

# Nighthawk provides update on latest Colomac metallurgical testwork

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TSX: NHK

TORONTO, May 22, 2018 /CNW/ - [Nighthawk Gold Corp.](#) ("Nighthawk" or the "Company") (TSX: NHK; OTCQX: MIMZF) is pleased to provide a summary of results from its ongoing preliminary metallurgical testwork on the Colomac Gold Project ("Colomac"). Findings reveal: a relatively uniform hardness for material tested to-date; that the rock is amenable to all standard gold recovery technologies; and using a combination of gravity and cyanide leach recovery processes, testing showed that gold recoveries range from 96.5% on the lower-grade material and up to 98.0% on the higher-grade rock (see press releases April 19, 2017 and February 21, 2018), representing a significant increase in recovery over historic production results of 88.1% (1994 to 1997).

Two initial bottle roll leach tests were carried out to assess cyanide heap leach feasibility. Minus 12,700 micron (1.27 centimetre) material registered up to 81.8% recoveries on lower-grade rock (1.81 grams per tonne gold "gpt Au", head grade) and 57.50% on the higher-grade material (4.99 gpt Au). One column leach test has been completed to date on higher-grade mineralization posting a recovery of 34.30%. Such noted recovery variability is not uncommon as significant fluctuations have also been documented in recent metallurgical studies on other notable northern deposits and is largely a function of the particle size that interacts with the leachate.

## Higher-Grade Testwork Highlights:

- Minimal variation in rock hardness of all test samples indicates relatively homogeneous host rock;
- Favourable recoveries were achieved for all process options, including, flotation, gravity separation, and heap leaching;
- Gold extraction by flotation ranged from 90.7% - 94.6% with maximum tested recoveries achieved at a feed size F<sub>80</sub> of 75 microns (optimum grade-recovery performance was not examined);
- Cyanidation of ground rock after gravity concentration increased gold recoveries significantly up to 98.0%;
- Cyanide heap leach results show considerable variability between testing methods and grade of material processed but fall within expected performance range for crushed ore (recoveries between 34.30% up to 81.8%).

Despite the variability, Colomac results convey a positive indication of the deposit's heap leach potential, falling within the expected performance range for crushed ore. Additional metallurgical work is required to arrive at a statistically relevant population of results for all deposit types, mineralized zones and corresponding grade variations. As in the previous sampling programs, testwork will be carried out on Colomac drill core from recent drilling.

Dr. Michael Byron, President & CEO commented, "Although at the early stages of metallurgical testwork, the results to-date describe Colomac rock as exceptional in terms of grind characteristics, gold recoveries, purity, and responsiveness to all standard gold recovery technologies. We are also encouraged by the preliminary heap leach bottle roll and column test results. Although initial heap leach gold recoveries show significant variability, other northern deposits including the Fort Knox mine in Alaska, and Yukon's Coffee Gold deposit, Eagle Gold Project, and the Brewery Creek Mine all note variability in their recoveries. To address this, metallurgical testing is planned for 2018, that will cover some of the other mineralized zones, and will include additional bottle roll and column leach testwork as we continue to evaluate the potential heap leach option for the project."

## Metallurgical Testwork

Testing was completed at Bureau Veritas in Richmond, BC, and audited by Starkey & Associates Inc. in Oakville, Ontario. Studies to date have involved drill core mineral process testwork on one higher grade sample from Zone 1.5, and on lower-grade material consisting of three composite samples from various areas of the Colomac Main Sill.

Three drill core bulk samples of similar mineralogical characteristics, totalling 119.5 kilograms, of Colomac lower-grade mineralization was collected from different regions and elevations in the deposit to facilitate hardness testing (Table 1.0), and to address spatial and grade variations of the quartz diorite host rock (Table 2.0). Grinding test results indicate that all samples exhibit a consistent high hardness and show minor variability, thus they would present no milling issues. A master composite sample was then blended for the metallurgical testwork. Recoveries are summarized in Table 3.

To address the higher-grade mineralization, a single drill core sample from Colomac's high-grade Zone 1.5, totalling 70 kilograms of split drill core, was collected and submitted for identical mineral process testwork as was conducted on the lower-grade material.

Results from all studies to-date are summarized in the tables below and show that preliminary grinding testwork characterizes all samples as having a consistent high hardness with minor variability, and that the material tested responds favourably to the proposed process options.

Table 1. Head Assays of Colomac Samples

Sample	Fire Assay	Screen Metallics Assay
Information (g Au/t)	(g Au/t)	
South Zone	1.16	1.32
North Zone	0.35	0.90
Deep	0.65	1.69
High-Grade	2.83	7.16

Table 2. SAGDesign Test Summary

Sample	SG Solids	W <sub>SDT</sub>	S <sub>d</sub> -BWI
Information	(kWh/t) (kWh/t)		
South Zone	2.76	12.32	14.28
North Zone	2.73	13.52	14.38
Deep	2.70	14.07	14.10
High-Grade	2.67	12.69	15.18
Average	2.71	13.15	14.48

Table 3. Master Composite Test Results

Test	Description	Particle Size	Au Recovery (%)	
		~P80 (microns)	Master Composite	High Grade
FLOTATION	Fine	75	94.9	94.6
	Medium	106	94.1	93.5
	Coarse	150	95.5	90.7
GRAVITY	Fine	75	33.3	54.3
	Medium	106	45.0	40.5
	Coarse	150	25.9	42.8
*Crushed Leach	Bottle Roll Leach	12700	81.8	57.5
	Column Leach	12700	N/A	34.3
Ground Leach	Whole Ore	150	96.5	96.4
	Gravity + Leach	106	96.4	98.0

\*standard tests to determine preliminary heap leach amenability

#### Future Testing

Preliminary testwork indicates that the Colomac deposit is amenable to all standard recovery technologies, however future studies will be broadened to include samples from other gold zones within the mineralized sills, and to continue scrutinizing its heap leach potential. The main objective is to confirm that the metallurgical responses observed so far will apply over a broader range of head grades and zone locations.

#### Quality Control and Qualified Persons

The technical information disclosed herein was prepared under the supervision of Dr. Alice Shi of Bureau Veritas and Mr. John Starkey of Starkey & Associates Inc., who is considered an independent "Qualified Person" as defined by NI 43-101 for the metallurgical testing performed on behalf of [Nighthawk Gold Corp.](#) Mr. Starkey has supervised the metallurgical work reported on and has reviewed and approved the technical disclosure contained in this news release with respect to such work.

Dr. Michael J. Byron, Ph.D., P.Geo., President & Chief Executive Officer of Nighthawk, the Qualified Person as defined by NI 43-101 for this project, has observed the collection of the samples for metallurgical testing, reviewed the progress on the metallurgical testing on multiple occasions and has reviewed and approved of the technical disclosure contained in this news release. Please refer to NI 43-101 technical report "Technical Report and mineral resource estimate update on the Colomac Property of the Indin Lake Project", dated June 17, 2013, as filed under the company's profile on [www.sedar.com](http://www.sedar.com).

#### About Nighthawk

Nighthawk is a Canadian-based gold exploration company with 100% ownership of a district-scale land position within the Indin Lake Greenstone Belt, located approximately 200 kilometres north of Yellowknife, Northwest Territories, Canada. Nighthawk is focused on advancing the Colomac Gold Project with a current inferred resource of 2.1 million ounces of gold (39.8 million tonnes at an average grade of 1.64 grams per tonne), as well as advancing its other regional gold deposits and showings within this Archean gold camp.

The Company has an experienced and dedicated team and is well funded to complete its goals and

objectives over the next 18-24 months.

The Toronto Stock Exchange has neither reviewed nor accepts responsibility for the adequacy or accuracy of this news release.

#### Forward-Looking Information

This news release contains "forward-looking information" within the meaning of applicable Canadian securities legislation. Forward-looking information includes, but is not limited to, information with respect to the Company's continued metallurgical testing on the Colomac Gold Project and the timing and results thereof. Generally, forward-looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", or "does not anticipate", or "believes", or variations of such words and phrases or statements that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur", or "be achieved". Suzette N Ramcharan, VP, Corporate Development, Tel: 1-647-794-4362

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Forward-looking information is based on the opinions and estimates of management at the date the information is made, and is based on a number of assumptions and is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of Nighthawk to be materially different from those expressed or implied by such forward-looking information, including risks associated with the exploration, development and mining such as economic factors as they effect exploration, future commodity prices, changes in foreign exchange and interest rates, actual results of current exploration activities, government regulation, political or economic developments, environmental risks, permitting timelines, capital expenditures, operating or technical difficulties in connection with development activities, employee relations, the speculative nature of gold exploration and development, including the risks of diminishing quantities of grades of reserves, contests over title to properties, and changes in project parameters as plans continue to be refined as well as those risk factors discussed in Nighthawk's annual information form for the year ended December 31, 2016, available on [www.sedar.com](http://www.sedar.com). Although Nighthawk has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. Nighthawk does not undertake to update any forward-looking information, except in accordance with applicable securities laws.

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