Nighthawk Reports More Positive Metallurgy for Colomac

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TORONTO, September 15, 2020 - Nighthawk Gold Corp. ("Nighthawk" or the "Company") (TSX:NHK)(OTCQX:MIMZF) is pleased to provide results from the latest metallurgical testwork collected in 2019 from the Colomac Gold Project ("Colomac"), centrally located within the Company's 100% owned Indin Lake Gold Property, Northwest Territories, Canada. Four (4) bulk drill core samples were submitted for SAGDesign, gravity concentration, flotation, bottle roll cyanide leaching, and column heap leach testing with results reported herein.

Results for all previous sampling programs (2016, 2017, and 2018) are also included in this release for reference (Table 1). Current test results are consistent with previous studies showing that Colomac rock performs exceptionally well in terms of its grind characteristics, gold recoveries, purity, and responsiveness to all standard gold recovery technologies. The Colomac test program is still at an early stage of evaluation, where it is reasonable to believe that further optimization should improve gold recovery in all process options. At this stage of the project, no further testing is required until a preferred process option has been decided upon. Once the preferred process option is defined, a comprehensive metallurgical study would be necessary to optimize process conditions.

Dr. Michael Byron, President & CEO commented, "We are extremely pleased with the metallurgical results to-date, which continue to substantiate the consistently limited variability of Colomac rock in terms of its hardness and response to standard mineral processing studies. Heap leach testing, including bottle roll and column tests, are still at a preliminary stage; however, results show a favourable response to the deposit's heap leach potential. We now have a total of ten bottle roll and nine column leach tests that collectively shed considerable insight for the ongoing assessment of the deposit's heap leach and primary processing potential."

"Four metallurgical test programs have now been completed to-date on 12 Colomac bulk samples. Gold recoveries from all studies conducted to date, including the different process routes are summarized in Table 3 and confirm the host rock's remarkably uniform responses to all process options."

Testwork Highlights To-Date:

- Studies continue to note minimal variation in rock hardness for all test samples covering all zones and deposit depths, indicating that both the Colomac Main and Goldcrest sills are relatively homogeneous (Table 2).
- Based on the collective test results to-date, the Colomac deposit is amenable to all standard gold recovery technologies including, flotation, gravity concentration, cyanidation, and heap leaching (Table 3).
    - A combination of gravity and cyanide leach recovery processes (gravity+cyanidation), as well as whole ore cyanidation methods, have given exceptional results with recoveries ranging in average from 95.1% to 98.0% and 91.3% to 97.2% respectively (Table 3), representing a significant increase in recovery over historical production results of 88.1% (1994 to 1997).
    - Although additional studies are required to fully validate these findings, early indications based on metallurgical results received to-date suggest that a semi-autogenous grinding ("SAG") ball mill grinding circuit followed by a gravity concentrate leach, and a cyanide leach circuit on the resultant final ground product, represent a promising process route for recovering gold from Colomac rock.
- Based on the findings of all test work to-date, gold recoveries using heap leaching may be a viable process for low-grade material which would otherwise be discarded as waste.
    - Column leach tests performed to-date resulted in recoveries ranging from 21.3% to 66.0% (107 day run) and up to 69.7% (206 day run) (Table 3).
    - Bottle roll leach tests performed to-date resulted in recoveries ranging from 22.0% to 81.8% (minus half (½) inch crushed material, 10 day run)
- At this time, no further studies are contemplated until a preferred process option has been decided upon.

Metallurgical Testwork

Testing was completed at Bureau Veritas in Richmond, BC, and audited by Starkey & Associates Inc., in Oakville, Ontario. Studies completed to-date include; the four latest 2019 composite samples (standard testing, four bottle roll and four column leach tests), four 2018 composite samples (that were submitted for the same tests, see press releases dated March 19, 2019 and April 23, 2020), one higher grade sample from Zone 1.5 (standard testing, two bottle roll and one column leach tests, see press releases dated February 21, 2018 and May 22, 2018), and three composite samples from lower-grade material (standard testing and one bottle roll leach test, (see press release dated April 19, 2017). All results received to-date are summarized in Tables 1, 2, and 3, and show that the materials tested responded favourably to the proposed process options.

The 2019 program sampled areas of the Colomac Main sill that had not been previously investigated and involved the selective sampling of 11 boreholes from Zones 2.0, 2.5, and 3.0 (Figure 1). All programs to-date collected approximately 70 kg of drill core material for each sample, which were then assayed for gold, tested for grindability using the SAGDesign methodology, and for amenability to several other commonly used gold recovery processes.

It has been well documented that the head grades of assayed Colomac samples show significant variability between fire assay and screened metallic assays (except the lower-grade Colomac 2019 samples). This is believed to be due to the nugget effect of gold in the deposit as material with nuggetty gold mineralization would be expected to result in erratic calculated heads for the various tests. Fire assay results are consistently lower while the metallic assays and screen analysis assays of all the size fractions gives a much better indication of the amount of gold present. This is evidenced by the extent to which gold is recovered in the tests completed (Table 1).

Table 1. Head Assays of Colomac Samples (Including Previous Programs)

Sample ID	Zone	Au Grade (g/mt)			
		Fire Assay	Metallics	Screen Analysis	Average
2019 MET- 1	2.0	0.39	0.34	0.50	0.41
2019 MET- 2	2.0	0.67	0.84	0.71	0.74
2019 MET- 3	2.0	0.58	0.52	0.40	0.50
2019 MET- 4	3.0	0.47	0.60	0.44	0.50
Average-Colomac 2019		0.53	0.57	0.51	0.54
Colomac 2018 Sample 1	1.0	1.67	2.28	3.77	2.57
Colomac 2018 Sample 2	2.0-2.5	2.15	2.05	2.29	2.16
Colomac 2018 Sample 3	3.0-3.5	2.38	2.41	2.82	2.53
Gold Crest 2018 Sample 4	Goldcrest	1.34	2.30	1.48	1.71
Average-Colomac 2018		1.88	2.26	2.59	2.24
Colomac 2017 High-grade (Zone 1.5)		2.83	7.16	N.A	4.99
Colomac 2016 *South Zone	3.0-3.5	1.16	1.32	N.A	1.24
Colomac 2016 North Zone					

1.5-2.0

0.35

0.90

N.A

0.63

Colomac 2016 *Deep	1.5-2.0	0.65	1.69	N.A	1.17
Colomac Master Composite 2016		1.80	2.58	N.A	2.19

* Deep and South Zones Blended into a "Master Composite". The North Zone was excluded from gold recovery process testing due to unexpectedly low assay grades (see press release dated April 19, 2017).

Table 2. Colomac SAGDesign Ore Hardness Test Work Results (Including Previous Programs)

Zone	Sample Information	SG Solids	W_{SDT} (kWh/t)	S_d-BWI (kWh/t)
2.0	2019 MET-1	2.69	12.00	14.44
2.0	2019 MET-2	2.74	12.84	14.22
2.0	2019 MET-3	2.67	11.70	14.23
3.0	2019 MET-4	2.75	12.59	14.61
	Average Colomac 2019	2.71	12.28	14.37
1.0	Colomac 2018 Sample 1	2.70	13.49	15.43
2.0-2.5	Colomac 2018 Sample 2	2.62	11.74	14.93
3.0-3.5	Colomac 2018 Sample 3	2.71	11.48	13.90
Goldcrest	Gold Crest 2018 Sample 4	2.61	16.45	14.88
	Average Colomac 2018	2.66	13.29	14.79
3.0-3.5	South Zone	2.76	12.32	14.28
1.5-2.0	North Zone	2.73	13.52	14.38
1.5-2.0	Deep	2.70	14.07	14.10
	Average Colomac 2016	2.73	13.30	14.25
1.5	Colomac 2017 High-Grade	2.67	12.69	15.18
	Average-Overall[1]	2.69	12.91	14.55

Table 3. Metallurgical Test Results (Including Previous Programs)

Process Routes	Gold Recovery, %										
	Heap Bottle Roll	Column Cyanide*	Column Cyanide*	Flotation			Whole Ore Cyanide*	Gravity			Gravity + Cyanide*
Particle Size P_{80}(µm)	12700	12700	12700	75	106	150	150	75	106	150	106
2019 MET-1	42.6	66.0		90.0	92.8	84.2	93.4	72.5	84.1	91.4	93.8
2019 MET-2	22.0	43.6		88.2	88.8	85.8	95.2	82.2	39.0	52.9	96.0
2019 MET-3	72.4	60.3	N.A	95.7	93.4	87.4	94.4	74.9	78.7	74.8	95.9
2019 MET-4	47.7	21.3		86.3	82.6	75.6	91.3	53.6	59.0	50.9	94.6
Average Colomac 2019	46.1	47.8	TBC	90.1	89.4	83.3	93.6	70.8	65.2	67.5	95.1
Colomac 2018 Sample 1	31.5	45.6	57.4	94.9	94.5	92.8	97.1	76.6	75.4	64.0	98.0
Colomac 2018 Sample 2		~107 days	+206days								

49.1

46.4

55.5

94.8

94.5

94.2

96.8

75.8

75.0

69.0

97.3

Colomac 2018 Sample 3	47.1	46.1	54.9	92.1	88.6	84.8	96.7	63.3	58.7	53.6	96.3
Goldcrest 2018 Sample 4	49.6	61.1	69.7	98.1	94.9	95.5	97.2	83.0	76.3	74.9	96.8
Average Colomac 2018	44.3	49.8	59.4	95.0	93.1	91.9	97.0	74.7	71.4	65.4	97.1
Colomac 2017 High-Grade	57.5	34.3	N.A	94.6	93.5	90.7	96.4	77.6	74.7	74.9	98.0
Colomac Master Composite 2016	81.8	N.A	N.A	94.9	94.1	95.5	96.4	65.4	74.1	76.3	96.5

*Headers identified as "Column Cyanide", refers to the Column Cyanidation test, "Whole Ore Cyanide", refers to the Whole Ore Cyanidation test, and "Gravity + Cyanide", refers to the Gravity + Cyanidation test.

Notes:

1. Samples ran from 206 up to 213 days

Future Testing

Preliminary testwork indicates that the Colomac deposit is amenable to all standard recovery technologies, with no adverse materials detected. These preliminary metallurgical results indicate that a standard SAG ball mill grinding circuit with or without gravity concentrators on cyclone underflows, and followed by a gravity concentrate leach (if applicable), and a cyanide leach circuit on the resultant final ground product, would be the best process options to consider for recovering gold from Colomac.

At this time, no further testing is contemplated. Going forward, a preliminary economic analysis of the flowsheet alternatives would be required to conclusively determine the CAPEX/OPEX for each flowsheet considered. Such a study would allow for a more focused metallurgical test program to be developed for testing samples from future sampling campaigns. Such studies may contemplate broadening future sampling to include other satellite gold zones and other zones to depth within the mineralized sills, with the main objective to confirm that the metallurgical responses observed so far will apply over a broader range of head grades, zone locations, and depths within the deposit.

Metallurgical Findings To-Date - Detailed Summary

Preliminary metallurgical testing programs were conducted on composite samples collected from annual Colomac site visits since 2016, to confirm the deposit's amenability to conventional mineral processing flowsheets including gravity concentration, cyanidation and flotation. A comparison of gold recoveries from these different process routes including Bottle Roll and Column Leaching, are summarized in Table 3.

Test results are summarized chronologically as follows and tabulated in Table 3

1. Gravity Concentration:

All Colomac samples responded well to gravity concentration:

- Colomac (2019): yielding gravity rougher concentrates containing on average 70.7% of the gold in 3.6% of the feed mass. Upgrading of the rougher gravity concentrates by panning produced cleaner concentrates averaging 36.6% gold recovery in 0.09% of feed mass.
- Colomac (2018): yielding gravity rougher concentrates containing on average 70.5% of the gold in 3.4% of the feed mass. Upgrading of the rougher gravity concentrates by panning produced cleaner concentrates averaging 40.6% gold recovery in 0.08% of feed mass.

- High Grade (2017): yielding gravity rougher concentrates containing on average 75.7% of the gold in 3.8% of the feed mass. Upgrading of the rougher gravity concentrates by panning produced cleaner concentrates averaging 45.9% gold recovery in 0.12% of feed mass.
- Master Composite (2016): yielding gravity rougher concentrates containing on average 71.9% of the gold in 3.4% of the feed mass. Upgrading of the rougher gravity concentrates by panning produced cleaner concentrates averaging 34.7% gold recovery in 0.09% of feed mass.

2. Whole Ore Cyanidation:

Seventy-two hours baseline cyanidation test results conducted on P_{80} 150 µm ground whole-ore samples at 40% solids in 1.0 g/L NaCN. All Colomac samples responded well as follows:

Colomac (2019): yielding an average gold recovery of 93.6% at an average cyanide and lime consumption of 1.7 kg/t and 0.33 kg/t respectively;

- Colomac (2018): yielding an average gold recovery of 96.9% at an average cyanide consumption of 1.62 kg/t and 0.13 kg/t lime respectively;
- High Grade (2017): yielding a gold recovery of 96.4% at an average cyanide consumption of 1.86 kg/t and 0.26 kg/t lime respectively;
- Master Composite (2016): yielding a gold recovery of 96.9% (also in 72 hours) at an average cyanide consumption of 1.73 kg/t and 0.24 kg/t lime respectively.

3. Bottle roll leach of half inch (½"):

Colomac bottle roll leach test results are summarized as follows:

- Colomac (2019): Bottle roll leaching of half inch (½") crushed materials for 10 days resulted in 46.1% gold extraction averagely;
- Colomac (2018): Bottle roll leaching of ½" crushed materials for 10 days resulted in 44.3% gold extraction averagely;
- High Grade (2017): Bottle roll leaching of ½" crushed materials for 10 days resulted in 57.5 % gold extraction averagely;
- Master Composite (2016): Bottle roll leaching of ½" crushed materials for 10 days resulted in 81.8% gold extraction averagely.

4. Column Cyanide Leach of half inch (½"):

Colomac column leach test results are summarized as follows:

- Colomac (2019): Gold extractions from 107-day column leaching of ½" crushed samples varied from 21.30% (2019 MET-4) to 66.10% (2019 MET-1), averaging 47.80%;
- Colomac (2018): The test results showed gold extractions varying from 46.10% (Colomac 2018 Sample 3) to 61.10% (Gold Crest 2018 Sample 4) in 107 days. Further cyanidation resulted in final gold extractions varying from 54.90% (Colomac 2018 Sample 3) to 69.70% (Gold Crest 2018 Sample 4) in 200-plus days;
- High Grade (2017): The test results showed gold recovery of 34.3% in 107 days with a residue grade of 3.15 gpt Au.

5. Sulphide Flotation:

Flotation was proven effective for all Colomac samples at grind sizes ranging from 75 µm to 150 µm as summarized below:

- Colomac (2019): 87.6% of gold was recovered on average into around 4.8% of feed mass;
- Colomac (2018): 93.3% of gold was recovered into around 9.0% of feed mass;
- High Grade (2017): 92.9% of gold was recovered into around 6.8% of feed mass;
- Master Composite (2016): 94.8% of gold was recovered into around 7.4% of feed mass.

6. Gravity + Cyanidation:

A combination of gravity pre-concentration followed by cyanidation of gravity tailings at P_{80} 105 µm grind was proven effective for all Colomac samples:

- Colomac (2019): achieved gold recovery of 95.1%;
- Colomac (2018): achieved gold recovery of 97.2%;
- High Grade (2017): achieved gold recovery of 98.0%;
- Master Composite (2016): achieved gold recovery of 96.4%.

Figure 1. Drillhole locations sampled in Colomac metallurgical testwork to-date.

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.

About Us

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 km north of Yellowknife, Northwest Territories, Canada. Nighthawk has advanced its flagship asset Colomac, outlining a robust project with current Indicated Resources of 25.89 Mt with an average grade of 2.01 gpt Au for 1.67 Moz of gold and Inferred Resources of 5.71 Mt with an average grade of 2.03 gpt Au for 0.37 Moz of gold, with the majority of ounces contained within an underground resource. Near-term resource expansion opportunities exist proximal to the current resources, and additional upside exists throughout the +7km strike length of the host quartz diorite with a substantial opportunity at depth where the true width is known to expand significantly across a 3.5km-long section. Within this largely underexplored Archean gold camp, the Company has identified several high-priority targets within large regional deformation zones that are pregnant with gold mineralization and are known to host significant deposits which warrant additional exploration and follow-up.

The Company has an experienced and dedicated team with a track record of successfully advancing projects and is well funded and supported to complete its goals and objectives.

Qualified Person

Technical information related to the 2020 Mineral Resource Estimate on the 100% owned Indin Lake Gold Property (the "2020 MRE") was reviewed and approved by Marina Iund, M.Sc., P.Geo., Project Geologist and Carl Pelletier, P.Geo., Co-President Founder of InnovExplo who are independent Qualified Persons as defined by NI 43-101, with the ability and authority to verify the authenticity and validity of this data. Please refer to the NI 43-101 technical report "NI 43-101 Technical Report and Mineral Resource Estimate for the Indin lake Gold Property, Northwest Territories, Canada", dated September 11, 2020, as filed under the company's profile on www.sedar.com.

Dr. Michael J. Byron, Ph.D., P.Geo., President & Chief Executive Officer of Nighthawk, who is the "Qualified Person" as defined by NI 43-101 for this project, has reviewed and approved of the technical disclosure contained in this news release.

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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 additional metallurgical testing as required, and the timing and results thereof; and the 2020 MRE. 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 state that certain actions, events or results "may", "could", "would", "might", or "will be taken", "occur", or "be achieved".

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, 2019, available on 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.

SOURCE: Nighthawk Gold Corp.

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