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Vista Gold Corp. Publishes Mt. Todd Gold Project Metallurgic Test Results and Schedules Release of Preliminary Feasibility Study Results for May 29, 2013

DENVER, May 22, 2013 /[PRNewswire](#)/ -- Vista Gold Corp. ("Vista" or the "Company") (NYSE MKT and TSX: VGZ) today published the significant results of feasibility-level metallurgic test work supporting the comminution circuit design and estimated gold recovery rates for the Batman deposit at the Mt. Todd gold project in Northern Territory, Australia. The test work was based on HQ core samples from the Company's 2011 and 2012 drilling programs and included extensive variability testing. This test work, combined with the findings of previous test work programs, supports (1) ore hardness estimates at the Batman deposit that are consistent and do not change at depth; (2) the selection of High Pressure Grinding Roll ("HPGR") technology as part of the comminution circuit; (3) gold recovery rates for freshly mined ore of 81.7% based on optimized grind size and leach conditions; and (4) the processing of material from the historic heap leach pad at the end of the proposed mine life. **Results of this test work are being incorporated into the Company's preliminary feasibility study ("PFS"), the results of which will be released prior to market open on May 29, 2013.** Vista will host a conference call that afternoon to discuss the results of the PFS.

Vista's President and Chief Executive Officer, Frederick H. Earnest, commented, "These metallurgic test results are key milestones in the optimization of the Mt. Todd gold project. Since purchasing the project in 2006, Vista has completely re-evaluated the entire project with a methodical, systematic and exhaustive focus on the metallurgical process. The feasibility-level metallurgic testing program has added significantly to our understanding of the metallurgical behavior of the Batman deposit and independently validated more than six years of technical analysis of the project. We are confident that material from the Batman deposit can be efficiently processed by proven, 'off the shelf' technologies to achieve good gold recoveries."

Full technical reports are available under the "Technical Reports" header of the Mt. Todd section of the Vista Gold website at

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http://www.vistagold.com/mt_todd.php?subpage=technical_study. The key findings are summarized below.

Ore Hardness: ore in the Batman deposit is hard, but consistent and does not change at depth

Samples used for the test work program were sourced from eight holes from the Company's 2010 and 2011 drilling program that were oriented to intersect the main Batman deposit beneath the existing pit and are believed to be representative of the ore within the limits of the preliminary feasibility pit.

Twenty of the samples were subjected to Bond ball mill work index ("BWi") tests, the SMC Test (drop-weight and specific gravity tests) as well as Compressive Strength Tests and Crushing Work Index ("CWI") tests. The results of the BWi tests show an average BWi value of 26.2 kWh/t with a maximum value of 28.2 kWh/t and a minimum value of 23.6 kWh/t.

The results of this test work support two main conclusions: (1) that the hardness of ore at the Batman deposit is relatively constant; and (2) that ore at the Batman deposit does not change at depth.

This test work validates the Company's prior test work and supports Vista's comminution circuit design, which is designed to crush and grind ore with an average BWi of 27.4 kWh/t, a 5% factor of safety above the average BWi and closer to the 75th percentile of BWi test results.

HPGR Selection: use of HPGRs provides more desirable feed for ball mills and saves on energy consumption compared to a Semi-Autogenous Grinding ("SAG") mill

Prior operators of the Mt. Todd project processed approximately 7.5 million tonnes through a five-stage comminution circuit that

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incorporated a gyratory crusher and cone crushers as the primary and secondary-stage crushers. Historic operating data indicates that the primary and secondary crushers worked well, although may have been inappropriately sized (too small or under-powered). The third and fourth-stages of crushing, which incorporated the use of 19 Barmac crushers, were the bottleneck of the historic operation.

Vista's proposed comminution circuit incorporates the use of a large gyratory crusher and two large cone crushers for the primary and secondary stages, but contemplates the use of HPGRs as the third-stage of the crushing circuit. Much of Vista's test work has focused on confirming the use of HPGRs.

Initially, Vista ran a series of parallel tests comparing a SAG/ball mill circuit with an HPGR crushing and ball mill circuit. Based on the test work completed, HPGR technology was selected. Industry experience has shown HPGRs to produce micro-fracturing in particles that reduce the overall particle strength and generate a greater distribution of fine material in the ball mill feed, reducing downstream ball mill energy requirements. The ore at the Batman deposit consists of silicified greywackes/shales/siltstones and test work has shown the HPGRs tend to fracture ore at the Batman deposit along the bedding planes more than micro-fracturing. The result, however, is consistent with other industry HPGR applications in that the HPGR product produces a lower BWi feed for the ball mills. The test results indicate the SAG mill circuit produced a product with an average BWi of 26.4 kWh/t compared to the HPGR crushed product with an average BWi of 24.8 kWh/t, a reduction of over 6%.

Additionally, material crushed in the HPGR test resulted in up to 10% of the HPGR product being fine enough to by-pass the ball mills entirely and proceed straight to the leach circuit. Vista has incorporated this HPGR advantage in its comminution circuit design.

The test work also assessed the difference in power requirements

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between a primary/SAG/ball mill circuit, a conventional 3-stage crush/ball mill circuit, and a 3-stage HPGR/ball mill circuit to generate a 90 μm P₈₀ product. The assessment concluded that the 3-stage HPGR/ball mill circuit has a significantly lower specific energy requirement than the primary/SAG/ball mill option and that a finer grind size can be achieved with the HPGR crushed material compared to conventionally crushed material ground for the same period of time.

This test work also confirms the Company's prior test work and supports Vista's comminution circuit design. The use of HPGRs is anticipated to (a) produce a product that can be ground more efficiently (lower BWi) in the ball mills; and (b) reduce energy requirements when compared to a SAG mill design.

Gold Recoveries: gold recovery rates expected to be 81.7% for freshly mined ore and not negatively impacted by presence of copper in ore

Vista's focus was to solve the high reagent consumption, poor gold recovery and copper leaching issues encountered by previous operators. Historic core samples indicated the presence of cyanide soluble secondary copper mineralization (chalcocite and bornite) in ore at the Batman deposit, and as such, Vista's initial focus was to develop a flowsheet that incorporated the production of a copper concentrate.

However, Vista's drill programs from 2007-2012 indicated a significant change in the mineralogy of ore at the Batman deposit with depth with copper mineralogy changing from cyanide soluble secondary copper to non-cyanide soluble primary copper mineralization (chalcopyrite). The change in mineralogy occurs at approximately 40 meters below surface and the majority of the ore containing cyanide soluble secondary copper was mined by previous operators. As a result, more than 96% of ore at the Batman deposit contains low-to-non-cyanide soluble primary copper mineralization. Therefore, Vista's recovery circuit has been

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simplified and focuses only on recovering gold from ore at the Batman deposit through a conventional Carbon in Leach ("CIL") circuit.

The remainder of Vista's test work relating to gold recovery focused on optimal grind size, pre-conditioning of ore with lime (to reduce cyanide consumption), the identification of a reagent to suppress copper leaching (lead nitrate was selected), and optimal cyanide concentration.

After determining the optimal leach conditions, 99 samples covering a range of head grades from throughout the Batman deposit were subjected to leach tests resulting in gold extraction between 75% and 85%, with an average of 81.7%, net of solution losses. Cyanide consumption was estimated at 0.77kg/t and lime consumption was estimated at 0.91kg/t.

This test work validates the Company's prior recovery estimates (82%), indicates little gold recovery variability throughout the Batman deposit, and supports Vista's recovery plant design utilizing a conventional, industry-proven, CIL circuit.

Deepak Malhotra, President of Resource Development Inc., who is a "qualified person" within the meaning of Canadian National Instrument 43-101 - Standards of Disclosure for Mineral Projects, has verified and approved the data and approved the scientific and technical information disclosed in this press release.

Existing Heap Leach Pad: material to be processed through mill at end of mine life

In addition to analysis of freshly-mined ore from the Batman deposit, Vista has analyzed the potential to incorporate nearly 13.35 million tonnes of material on the existing heap leach pad into the Mt. Todd gold project. The original Mt. Todd project started as a heap leach operation with historic records indicating that the average grade of material placed on the pad was 0.96 g Au/t. Although the material was



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partially leached in the mid-1990s, Vista has drilled 24 air-rotary holes into the heap leach pad and assayed 361 samples, and created a 3D resource model that has an average grade of 0.54 g Au/t.

Initial evaluation efforts focused on re-starting the heap leach pad. Bottle roll and column tests were completed, both of which supported the leachability of the material with gold recovery rates around 35%. However, poor in situ permeability rates caused Vista to ultimately abandon plans to re-start the heap.

Vista subsequently submitted two heap leach variability composites and two drill hole composites from the leach pad for CIL cyanidation leach test work. The samples were ground to P₈₀ passing 90 µm and pre-treated with lime and 100g/t of lead nitrate to suppress copper leaching. The material was then leached for 24 hours. These results support recovery rates of 70% for this material when processed through the CIL plant.

Vista's upcoming pre-feasibility study will incorporate processing this material through the plant at the end of the mine life. The heap leach material will be listed as a separate resource from the Batman deposit. A separate technical report relating to the heap leach CIL cyanidation test work has been completed and posted to the Vista website along with the additional reports referenced above.

About Vista Gold Corp.

Vista is focused on the development of the Mt. Todd gold project in Northern Territory, Australia, to achieve its goal of becoming a gold producer. Vista has completed a preliminary economic assessment on its Guadalupe de los Reyes gold/silver project in Mexico and has granted Investure Group, S.A. de C.V. a right to earn a 62.5% interest in the Los Cardones gold project, in Mexico. Vista's other holdings include the Awak Mas gold project in Indonesia, subject to One Asia Resources Ltd.'s right to earn an 80% interest, and the Long Valley gold project



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in California. For more information about our projects, including technical studies and resource estimates, please visit our website at www.vistagold.com.

For further information, please contact Connie Martinez at (720) 981-1185.

Forward Looking Statements

This press release contains forward-looking statements within the meaning of the U.S. Securities Act of 1933, as amended, and U.S. Securities Exchange Act of 1934, as amended, and forward-looking information within the meaning of Canadian securities laws. All statements, other than statements of historical facts, included in this press release that address activities, events or developments that Vista expects or anticipates will or may occur in the future, including such things as, the completion and release of the PFS as scheduled, the expected efficiencies from the use of HPGR's in Vista's plant design, Vista's expected gold recovery rate at the Mt. Todd project, Vista's ability to recover gold using a CIL recovery circuit and Vista's goal of becoming a gold producer and other such matters are forward-looking statements and forward-looking information. The material factors and assumptions used to develop the forward-looking statements and forward-looking information contained in this press release include the following: timing and completion of the preliminary feasibility and feasibility studies, timing and the ability to obtain the necessary permits, keeping expenditures at a minimum while taking advantage of the estimated mineral resources at the Mt. Todd gold project, the amount of expenditures required to increase the plant capacity and timing and schedule of consultants' work and other such matters are forward-looking statements and forward-looking information. When used in this press release, the words "optimistic," "potential," "indicate," "expect," "intend," "hopes," "believe," "may," "will," "if," "anticipate," and similar expressions are intended to identify forward-looking statements and



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forward-looking information. These statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Vista to be materially different from any future results, performance or achievements expressed or implied by such statements. Such factors include, among others, uncertainty of resource estimates, estimates of results based on such resource estimates; risks relating to completing metallurgical testing; risks relating to cost increases for capital and operating costs; risks related to the timing and the ability to obtain the necessary permits, risks of shortages and fluctuating costs of equipment or supplies; risks relating to fluctuations in the price of gold; the inherently hazardous nature of mining-related activities; potential effects on Vista's operations of environmental regulations in the countries in which it operates; risks due to legal proceedings; risks relating to political and economic instability in certain countries in which it operates; as well as those factors discussed under the headings "Note Regarding Forward-Looking Statements" and "Risk Factors" in Vista's Annual Report Form 10-K as filed on March 14, 2013 and other documents filed with the U.S. Securities and Exchange Commission and Canadian securities regulatory authorities. Although Vista has attempted to identify important factors that could cause actual results to differ materially from those described in forward-looking statements and forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. Except as required by law, Vista assumes no obligation to publicly update any forward-looking statements or forward-looking information; whether as a result of new information, future events or otherwise.

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