3.90 g/t Au Over 6.3 Metres Intersected 650 Metres East of Discovery Hole

MONTREAL, QUEBEC--(Marketwired - Jan 18, 2017) - Osisko Mining Inc. (TSX:OSK) ("Osisko" or the "Corporation") is pleased to announce new drill results from its 100% owned Black Dog gold-silver-copper discovery located in Barry Township, Québec, 15 kilometres southwest of Osisko's flagship Windfall Lake gold deposit. Drilling is targeting extensions of the Black Dog discovery and nearby anomalies identified by an airborne geophysical survey conducted by Osisko in 2016. The discovery coincides with magnetic and electromagnetic anomalies that are associated with breccia-hosted quartz-tourmaline mineralization and alteration, with disseminated to semi-massive Au-Ag-Cu bearing sulfides. Analytical results from three new intersections at Black Dog are reported below (OSK-BD-16-006, -007, -011); previously reported results from the discovery holes (OSK-BD-16-001 and OSK-BD-002) are provided for reference.

Highlights of Exploration Results at the Developing Black Dog Discovery

- Discovery hole OSK-BD-16-002 (previously reported) intersected 3.42 g/t Au, 23.2 g/t Ag, 0.65% Cu over 32.1 metres (including 6.14 g/t Au, 34.1 g/t Ag, 0.95% Cu over 14.4 metres).
- Discovery area is presently defined by five intersections in four separate locations along approximately 1200 metres of a NE-trending linear magnetic structure; mineralization centres occur as tabular breccia zones interpreted to be disconnected laterally at surface.
- New intercept in OSK-BD-16-006 averaged 3.90 g/t Au over 6.3 metres, 650 metres east of the discovery hole
- New intercept OSK-BD-16-011 averaged 5.69 g/t Au, 47.5 g/t Ag, 1.87 % Cu over 2.7 metres 50 metres west of the discovery hole.
- Borehole electromagnetic geophysics surveys in holes OSK-BD-16-003 and -005 indicate the presence of two off-hole conductors located below and to the east of these holes; anomalies are located 1500 metres east of the discovery hole and will be drilled in the coming month.

Drill Hole	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Cu (%)	Zone
OSK-BD-16-001	199.9	200.8	0.9	5.76	34.8	0.71	Black Dog
OSK-BD-16-002	93.2	125.3	32.1	3.42	23.2	0.65	Black Dog
including	*97.2*	*111.6*	*14.4*	*6.14*	*34.1*	*0.95*	Black Dog
including	*97.2*	*100.0*	*2.8*	*15.6*	*93.5*	*3.29*	Black Dog
OSK-BD-16-006	359.9	366.2	6.3	3.90	7.54	0.09	Black Dog
including	*359.9*	*362.0*	*2.1*	*7.10*	*17.27*	*0.19*	Black Dog
OSK-BD-16-007	608.6	610.6	2.0	4.69	12.19	0.33	Black Dog
including	*609.0*	*609.9*	*0.9*	*8.34*	*17.19*	*0.46*	Black Dog
OSK-BD-16-011	107.3	110.0	2.7	5.69	47.5	1.87	Black Dog

Notes: True Widths of breccias are not known. See "Quality Control" below.

Further drilling is currently in progress and is directed at determining the extent, continuity and geometry of the new polymetallic gold mineralization discovered at Black Dog. Further downhole electromagnetic (EM) surveys are planned to assist in targeting, and a second drill rig will be assigned to the project in the coming month.

Maps and sections showing the location of the holes presented in this news release and full analytical results are available at www.osiskomining.com.

Hole Number	Azimuth (°)	Dip (°)	Length (m)	UTM E	UTM N
OSK-BD-16-001	330	-56	288.0	441704	5422936
OSK-BD-16-002	332	-61	196.5	442131	5423313
OSK-BD-16-003	328	-61	295.5	443063	5423732
OSK-BD-16-004	330	-62	60.5	443164	5423726
OSK-BD-16-005	330	-65	340.5	443164	5423727
OSK-BD-16-006	327	-60	547.5	442824	5423368
OSK-BD-16-007	326	-60	724.5	442802	5432044
OSK-BD-16-008	326	-60	700.5	442617	5422925
OSK-BD-16-009	331	-62	289.5	441305	5422684
OSK-BD-16-010	328	-65	608.0	441186	5422261
OSK-BD-16-011	295	-45	199.5	442131	5423312

OSK-BD-16-006 targeted an EM anomaly 650 metres east of the discovery hole. The hole intersected 3.90 g/t Au and 7.54 g/t Ag over 6.3 metres (including 7.10 g/t Au and 17.27 g/t Ag over 2.1 metres) in a tourmaline altered and garnet-bearing volcanic flow containing up to 10% pyrite with traces of sphalerite and chalcopyrite.

OSK-BD-16-007 targeted an EM anomaly 630 metres ESE of the discovery hole, intersecting 4.69 g/t Au and 12.19 g/t Ag over 2.0 metres, hosted in an altered andesite with tourmaline veining containing 5-10% pyrite with minor chalcopyrite and sphalerite.

OSK-BD-16-008 was collared 620 metres southeast of the discovery hole to test the interpreted down-plunge extension of the tourmaline/sulphide breccia. The hole intersected 21.0 metres of tourmaline breccia containing 3-10% pyrite, but returned no significant gold values. However, the hole demonstrates the mineralized breccia column has a down-plunge extension of at least 500 metres.

OSK-BD-16-011 targeted the immediate western extension of the discovery zone (50 metres west). The hole intersected 5.69 g/t Au, 47.5 g/t Ag, and 1.87% Cu over 2.7 metres in a tourmaline and sulfide breccia containing 10-90% pyrite and up to 15% chalcopyrite. The two intervals (OSK-BD-16-002 and OSK-BD-011) correspond to a borehole electromagnetic anomaly extending below the holes.

OSK-BD-16-003, -004, and -005 were drilled 1 kilometre to the ENE of the discovery zone and intersected volcanic rocks strongly altered with tourmaline. OSK-BD-16-004 was abandoned at shallow depth, and no significant results were encountered in OSK-BD-16-003 and -005. OSK-BD-16-009 and -010 were drilled on geophysical targets approximately 1 kilometre and 1.4 kilometres (respectively) from the discovery hole. Both holes encountered zones containing up to 5-6% pyrite mineralization with associated bleaching and silicification. Analytical results from these holes are pending.

Qualified Person

The scientific and technical content of this news release has been reviewed, prepared and approved by Mr. Jean-Philippe Desrochers, Ph.D., P.Geo. Senior Project Manager of Osisko's Black Dog project and Windfall Lake gold project, who is a "Qualified Person" as defined by National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101").

Quality Control

Additional drilling is planned for the immediate area which will enable the true width determination. Assays are uncut except where indicated. All NQ core assays reported were obtained by either 1 kilogram whole rock metallic screen/fire assay or standard 50 gram fire-assaying with AA or gravimetric finish at ALS Laboratories in Val d'Or, Québec or Sudbury, Ontario. The 1 kilogram metallic screen assay method is selected by the geologist when samples contain coarse gold or present a higher percentage of pyrite than surrounding intervals. All samples are also analyzed for multi-elements, including silver, using an Aqua Regia-ICP-AES method at ALS laboratories. Drill program design, Quality Assurance/Quality Control and interpretation of results are performed by a "Qualified Person" (within the meaning of NI 43-101) employing a Quality Assurance/Quality Control program consistent with NI 43-101 and industry best practices. Standards and blanks are included with every 20 samples for Quality Assurance/Quality Control purposes by the Corporation as well as the lab. Approximately 5% of sample pulps are sent to secondary laboratories for check assays.

About the Black Dog Project

The Black Dog Project is located approximately 90 kilometres east of Lebel sur Quevillon, 14 kilometres southwest of, and along the same geological trend as, Osisko's Windfall Lake gold project. Three zones have been defined by historical work on the property including the Nubar Zone (with estimated resources of 564,000 tonnes at 6.2 g/t Au, based on historical estimates that have not been prepared in accordance with NI 43-101, the Tourmaline Hill Zone, and the Barry-Souart Zone. These three zones are located along a 5 kilometre length of the same geological structure. See below under the heading "Disclosure of Historical Estimates".

Disclosure of Historical Estimates

In 1950, Nubar Mines Ltd. sunk a 44 metre deep shaft and drove 135 metres of drifts and crosscuts. Several exploration surveys were then completed by other companies (Glenelm Developers Limited, Goldmaster Mines Ltd., Shell Canada Limited, Tut Explorations, Société de développement de la Baie-Jaimes (SDBG) and Oasis Resources Inc.). Between 1985 and 1990, Oasis Resources Inc. completed 152 drill holes, followed with an estimated resource calculation of 564,000 tonnes at 6.2 g/t Au. These resource estimates are of a historical nature and do not comply with NI 43-101. However, the resource estimate may be relevant because the Black Dog property encompasses the same geological trend that the Nubar Zone occupies and, to the best of the knowledge of Mr. Jean-Phillipe Desrochers, there has been no material change with respect to the metallic minerals within the original resource estimation area (and region) that would affect the estimation parameters since 1985. Further drilling would be required to upgrade or verity the historical resource estimate as current mineral resources or reserves. Osisko is unaware of the existence of any technical report prepared in connection with the scientific and technical information in this news release. A "Qualified Person" (within the meaning of NI 43-101) has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves. Osisko is not treating the historical estimate as current mineral resources or mineral reserves. Further, there have not been any mineral resources calculated on the Black Dog property recently.

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 (82,400 hectares), 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 zones 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 Ontario. Osisko continues to be well financed and has approximately $90 million in cash and cash equivalents as well as equity investments of approximately $50 million.

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 drilling being done to target extensions of the Black Dog discovery and nearby anomalies identified by an airborne geophysical survey conducted by Osisko in 2016; any future drilling plans; that future drill plans will be directed at determining the extent, continuity and geometry of the new polymetallic gold mineralization discovered at Black Dog; the future downhole electromagnetic surveys planned to assist in targeting; a second drill rig being assigned to the Black Dog project in the coming months; that additional drilling will enable a true width determination; the treatment of historical estimates; potential mineralization; 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; 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 reasonable assumptions and estimates of management of the Corporation, at the time it was made, 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 drilling and adding additional rigs; property interests; 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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