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Vista Gold Corp. Announces Improved Gold Recovery for the Mt Todd Gold Project and Guidance for Preliminary Feasibility Study Update



DENVER, Nov. 27, 2017 /[PRNewswire](#)/ -- Vista Gold Corp. (the "Company," "we" or "our") (TSX and NYSE American: VGZ) today issued the results of its previously announced metallurgical testing program for the Mt Todd gold project located in the Northern Territory, Australia. The test work confirms that the inclusion of automated sorting and a re-designed, 2-stage grinding circuit will enable the project to achieve a finer grind size, higher gold recoveries/higher gold production, and lower processing costs with no material increase in project capital.

Automated Sorting

The Company's automated sorting program (see the Company's July 24, 2017 press release for full details) is now complete, with assays for all size fractions. The test work confirmed that the combination of x-ray transmission ("XRT") and laser sorting on the +5/8" (16mm) screened HPGR crushed material (approximately 18% of the run-of-mine feed) enables the Company to reject approximately 10% of the run-of-mine feed as below cut-off grade material (this uneconomic material is hereafter referred to as "waste"). This results in an approximate 8% improvement in estimated mill feed grade (life-of-mine average 0.91 grams gold per tonne "g Au/t" compared to the 0.84 g Au/t life-of-mine reserve grade) with an estimated gold loss of only 1.3%. With the installation of an automated sorting circuit, the Company expects to reduce total grinding, leaching and tailings handling costs by approximately 10%.

Newly Designed 2-Stage Grinding Circuit

Past metallurgical studies at Mt Todd demonstrate a strong correlation between finer grind size and higher gold recovery. To efficiently



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achieve a finer grind size and higher recovery, the Company has optimized the crushing and grinding circuits. Excess capacity in the HPGR crusher will now be used to produce finer feed for the grinding circuit. Each grinding module is now comprised of a primary ball mill and three, small fine-grinding mills. The combination of the reduced material volume (as a result of automated sorting), smaller mill feed size, and 2-stage grinding, lowers the total estimated project power requirements by approximately 13% and enables the Company to cost-effectively achieve a nominal P₈₀ grind size of 60µm. Leaching tests on material ground to 60µm in the 2-stage grinding tests show improved estimated gold recoveries of 86.2% (weighted average, net of solution losses) compared to previous gold recovery estimates of 81.7% calculated on the same basis.

Vista's President & CEO, Frederick H. Earnest, commented, "Mt Todd is one of the largest, advanced-stage gold development projects in Australia. Last year we initiated a comprehensive program to optimize the Mt Todd project and demonstrate its viability at a US\$1,250 per ounce gold price. We have now completed test work confirming our ability to achieve a significant improvement in feed grade to the grinding circuit while reducing our grinding, leaching and tailings handling costs. Our newly designed, 2-stage grinding circuit is expected to generate a finer product (with lower power consumption), which we have confirmed results in higher gold recovery and a 4.1% increase in gold production. We intend to include these process area improvements in an updated Mt Todd preliminary feasibility study, targeted for completion in Q1 2018. We expect these improvements, along with current foreign exchange rates, and updated capital, labor and operating costs estimates to demonstrate that Mt Todd will be a long-life, low-cost, significant gold producer, with robust project economics at today's gold prices."

Metallurgical Testing Results Details

Automated Sorting

NEWS

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The bulk automated sorting tests were four, five-tonne composites prepared from 3.75" drill core. Three of the composites contain predominately the sulfide mineralization and one composite contains mixed oxide/sulfide material that is encountered on the periphery of the deposit. The drill core was HPGR crushed and screened at 16mm at the facilities of Thyssen Krupp Industries ("TKI") near Dusseldorf, Germany. The +16mm material was sent to the test facility of Tomra Sorting Solutions ("Tomra") near Hamburg, Germany where this material was initially sorted using XRT sorting. A total of 12 sorting tests were completed. The XRT rejects were then subjected to laser sorting to produce a final reject. All material (-16mm HPGR crushed, XRT product, laser product and sorting reject) was sent to the metallurgical laboratory of Resource Development Inc. ("RDi") in Wheatridge, Colorado for subsequent sample preparation, assaying and additional metallurgical testing.

On a material mass basis, the combined XRT and laser sorting tests confirmed the Company's expectation that it can reject 10% of the run-of-mine feed waste (test results range from 6.8% to 11.0%). The average grade of the rejected material is estimated to be 0.12 g Au/t (results range from 0.06 g Au/t to 0.23 g Au/t) compared to the mine cut-off grade of 0.4 g Au/t, resulting in a gold loss from the rejected waste of approximately 1.3%. The improvement in mill feed grade is expected to be approximately 8%, resulting in run-of-mine average mill feed grade of 0.91 g Au/t compared to the life-of-mine reserve grade of 0.84 g Au/t. We now expect grinding, leaching and tailings handling costs, which are dependent on the volume of material processed, to be approximately 10% less.

Grind Size and Leach Optimization Tests

RDi prepared samples of the individual components received from Tomra and TKI and sent splits to Florin Analytical Services ("Florin") in Reno, Nevada for assay. RDi then recombined the components (excluding the sorter reject material) to create representative samples of each

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composite. Single-stage grind optimization tests were completed on the representative samples from each composite. Leach optimization tests were undertaken on these samples at various grind sizes. Subsequently, 2-stage grind and leach optimization tests were undertaken on representative material from the composites ground to a nominal P₈₀ grind size of 60µm. Additionally, 2-stage grind and leach optimization tests were undertaken on high-grade samples left over from previous Mt Todd testing undertaken at RDi. In total, 41 grind and leach tests were completed on samples representing low-grade, near deposit average grade and high-grade material from the Mt Todd deposit. The leach tests were designed and undertaken to simulate the proposed process flow sheet leach circuit. Bottle roll leach tests consisted of four hours of pretreatment with lime and air, 24 hours of cyanide leaching and six hours of carbon loading. Head and tail assays were completed by Florin. This testing program indicates that 2-stage grinding to a nominal P₈₀ grind size of 60µm can be expected to result in gold recoveries up to 91.0%. Taking into consideration the relative proportions of the different ore types to be processed, the leach test results indicate that a recovery of 86.2% (weighted average, net of solution losses) can be achieved.

The results of the grinding/leaching tests have been transmitted to the process design team at TetraTech Proteus ("Proteus") who are completing the process area designs as part of the updated preliminary feasibility study. Proteus and Vista have worked closely with the engineers at TKI to assess the capacity of the HPGR crushing circuit. We have also consulted with the engineers at Glencore relative to our selection of IsaMills as the preferred fine grinding equipment.

The removal of waste by automated sorting is complemented by changes in the operation of the HPGR crushing circuit and the design of a new 2-stage grinding circuit. The new process flow sheet incorporates work-sharing between the HPGR and grinding circuits. Excess capacity in the HPGR circuit will now be used to produce a ball mill feed product of approximately P₈₀ 1/8" (nominally 3.5 mm), a 42% reduction

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from past studies. Due to the final product size, wet screening will be incorporated and the HPGR crusher circuit product will now report to a sump and cyclone bank. In each grinding circuit module, the new 2-stage grinding circuit replaces each previously planned large, single ball mill (designed to produce a P₈₀ 90µm product) with a ball mill and three IsaMills to produce a final product with a P₈₀ grind size of 60µm. Due to the reduction in the volume of ore to the grinding circuit and efficiencies resulting from the combination of mill type, ball charge size and feed size, the implementation of automated sorting and 2-stage grinding is expected to consume approximately 13% less power, produce a final product that is 32% finer, and produce 4.1% more gold from the same run-of-mine feed.

Updated Preliminary Feasibility Study Guidance

The Company expects to complete an updated preliminary feasibility study in the first quarter of 2018. The updated preliminary feasibility study will include the more favorable current US dollar vs. Australian dollar exchange rate, gold price of US\$1,250 per ounce, automated sorting, improved gold recovery, redesigned and more efficient HPGR crushing/grinding circuit, and various other capital and operating cost improvements, all of which are expected to result in a technically improved project with higher gold production, lower operating costs, and strong project economics.

Qualified Persons

Dr. Deepak Malhotra, Metallurgist and President of RDi and John Rozelle, Senior Vice President of Vista, independent Qualified Persons as defined by Canadian National Instrument 43-101 ("NI 43-101"), prepared or supervised the preparation of information that forms the basis for the scientific and technical information disclosed herein and have reviewed this press release and have consented to its release. For additional information on the Mt Todd gold project, see our technical report entitled "NI 43-101 Technical Report - Mt Todd



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Gold Project, 50,000 tpd Preliminary Feasibility Study, Northern Territory, Australia" amended and restated July 7, 2014.

About Vista Gold Corp.

The Company is a well-funded gold project developer. Our principal asset is our flagship Mt Todd gold project in Northern Territory, Australia. Mt Todd is one of the largest undeveloped gold projects in Australia. 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 we expect or anticipate will or may occur in the future, including such things as our plan to implement automated sorting and our belief that automated sorting and a re-designed, 2-stage grinding circuit (each module consisting of a ball mill and three IsaMills to produce a final product with a P_{80} grind size of 60 μ m) will enable the project to achieve a finer grind size, higher gold recoveries/higher gold production, and 10% lower processing costs (comprised of grinding, leaching and tailings handling) with no material increase in project capital; our plan to use excess capacity in the HPGR crusher to produce smaller grinding circuit feed of approximately P_{80} 1/8" (nominally 3.5 mm); our plan to include these process area improvements in an updated Mt Todd preliminary feasibility study, targeted for completion in Q1 2018; our expectation that an average



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recovery of 86.2% (net of solution losses) can be achieved; our plan to use wet screening with the HPGR crusher circuit product reporting to a sump and cyclone bank; our expectation that automated sorting and 2-stage grinding will consume approximately 13% less power, produce a final product that is 32% finer, and produce 4.1% more gold from the same run-of-mine feed; our expectation that all of these improvements, along with current foreign exchange rates, and updated capital, labor and operating costs estimates will demonstrate that Mt Todd will be a long-life, low-cost, significant gold producer, with robust project economics at today's gold prices 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: our approved business plans, exploration and assay results, results of our test work for process area improvements, mineral resource and reserve estimates and results of preliminary economic assessments, prefeasibility studies and feasibility studies on our projects, if any, our experience with regulators, and positive changes to current economic conditions and the price of gold. 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 forward-looking information. These statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company 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 and reserve estimates, uncertainty as to the Company's future operating costs and ability to raise capital; risks relating to cost increases for capital and operating costs; 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 our operations of environmental regulations in the countries in which it operates; risks



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due to legal proceedings; risks relating to political and economic instability in certain countries in which it operates; uncertainty as to the results of bulk metallurgical test work; and uncertainty as to completion of critical milestones for Mt Todd; as well as those factors discussed under the headings "Note Regarding Forward-Looking Statements" and "Risk Factors" in the Company's latest Annual Report on Form 10-K as filed on February 22, 2017 and other documents filed with the U.S. Securities and Exchange Commission and Canadian securities regulatory authorities. Although we have 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, we assume no obligation to publicly update any forward-looking statements or forward-looking information; whether as a result of new information, future events or otherwise.

SOURCE Vista Gold Corp.