

## Panoro Minerals Ltd. Announces Increased Copper Recovery Estimates at Antilla Copper Project, Peru.

Vancouver, B.C., September 4, 2018 – **Panoro Minerals Ltd. (TSXV: PML, Lima: PML, Frankfurt: PZM) (“Panoro”, the “Company”)** Panoro is pleased to announce the final results from the recently completed leach test from Column #4 at the 100% owned Antilla Copper Project.

The revised estimate for copper recovery from the secondary sulphides is 79.9% in a period of 150 days. This is an increase from the Preliminary Economic Assessment (PEA), announced in May 2018 which, which included an estimated 72.5% copper recovery over a 200 day period.

“The results of the Antilla column leach testing program have demonstrated significant upside potential to the Antilla Project economics. The project is well situated, with low capital intensity, low operating costs and strong economics. We are confident that the strategic review of the projects’ roadmap to feasibility and development will yield positive outcomes in the near future” stated Luquman Shaheen, President & CEO of Panoro Minerals.

The leach test results from Column #4 have increased the estimated recoveries and reduced the recovery time of each of the four mineralogical zones included in the Antilla Project mine plan in the PEA as summarized in the table below.

Mineralogical Zone	Copper Recovery Estimates					
	Current Estimates		2018 PEA Estimates		Change	
	Cu Recovery (%)	Period (days)	Cu Recovery (%)	Period (days)	Cu Recovery (%)	Period (days)
Cover	72.9	150	31.1	200	+ 41.8	- 50
Leach Cap	74.4		38.0		+ 36.4	
Secondary Sulphides	79.9		72.5		+ 7.4	
Primary Sulphides	69.7		21.2		+ 48.5	

The PEA mine plan includes 117 million tonnes of secondary sulphides corresponding to 98% of the feed to the heap leach pad. The balance of the feed to the heap leach is made up of Cover, Leach Cap and Primary Sulphides.

The recoveries estimated for the PEA were derived from bottle roll tests and mineralogic testwork available at the time of the completion of the PEA. The column test program was initiated early in 2018 while the PEA was underway. Leach tests from Columns #1, #2 and #3 were completed in July 2018 and #4 was completed in August 2018.

The PEA recovery estimates were based on analytical extraction data. The revised estimates are based on an assessment of the actual and likely extractions under a thermophilic leach scenario. Also, the PEA estimates included days under acid leach in the laboratory testwork. The new estimates assume bioleaching from the start.

The original objective of the test program was to determine copper extraction from supergene (secondary sulphide) material under simulated mesophilic bio-leach conditions (medium temperature) at a range of crush sizes. These tests were successful and indicated that overall process recoveries of 72.5% were achievable. Leaching of primary sulphides such as chalcopyrite or enargite is limited under mesophilic conditions. The leach cycle of Column #4 was extended and the column transitioned to thermophilic conditions (up to 55°C temperature) to determine to what extent the small amounts of primary sulphides within the material would be leached. Transitioning to thermophilic conditions led to a significant

improvement in the global leach extraction with 85% copper extraction being achieved. Overall process recovery is estimated to be 94% of leach extraction for each zone where the leach extraction estimates are summarized in the table below.

Mineralogical Zone	Cu Extraction (%)
Cover	77.6
Leach Cap	79.2
Secondary Sulphides	85.0
Primary Sulphides	74.2

Extraction numbers are based on laboratory column leach tests of supergene material under simulated mesophilic and thermophilic bioleach conditions. Additional laboratory bioleach testwork will be completed as part of the next stage of engineering for the project. Heap bioleaching has been successfully implemented over the past 30 years. Examples of current and historical copper heap bioleach projects are the Cerro Verde mine, Peru (Freeport McMoran), the La Granja project, Peru (Rio Tinto), the Cerro Colorado mine, Chile (BHP), the Quebrada Blanca mine, Chile (Teck Resources), the Zaldivar mine, Chile (Barrick), the Lince II mine, Chile (Antofagasta Plc), in addition to others.

The column leach program, together with associated mineralogical and bottle roll leach testwork has been conducted at Aminpro Laboratories, an ISO 9001 and 14001 Laboratory based in Lima, Peru. All works were designed and supervised by Andrew Carter, General Manager UK of the Mining and Minerals arm of Tetra Tech.

### **About Panoro**

Panoro Minerals is a uniquely positioned Peru focused copper exploration and development company. The Company is advancing its flagship project, Cotabambas Copper-Gold-Silver Project and its Antilla Copper-Molybdenum Project, both located in the strategically important area of southern Peru. The Company is well financed to expand, enhance and advance its projects in the region where infrastructure such as railway, roads, ports, water supply, power generation and transmission are readily available and expanding quickly. The region boasts the recent investment of over US\$15 billion into the construction or expansion of four large open pit copper mines.

Since 2007, the Company has completed over 80,000 meters of exploration drilling at these two key projects leading to substantial increases in the mineral resource base for each, as summarized in the table below.

### **Summary of Cotabambas and Antilla Project Resources**

Project	Resource Classification	Million Tonnes	Cu (%)	Au (g/t)	Ag (g/t)	Mo (%)
Cotabambas Cu/Au/Ag	Indicated	117.1	0.42	0.23	2.74	0.001
	Inferred	605.3	0.31	0.17	2.33	0.002
	@ 0.20% CuEq cutoff, effective October 2013, Tetrattech					
Antilla Cu/Mo	Indicated	291.8	0.34	-	-	0.01
	Inferred	90.5	0.26	-	-	0.007
	@ 0.175% CuEq cutoff, effective May 2016, Tetrattech					

Preliminary Economic Assessments (PEA) have been completed for both the Cotabambas and Antilla Projects, the key results are summarized below.

**Summary of Cotabambas and Antilla Project PEA Results**

Key Project Parameters			Cotabambas Cu/Au/Ag Project <sup>1</sup>	Antilla Cu Project <sup>2</sup>
Process Feed, life of mine		million tonnes	483.1	118.7
Process Feed, daily		Tonnes	80,000	20,000
Strip Ratio, life of mine			1.25 : 1	1.38: 1
Before Tax <sup>1</sup>	NPV <sub>7.5%</sub>	million USD	1,053	520
	IRR	%	20.4	34.7
	Payback	Years	3.2	2.6
After Tax <sup>1</sup>	NPV <sub>7.5%</sub>	million USD	684	305
	IRR	%	16.7	25.9
	Payback	Years	3.6	3.0
Annual Average Payable Metals	Cu	thousand tonnes	70.5	21.0
	Au	thousand ounces	95.1	-
	Ag	thousand ounces	1,018.4	-
	Mo	thousand tonnes	-	-
Initial Capital Cost		million USD	1,530	250
1. Project economics estimated at commodity prices of; Cu = US\$3.00/lb, Au = US\$1,250/oz, Ag = US\$18.50/oz, Mo = US\$12/lb 2. Project economics estimated at long term commodity price of Cu = US\$3.05/lb and Short term commodity price of Cu = US\$3.20, US\$3.15 and US\$3.10 for Years 1,2 and 3 of operations, respectively.				

The PEAs are considered preliminary in nature and include Inferred Mineral Resources that are considered too speculative to have the economic considerations applied that would enable classification as Mineral Reserves. There is no certainty that the conclusions within the updated PEA will be realized. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

Luis Vela, a Qualified Person under National Instrument 43-101, has reviewed and approved the scientific and technical information in this press release.

On behalf of the Board of **Panoro Minerals Ltd.**

Luquman Shaheen. PEng, PE, MBA  
President & CEO

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**CAUTION REGARDING FORWARD LOOKING STATEMENTS:** Information and statements contained in this news release that are not historical facts are “forward-looking information” within the meaning of applicable Canadian securities legislation and involve risks and uncertainties.

Forward-looking statements are subject to a variety of known and unknown risks, uncertainties and other factors which could cause actual events or results to differ materially from those expressed or implied by the forward-looking statements, including, without limitation:

- risks relating to metal price fluctuations;
- risks relating to estimates of mineral resources, production, capital and operating costs, decommissioning or reclamation expenses, proving to be inaccurate;
- the inherent operational risks associated with mining and mineral exploration, development, mine construction and operating activities, many of which are beyond Panoro's control;
- risks relating to Panoro's ability to enforce Panoro's legal rights under permits or licenses or risk that Panoro's will become subject to litigation or arbitration that has an adverse outcome;
- risks relating to Panoro's projects being in Peru, including political, economic and regulatory instability;
- risks relating to the uncertainty of applications to obtain, extend or renew licenses and permits;
- risks relating to potential challenges to Panoro's right to explore and/or develop its projects;
- risks relating to mineral resource estimates being based on interpretations and assumptions which may result in less mineral production under actual circumstances;
- risks relating to Panoro's operations being subject to environmental and remediation requirements, which may increase the cost of doing business and restrict Panoro's operations;
- risks relating to being adversely affected by environmental, safety and regulatory risks, including increased regulatory burdens or delays and changes of law;
- risks relating to inadequate insurance or inability to obtain insurance;
- risks relating to the fact that Panoro's properties are not yet in commercial production;
- risks relating to fluctuations in foreign currency exchange rates, interest rates and tax rates; and
- risks relating to Panoro's ability to raise funding to continue its exploration, development and mining activities.

This list is not exhaustive of the factors that may affect the forward-looking information and statements contained in this news release. Should one or more of these risks and uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in the forward-looking information. The forward-looking information contained in this news release is based on beliefs, expectations and opinions as of the date of this news release. For the reasons set forth above, readers are cautioned not to place undue reliance on forward-looking information. Panoro does not undertake to update any forward-looking information and statements included herein, except in accordance with applicable securities laws.

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