(Please note that all dollar amounts in this news release are expressed in U.S. dollars unless otherwise indicated.)

TORONTO, ON--(Marketwired - January 18, 2017) - Primero Mining Corp. ("Primero" or the "Company") (TSX: P) (NYSE: PPP) today announces its preliminary fourth quarter and full-year 2016 operating results. The Company's fourth quarter and full-year 2016 financial results will be released on March 15, 2017, and 2017 production guidance will be released in mid-February.

Highlights:

- Revised Production Guidance Achieved: Fourth quarter production of 45,794 gold equivalent ounces[1] resulted in annual 2016 production of 176,139 gold equivalent ounces within the Company's 2016 revised production guidance range of 170,000 to 190,000 gold equivalent ounces. Annual production totalled 156,052 ounces of gold and 5.3 million ounces of silver from the San Dimas and Black Fox mines.
- Cash Costs Within Revised Guidance Range: Preliminary 2016 consolidated total cash costs[2,4] are expected to be $865 per gold equivalent ounce, and preliminary consolidated all-in sustaining costs[3,4] ("AISC") including corporate G&A are expected to be $1,326 per gold ounce, slightly better than the Company's revised 2016 guidance range.
- San Dimas Focused on Improving Productivity and Grades: San Dimas produced 28,282 gold equivalent ounces in the fourth quarter resulting in 113,968 gold equivalent ounces for full-year 2016 (93,881 ounces of gold and 5.3 million ounces of silver) at total cash costs of $856 per gold equivalent ounce and AISC of $1,117 per gold ounce. Production levels in 2016 were impacted by a series of factors that were identified and improved upon during the course of the year, as discussed below.
- Black Fox Benefitted from High-Grade Deep Central Zone Production: Black Fox produced 17,512 ounces of gold in the fourth quarter resulting in 62,171 ounces of gold in 2016 at total cash costs of $881 per ounce and AISC of $1,291 per ounce. The underground mine achieved increased production rates averaging 641 tonnes per day ("TPD"), representing a 66% improvement over 2015. Production from the Deep Central Zone has ramped-up since initial stoping activities began in September, and mining is now progressing on three levels in four working faces delivering 800 TPD of ore production in Q4 2016.
- Streamlined Operations to Significantly Improve Cash Flows in 2017: Primero has streamlined its operations, focusing on productivity improvements, right-sizing of operations, and strong adherence to mine plans. Furthermore, the Company is implementing broad cost-control measures at both mines in 2017. Primero expects to provide 2017 guidance in mid-February, and anticipates 2017 production levels will be in-line with 2016 but at reduced costs, resulting in improved cash flows from operations in 2017.

"While Primero faced a number of significant challenges in 2016, I believe the changes we have already made, and will continue to make, will result in a considerable improvement in our 2017 results," stated Ernest Mast, President and Chief Executive Officer. "We have recently strengthened our management team with the addition of an experienced C.O.O. and C.F.O., and expect to see marked improvement in the near-term as we work to reduce costs, increase production and simplify the way we mine. These key steps will lay the foundations of Primero's return to sustainable profitability."

Revised Guidance Achieved

Primero produced 45,794 gold equivalent ounces during the fourth quarter of 2016 (23,162 ounces of gold and 1.4 million ounces of silver from San Dimas, and 17,512 ounces of gold from Black Fox), resulting in annual production for the Company of 176,139 gold equivalent ounces in 2016 (93,881 ounces of gold and 5.3 million ounces of silver from San Dimas, and 62,171 ounces of gold from Black Fox) within the Company's revised production guidance range.

Preliminary consolidated total cash costs for the fourth quarter of 2016 are expected to be $777 per gold equivalent ounce, with preliminary AISC including corporate G&A of $1,133 per ounce. For the full-year 2016, preliminary consolidated total cash costs were $865 per gold equivalent ounce, within the revised guidance range of $850 to $900 per gold equivalent ounce. Preliminary consolidated AISC including corporate G&A of $1,326 per ounce were slightly better than the cost guidance range of $1,350 to $1,400 per ounce. Costs were affected by reduced production levels at both the San Dimas and Black Fox mines and lower silver spot sales realized during the year.

San Dimas produced 28,282 gold equivalent ounces during the fourth quarter at preliminary cash costs of $746 per gold equivalent ounce and preliminary AISC of $994 per gold ounce. This resulted annual production of 113,968 gold equivalent ounces at preliminary cash costs of $856 per gold equivalent ounce and preliminary AISC of $1,117 per gold ounce, slightly better than the revised 2016 guidance range of $1,125 to $1,175 per ounce. Production at San Dimas was impacted by the implementation of enhanced ground support in early-2016, and later by high unplanned worker absences and lack of compliance to the mine plans. This resulted in reduced underground development rates and ventilation restrictions which reduced mine productivity. In late-2016, San Dimas began to reduce the complexity of the mining operation by prioritizing work in the higher production areas. With increased workforce engagement in November and December, the mine experienced minimal production impact due to labour related issues during these months. Mining development during Q4 were the highest quarterly total since Q2 2015 and an indication that stopes will begin to be scheduled in an improved manner. San Dimas mill throughput in 2016 averaged 2,074 TPD (based on 366 day availability).

Black Fox produced 17,512 ounces of gold during the fourth quarter of 2016 at preliminary cash costs of $828 per ounce and

preliminary AISC of $1,101 per ounce. For the full-year 2016, the mine produced 62,171 ounces at preliminary cash costs of $881 per ounce. Preliminary AISC were $1,291 per ounce, in line with the 2016 revised cost guidance range. The Black Fox underground mine achieved increased production rates averaging 641 TPD in 2016 at average grades of 5.0 grams per tonne gold, representing a 66% and 4% improvement, respectively, over 2015. Production from the Deep Central Zone has ramped-up since initial stoping activities began in September, and mining is now progressing on three levels (660, 680, 700 metre levels). There are a total of four active working faces on these levels that delivered 800 tonnes per day of ore production in Q4 2016. Black Fox mill throughput in 2016 established a new record averaging 2,495 TPD (based on 366 day availability).

Streamlined Operations Expected to Generate Significantly Improved Cash Flows in 2017

Primero has streamlined its operations, focusing on productivity improvements, right-sizing of operations, and strong adherence to mine plans. Furthermore, the Company is implementing broad cost-control measures at both mines in 2017. The Company expects to provide 2017 production and cost guidance in mid-February.

Primero anticipates 2017 production levels will be in-line with 2016 but at reduced unit costs. Total capital expenditures are also expected be reduced on an overall basis, but year-over-year spending will increase in specific focus areas such as mine development and near-mine exploration.

Current Liquidity Position

The Company's total liquidity position at December 31, 2016 totalled $45 million, comprised of approximately $20 million in cash and $25 million available under its line of credit. Primero has been in discussions with lenders to re-finance or extend its line of credit facility which matures in May 2017. The Company also amended its financial covenants associated with its line of credit during the period ending December 31, 2016.

Conference Call Details

Primero plans to release its fourth quarter and full-year 2016 financial results before the market opens on Wednesday, March 15, 2017. A conference call will also be held on the same day at 10:00 am ET to discuss these results.

Participants may join the call by dialling North America toll free 1-888-789-9572 or 416-695-7806 for calls outside Canada and the U.S., and entering the participant passcode 1092106.

A live and archived webcast of the conference call will also be available at www.primeromining.com under the News and Events section or by clicking here: http://www.gowebcasting.com/8311.

A recorded playback of the third quarter 2015 results call will be available until July 1, 2017 by dialling 1-800-408-3053 or 905-694-9451 and entering the call back passcode 5641196.

(1) "Gold equivalent ounces" include silver ounces produced, and converted to a gold equivalent based on a ratio of the average commodity prices realized for each period. The ratio for the fourth quarter 2016 was 278:1 based on the average realized prices of $1,208 per ounce of gold and $4.34 per ounce of silver. The ratio for full-year 2016 was 266:1 based on the average realized prices of $1,246 per ounce of gold and $4.68 per ounce of silver.

(2) Total cash costs per gold equivalent ounce and total cash costs per gold ounce on a by-product basis are non-GAAP measures. Total cash costs per gold equivalent ounce are defined as costs of production (including refining costs) divided by the total number of gold equivalent ounces produced. Total cash costs per gold ounce on a by-product basis are calculated by deducting the by-product silver credits from operating costs and dividing by the total number of gold ounces produced. The Company reports total cash costs on a production basis. In the gold mining industry, these are common performance measures but do not have any standardized meaning, and are non-GAAP measures. As such, they are unlikely to be comparable to similar measures presented by other issuers. In reporting total cash costs per gold equivalent and total cash costs per gold ounce on a by-product basis, the Company follows the recommendations of the Gold Institute standard. The Company believes that, in addition to conventional measures, prepared in accordance with GAAP, certain investors use this information to evaluate the Company's performance and ability to generate cash flow. Accordingly, it is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with GAAP. Refer to the Company's third quarter 2016 MD&A for a reconciliation of cash costs per gold ounce on both a by-product and gold equivalent basis to reported operating expenses (the most directly comparable GAAP measure).

(3) The Company, in conjunction with an initiative undertaken within the gold mining industry, has adopted an all-in sustaining cost non-GAAP performance measure that the Company believes more fully defines the total cost associated with producing gold; however, this performance measure has no standardized meaning. Accordingly, it is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with GAAP. The Company reports this measure on a gold ounces produced basis. For the purposes of calculating all-in

sustaining costs at individual mine sites, the Company does not include corporate general and administrative expenses. Corporate general and administrative expenses are included in the computation of all-in sustaining costs per consolidated gold ounce. Refer to the Company's third quarter 2016 MD&A for a reconciliation of all-in sustaining costs per gold ounce.

(4) The preliminary cash cost information provided in this news release is approximate and may differ from the final results included in the Company's 2016 annual audited financial statements and MD&A.

About Primero

Primero Mining Corp. is a Canadian-based precious metals producer that owns 100% of the San Dimas gold-silver mine and the Cerro del Gallo gold-silver-copper development project in Mexico and 100% of the Black Fox mine and adjoining properties in the Township of Black River â¬Matheson near Timmins, Ontario, Canada. Primero offers immediate exposure to un-hedged, below average cash cost gold production with a substantial resource base in politically stable jurisdictions. The Company is focused on becoming a leading intermediate gold producer by building a portfolio of high quality, low cost precious metals assets in the Americas.

Primero's website is www.primeromining.com.

CAUTIONARY STATEMENT ON FORWARD-LOOKING INFORMATION

This news release contains "forward-looking statements", within the meaning of the United States Private Securities Litigation Reform Act of 1995 and applicable Canadian securities legislation, concerning the business and operations of Primero Mining Corp. and its consolidated subsidiaries (collectively, "Primero" or the "Company"). All statements, other than statements of historical fact, are forward-looking statements. Generally, forward-looking statements can be identified by the use of forward-looking terminology such as "plans", "expects", "is expected", "if approved", "forecasts", "intends", "anticipates", "believes", "in order to" or variations of such words and phrases or statements that certain actions, events or results "are anticipated", "may", "could", "would", "might" or "will require", "will allow", "will enhance" or "will include" or similar statements or the negative connotation thereof. Forward-looking information is also identifiable in statements of currently occurring matters which will continue in future, such as "is updating", "is working" or "is also assessing" or other statements that may be stated in the present tense and are not historical facts or words with future implication such as "opportunity", "promising".

Forward-looking statements in this news release include, but are not limited to, statements regarding the Company's total cash costs for the fourth quarter and year-end of 2016; the level and timing of gold equivalent production at San Dimas and Black Fox; the Company's annual production guidance; the realization of silver sales at spot prices; the amount of gold equivalent ounces produced in 2016, the cash costs and all-in sustaining costs for 2016; the capital expenditures in 2016; the Black Fox underground development and ability to open new mining areas in 2017; the amount of ore from the Company's operations in 2016; the probability of encountering high grade mineralization in, and the exploration potential of, the Company's exploration targets and plans; the ability to generate significant free cash flow while repaying debt and also internally funding future growth; optimization and expansion initiatives; the ability to re-finance or extend its line of credit facility; and the Company's intentions to become an intermediate gold producer.

The assumptions made by the Company in preparing the forward-looking information contained in this news release, which may prove to be incorrect, include, but are not limited to: the expectations and beliefs of management; the specific assumptions set forth above in this news release; that there are no significant disruptions affecting operations; that development and expansion at San Dimas proceeds on a basis consistent with current expectations and the Company does not change its development and exploration plans; that the exchange rate between the Canadian dollar, Mexican peso and the United States dollar remain consistent with current levels or as set out in this news release; that prices for gold and silver remain consistent with the Company's expectations; that production meets expectations; the amount of silver that the Company will sell at spot prices in 2017; the success in the exploration and development of areas in the Deep Central Zone and the adjacent Froome zone at Black Fox; that the Company identifies higher grade veins in sufficient quantities of minable ore in the Central Block and in Sinaloa Graben; that there are no material variations in the current tax and regulatory environment; that the Company will receive required permits and access to surface rights; that the Company can access financing, appropriate equipment and sufficient labour; that the political environment within Mexico and Canada will continue to support the development of environmentally safe mining projects.

Forward-looking statements are subject to known and unknown risks, uncertainties and other important factors that may cause the actual results, performance or achievements of Primero to be materially different from those expressed or implied by such forward-looking statements, including: the Company may not be able to achieve planned production levels; the Company may not be able to expand production at San Dimas as anticipated or generate significant free cash flow; the Company may not be successful in returning the Black Fox mine to higher production levels; the Company may be required to change its development and exploration plans with a negative impact on production; the Company may not discover mineralization in minable quantities; the exchange rate between the Canadian dollar, the Mexican peso and the United States dollar may change with an adverse impact on the Company's financial results; the optimization and expansion initiatives may not provide the benefits anticipated; the Company may not be able to re-finance or extend its line of credit facility; the Company may not be able to become an intermediate gold producer by building a portfolio of high quality, low cost precious metals assets in the Americas. Certain of these factors are discussed in greater detail in Primero's registration statement on Form 40-F on file with the U.S. Securities and

Exchange Commission, and its most recent Annual Information Form on file with the Canadian provincial securities regulatory authorities and available at www.sedar.com.

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 forward-looking statements. In addition, although Primero has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, 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 such statements 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 statements.

Forward-looking statements are made as of the date hereof and accordingly are subject to change after such date. Forward-looking statements are provided for the purpose of providing information about management's current expectations and plans and allowing investors and others to get a better understanding of our operating environment. Primero does not undertake to update any forward-looking statements that are included in this document, except in accordance with applicable securities laws.

Attachment Available:
http://www.marketwire.com/library/MwGo/2017/1/17/11G127641/PR1-17_2016_Results_Final_v3-b9b8c4282d73bb4e87d0b2acfe7

Contact

For further information, please contact:
Evan Young
Manager, Investor Relations
Tel: (416) 814-2694
eyoung@primeromining.com