluated.
- A sampling program will need to be completed to map out the amount of cyanide soluble copper in the oxide and transition mineralization at Rio Grande.
- The Cu is recovered as a high grade chalcocite concentrate in the range of 37% Cu.
- Net cyanide consumption during the gold leaching process was low averaging 2.05 kg/t for the four bottle roll cyanidation tests.
- The SART process indicates good cyanide recovery with SART recoverable CN ranging from 82-86% of the cyanide used in the leaching process.

Sequential Sulphuric Acid - Cyanidation Leach tests for Copper and Gold - RDI

A total of 22 composite samples of coarse rejects from drill core were submitted to RDI for sequential sulphuric acid - cyanidation bottle roll leach tests. Twenty of the samples represented oxide or transitional oxide-sulphide material and two of the samples were sulphide material.

The samples were first subjected to sulphuric acid leaching (72 hours, 40% solids, 10 g/l acid, P100 - 150 mesh) and subsequently to cyanidation leaching (48 hours, 40% solids, 1 g/l NaCN). A summary of the results obtained follows:

- The majority of the soluble copper is in the form of acid soluble copper with significantly lesser amounts of cyanide soluble copper
- Copper recoveries from oxide material ranged from 50-84% (average 71% - 15 samples), from transitional oxide-sulphide material ranged from 28-69% (average 58% - 5 samples), and from sulphide material ranged from 9.1-9.4% (only two samples)
- Acid consumption was very high in all samples, ranging from 37-136 kg/t (average 70 kg.t) and with no notable variance depending upon amount of oxidation
- Gold recoveries from oxide material ranged from 76-94% (average 86.5% - 15 samples), from transitional oxide-sulphide material ranged from 25-95% (average 69% - 5 samples), and from sulphide material ranged from 91-93% (average 92% - only 2 samples)
- Cyanide consumption was reasonable for most of the composite sample, typically ranging from 0.2-0.7 Kg/t with values somewhat higher for samples where significant copper was also leached with the gold (up to 3 kg/t).

Gravity Tests - RDI

Gravity concentration tests were conducted to determine if sufficient coarse free gold exists to warrant this processing technique. The Gemini concentrates captured 13-42% of the gold from representative composite samples of oxide, transitional oxide-sulphide and sulphide material. However the gold grade of the concentrates (9-30 g/t, with one sample of 72 g/t Au) was not sufficiently high for direct smelt. Hence, gravity concentration will only be of potential value if used in the grind circuit along with conventional flotation processing.

Flotation Tests - RDI Labs

Two representative bulk composite samples for oxide and transitional oxide-sulphide material were subjected to a total of 10 rougher concentrate flotation tests to evaluate variation in grind size and reagents. The results of these studies are summarized below:

- Gold recoveries in the rougher concentrate ranged from 58-67% for the oxide composite and from 67-80% for the transitional oxide-sulphide composite
- Copper recoveries in the rougher concentrate ranged from 6-15% for the oxide composite and from 27-40% for the transitional oxide-sulphide composite
- Sulfidation reagents appear to produce a slight increase in copper recoveries (to the upper end of the recovery ranges indicated above)
- Flotation studies for sulphide material are in progress and will incorporate fresh samples from current drilling

About Regulus Resources Inc.

Regulus Resources Inc. (TSX VENTURE:REG) is a mineral exploration company formed in December 2010 in connection with the sale of [Antares Minerals Inc.](#) to [First Quantum Minerals Ltd.](#) Regulus is currently exploring the Rio Grande Cu-Au-Ag porphyry project in Salta Province of NW Argentina on a 50/50 joint-venture basis with Pachamama Resources Ltd.

Current Share Capital	
Shares Outstanding	36,782,234 Common Shares
Shares Fully Diluted	39,366,234 Common Shares

The TSX Venture Exchange does not accept responsibility for the adequacy or accuracy of this release. All of Regulus' exploration programs and pertinent disclosure of a technical or scientific nature are prepared by, or under the direct supervision of, Wayne Hewgill, P. Geo, and Regulus' President, who serves as the qualified person (QP) under the definitions of National Instrument 43-101.

Regulus' security, chain of custody and quality control is described on their website and can be reviewed at: <http://www.regulusresources.com/BestPractices/SamplingMethodologies.aspx>

Forward Looking Information

Certain statements regarding Regulus, including management's assessment of future plans and operations, may constitute forward-looking statements under applicable securities laws and necessarily involve known and unknown risks and uncertainties, most of which are beyond Regulus' control.

Specifically, and without limitation, all statements included in this press release that address activities, events or developments that either Regulus expects or anticipates will or may occur in the future, including management's assessment of future plans and operations and statements with respect to the completion of its anticipated drilling programs, future results, the completion of a NI 43-101 compliant resource estimate, success of recovery of mineral resources and mineral recovery methodologies may constitute forward-looking statements under applicable securities laws and necessarily involve known and unknown risks and uncertainties, most of which are beyond Regulus' control. These risks may cause actual financial and operating results, performance, levels of activity and achievements to differ materially from those expressed in, or implied by, such forward-looking statements. Although Regulus believes that the expectations represented in such forward-looking statements are reasonable, there can be no assurance that such expectations will prove to be correct. Such risks and uncertainties include, but are not limited to: the impact of general economic conditions in Canada and Argentina, industry conditions including changes in laws and regulations including adoption of new environmental laws and regulations, and changes in how they are interpreted and enforced, in Canada and Argentina, fluctuations in commodity prices and ability to complete operations due to factors beyond Regulus' control.

Although the forward-looking statements contained in this Press Release are based upon assumptions which management believes to be reasonable, Regulus cannot assure shareholders that actual results will be consistent with these forward-looking statements. With respect to forward-looking statements contained in this press release, Regulus have made assumptions regarding: current commodity prices and royalty regimes; timing of receipt of regulatory approvals; availability of skilled labour; timing and amount of capital expenditures; future exchange rates; the impact of increasing competition; conditions in general economic and financial markets; effects of regulation by governmental agencies; royalty rates; future operating costs; and other matters.

Accordingly, Regulus does not give any assurance nor make any representations or warranty that the expectations conveyed by the forward-looking statements will prove to be correct and actual results may differ materially from those anticipated in the forward-looking statements. Regulus does not undertake any obligation to publicly update or revise any forward-looking statements other than required by applicable securities law.

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