



Pan American Silver Announces Results of Joaquin Preliminary Feasibility Study

All amounts are expressed in US\$ unless otherwise indicated. This news release contains forward-looking information about expected future events and financial and operating performance of the Company. Readers should refer to the risks and assumptions set out in the "Cautionary Note Regarding Forward-Looking Statements and Information" at the end of this news release.

Vancouver, B.C. - Dec. 21, 2017 - Pan American Silver Corp. (NASDAQ: PAAS; TSX: PAAS) ("Pan American", or the "Company") has finalized a preliminary feasibility study on the La Morocha deposit, which is part of the Joaquin project ("Joaquin"), located in Santa Cruz, Argentina. The study recommends the development of the La Morocha deposit as an underground mine, with processing to occur at Pan American's Manantial Espejo mill. Based on the results of the preliminary feasibility study, Pan American's Board of Directors has approved a capital investment of approximately \$37.8 million to construct the La Morocha underground mine and fund activities up to the point of commercial production (excluding \$3.6 million of reimbursable value-added tax ("VAT")).

The Company intends to prepare a technical report (the "Technical Report") pursuant to *National Instrument 43-101 - Standards of Disclosure for Mining Projects* ("NI 43-101") and file on SEDAR (www.sedar.com). The Technical Report will also be available on the Company's website (www.panamericansilver.com).

La Morocha Preliminary Feasibility Study Highlights:

- Ore to be delivered to Manantial Espejo for processing is estimated to be 474 thousand tonnes at 721 grams per tonne of silver.
- Life-of-mine recovered silver ounces are estimated at 8.9 million and account for 96% of the total estimated project revenue. Total recovered gold ounces are estimated at 5,100.
- Metallurgical test work confirms that the Manantial Espejo mill is suited to process the ore from La Morocha at a slightly higher cost per tonne than the ore from Manantial Espejo. Silver and gold recovery is estimated to average 81%.
- An estimated mine production and ore transport rate of 600 tonnes per day during peak operations.
- The mining method will be primarily post pillar cut and fill using unconsolidated mine development waste rock for backfill.
- Ore will be hauled to surface by mine trucks and then transported by road to the Manantial Espejo processing facility, located 145 kilometres to the south of Joaquin.
- Development of the underground access decline ramp is scheduled to begin in the second quarter of 2018, with first ore production starting in late 2019 and running until the end of 2021.
- The estimated \$37.8 million project development capital investment (excluding \$3.6 million of reimbursable VAT) is scheduled to be incurred during 2018 and 2019, and is anticipated to be funded from the cash flow generated through the Company's operating activities.
- The base case economic estimate for La Morocha is an after-tax net present value ("NPV") of \$9.1 million, using a 5% discount rate, with an after-tax internal rate of return ("IRR") of 18%, at assumed metal prices of \$18.50 per ounce silver and \$1,300 per ounce gold.

"Developing Joaquin is a low-risk project that enhances the value of our Manantial Espejo processing plant and infrastructure assets. The ore from La Morocha will supplement ore feed from the underground mine and stockpiles at Manantial Espejo, as well as the feed from our COSE project. We expect the combined

production from these sources to contribute approximately 21 million ounces of silver to Pan American’s consolidated silver production over the 2018 to 2021 time period,” said Michael Steinmann, President and Chief Executive Officer of Pan American. “Furthermore, extending the life of our operations at Manantial Espejo supports our efforts to continue exploring across our large mineral concessions in the area, including the attractive exploration potential at the La Negra deposit and other prospects acquired with Joaquin.”

Estimated Production Profile

| Silver production (million ounces) | Manantial Espejo | COSE | Joaquin | Annual Total |
|---------------------------------------|------------------|-------------|------------|--------------|
| 2018 | 3.3 | 0.0 | 0.0 | 3.4 |
| 2019 | 2.7 | 1.6 | 0.8 | 5.1 |
| 2020 | 2.9 | 0.4 | 4.3 | 7.6 |
| 2021 | 1.3 | 0.0 | 3.8 | 5.1 |
| Total | 10.3 | 2.0 | 8.9 | 21.2 |
| Gold production (thousand ounces) | | | | |
| 2018 | 30.0 | 0.1 | 0.0 | 30.1 |
| 2019 | 22.8 | 33.5 | 1.0 | 57.3 |
| 2020 | 24.3 | 8.0 | 2.8 | 35.0 |
| 2021 | 11.2 | 0.0 | 1.3 | 12.5 |
| Total | 88.2 | 41.6 | 5.1 | 134.9 |

Totals may not add up due to rounding.

Mineral Reserve and Resource Estimates

Management estimates that mineral reserves and mineral resources at La Morocha, as at November 30, 2017, are as follows:

| Classification | Tonnes | Silver (grams per tonne) | Silver contained metal (million ounces) | Gold (grams per tonne) | Gold contained metal (thousand ounces) |
|--|---------|--------------------------|---|------------------------|--|
| Probable | 474,000 | 721 | 11.0 | 0.4 | 6.3 |
| Totals may not add up due to rounding. Mineral reserve estimates were prepared under the supervision of, or were reviewed by, Martin Wafforn, P. Eng., Senior Vice President Technical Services and Process Optimization of Pan American. Metal prices used for the mineral reserve estimate were \$18.50 per ounce of silver and \$1,300 per ounce of gold. | | | | | |

| Classification | Tonnes | Silver (grams per tonne) | Silver contained metal (million ounces) | Gold (grams per tonne) | Gold contained metal (thousand ounces) |
|---|--------|--------------------------|---|------------------------|--|
| Indicated | 58,000 | 385 | 0.7 | 0.6 | 1.1 |
| Inferred | 6,000 | 389 | 0.1 | 1.3 | 0.2 |
| Totals may not add up due to rounding. Mineral resource estimates were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, Vice President Business Development and Geology, of Pan American. Metal prices used for the mineral resource estimate were \$25 per ounce of silver and \$1,400 per ounce of gold. Mineral resources do not have demonstrated economic viability, and are in addition to mineral reserves. | | | | | |

Pan American Silver acquired 100% of Joaquin from Coeur Mining, Inc. ("Coeur") in February 2017. Pan American owns 100% of the Manantial Espejo mine and processing plant, which has nominal capacity of 2,000 tonnes per day and produces silver and gold doré.

Qualified Persons

This news release was prepared under the supervision and review of Martin Wafforn, P. Eng., Senior Vice President, Technical Services and Process Optimization, and Christopher Emerson, FAusIMM, Vice President, Business Development and Geology, who are Qualified Persons as that term is defined by NI 43-101.

Data Verification

The Qualified Persons responsible for the preparation of the Technical Report have verified the data disclosed, including sampling, analytical, and test data underlying the information contained in this news release. Geological, mine engineering and metallurgical reviews included, among other things, reviewing mapping, core logs, and re-logging existing drillholes, review of geotechnical and hydrological studies, environmental and community factors, the development of the life of mine plan, capital and operating costs, transportation, taxation and royalties, and review of existing metallurgical test work. In the opinion of the Qualified Persons responsible for the preparation of the Technical Report, the data, assumptions, and parameters used to estimate mineral resources and mineral reserves, the metallurgical model, the economic analysis, and the preliminary feasibility study are sufficiently reliable for those purposes. The Technical Report, when filed, will contain more detailed information concerning associated QA/ QC and other data verification matters, and the key assumptions, parameters and methods used by the Company.

About Pan American Silver

Pan American Silver is one of the world's largest primary silver producers, providing investors with enhanced exposure to silver through low-cost operations. Founded in 1994, Pan American Silver is recognized for its operating expertise, prudent financial management and commitment to responsible development. The Company is headquartered in Vancouver, B.C. and owns and operates six mines in Mexico, Peru, Argentina and Bolivia. Our shares trade on NASDAQ and the Toronto Stock Exchange under the symbol "PAAS".

For more information, visit: www.panamericansilver.com.

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Cautionary Note Regarding Forward-Looking Statements and Information

Certain of the statements and information in this news release constitute "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 and "forward-looking information" within the meaning of applicable Canadian provincial securities laws. All statements, other than statements of historical fact, are forward-looking statements or information. Forward-looking statements or information in this news release relate to, among other things: the estimated grade of mineral reserves and resources; the development of La Morocha as an underground mine and the processing of mineralized material at Manantial Espejo as a viable option for the Company; estimates of operating costs; future financial or operational performance, including the amount of future production at La Morocha; and our estimated production of silver and gold during the period 2018 to 2021; the estimated capital investment in respect of the La Morocha Project and source of funds; the ability of the Company to successfully complete development of La Morocha and COSE on schedule or on budget, or at all, and the impacts of such projects on the Company, including with respect to production; the estimates of project NPV and IRR for La Morocha; and the expenditures and success related to any future exploration or development programs.

These forward-looking statements and information reflect the Company's current views with respect to future events and are necessarily based upon a number of assumptions that, while considered reasonable by the Company, are inherently subject to significant operational, business, economic and regulatory uncertainties and contingencies. These assumptions include: our mineral reserve and resource estimates and the assumptions upon which they are based, including geotechnical and metallurgical characteristics of rock confirming to sampled results and metallurgical performance; tonnage of ore to be mined and processed; ore grades and recoveries; assumptions and discount rates being appropriately applied to the preliminary feasibility study; success of the Company's projects, including the La Morocha development; prices for silver and gold remaining as estimated; currency exchange rates remaining as estimated; availability of funds for the Company's projects; capital, decommissioning and reclamation estimates; our mineral reserve and resource estimates and the assumptions upon which they are based; prices for energy inputs, labour, materials, supplies and services (including transportation); no labour-related disruptions; no unplanned delays or interruptions in scheduled construction and production; all necessary permits, licenses and regulatory approvals are received in a timely manner; and our ability to comply with environmental, health and safety laws. The foregoing list of assumptions is not exhaustive.

The Company cautions the reader that forward-looking statements and information involve known and unknown risks, uncertainties and other factors that may cause actual results and developments to differ materially from those expressed or implied by such forward-looking statements or information contained in this news release and the Company has made assumptions and estimates based on or related to many of these factors. Such factors include, without limitation: fluctuations in silver and gold prices; fluctuations in prices for energy inputs, labour, materials, supplies and services (including transportation); fluctuations in currency markets (such as the Canadian

dollar and Argentine peso versus the U.S. dollar); operational risks and hazards inherent with the business of mining (including environmental accidents and hazards, industrial accidents, equipment breakdown, unusual or unexpected geological or structural formations, cave-ins, flooding and severe weather); inadequate insurance, or inability to obtain insurance, to cover these risks and hazards; employee relations; relationships with, and claims by, local communities and indigenous populations; our ability to obtain all necessary permits, licenses and regulatory approvals in a timely manner; changes in laws, regulations and government practices in Argentina, including environmental, export and import laws and regulations; legal restrictions relating to mining, including in Santa Cruz, Argentina; risks relating to expropriation; increased competition in the mining industry for equipment and qualified personnel; and those factors identified under the caption "Risks Related to Pan American's Business" in the Company's most recent Form 40-F and Annual Information Form filed with the United States Securities and Exchange Commission and Canadian provincial securities regulatory authorities, respectively. Although the Company has attempted to identify important factors that could cause actual results to differ materially, there may be other factors that cause results not to be as anticipated, estimated, described or intended. Investors are cautioned against undue reliance on forward-looking statements or information. Forward-looking statements and information are designed to help readers understand management's current views of our near and longer term prospects and may not be appropriate for other purposes. The Company does not intend, nor does it assume any obligation to update or revise forward-looking statements or information, whether as a result of new information, changes in assumptions, future events or otherwise, except to the extent required by applicable law.

Cautionary Note to U.S. Investors Regarding References to Mineral Resources and Mineral Reserves

This news release has been prepared in accordance with the requirements of Canadian securities laws, which differ from the requirements of U.S. securities laws. Unless otherwise indicated, all mineral reserve and mineral resource estimates included in this news release have been disclosed in accordance with NI 43-101 and the Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards. NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects.

Canadian public disclosure standards, including NI 43-101, differ significantly from the requirements of the United States Securities and Exchange Commission (the "SEC"), and information concerning mineralization, deposits, mineral reserve and resource information contained or referred to herein may not be comparable to similar information disclosed by U.S. companies. In particular, and without limiting the generality of the foregoing, this news release uses the terms "indicated resources" and "inferred resources". U.S. investors are advised that, while such terms are recognized and required by Canadian securities laws, the SEC does not recognize them. The requirements of NI 43-101 for identification of "reserves" are not the same as those of the SEC, and reserves reported by Pan American in compliance with NI 43-101 may not qualify as "reserves" under SEC standards. Under U.S. standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. U.S. investors are cautioned not to assume that any part of an "indicated resource" will ever be converted into a "reserve". U.S. investors should also understand that "inferred resources" have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of "inferred resources" exist, are economically or legally mineable or will ever be upgraded to a higher category. Under Canadian securities laws, estimated "inferred resources" may not form the basis of feasibility or pre-feasibility studies except in rare cases. Disclosure of "contained ounces" in a mineral resource is permitted disclosure under Canadian securities laws. However, the SEC normally only permits issuers to report mineralization that does not constitute "reserves" by SEC standards as in place tonnage and grade, without reference to unit measures. Accordingly, information concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in accordance with U.S. standards.