

VANCOUVER, BC--(Marketwired - October 12, 2016) - [Copper North Mining Corp.](#) ("Copper North" or the "Company") (TSX VENTURE: COL) is pleased to announce the results of a Preliminary Economic Assessment (the "New PEA" or "PEA") that evaluates the recovery of gold and silver alongside the recovery of copper at the Company's Carmacks Copper-Gold-Silver project. The Carmacks Project is located in south central Yukon within the southern end of the copper-gold-silver Dawson District.

Dr. Harlan Meade, President and CEO of Copper North states: "The work completed at Carmacks has significantly improved the project with addition of gold and silver recovery alongside copper recovery. Application of standard agitated tank leach technology reduced operating and environmental risk, compared to the previously proposed heap leach of copper, gold and silver. The application of agitated tank leach provides for rapid leaching of the copper-gold-silver mineralization and reduction of production cost of copper production. We are particularly pleased with the low cash cost of copper production to US\$1.08/lb, net of gold and silver credits. The PEA indicates that, not only has good progress been made, but also with the potential expansion of mineral resources, a modest increase of metal prices and other improvements could result in significant benefits for project economics."

## Project Summary

The Carmacks Project is an open pit operation for processing of oxide copper, gold and silver mineralization. The re-engineered project in the New PEA utilizes agitated tank leach processing of copper oxide mineralization to produce cathode copper, followed by agitated tank leach cyanidation and carbon-in-leach (CIL) process for recovery of gold and silver in doré. Tailings are filtered for dry-stacked storage. Drilling in 2015 identified a substantial sulphide mineral resource that warrants further evaluation of the potential for mining and processing the sulphide mineralization. Exploration has also indicated additional oxide mineral resources for which management believes further drilling is warranted for both oxide and sulphide mineralization to expand mineral resources and extend mine life.

## Preliminary Economic Assessment

The New PEA was prepared in accordance with National Instrument 43-101 *Standards of Disclosure for Mineral Projects* ("NI 43-101") by JDS Energy and Mining Inc., and a number of other consultants. The New PEA supersedes the Company's previous technical reports in respect of the Carmacks Project. The New PEA builds upon previous engineering studies on the Carmacks Project and additional work completed during the past 28 months. Initial work was focused on additional metallurgical test work supervised by Dr. Morris Beattie P.Eng. and Dr. David Dreisinger P.Eng. The expanded resource estimation work was completed by Dr. Gilles Arseneau, P.Geo. of Arseneau Consulting Services Inc.; designs of the waste rock storage area and tailings management area were developed by Fiona Esford, P.Eng. and David Anstey, P.Eng. of Golder Associates Ltd.; and the mining plan was developed by Michael Hester, FAusIMM of Independent Mining Consultants Inc. All of the foregoing individuals are "qualified persons" within the definition of such term in NI 43-101.

## Project Economics Highlights

The following table illustrates the base case pricing model for the Carmacks Project:

- The base case metal price in the PEA is US\$2.50/lb copper which is near the median of current medium to long term analyst forecasts for copper. Gold was applied at US\$1300/oz and silver at US\$17.50/oz. Copper recovery is 85.5% and gold recovery of 84.4%; additional metallurgical test work is warranted to improve current 9.4% recovery for silver.
- The PEA uses an exchange rate of CAD\$1.00 equals US\$0.78 (US\$1.00 equals CAD\$1.28). Costing is in Canadian dollars.

## Base Case Pricing Model

Life of Mine Production	212.9 M lbs Cu	
	136,300 oz Gold	
	151,200 oz Silver	
Annual Production (average)	30M lb cathode copper	
	19,500 oz gold	
	21,600 oz silver	
Life of Mine	7 years	
Preproduction Capex	CAD\$214.7M	US\$167.4M
Sustaining Capital	CAD\$20.5M	US\$16.0M
Contingency	CAD\$28.4M	US\$22.1M
Total Capex	CAD\$263.6M	US\$205.6M
Base Case (LOM) Gross Revenue	CAD \$912.8M	
Base Case (LOM) Mine Operating Costs	CAD \$524.9M	
Base Case (LOM) Net Operating Revenue	CAD\$381.8M	
Annual Net Operating Cashflow	Range CAD\$39M to CAD\$79M	
Copper Cash Cost Production (Base Case)	US\$1.08/lb	
-C1 Cost		
-All in Cost	US\$1.16/lb	
NPV Pre-tax (discounted 8%)	CAD\$11.9M	
NPV Pre-tax (discounted 0%)	CAD\$118.2M	

NPV After-tax (discounted 8%)	CAD-\$11.4.4M
NPV After-tax (discounted 0%)	CAD\$75.2M
IRR Pre-tax	9.4%
IRR After-tax	6.6%
Payback	
- Pre-tax	5.2 years
- After-tax	5.3 years

#### Sensitivity Analysis

The pre-tax price sensitivity for copper and gold provides a range of values for Net Present Value, Internal Rate of Return and Payback of capital (the base case is indicated in bold with an asterisk below). The project economics would be much improved in the event of a 10 to 20% increase in copper and gold pricing and extension of mine life.

Pre-tax	Copper Price US\$/lb							NPV (CAD\$M)
		\$2.00	\$2.25	\$2.50	\$2.75	\$3.00	\$3.25	
	\$1100	-\$98.6	-\$54.7	-\$10.7	\$33.3	\$77.2	\$121.2	
	\$1200	-\$87.3	-\$43.3	\$0.6	\$44.6	\$88.5	\$132.5	
	\$1300	-\$76.0	-\$32.0	\$11.9	\$55.9	\$99.8	\$143.8	
	\$1400	-\$64.7	-\$20.7	\$23.2	\$67.2	\$111.2	\$155.1	
Gold Price US\$/oz	\$1500	-\$53.4	-\$9.4	\$34.6	\$78.5	\$122.5	\$166.4	IRR
	\$1100	-4.8%	1.3%	6.7%	11.7%	16.4%	20.8%	
	\$1200	-3.2%	2.7%	8.1%	13.0%	17.5%	21.9%	
	\$1300	-1.6%	4.2%	9.4%	14.2%	18.7%	22.9%	
	\$1400	-0.1%	5.5%	10.6%	15.4%	19.8%	24.0%	
	\$1500	1.4%	6.9%	11.9%	16.5%	20.9%	25.1%	
	\$1100	-	6.6	5.6	4.8	3.9	3.3	Payback (years)
	\$1200	-	6.3	5.4	4.5	3.7	3.1	
	\$1300	-	6.0	5.2	4.3	3.6	3.0	
	\$1400	17.3	5.7	5.0	4.1	3.4	2.9	
	\$1500	6.6	5.5	4.7	3.9	3.2	2.8	

#### Mineral Resource and Mining

The following table summarizes the measured mineral resource and indicated mineral resource estimates for zones 1, 4 and 7 that total 11,980,000 tonnes grading 1.07% total copper of which 0.86% is soluble copper. The mineral resource estimates also include substantial gold and silver. The mineral resources in the oxide classification form the basis for the potentially mineable mineralization by open pit methods. The present PEA does not include inferred mineral resources in the economic calculations. The PEA is preliminary in nature and there is no guaranty that any of the mineral resources will be converted to mineral reserves, or that the PEA will be realized.

#### Mineral Resources at a 0.25% Total Copper Cut-Off, Zones 1, 4, and 7

Zone	Class	Tonnage (000's)	TCu (%)	CuX (%)	CuS (%)	Au (g/t)	Ag (g/t)
Oxide	Measured (ME)	4,031	1.10	0.90	0.20	0.588	5.666
	Indicated (IN)	7,949	1.04	0.83	0.20	0.391	4.039
	ME+IN	11,980	1.07	0.86	0.21	0.456	4.578
Sulphide	Measured (ME)	695	0.80	0.02	0.77	0.261	2.542
	Indicated (IN)	3,645	0.74	0.03	0.71	0.205	2.296
	ME+IN	4,340	0.75	0.03	0.73	0.221	2.369

#### In-Pit Mineral Resources

The conceptual mining plan entails mining 1,750,000 tonnes per annum using the open pit method whereby mineralization would be transported to the crushing circuit at the process plant by mine trucks. Life of mine waste to potentially mineable material ratio is estimated at 5.1:1 with a maximum mining rate of 37,500 tonnes per day. The In- Pit Resources are from Zones 1, 4, and 7.

Measured mineral resources and indicated mineral resources within the proposed open pit total 11,551,000 tonnes grading 0.805% soluble copper, 0.435g/t gold and 4.34 g/t silver. As discussed above, the PEA does not include inferred mineral resources. The PEA is preliminary in nature and there is no certainty that the PEA will be realized. The Company is not relying upon the mineral reserves in the feasibility study in respect of the Carmacks project previously prepared for the Company by M3 Engineering and Technology Corporation.

In-Pit Mineral Resource Category	K (Tonnes)	Total Cu (%)	SolCu (%)	NonsolCu (%)	Gold (g/t)	Silver (g/t)
----------------------------------	---------------	-----------------	--------------	-----------------	---------------	-----------------

Measured Mineral Resource	4,127	1.039	0.851	0.188	0.559	5.39
Indicated Mineral Resource	7,424	0.943	0.780	0.163	0.365	3.76
Measured and Indicated Resource	11,551	0.977	0.805	0.172	0.435	4.34

1. Total material in potential Open Pit of 69,957,000 tonnes of Waste Mineral Resources ratio of 5.1:1.

2. Resources are fully diluted and based on cut-off grade 0.18% soluble copper.

## Capital and Operating Costs (\$CAD)

Total capital cost (capex) is estimated at \$263.6 million including \$20.5 million in sustaining capital (8.7%) and a \$28.4 million contingency (12.1%). The processing plant accounts for approximately 50% of the capex. Other capital items include a new mine access road, transmission line to grid power and 168 person camp for workers. Mining equipment will be leased.

Capital Costs	Pre-Production (CAD\$M)	Sustaining (CAD\$M)	Total (CAD\$M)	% of total
Mining	9.9	3.0	12.9	5%
Site Development and Earthworks	10.6	6.9	17.5	7%
Ore Crushing and handling	3.0	-	3.0	1%
Process Plant	129.2	1.9	131.1	50%
On-Site Infrastructure	15.0	1.8	16.8	6%
Off-Site Infrastructure	7.3	-	7.3	3%
Project Indirect Costs	8.3	1.3	9.6	4%
EPCM	16.8	-	16.8	6%
Owner Costs	14.4	-	14.4	5%
Closure Costs	-	5.6	5.6	2%
Total Pre-Contingency Capital Costs	214.7	20.5	235.2	89%
Contingency	25.9	2.5	28.4	11%
Total Capital Including Contingency	240.6	23.0	263.6	100%

Life of mine operating cost totals \$524.9 million, consisting of \$181.7 million for mining (including the equipment leases), \$268.8 million for processing and \$74.5 million for general and administrative expenses (G&A). Unit costs are \$15.73 per tonne for mining, \$23.27 per tonne for processing and \$6.45 per tonne for G&A, for a total unit operating cost of \$45.45 per tonne processed. Reagents for leaching and recovery of metals and for the destruction of cyanide in the tailings before final disposal account for approximately 54% of the total processing operating cost.

## Mine Development Plan

The proposed development plan in the New PEA includes measured mineral resources and indicated mineral resources as well as a conceptual open pit mine plan and crushing of the mineralization. The current plan provides for a primary crush of the ores and grinding in a SAG mill to achieve p80 664 µm grind size. The crushing and processing rate is assumed at 4,500 tonnes per day and feeds into a series of agitated tanks for leaching of copper using sulphuric acid to recover the copper in a Solvent Extraction Electrowinning (SXEW) facility, producing cathode copper for direct shipment to fabricators for further usage.

The dewatered residue from the copper leach circuit is neutralized then transferred to a second agitated tank leach circuit for extraction of gold and silver by cyanidation. Thereafter, the pregnant cyanide solution goes to a CIL circuit for recovery of gold and silver as a doré bar for shipment to a gold-silver refinery.

## Metallurgy and Process Plan

Extensive test work on the oxide copper mineralization, consisting largely of malachite, azurite and tenorite, has demonstrated rapid leaching of the copper. The series of testing work undertaken by Dr. Morris Beattie and Dr. David Dreisinger during 2014 to 2016 indicates recovery rates of 85.5% for copper, 84.4% for gold and 9.4% for silver. Additional test work is planned to determine if the silver recovery rate can be improved.

## Leach Waste Processing

The barren leach residue remaining after gold and silver recovery will transfer to a cyanide destruction circuit that will use the Inco-SO<sub>2</sub> process to remove residual cyanide. The treated residue is then filtered to achieve a solids content of ~83% and the filtered residue (tailings) will be trucked to the Tailings Management Area, where it will be spread and compacted in lifts. Filtered (dry-stack) tailings management is considered industry best available technology for tailings management.

## Permitting and First Nations

The Carmacks Project is located on Crown land in the Traditional Territories of the Little-Salmon Carmacks First Nation and the Selkirk First Nation and the two First Nations are key stakeholders in the permitting process. The Project will require two environmental licenses, a Quartz Mining License, issued by the Yukon Government Department on Energy, Mines, and Resources

(EMR) and a Type A Water License, issued by the Yukon Water Board. An environmental assessment must be completed before either license can be issued. The Project will be subject to an Executive Committee Screening-level Environmental Assessment under the Yukon Environmental and Socioeconomic Assessment Act (YESAA). This will be the second time the project has entered the YESAA process, and is necessary because of the planned changes in the metallurgical process. The previously-proposed copper-only heap leach project received a positive environmental assessment decision in 2008. A Quartz Mining License was issued for the project plan in 2009. That license remains in good standing and would require amendment or replacement, at the discretion of EMR, for the Project as now proposed.

## Project Opportunities and Risks

In the re-engineering of the Carmacks Project and the preparation of the New PEA, the Company has identified a number of opportunities for improving project economics. Key to overall project economics is the extension of mine life and capital reductions, positioning the project to achieve greater efficiencies in the event of improved metal prices.

### Recovery and Operation Improvements

- Process improvements include a modest metallurgical test program to optimize the balance between copper and gold-silver recoveries; particularly the optimal leach temperature for copper and recovery of silver.
- Alternative improved solid-liquid separation of copper leach circuit.
- Further evaluation of reagent efficiency and purchase.
- Mine and plant construction efficiency and timelines.
- Global sourcing of used equipment for operations.
- Evaluation of processing sulphide mineral resource at Carmacks, for mine extension.

### Mineral Resource Expansion

Drilling at Carmacks' defined extension of the mineral resources and the preparation of an updated NI 43-101 Mineral Resource Estimate that indicates the potential expansion of mineral resources (see news release January 25, 2016). The expanded mineral resources are not included in the PEA, and require additional drilling to include the mineral resources into the Mine Development plan and extension of mine life.

### Maiden Mineral Resource Estimate (zones 12, 13, and 2000S) January 2016

#### *Oxide and transition mineral resources:*

- Measured and Indicated of 3.7 Mt grading 0.50% Cu, 0.35% acid-soluble Cu, 0.132 g/t Au and 2.011 g/t Ag
- Inferred of 0.8 Mt grading 0.42% Cu, 0.28% acid-soluble Cu, 0.119 g/t Au and 1.910 g/t Ag

#### *Sulphide mineral resources:*

- Measured and Indicated of 3.7 Mt grading 0.60% Cu, 0.128 g/t Au and 2.288 g/t Ag
- Inferred of 4.4 Mt grading 0.55% Cu, 0.123 g/t Au and 2.081 g/t Ag

### New Updated Mineral Resource Estimate

The Updated Mineral Resource consists of the Maiden Resource on zones 12, 13 and 2000S combined with the previously defined mineral resource in zones 1, 4 and 7, for the Carmacks Project as set out in the June 2014 PEA. Additional drilling is required to upgrade Inferred mineral resources into the Measured and Indicated categories.

#### *Oxide and transition mineral resources:*

- Measured and Indicated of 15.7 Mt grading 0.94% Cu, 0.74% acid-soluble Cu, 0.379 g/t Au and 3.971 g/t Ag; an increase of 31%.
- Inferred Resources of 0.9 Mt grading 0.45% Cu, 0.30% acid-soluble Cu, 0.119 g/t Au and 1.900 g/t Ag; a tenfold increase.

#### *Sulphide mineral resources:*

- Measured and Indicated of 8.1 Mt grading 0.68% Cu, 0.178 g/t Au and 2.332 g/t Ag; an increase of 86%.
- Inferred resource of 8.4 Mt grading 0.63% Cu, 0.150 g/t Au and 1.994 g/t Ag; an increase of 108%.

## Project Risks

- The process plant design criteria, including recoveries, are based on limited test data and confirmation of the results is recommended.
- ADR circuits were designed on limited test data. Carbon loading test work is recommended to confirm the ADR plant size.

## Next Steps

The Company intends to complete geotechnical study for dry stacked tailings storage, needed for completion of environmental report for resumption of permitting of the project. A modest metallurgical and process study will be undertaken to improve and upgrade the PEA. Additional drilling is planned to expand the Measured and Indicated mineral resources that were reported in the January 2016 mineral resource prepared in accordance with NI 43-101, and undertake mine planning of the new oxide mineral resources for inclusion into an expanded mine plan.

## Qualified Person

This news release is based upon information prepared by or under the supervision of the Qualified Persons named above under the heading "Preliminary Economic Assessment" and approved by Dr. Harlan Meade, P.Geo., the President and CEO of Copper North and a qualified person within the meaning of NI 43-101. The PEA will be filed on SEDAR within the next 45 days.

## About Copper North Mining Corp.

The Company is focused on the exploration and development of copper deposits. Its core asset is the Carmacks Project in the Yukon which is progressing to feasibility study for the early production of copper, gold and silver from proposed leach operations. The Company acquired the Thor Project in northwest BC adjacent to the Kemess mine and mill facility. Exploration at Thor has indicated the potential for multiple porphyry copper-gold deposits within the 20,000 hectare, including a discovery in the Thor East target where drilling is in progress. The Company's Redstone Project in the North West Territories is a large high grade copper deposit that is at the early exploration stage.

On behalf of the Board of Directors,

Dr. Harlan D. Meade

President, CEO, and Director

## Cautionary and Forward-Looking Information Comments

*This news release includes certain forward-looking information or forward-looking statements (collectively "Forward-Looking Information") for the purposes of applicable securities laws. Forward-Looking Information includes, but is not limited to, statements with respect to the PEA, results of the PEA and potential recovery of gold and silver at the Carmacks Project; potential improvement in project economics and reduction in operating costs; the proposed exploration and development activities and their timing and potential mineralization; possible events, conditions or performance that are based on assumptions about future courses of action; the timing and costs of future exploration and development activities on Carmacks; permitting and infrastructure time lines and requirements; and requirements for additional capital. In certain cases, Forward-Looking Information can be identified by the use of words and phrases such as "plans", "expects" or "does not expect", "scheduled", "estimates", "anticipates", "potential", "recommends" or variations of such words and phrases or statements that certain actions, events or results "may", "could", "would" or "will be taken", "occur" or "be achieved". These statements address future events and conditions and, as such, involve known and unknown risks, uncertainties and other factors, which may cause the actual results, performance or achievements to differ materially from those anticipated in such statements. Important factors that could cause actual results to differ materially from the Company's expectations include, among others, that the development plans under the PEA will not proceed as planned, the gold and silver recovery will not impact revenue and operating costs as projected, the timing and success of future exploration and development activities, exploration and development risks, market prices, exploitation and exploration results, availability of capital and financing, general economic, market or business conditions, uninsured risks, regulatory changes, defects in title, availability of personnel, materials and equipment, timeliness of government approvals, unanticipated environmental impacts on operations and other exploration risks detailed herein and from time to time in the filings made by the Company with securities regulators. In making the forward-looking statements, the Company has applied several material assumptions including, but not limited to, the assumptions that the results of the PEA and the proposed plans thereunder will proceed as planned, that the recovery of gold and silver will have a positive impact on project economics and reduce operating costs, that the proposed exploration and development of Carmacks will proceed as planned, the Company will be able to timely obtain permits and licences required for development of the property and conduct its operations, that market fundamentals will result in sustained metals and mineral prices, current exploration and other objectives concerning Carmacks can be achieved, that the Company's other corporate activities will proceed as expected, and any additional financing needed will be available on reasonable terms. Although the Company has attempted to identify important factors that could affect the Company and may cause actual actions, events or results to differ materially from those described herein, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that Forward-Looking Information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on Forward-Looking Information. The Company expressly disclaims any intention or obligation to update or*

*revise any forward-looking statements whether as a result of new information, future events or otherwise except as otherwise required by applicable securities legislation.*

*Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.*

## Contact

### For Further Information:

Dr. Harlan Meade

President and CEO

Tel: 604.398.3451

Email: [info@copperrnorthmining.com](mailto:info@copperrnorthmining.com)

Web: [www.copperrnorthmining.com](http://www.copperrnorthmining.com)