



OSISKO MINING DELIVERS POSITIVE PEA UPDATE FOR WINDFALL

300,000 oz Au Average in First Seven Years of Full Production

39.3% After-Tax IRR and C\$1.5 Billion After-Tax NPV at US\$1,500/oz Au with 18 Year LOM

C\$253 Million Average Annual After-Tax Free Cash Flow in First Seven Years of Full Production

(Toronto, April 7, 2021) Osisko Mining Inc. (OSK:TSX. "Osisko" or the "Corporation") is pleased to provide significant positive results from the independent Preliminary Economic Assessment ("PEA") prepared in accordance with National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101") on its 100% owned Windfall gold project located in the Abitibi greenstone belt, Urban Township, Eeyou Istchee James Bay, Québec.

The PEA provides a robust base case assessment for developing the Windfall gold deposit as an underground dual ramp-access mine with a central processing mill at the site. The study includes drill results available as of November 30, 2020. Osisko is rapidly advancing surface and underground work at Windfall, with over 8.5 kilometres of underground exploration ramp, recently achieving 500 metres vertical depth (see *Osisko news release dated March 25, 2021*).

Highlights

- ***First 7 years of full production: 300,000 oz Au per year average, 8.1 g/t Au average diluted grade***
- ***Peak recovery of 328,000 oz Au in year 6; average production over 18 year life of mine ("LOM") of 238,000 oz Au per year (based on MRE database as of November 2020)****
- ***50.6% Pre-Tax Internal Rate of Return ("IRR"), 39.3% After-Tax IRR; C\$2.6 Billion Pre-Tax Net Present Value ("NPV"), C\$1.5 Billion After-Tax NPV; After-Tax Payback Period 2.2 years from start of production***
- ***Average annual after-tax free cash flow of C\$253 Million in the first seven years of full production (C\$1.8 Billion cumulative), cumulative LOM after-tax free cash flow of C\$2.6 Billion***
- ***AISC of US\$610/oz Au***
- ***Capital expenditure ("Capex") of C\$544 Million (includes power line construction and C\$55 Million as contingency in direct and indirect costs), NPV/Capex ratio of 2.7***
- ***PEA assumes 3,100 tonnes per day ("tpd") milling operation***
- ***Average gold recovery of 94.8%; total operating cost of C\$122/tonne***
- ***Windfall will generate over C\$8.2 Billion of gross revenue and C\$1.7 Billion in taxes***
- ***Creation of approximately 400 direct jobs and 200 indirect jobs during operation, over 500 jobs during construction***

*Cautionary Statement - The reader is advised that the PEA summarized in this news release is intended to provide only an initial, high-level review of the project potential and design options. The PEA mine plan and economic model include numerous assumptions and the use of inferred mineral resources. Inferred mineral resources are considered to be too speculative to be used in an economic analysis except as allowed for by NI 43-101 in PEA studies. There is no guarantee that inferred mineral resources can be converted to indicated or measured mineral resources, and as such, there is no guarantee the project economics described herein will be achieved.

Osisko Chief Executive Officer John Burzynski commented: “The sum of our work to date outlines the very strong base-case for a significant and highly profitable new gold mine in Québec . This PEA is an important interim update on the progress of our extensive work program at Windfall, with a robust 39% after-tax IRR and C\$1.5 Billion after-tax NPV using US\$1,500 oz gold. We believe this highly positive PEA is conservative. The eventual inclusion of high-grade infill results received since November 2020, and the results we anticipate as we complete the infill drilling for the Definitive Feasibility Study (“DFS”) by the early fall of 2021, should convert a significant number of additional high-grade mineral resource estimate (“MRE”) inferred ounces to the measured and indicated categories. In the next 12 months we are focused on completing drilling, the DFS, optimizing the capital program and operating plans, and securing project financing, as we advance our goal to move the project to first production in 2024.”

This independent study was prepared by BBA Inc. (Montreal) under the supervision of Mr. Don Njegovan, Chief Operating Officer of Osisko, Ms. Kim-Quyên Nguyễn, P. Eng., MBA, Project Director for Osisko, the Osisko Group technical team, and included contributions from the geological and engineering teams at BBA Inc., Entech Mining Ltd. (Toronto), Andrieux & Associates Geomechanics Consulting LP (A2GC, Montreal), GCM Consultants (Montreal), Golder Associates Ltd. (Montreal) and WSP Canada Inc. (Val d’Or). These firms provided mineral resource estimates, design parameters and cost estimates for mine operations, process facilities, major equipment selection, waste and tailings storage, reclamation, permitting, and operating and capital expenditures. Table 5 details the contributors and their area of responsibility.

Table 1: PEA Summary (reported in C\$, except where noted)

Total mineralized material mined (t)	19,699,688
Average stope diluted grade (Au g/t)	7.38
Average stockpile development diluted grade (Au g/t)	5.43
Average mill feed diluted grade (Au g/t)	6.95
Total gold contained (oz)	4,400,711
Total gold produced (oz)	4,174,870
Total gold payable (oz)	4,172,782
Gold payable recovery (%)	94.8%
Average annual gold produced (oz)	238,314
Total initial Capex (C\$M) (less incurred camp and mill costs)	543.5
Sustaining capital (C\$M)	761.5
Unit Operating Cost (per tonne milled)	
Mining (C\$)	57.29
Processing (C\$)	26.85
Tailings & water management (C\$)	9.91
General & administration (C\$)	27.71
Total unit operating cost per tonne milled (C\$)	121.76

Table 2: Summary Economics at US\$1,500 gold per oz total

LOM Net Smelter Return Revenue (C\$M)	8,150
Total LOM Pre-Tax Cash Flow (C\$M)	4,286
Average Annual Pre-Tax Cash Flow (C\$M)	245
LOM Income Taxes (C\$M)	1,686.6
Total LOM After-Tax Free Cash Flow (C\$M)	2,599.7
Average Annual After-Tax Free Cash Flow (C\$M)	148
Discount Rate (%)	5.0
Pre-Tax NPV (C\$M)	2,571
Pre-Tax IRR	50.6

Pre-Tax Payback after start of production (Years)	2.0
After-Tax NPV (C\$M)	1,534
After-Tax IRR	39.3%
After-Tax Payback after start of production (Years)	2.2

Table 3: All-In Sustaining Cost

Mining Cost (C\$M)	1,128.6
Processing Cost (C\$M)	528.9
Tailing & Water Management (C\$M)	195.3
General & Administrative (C\$M)	545.8
Refining & Smelting (C\$M)	28.1
Royalties (C\$M)	163.0
Silver Credit (\$M)	(41.5)
Adjusted Operating Costs	2,548.2
Sustaining (C\$M)	666.4
Closure cost (C\$M)	95.1
Total (C\$M)	3,309.7
All-in Sustaining Cost (C\$/oz)**	793.2
All-in Sustaining Cost (US\$/oz)**	610.1

** All-in Sustaining Costs are presented as defined by the World Gold Council less Corporate G&A

Table 4: Sensitivities (base case in bold)

Gold Price US\$/oz	\$1300	\$1400	\$1500	\$1600	\$1700	\$1800	\$1900	\$2000
Pre-Tax NPV 5% (C\$M)	1,906.0	2,238.6	2,571.3	2,903.9	3,236.5	3,569.2	3,901.8	4,234.4
After-Tax NPV 5% (C\$M)	869.1	1,201.7	1,534.4	1,867.0	2,199.6	2,532.3	2,864.9	3,197.5
Pre-Tax IRR	41.1%	45.9%	50.6%	55.1%	59.5%	63.8%	68.0%	72.1%
After-Tax IRR	27.3%	33.6%	39.3%	44.8%	49.9%	54.9%	59.7%	64.3%
Pre-Tax Payback at production start (yrs)	2.4	2.2	2.0	1.8	1.7	1.6	1.5	1.4
After-Tax Payback at production start (yrs)	3.0	2.5	2.2	2.0	1.8	1.6	1.5	1.4

FX C\$1:US\$	0.90	0.85	0.80	0.77	0.70	0.65	0.60	0.55
Pre-Tax NPV 5% (C\$M)	1,844.9	2,096.2	2,379.0	2,571.3	3,065.7	3,488.3	3,981.3	4,563.9
After-Tax NPV 5% (C\$M)	808.0	1,059.3	1,342.1	1,534.4	2,028.8	2,451.4	2,944.4	3,527.1
Pre-Tax IRR	40.2%	43.9%	47.9%	50.6%	57.2%	62.7%	69.0%	76.1%
After-Tax IRR	26.1%	30.9%	36.0%	39.3%	47.3%	53.7%	60.8%	68.7%
Pre-Tax Payback at production start (yrs)	2.5	2.3	2.1	2.0	1.7	1.6	1.4	1.3
After-Tax Payback at production start (yrs)	3.1	2.7	2.4	2.2	1.9	1.6	1.5	1.3

Table 5: Consulting Firm and Area of Responsibility

Consulting Firm	
A2GC	<ul style="list-style-type: none"> - Rock mass characterization and rock engineering in support of the underground mine design
BBA Inc.	<ul style="list-style-type: none"> - Historical data review; - Current and historical geology, exploration, drilling; - Sample preparation, QA/QC, and data verification; - Geological modelling and mineral resource estimate; - Metallurgical test work management and analysis, - Crusher and process plant mass and water balance, - Crusher and process plant design, capital costs and operating costs; - Electrical infrastructure design and costs (supply); - IT and communications infrastructure design and costs (supply and on-site); - Integrated Remote Operations Centre (IROC) design and costs; - General and administration operating costs; - Financial Analysis and overall NI 43-101 integration.
Entech Mining Ltd.	<ul style="list-style-type: none"> - Underground mine design, underground infrastructure, ventilation, production scheduling, underground capital costs and operating costs.
Golder Associates Ltd.	<ul style="list-style-type: none"> - Waste rock, tailings, and ore a geochemical characterization; - Surface tailings management facility designs and costs; - Site wide water balance; - Hydrogeology and groundwater quality input to environmental studies; - Hydrogeology input to underground mine design;
WSP Canada Inc.	<ul style="list-style-type: none"> - Design and costs of surface infrastructure for Windfall site; - Site utilities design and costs; - Off-site access road to Windfall evaluation and costs; - On-site roads and pads design and costs; - Site Infrastructure electrical distribution design and costs; - Surface mineralized material, waste rock, overburden and topsoil management facility design and costs; - Surface water management infrastructure design and costs; - Tailings filtration plant and dry tailings storage / handling design and costs; - Underground paste backfill distribution and infrastructure design and costs; - Environmental studies, permitting and closure costs; - Regulatory context, social considerations, and anticipated environmental issues; - Geotechnical input for the surface infrastructure design.
GCM Consultants	<ul style="list-style-type: none"> - Water treatment plant design, capital and operating costs

Resource Estimate

The PEA is based on measured, indicated and inferred mineral resource estimates completed by Mr. Pierre-Luc Richard (P.Geol., M.Sc) of BBA Inc. (who is an independent qualified person for purposes of NI 43-101) for the Windfall deposit (Table 6). This mineral estimate uses a base cut-off of 3.5 g/t Au.

Table 6: Windfall Deposit Mineral Resource Estimate ⁽¹⁾

Area	Measured					Indicated					Inferred				
	Tonnes (t)	Grade Au (g/t)	Grade Ag (g/t)	Ounces Au (000 oz)	Ounces Ag (000 oz)	Tonnes (t)	Grade Au (g/t)	Grade Ag (g/t)	Ounces Au (000 oz)	Ounces Ag (000 oz)	Tonnes (t)	Grade Au (g/t)	Grade Ag (g/t)	Ounces Au (000 oz)	Ounces Ag (000 oz)
Lynx	521	11.3	8.1	189	135	3,075	11.0	6.6	1,088	655	7,418	9.9	3.5	2,355	833
Underdog	-	-	-	-	-	562	8.0	1.1	145	20	4,788	6.9	0.9	1,068	139
Main	-	-	-	-	-	1,865	7.3	5.7	436	339	3,540	5.9	3.3	673	375
Triple 8	-	-	-	-	-	-	-	-	-	-	655	7.1	4.7	149	99
Total	521	11.3	8.1	189	135	5,502	9.4	5.7	1,668	1,013	16,401	8.0	2.7	4,244	1,446

Resources estimate notes and resource modeling notes are shown below.

Table 7: Capital Cost Summary

Capital Costs (C\$M)	Pre-Production	Sustaining	Total
Mining	75.2	575.4	650.5
Mineral Processing Plant	131.9	47.1	179.0
Mine Surface Facilities	12.6	4.0	16.7
Electrical and Communication	49.2	0.8	50.0
Plant Surface Facilities	12.2	2.1	14.3
Tailings and Water Management	61.5	15.1	76.6
Indirect and Owner's Costs	145.4	9.2	154.6
Site Restoration	-	95.1	95.1
Subtotal	488.1	748.8	1,236.8
Contingency	55.4	12.8	68.2
Total Capital Costs	543.5	761.5	1,305.0
Production Revenue NSR		8,150.2	8,150.2

Notes: Totals may differ due to rounding. The total excludes grinding mills and camp sunk cost total of C\$33.1M.

Table 8: Operating Cost Summary

Operating Costs (C\$M)	Production
Mining	1,128.6
Processing	528.9
Tailings and Water Management	195.3
General & Administration	545.8
Total Operating Costs	2,398.6

Mining

The mineral resources used in the mine plan are contained in three different zones (Lynx, Main and Underdog) over a strike length of 2,300 metres and span from surface to a depth of approximately 1,500 metres. Each zone is characterized by multiple tabular panels, which mainly trend ENE and dip vertically to sub-vertically.

The underground mine will have a production rate of 3,100 tpd. The selected mining method is long-hole open stoping with longitudinal retreat. Stope dimensions vary from 10 to 30 metres in strike length and 20 to 25 metres in height, with a minimum thickness of 4 metres. Mineralized material will be extracted using a fleet of 15 tonne load-haul-dump trucks and 51 tonne haul trucks using a ramp to surface.

Processing

A total of 3,100 tpd of material will be processed in a plant that consists of primary crushing, followed by a grinding circuit consisting of a semi-autogenous grinding mill (22' x 12' in closed circuit with a pebble crusher) and ball mill (17' x 25' in closed circuit with cyclones - SABC circuit). A gravity circuit followed by leaching will recover coarse gold from the cyclone underflow, while the cyclone overflow, at a $P_{80} = 37$ microns, is treated in an eight (8) tank carbon-in-leach circuit, followed by SO₂/air cyanide destruction. Gold and silver will be recovered in an adsorption-desorption-recovery circuit and electrowinning cells, with gold room recovery and production of bullion bars.

The process plant is followed by a tailings pond for the first year, and then by a tailings filtration plant with filter press to produce paste backfill to send underground and/or dry material for tailings dry stack storage.

The process plant payable gold recovery is estimated to average 94.8% and 78.3% for silver over the LOM. The process plant building will include a laboratory, mine and mill offices, a dry, warehouse and a first aid office.

Surface Infrastructure and Indirect Costs

The mining and processing infrastructure will be located at the Windfall site. The mine envisions the upgrade of existing surface infrastructure: site access road; potable water and sewage systems;

underground mine portal(s); mine ventilation systems (intake and exhaust); main and remote gatehouses; surface truck shop; waste rock stockpile; overburden stockpile; mineralized material stockpile; and construction of the following infrastructure items: process plant complex, including crushing line, offices, dry and warehouse; 94 kilometre 120 kV overhead transmission line from Lebel-sur-Quévillon; 120 kV main substation; final effluent water treatment plant; surface water management facility, including ditches, pond and pumping stations; service and haulage roads; and tailings management facility. Existing infrastructure includes waste rock stockpile, overburden stockpile and camp complex items such as dormitories and cafeteria.

Indirect costs including owner's costs, engineering, procurement and construction management, temporary facilities for construction and other related items are estimated at C\$146 million. An additional C\$55.4 million (pre-production) has been budgeted as contingency for specific direct and indirect costs.

Environment and Closure

The Windfall project is located on territory governed by the *James Bay and Northern Québec Agreement* ("JBNQA") and, as such subject to the *Environmental and Social Impact Assessment* ("ESIA") and review process outlined in the JBNQA. All mining projects located in the JBNQA territory are also subject to the *Environment Quality Act* (Québec). If the ESIA report for the Windfall project is submitted prior to August 29, 2022, the project would be grandfathered under the prevailing *Canadian Environmental Assessment Act* (2012) regime and, as a result, require a federal environmental assessment ("EA"). However, if the report is submitted after August 29, 2022, the project would not require a federal EA under the *Impact Assessment Agency of Canada* (2019), as the daily tonnage rate is less than 5,000 tpd threshold.

Environmental baseline data collection has been initiated and all collected baseline data will inform the ESIA, which is currently underway.

In addition to provincial EA approval, the project will require permits and authorizations prior to construction and operation of the mine. Requests for these approvals will be submitted following the EA approval.

A closure plan for the Windfall project has been developed in accordance with the *Mining Act* (Québec), the closure costs are estimated at C\$95.1 million. The objective of site closure is to return the site to a fully satisfactory state that includes eliminating all unacceptable health hazards and ensuring public safety, eliminating the production and spread of contaminants that could damage the receiving environment and, in the long term (aiming to cease the necessity of maintenance and monitoring) returning the site to environmentally sound condition. This estimate includes all costs for site restoration as well as post-closure monitoring, 30% of direct costs for engineering and a contingency of 15% as prescribed in the MERN Guidelines. In accordance with the regulations, the Corporation will post a bond as a guarantee for the site closure costs.

Stakeholder Engagement

The Windfall project is located on the traditional lands of the Cree community of Waswanipi. Osisko has been proactive in stakeholder consultation, holding more than 170 communication activities since 2015, primarily with the Cree First Nation of Waswanipi and Lebel-sur-Quévillon communities. Information has also been shared with the communities of Chapais, Chibougamau, Senneterre, the Lac Simon Anishinabeg First Nation and the Atikamekw First Nation of Obedjiwan, as they have expressed an interest in learning about the project. Consultation on the project with Aboriginal and non-Aboriginal communities was initiated in 2015 and has continued with frequent notifications on project activities, meetings, open house presentations, committees and employment and contracting opportunities.

Concerns raised by communities include land disturbance, water quality, impacts to wildlife and the cumulative effects of all projects in the area. Osisko is committed to addressing concerns and continuing the dialogue with potentially affected communities through the environmental assessment process.

Both the Aboriginal and non-Aboriginal communities have expressed strong support for the project. Their

main interest in the project is to maximize the economic benefits for local communities – specifically with a focus on employment and entrepreneurial opportunities throughout the phases of the project. In 2020 more than 100 First Nations’ community members worked at the Windfall site. Since 2016, Osisko has purchased over C\$115 Million dollars in goods and services from First Nations-owned companies or joint ventures.

Royalties

A 2.0% net smelter return (“NSR”) royalty on all metals produced from the Windfall project has been applied in the PEA.

Notes

(1) Mineral Resource Estimates notes for Windfall Deposit

1. *The independent qualified person for the 2021 MRE, as defined by NI 43-101 guidelines, is Pierre-Luc Richard, P.Geo.(OGQ#1119), of BBA Inc. The effective date of the estimate is November 30, 2020.*
2. *The Windfall mineral resource estimate is compliant with the November 29, 2019 CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines.*
3. *These mineral resources are not mineral reserves as they have not demonstrated economic viability. The quantity and grade of reported inferred mineral resources in this news release are uncertain in nature and there has been insufficient exploration to define these resources as indicated or measured mineral resources; however, it is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.*
4. *Resources are presented undiluted and in situ and are considered to have reasonable prospects for economic extraction. Isolated and discontinuous blocks above the stated cut-off grade are excluded from the mineral resource estimate. Must-take material, i.e. isolated blocks below cut-off grade located within a potentially mineable volume, was included in the mineral resource estimate.*
5. *As of November 30, 2020, the drill database comprised a total of 3,612 drill holes for 1,343,593 metres of drilling in the area extent of the mineral resource estimate, of which 2,959 drill holes (1,161,872 metres) were completed and assayed by Osisko. The drill hole grid spacing is approximately 12.5 metre x 12.5 metre for definition drilling, 25 metre x 25 metre for infill drilling and larger for extension drilling.*
6. *All core assays reported by Osisko were obtained by analytical methods described below under “Quality Control and Reporting Protocols”.*
7. *Geological interpretation of the deposit is based on lithologies, mineralization style, alteration and structural features. Most mineralization envelopes are subvertical, striking NE-SW and plunging approximately 40 degrees towards the North-East. The 3D wireframing was generated in Leapfrog Geo, a modelling software, from hand selections of mineralization intervals. The mineral resource estimate includes a total of 374 tabular, mostly sub-vertical domains defined by individual wireframes with a minimum true thickness of 2.0 metres.*
8. *Assays were composited within the mineralization domains into 2.0 metres length composites. A value of 0.00125 g/t Au and 0.0025 g/t Ag (¼ of the detection limit) was applied to unassayed core intervals.*
9. *High-grade composites were capped. Cappings were determined in each area from statistical studies on groups of zones sharing similar mineralization characteristics. Cappings vary from 10 g/t Au to 200 g/t Au and from 5 g/t Ag to 150 g/t Ag. A multiple capping strategy defined by capping values decreasing as interpolation search distances increase was used in the grade estimations.*
10. *Block models were produced using Datamine™ Studio RM Software. The models are defined by parent cell sizes of 5 metres NE, 2 metres NW and 5 metres height, and sublocked to minimum subcell sizes of 1.25 metres NE, 0.5 metres NW and 1.25 metres height.*
11. *Ordinary Kriging (OK) based interpolations were produced for gold estimations in each area of the Windfall deposit, while silver grade estimations were produced using Ordinary Kriging (OK) or Inverse Distance Squared (ID²) interpolations. Gold estimation parameters are based on composite variography analyses. The gold estimation parameters were used for the silver estimation.*
12. *Density values of 2.8 were applied to the mineralized zones.*
13. *The Windfall mineral resource estimate categorizes the measured, indicated and inferred mineral resources using the following criteria:*
 - a. *The measured mineral resource category is manually defined and enclosed areas where:*
 - i. *the drill spacing is less than 12.5 metres,*
 - ii. *blocks are informed by a minimum of four drill holes,*
 - iii. *geological evidence is sufficient to confirm geological and grade continuity,*
 - iv. *zones have been accessed by underground workings.*
 - b. *The indicated mineral resource category is manually defined and encloses areas where:*
 - i. *the drill spacing is generally less than 12.5 metres,*
 - ii. *blocks are informed by a minimum of two drill holes,*
 - iii. *geological evidence is sufficient to assume geological and grade continuity.*
 - c. *The inferred mineral resource category is manually defined and encloses areas where:*
 - i. *drill spacing is less than 100 metres,*

- ii. blocks are informed by a minimum of two drill holes,
 - iii. geological evidence is sufficient to imply, but not verify geological and grade continuity.
14. The mineral resource estimate is reported at 3.5 g/t Au cut-off. The cut-off grade is based on the following economic parameters: gold price at 1,485 USD/oz, exchange rate at 1.30 USD/CAD, 94% mill recovery; payability of 99.95%; selling cost at 5 USD/oz, 2% NSR royalties, mining cost at 100 C\$/t milled, G&A cost at 30 C\$/t milled, processing cost at 40 C\$/t, transportation cost at 2 C\$/t considering mill at site, and environment cost at 10 C\$/t. A cut-off grade of 3.5 g/t Au was selected over the calculated cut-off grade of 3.2 g/t Au to better reflect a realistic mining cut-off.
 15. Estimates use metric units (metres, tonnes and g/t). Metal contents are presented in troy ounces (metric tonne x grade / 31.10348).
 16. The independent qualified person is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political or marketing issues, or any other relevant issue, that could materially affect the mineral resource estimate.
 17. Values in tonnes and ounces are rounded to nearest thousand which may cause apparent discrepancies.

Independent Qualified Persons

This PEA was prepared for Osisko by BBA Inc. and other industry consultants, with each being a "qualified person" under NI 43-101. Each "qualified person" has reviewed and approved the content of this news release, including the following who are independent for the purposes of NI 43-101:

- Nicolas St-Onge, P.Eng. (A2GC)
- Colin Hardie, P.Eng., Martin Houde, P.Eng., Pierre-Luc Richard, P. Geo., Charlotte Athurion, P. Geo. (BBA)
- Patrick Langlais, P.Eng. (Entech Mining)
- Yves Boulianne, P. Eng., Michel Mailloux, P. Eng. (Golder)
- Eric Poirier, P. Eng., Isabelle Larouche, P.Eng., Simon Latulippe, P.Eng. (WSP)
- Marie-Claude Dion St-Pierre, P. Eng. (GCM Consultants)

About the Windfall Gold Deposit

The Windfall gold deposit is located between Val-d'Or and Chibougamau in the Abitibi region of Québec, Canada. The mineral resource for the Windfall gold deposit is supported by a technical report prepared in accordance with NI 43-101 and entitled "Mineral Resource Estimate Update for the Windfall Project, Eeyou Istchee James Bay, Québec, Canada" dated March 8, 2021 (with an effective date of November 30, 2020), and prepared by BBA Inc. for Osisko (the "Windfall MRE (2021)"). The Windfall MRE (2021) assumes a cut-off grade of 3.50 g/t Au, comprises 521,000 tonnes at 11.3 g/t Au (189,000 ounces) in the measured mineral resource category, 5,502,000 tonnes at 9.4 g/t Au (1,668,000 ounces) in the indicated mineral resource category and 16,401,000 tonnes at 8.0 g/t Au (4,244,000 ounces) in the inferred mineral resource category. The key assumptions, parameters and methods used to estimate the mineral resource estimate are further described in the Windfall MRE (2021), which is available on SEDAR (www.sedar.com) under the Corporation's issuer profile. The Windfall gold deposit is currently one of the highest-grade resource-stage gold projects in Canada and has world-class scale. Mineralization occurs in three principal zones: Lynx, Main Zone, and Underdog. Mineralization is generally comprised of sub-vertical zones following intrusive porphyry contacts plunging to the northeast. The resources are defined from surface to a depth of 1,600 metres as it now includes the Triple 8 ("T8") zone. The resources excluding T8 are defined from surface to a depth of 1,200 metres. The deposit remains open along strike and at depth. Mineralization has been identified at surface in some areas and as deep as 2,625 metres in others with significant potential to extend mineralization down-plunge and at depth.

About Osisko Mining Inc.

Osisko is a mineral exploration company focused on the acquisition, exploration, and development of gold resource properties in Canada. Osisko holds a 100% interest in the high-grade Windfall 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 Quévillon area (over 2,700 square kilometres).

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. Any statement that involves 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", "potential", "feasibility", "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 news release contains the forward-looking information pertaining to, among other things: estimates and assumptions underlying the PEA; projected production; after-tax IRR; pre-tax IRR; after tax NPV; after-tax NPV; pre-tax NPV; life of mine estimates; after-tax free cash flows; AISC and break-even cost estimates; capex estimates; NPV/capex ratios; tpd milling operations at the Windfall mill; processing estimates; average recovery; projected gross revenue and taxes; job creation estimates; the profitability of Windfall; future drilling results; Osisko's ability to convert additional inferred resource ounces into measured and indicated categories; timing for production (if at all); mining and processing infrastructure; environmental assessment and closure plans matters; stakeholder engagement and relationships; the significance of the results disclosed in this news release; the PEA providing a robust base case analysis; the viability of ramp-access to the underground

deposit; the advancement of the ramp; Osisko's ability to convert additional high-grade mineral resources; the timing and ability to publish a DFS, including in H1 2022 (or at all); the key assumptions, parameters and methods used to estimate the mineral resource estimate in the Windfall MRE (2021) and PEA; the Windfall gold deposit being one of the highest-grade resource-stage gold projects in Canada and having world-class scale; the prospects, if any, of the Windfall gold deposit; the timing and ability of Osisko, if at all, to publish the DFS; the amount and type of drilling to be completed and the timing to complete such drilling; the focus of the remaining infill drilling; the trend of grade increase; the Lynx zone remaining open to expansion down plunge; upgrading a inferred mineral resource to a measured mineral resource or indicated mineral resource category; future drilling at the Windfall gold deposit; the significance of historic exploration activities and results. 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 (infill) drilling; property and royalty interests in the Windfall gold deposit; key assumptions, parameters or methods used to estimate the mineral resource estimate in the Windfall MRE (2021) or PEA becoming untrue or unachievable; the ability of the Corporation to obtain required approvals; the results of exploration activities; title deficiencies; 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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