Expanded Exploration and Continued Infill Drilling Program Planned for 2018

TORONTO, ONTARIO--(Marketwired - Aug. 28, 2017) - Osisko Mining Inc. (TSX:OSK) ("Osisko" or the "Corporation") is pleased to announce it is increasing the scale of the ongoing drill program at its 100% owned Windfall Lake gold project located in Urban Township, Abitibi, Québec. Osisko plans to add 400,000 metres of drilling to the current drill program, for a global total of 800,000 metres. The current drill program will be completed within two months, with 24 drills active on site producing approximately 40,000 metres per month.

The expanded work program will continue to focus on infill drilling of existing mineralized zones and exploring the new discoveries and extensions in the immediate area of the Windfall and Lynx deposits. New exploration drilling is also planned for 2018 in the northeast and southwest Windfall / Lynx trend and to explore the recently defined Bank Fault.

Osisko's work on the Windfall Project commenced 22 months ago and has greatly advanced the understanding of the Windfall mineralized system. New drilling lead to a reinterpretation of the existing deposit and the discovery of significant new mineralized zones, including the Lynx deposit and the northeast extension of the Windfall deposit. The Corporation continues to advance work on its initial resource estimate for the Windfall project which will also include a portion of the new Lynx deposit. Osisko's pending initial resource estimate will be based on the pre-existing data base and analyses of the initial 400,000 metres of drilling.

Windfall Project Highlights

- Acquisition of the Windfall Project in August 2015, Osisko began drilling October 2015
- Re-logging of approximately 180,000 metres of previously drilled core completed
- Reinterpretation of Windfall as an intrusion-hosted gold system and a new type of mineralized deposit in the Abitibi Greenstone Belt
- Completion of 330,000 metres of drilling in 22 months
- Expansion of Zone 27, Caribou and Underdog zones
- Discovery of the NE extension of Caribou zone
- Discovery of the Lynx deposit
- Discovery of the Bank Fault as controlling element of mineralized corridor
- Extension of the known Windfall/Lynx mineralized system to its current strike length of over three kilometres
- Discovery of Fox and Black Dog zones
- Consolidation of over 3,300 square kilometres of claims in the Urban-Barry and Quévillon areas and acquisition of the Osborne-Bell deposit
- Permitting and dewatering of existing exploration ramp on schedule, commencement of exploration ramp rehabilitation and preparation for advancing exploration ramp into Lynx and Windfall deposits
- Project description filed
- Camp expansion permitted and completed to accommodate 300 exploration and engineering personnel

President and Chief Executive Officer of Osisko John Burzynski commented: "We are greatly encouraged by the continued flow of solid results we are receiving from Windfall and Lynx. Our exploration team has worked very hard over the past 22 months to advance the Windfall project, and have been successful in reinterpreting the geology and making a number of significant new discoveries. While we have directed much of our drill work towards the resource update, we are equally focused on expansion and discovery. Windfall is proving to be a well-endowed gold system, with the principal gold zones remaining open down plunge to the NE and at depth. The Windfall project is growing towards what we believe will be world class status in an emerging new gold mining camp. Our first 400,000 metres of drilling will be completed in October, on schedule. The exploration ramp is also on schedule, and we expect to begin advancing towards the Lynx and Windfall deposits in October.

Resource work is progressing on Zone 27, Caribou, Underdog and a portion of our Lynx discovery. The initial resource estimate planned for the end of this year will most likely be moved back to the first quarter of 2018, as we are experiencing industry-wide delays in analytical sample turn-around times. The drill program is currently over 200 holes in advance of our receipt of analytical results, slowing the work on the initial resource estimate. Despite this delay we will continue to work as quickly as possible. Through 2018 we will continue to explore the down-plunge and depth extensions of the known zones, as well as commence exploring for new zones of mineralization in the northeast - southwest Windfall / Lynx trend and the Bank Fault area."

About the Windfall Lake Gold Deposit

The Windfall Lake gold deposit is located between Val-d'Or and Chibougamau in the Abitibi region of Québec, Canada. The mineral resource defined by the previous operator comprises 2,762,000 tonnes at 8.42 g/t Au (748,000 ounces) in the indicated category and 3,512,000 tonnes at 7.62 g/t Au (860,000 ounces) in the inferred category (sourced from a technical report dated June 10, 2015 entitled "Preliminary Economic Assessment of the Windfall Lake Gold Property, Québec, Canada" with an effective date of April 28, 2015, prepared in accordance with National Instrument 43-101 - Standards of Disclosure for Mineral Projects). The Windfall Lake gold deposit is currently one of the highest grade resource-stage gold projects in Canada. The bulk of the mineralization occurs in the Main Zone, a southwest/northeast trending zone of stacked mineralized lenses, measuring approximately 600 metres wide and at least 1,400 metres long. The deposit is well defined from surface to a depth of 500 metres, and remains open along strike and at depth. Mineralization has been identified only 30 metres from surface in some areas and as

deep as 870 metres in others, with significant potential to extend mineralization up and down-plunge and at depth.

About Osisko Mining Inc.

Osisko is a mineral exploration company focused on the acquisition, exploration, and development of precious metal resource properties in Canada. Osisko holds a 100% in the high-grade Windfall Lake gold deposit located between Val-d'Or and Chibougamau in Québec and holds a 100% undivided interest in a large area of claims in the surrounding Urban Barry area and nearby Quevillon area (over 3,300 square kilometres), a 100% interest in the Marban project located in the heart of Québec's prolific Abitibi gold mining district, and properties in the Larder Lake Mining Division in northeast Ontario, including the Jonpol and Garrcon deposits on the Garrison property, the Buffonta past producing mine and the Gold Pike mine property. The Corporation also holds interests and options in a number of additional properties in northern Quebec and Ontario. Osisko continues to be well financed with approximately $190 million in cash and investments.

Cautionary Note Regarding Forward-Looking Information

This news release contains "forward-looking information" within the meaning of the applicable Canadian securities legislation that is based on expectations, estimates, projections and interpretations as at the date of this news release. The information in this news release about the Windfall Lake gold deposit being one of the highest grade resource-stage gold projects in Canada; the Windfall project growing towards "world class status" in an emerging new gold mining camp; the results of the current 400,000 metre drill program; the timing to complete the current 400,000 metre drill program; the expansion of the current drill program by 400,000 metres of drilling; the timing to complete the initial resource estimate for the Windfall deposit, if at all; the industry-wide delays vis-à-vis turn-around times for analytical samples; the scope of the initial resource estimate for the Windfall deposit, including the deposits to be included in such initial resource estimate; the basis of the initial resource estimate being pre-existing data and analysis of the current 400,000 metre drill program; the number of drills active on site and the approximate metres of drilling per month; the scope and focus of the expanded work program; exploration planned for 2018 in the northeast and southwest Windfall / Lynx trend and to explore the Bank Fault; the significance of new results from the ongoing drill program at the Windfall Lake gold project, including the reinterpretation of the existing deposit and the discovery of significant new mineralized zones; the type of drilling included in the current and expanded drill programs; the significance of new discoveries; the endowment of the Windfall gold system, including principal gold zones remaining open down plunge to the northeast and at depth; the status and advancement of the exploration ramp; potential mineralization; the potential to extend mineralization up and down-plunge and at depth at the Windfall Lake gold deposit; the ability to realize upon any mineralization in a manner that is economic; the ability to complete any proposed exploration activities and the results of such activities, including the continuity or extension of any mineralization; and any other information herein that is not a historical fact may be "forward-looking information".
Any statement that involves discussions with respect to predictions, expectations, interpretations, beliefs, plans, projections, objectives, assumptions, future events or performance (often but not always using phrases such as "expects", or "does not expect", "is expected", "interpreted", "management's view", "anticipates" or "does not anticipate", "plans", "budget", "scheduled", "forecasts", "estimates", "believes" or "intends" or variations of such words and phrases or stating that certain actions, events or results "may" or "could", "would", "might" or "will" be taken to occur or be achieved) are not statements of historical fact and may be forward-looking information and are intended to identify forward-looking information. This "forward-looking information" is based on the reasonable assumptions and estimates of management of the Corporation at the time such assumptions and estimates were made, and involves known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Osisko to be materially different from any future results, performance or achievements expressed or implied by such "forward-looking information". Such factors include, among others, risks relating to the ability of exploration activities (including drill results) to accurately predict mineralization; errors in management's geological modelling; the ability of Osisko to complete further exploration activities, including the current and expanded drill program; property interests in the Windfall Lake gold project; the ability of the Corporation to obtain required approvals and complete transactions on terms announced; the results of exploration activities; risks relating to mining activities; the global economic climate; metal prices; dilution; environmental risks; and community and non-governmental actions. Although the forward-looking information contained in this news release is based upon what management believes, or believed at the time, to be reasonable assumptions. Osisko cannot assure shareholders and prospective purchasers of securities of the Corporation that actual results will be consistent with such forward-looking information, as there may be other factors that cause results not to be as anticipated, estimated or intended, and neither Osisko nor any other person assumes responsibility for the accuracy and completeness of any such forward-looking information, Osisko does not undertake, and assumes no obligation, to update or revise any such forward-looking statements or forward-looking information contained herein to reflect new events or circumstances, except as may be required by law.

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