



Panoro Reports Positive Preliminary Economic Assessment for Antilla Copper Project Heap Leach & SX/EW Operation

Vancouver, B.C., May 14, 2018 – **Panoro Minerals Ltd.** (TSXV: PML, Lima: PML, Frankfurt: PZM) (“Panoro”, the “Company”) is pleased to announce that it has received the results of an independent Preliminary Economic Assessment (“PEA”) of the Company’s 100% owned Antilla project in Peru. The Antilla project is a copper-molybdenum porphyry deposit, located 140 km south west of the city of Cuzco, in the Apurimac region in Southern Peru.

Highlights

- Pre-tax Estimates:
 - NPV (7.5%) of US\$ 519.8 million;
 - IRR of 34.7%; and
 - Payback of 2.6 years.
- After-tax Estimates:
 - NPV (7.5%) of US\$ 305.4 million;
 - IRR of 25.9%; and
 - Payback of 3.0 years.
- Conventional open pit mine focused on supergene copper sulphides;
- Heap Leach and Solvent Extraction Electrowinning (SX/EW) process;
- Design throughput of 20,000 tonnes per day with an operational mine life of 17 years
- Low waste to mill feed ratio of 1.38:1;
- Average annual payable copper of 46.3 million pounds, as Cathodes;
- Average direct cash costs (C1) of US\$1.51 per pound of payable copper;
- Initial Project capital costs of US\$ 250.4 million, including contingencies; and
- Good potential for discovery of additional supergene mineralization adjacent to the current mineral resource area.

Having completed the optimization of the Antilla Project, the Company will be completing a strategic review of the development and financing plans to put the Antilla Project on the road to development.

The PEA was prepared by Moose Mountain Technical Services Ltd. (“MMTS”) in accordance with the definitions in Canadian National Instrument 43-101. The PEA is based on a Mineral Resource estimate completed by Tetra Tech Inc. (“Tetra Tech”) in December 2013, based on 2,919 metres of drilling from legacy campaigns (2003-5), 9,130 metres of drilling by Panoro (2008), and 2,242 metres of drilling during a joint venture agreement with Chancadora Centauro SA (CHC) in 2010. The Mineral Resource estimate includes primary and supergene sulphides, as well as mixed hypogene and supergene copper mineralization.

The PEA is considered preliminary in nature. The mine plan of the PEA includes 113.3 million tonnes of Indicated Mineral Resources and 5.4 million tonnes of Inferred Mineral Resources. Inferred Mineral Resources 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 PEA will be realized. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Luquman Shaheen, President & CEO of Panoro Minerals states, “The redesign of the Antilla Project has resulted in significantly improved project economics. The mine plan has focused on the higher grade, near surface secondary sulphides, which are amenable to processing through heap leaching, solvent extraction, and electrowinning (LIX-SX-EW). As a result, the initial capital costs have been reduced by 59%, the C1 cash costs reduced by 18%, the C2 cash costs by 23% and the sustaining capital required for a tailings facility has been eliminated. The base case, after tax NPV_(7.5) has increased 36%, the IRR has increased 11% and the payback period has been reduced by 27%. Over 95% of the mineralized material contained in the mine plan is classified as Indicated. The improved Antilla Project is now near the lower quartile of new copper projects in terms of both cash costs and capital intensity. The much reduced \$250 million initial capital cost will facilitate a broader range of strategic financing and/or development approaches to advancing the Antilla Project through feasibility studies and into development and operation. We are very pleased to have achieved the objective of optimizing the Antilla Project and look forward to advancing our strategic plan. We continue focussing on our Flagship Cotabambas Project where our investment programs for 2018 and 2019 are focussing on enhancing the project economics and growth profile through exploration success.”

Economics

The table below summarizes base case economic metrics for the project as well as its sensitivity to the price of copper:

Table 1. Summary of PEA estimates of NPV, IRR, and Payback

Copper Price (\$/lb)	Before Tax*					After Tax				
	NPV 5% (million USD)	NPV 7.5% (million USD)	NPV 10% (million USD)	IRR (%)	Payback (Years)	NPV 5% (million USD)	NPV 7.5% (million USD)	NPV 10% (million USD)	IRR (%)	Payback (Years)
2.75	487	383	301	28.8	2.9	232	169	118	18.7	3.6
3.05	648	520	419	34.7	2.6	394	305	236	25.9	3.0
3.25	755	611	497	38.4	2.5	501	397	314	30.3	2.7

* Excluding Peru statutory charges, i.e. profit sharing, regulatory fees, mining royalty, special mining tax, and income tax

** The economic results are based on the heap leach tonnages in the selected ultimate pit. The heap leach tonnages include Inferred Resources. The reader is cautioned that Inferred Resources are considered too speculative geologically to have the economic considerations applied to them that would enable categorization as Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Note: base case at Cu=\$US 3.05 long term price in bold,

Project economics were estimated on the basis of long-term copper price of US\$3.05/lb. The long-term forecasts were derived from prices periodically published by large banking and financial institutions and were applied to years 4 to 17 of the mine life. Shorter term copper price estimates were used for Years 1 to 3 of the mine life reflecting higher price forecasts in the shorter term. For the base case, Years 1 to 3 of the mine life used estimated copper prices of \$3.20, \$3.15 and \$3.10, respectively. Molybdenum is not included in the proposed process recovery and not included in the project economics.

Mineral Resources

The PEA was based on a Mineral Resource model prepared by Tetra Tech, which is documented in a technical report filed on Sedar, dated December 16, 2013.

Mineral Resources were estimated by Qualified Person Paul Daigle, PGeo. (APGO #1592). A block model was generated with grade estimation constrained by modeled mineralization wireframes. Mineralization is mined from an open pit and treated using a conventional hydrometallurgical flow sheet. Copper equivalent (CuEq) cut-offs were used to report the mineral resource. Metal prices: copper - US\$3.25/lb and molybdenum – US\$9.00/lb and metallurgical recoveries: copper - 90% and molybdenum – 80% were applied in the equivalency calculation.

The Mineral Resource has an effective date October 19, 2015 and is tabulated in Table 2.

Table 2. Mineral Resource Statement*, Antilla Project, Peru, Tetra Tech Inc., October 19, 2015

Domain	Quantity '000 tonnes	Grade		
		Cu %	Mo %	CuEq%
Indicated				
Overburden/Cover	5,600	0.25	0.01	0.28
Leach Cap	13,400	0.25	0.01	0.27
Supergene	168,900	0.41	0.01	0.42
Primary Sulphides	103,900	0.24	0.01	0.26
Total Indicated	291,800	0.34	0.01	0.36
Inferred				
Overburden/Cover	500	0.22	0.009	0.24
Leach Cap	13,400	0.21	0.008	0.22
Supergene	25,900	0.34	0.008	0.36
Primary Sulphides	50,700	0.24	0.007	0.25
Total Inferred	90,500	0.26	0.007	0.28

* Mineral resources are not mineral reserves and have not demonstrated economic viability. All figures have been rounded to reflect the relative accuracy of the estimates. Reported at a cut-off grade of 0.175 CuEq%; assuming an open pit extraction scenario, a copper of US\$3.25 per pound and a molybdenum price of US\$ 9.00 per pound, and a metallurgical recovery of 90 percent for copper and 80 percent for molybdenum.

Mining and Processing

The PEA incorporates an open pit mining operation using conventional truck and shovel methods delivering mineralized material to the heap leach pad. Mining will be done using contractors. The estimated 17 year life of mine includes 118.7 million tonnes of mineralized leach pad feed plus 163.4 million tonnes of waste rock resulting in an average waste:process feed ratio of 1.38:1. The average life of mine leach pad head grade is 0.43% copper. The leach material placement is planned at an average rate of 20,000 tonnes per day. The waste rock will be placed in a storage area to the west of the pit, in between the pit and the leach pad.

Of the 118.7 million tonnes of leach material mined from the open pit, 117.1 million tonnes is classified as supergene enriched material with the balance of the 1.6 million tonnes being classified as overburden, leach cap or primary sulphides.

The sub-set of the Mineral Resources contained within the ultimate pit and included in the mine plan is 113.3 million tonnes averaging 0.45% Cu classified as Indicated Resources, and 5.4 million tonnes

averaging 0.26% Cu classified as Inferred Resources. The reader is cautioned that the Inferred Resources included in the mine plan are considered too speculative geologically to have economic considerations applied to them that would enable categorization as Mineral Reserves. There is no certainty that Inferred Resources will be upgraded to Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Table 3 summarizes the production parameters:

Table 3. Projected Production Summary

Total Mill Feed Material*	118.7 million tonnes**
Average Placement Rate	20,000 tonnes per day
Life of Mine (LOM) Strip Ratio	1.37
Copper	
Average Mill Feed Grade	0.43%
Average Leaching Recoveries	71.9%

* The leach material in the mine plan includes Inferred Resources. The reader is cautioned that Inferred Resources are considered too speculative geologically to have economic considerations applied to them that would enable categorization as Mineral Reserves. There is no certainty that Inferred Resources will be upgraded to Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

** The cut-off grade used to calculate the leach material is $NSR \geq \$8.10$.
NSR is calculated using the following formula:

$$NSR = [Cu \text{ grade } (\%) * Cu \text{ leach recovery } (\%) * 57.76].$$

Haul trucks will deliver the run of mine, mineralized material to a two-stage crushing plant. The product from the primary crusher will feed a secondary crushing station whose product will then be stored in a crushed ore stockpile. The crushed material will be loaded to trucks and delivered to the synthetic lined valley-fill heap leach facility for irrigation with sulfuric acid and ferric solutions. The pregnant leach solution (PLS) will be recovered from the heap leach operation and piped to a conventional solvent extraction and electrowinning (SX-EW) plant to produce grade-A copper cathodes. The copper-stripped solution generated in the SX plant (raffinate) will be conditioned with sulfuric acid and fresh water and then recycled to the heap leaching operation to irrigate more mineralized material.

Preliminary metallurgical characterisation testwork was completed on samples of mineralogical materials from the Antilla project in 2017. An extended testwork program was initiated at Aminpro Laboratories in March 2018 under the direction of Tetra Tech Mining and Minerals. Aminpro Laboratories are fully certified under both ISO 9001 and 1400. The testwork program comprises quantitative mineralogical analysis, sulphuric acid and ferric sulphate bottle roll predictor tests and column leach tests aimed at characterising the copper leaching characteristics of supergene mineralogical materials. Results from the predictor tests indicate secondary copper minerals are available for extraction with close to theoretical copper extractions being achieved. The column tests remain under leach and are estimated to be completed by September 2018. The results from the column leach program will be incorporated in subsequent technical studies. No test work has been conducted on the Cover, Cap and Primary Sulphide domains as these constitute only minor portions of the deposit.

Table 4 summarizes the expected recoveries of the four mineralized domains, with the Cover and Leach Cap performance assumed to follow the main domains based on similar copper mineralogy/speciation.

Table 4. Summary of Metallurgical Recoveries Estimated in the PEA

Mineralized Domain	Cu Recovery (%)
Cover*	31.1
Leach Cap*	38.0
Supergene	72.5
Primary Sulphide*	21.2

* QP estimates - no supporting testwork completed

Projected production of payable metals is summarized in Table 5.

Table 5. Summary of Annual Average and Life of Mine Payable Metals

	Annual Average	Life of Mine
Copper (Mlbs)	46.3	787.5

Capital and Operating Costs

The projected capital and operating costs for Antilla over a 1 ½ year construction period and 17 year operating mine life are summarized in the tables below.

Table 6. Summary of Antilla Initial Capital Cost Estimates (US\$ millions)

Item	Cost (US\$ million)
Mine Equipment	1.3
Mine Development	41.1
Crushing, SX, and EW plants	94.7
Infrastructure	42.4
Subtotal	179.5
Owners Cost	7.8
Indirect Costs	13.7
Subtotal	201.0
Contingencies	49.4
Total Initial Capital Cost	250.4

Power will be supplied via a 10 km long power line connected to the existing national grid connecting the Las Bambas mine to the Cotaruse substation in the district of Chalhuanca. This power line passes by the south part of Antilla property.

Grade-A copper cathodes produced by Antilla Project will be trucked by a contractor from the mine site to the port of Marcona, in Nazca province, along existing road networks.

Table 7. Antilla On-site Operating Costs (US\$ per tonne milled)

Item	Cost (US\$ per tonne)
Mining Cost	1.63
Processing Cost (including crushing)	3.85
Leach Material Haulage Cost (average)	0.81
G&A Costs	0.75
Total On-site Operating Cost	7.04

C1 and C2 cash costs, as defined by Brook Hunt, per pound of payable copper are listed in the table below.

Table 8. Antilla Average Cash Costs (US\$) per lb Payable Copper

Item	Cost (US\$ million)
C1 - Direct Cash Cost	1.51
C2 - Production Cost	1.82

Opportunities for Project Growth and Enhanced Economics

- Tetra Tech recommends that further investigation of the Antilla deposit is warranted and necessary. There is potential to add new mineral resources at depth and in the Northeast and Southeast sides of the pit shell. Tetra Tech recommends that additional drilling be carried out to reduce the drill spacing in those zones with copper mineralization, where drill spacing is greater than 100 m. Additional drilling will determine, with greater confidence, both the continuity and extents of copper mineralization within and outside of the known deposit.
- Tetra Tech recommends an extension of the current exploration grid to include the West Block, North Block, Middle Block and Chabuca exploration targets. Tetra Tech recommends continued geochemical sampling and geophysical surveys over these areas located next to the current mineral resources.
- Considering the preliminary metallurgical testwork undertaken on the project to date, there is potential to increase recoveries with additional metallurgical testing

Future Work

Further work leading to a Pre-Feasibility or Feasibility Study is recommended and will include drilling, mineral resource modeling, metallurgical testwork, engineering, and marketing studies, hydrological and geotechnical analysis, as well as various baseline environmental and archeological studies. In addition, exploration work will be recommended over the other targets in the vicinity of the known deposits.

Environment & Permitting

Existing environmental liabilities associated with the project are restricted to those expected to be associated with an exploration-stage project, and include drill sites and access roads. Additional Environmental Baseline studies should be conducted to collect site data including surface water quality, archeology, aquatic and terrestrial biology, flora, fauna, and additional geochemical characterization of mine waste materials. This information will inform a comprehensive Environmental Impact Study.

Technical Reporting

The complete technical report documenting the PEA will be filed within 45 days of this news release and will be available on Panoro's website and on SEDAR. The technical report will be authored by the following Qualified Persons:

Qualified Person	Firm	PEA Area	Professional Affiliation (and registration number)
Jesse Aarsen, PEng	TetraTech Inc. Moose Mountain Technical Services Ltd.	Geology, Resources Mining, Infrastructure	APEGBC (#38709)
Luquman Shaheen, PEng Andrew Carter	Panoro Minerals Ltd Tetra Tech Inc.	Marketing, Copper Pricing Mineral Processing and Metallurgical Testing	APEGBC (#21675) EURING (#2920GB) CENG (#378467) MIMMM (#46421) SAIMM (#19580) SME (#4112502)
Daniel Sepulveda	Moose Mountain Technical Services Ltd.	Recovery Methods, Processing Capex and Opex	SME #4206787RM
Luis Vela, CMC	Panoro Minerals Ltd.	Exploration, mineral tenure, permits	CMC (#0173)

Information in this news release, which is derived from the PEA, has been reviewed by the Qualified Persons of Tetra Tech, Moose Mountain Technical Services, and Panoro.

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 ¹	Antilla Cu Project ²
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 ¹	NPV _{7.5%}	million USD	1,053	520
	IRR	%	20.4	34.7
	Payback	years	3.2	2.6
After Tax ¹	NPV _{7.5%}	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
<p>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</p> <p>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.</p>				

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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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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