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# A LEADING CANADIAN GOLD EXPLORATION AND DEVELOPMENT COMPANY

January 2019



## CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

This presentation (the "Presentation") contains "forward-looking information" and "forward-looking statements" (collectively, "forward-looking statements") within the meaning of the applicable Canadian securities legislation. All statements, other than statements of historical fact, are forward-looking statements and are based on expectations, estimates and projections as at the date of this Presentation. Any statement that involves discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions, future events or performance (often but not always using phrases such as "expects", or "does not expect", "is expected", "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 statements.

In this Presentation, forward-looking statements relate, among other things, to the market capitalization of Osisko Mining Inc. ("Osisko"); the value of Osisko's cash and investments; the timing and ability of Osisko to release a resource estimate in respect of the Windfall/Lynx deposit in May 2018, if at all; the timing and ability of Osisko to release an updated Preliminary Economic Assessment in respect of the Windfall/Osborne Bell deposit in Q2 2018, if at all; the timing and ability of Osisko to release a feasibility study in respect of the Windfall/Lynx deposit in Q1 2019, if at all; the timing and ability of Osisko to advance the exploration ramp at the Windfall/Lynx deposit; the bulk-sampling program at the Windfall Lake gold deposit, if at all; the prior success of the "Osisko Group" in creating strong shareholder value having any impact on the ability of Osisko to create value for shareholders of Osisko; the potential of the

Windfall Lake gold deposit, if any; the proposed exploration activities at the Windfall Lake gold deposit; the target timelines in respect of the Windfall Lake gold deposit and Osisko's ability to make advance the project quickly; planned drilling at the Windfall Lake gold deposit in January 2018; the major shareholders of Osisko going forward; Québec exploration tax credits; the feasibility of the proposed mill complex at Lebel-sur-Quévillon; the development of the ramp, if at all; the timing and success of exploration, development and metallurgical testing activities; the timing, extent and success of mining operations (if any), project development and related permitting; the results of exploration programs; the results of economic analyses (including the Windfall Lake PEA as defined below); the ability to expand mineral resources beyond current mineral resource estimates; opportunities for growth of mineral projects; estimates of gold prices; the ability to adapt to changes in gold prices; estimates of costs, estimates of planned exploration and development expenditures and estimates of mine development and construction. All forward-looking statements entail various risks and uncertainties that are based on current expectations and actual results may differ materially from those contained in such information.

These uncertainties and risks include, but are not limited to, 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; property interests in the Windfall Lake gold project; the ability of Osisko to obtain required approvals and complete transactions on terms announced; the results of exploration activities; risks relating to mining activities; fluctuations in spot and forward prices of gold, silver, base metals or certain other commodities; fluctuations in

currency markets (such as the Canadian dollar to United States dollar exchange rate); change in international, national and local government, legislation, taxation, controls, regulations and political or economic developments; risks and hazards associated with the business of mineral exploration, development and mining (including environmental hazards, industrial accidents, unusual or unexpected formations pressures, cave-ins and flooding); inability to obtain adequate insurance to cover risks and hazards; the presence of laws and regulations that may impose restrictions on mining; employee relations; relationships with and claims by local communities and indigenous populations; availability of increasing costs associated with mining inputs and labour; the speculative nature of mineral exploration and development (including the risks of obtaining necessary licenses, permits and approvals from government authorities); and title to properties. Risks and uncertainties about Osisko's business are more fully discussed in the disclosure materials filed with the securities regulatory authorities in Canada, which are available on SEDAR under the issuer profile of Osisko at [www.sedar.com](http://www.sedar.com). Readers are urged to read these materials and should not place undue reliance on any forward-looking statement and information contained in this Presentation. Except as required by law, Osisko assume no obligation to update the forward-looking statements of beliefs, opinions, projections, or other factors, should they change, except as required by law. Unless otherwise noted, this Presentation has been prepared based on information available as of March 31, 2018. References in this Presentation to Osisko include Osisko Mining Inc. and its subsidiaries.



# CAUTIONARY STATEMENTS REGARDING TECHNICAL INFORMATION

## MINERAL RESOURCES

This Presentation contains information regarding mineral resources estimated at the projects of the companies referenced herein. Mineral resources are not mineral reserves and do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing or other relevant issues. In particular, the quantity and grade of reported inferred mineral resources in the estimates referenced in this Presentation are uncertain in nature and there is insufficient exploration to define these inferred mineral resources as an indicated or measured mineral resource in all cases. It is uncertain in all cases whether further exploration will result in upgrading the inferred mineral resources to an indicated or measured mineral resource category.

For details regarding the key assumptions, parameters and methods used to estimate the mineral resources presented in respect of the Windfall Lake gold project, please see the *"Technical Report for the Windfall Lake Gold Project, Québec"* dated April 17, 2014 (effective date March 3, 2014) filed on SEDAR under the issuer profile of Eagle Hill Exploration Corporation at [www.sedar.com](http://www.sedar.com). Please note that the Windfall Lake PEA (as defined below) is based on a mineral resource estimate with an effective date of November 13, 2014.

For details regarding the key assumptions, parameters and methods used to estimate the mineral resources presented in respect of the Osborne-Bell Deposit, Quévillon Property, please see the *"NI 43-101 Technical Report and Mineral Resource Estimate – Osborne-Bell Deposit, Quévillon Property"* dated April 23, 2018 (effective date March 2, 2018) filed on SEDAR under the issuer profile of Osisko at [www.sedar.com](http://www.sedar.com).

For details regarding the key assumptions, parameters and methods used to estimate the mineral resources presented in respect of the Golden Bear project, please see the *"Technical Report for the Golden Bear Project, Ontario"* dated March 3, 2014 (effective December 30, 2013) filed on SEDAR under the issuer profile of Northern Gold Mining Inc. at [www.sedar.com](http://www.sedar.com).

For details regarding the key assumptions, parameters and methods used to estimate the mineral resources presented in respect of the Marban project, please see the *"Details regarding Technical Report for the Marban project – Marban block property, Ontario"* dated August 15, 2013 (effective date June 1, 2013) filed on SEDAR under the issuer profile of NioGold at [www.sedar.com](http://www.sedar.com).

## PRELIMINARY ECONOMIC ASSESSMENT

The preliminary economic assessment of the Windfall Lake gold project (the **"Windfall Lake PEA"**) is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the Windfall Lake PEA will be realized.

## QUALIFIED PERSON

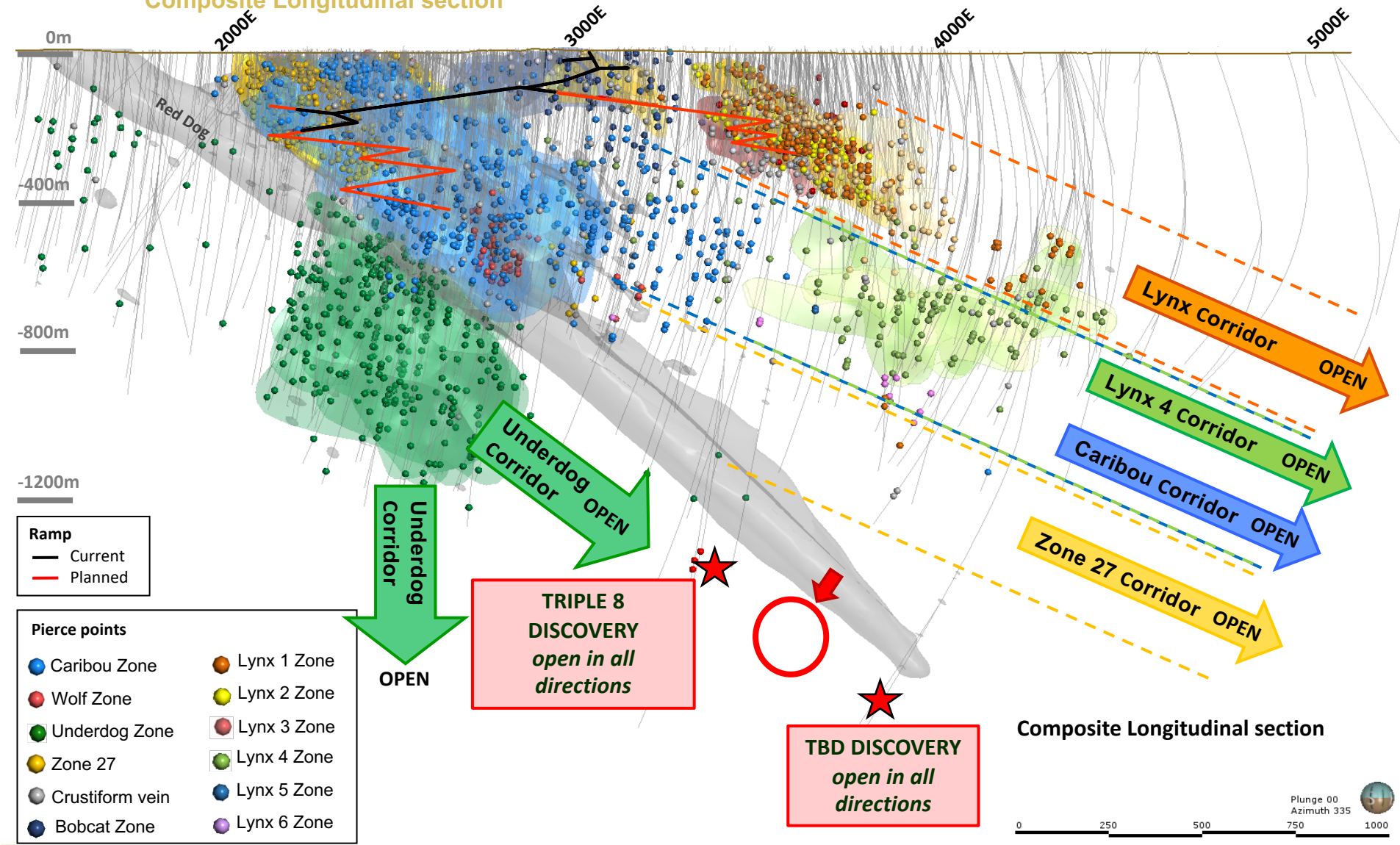
The scientific and technical information contained in this Presentation has been reviewed and approved by Robert Wares, P.Geo. and Executive Vice President Exploration and Resource Development of Osisko, a "qualified person" within the meaning of National Instrument 43-101 – *Standards for Disclosure of Mineral Projects*.





# WINDFALL DEPOSIT JANUARY 2019 +700,000 METRES DRILLING

Composite Longitudinal section







# WINDFALL – UPDATED LYNX ZONE MINERAL RESOURCE

INCREASE IN GRADE – INCREASE IN TONNES – INCREASE IN OUNCES

Updated Indicated and Inferred vs. previous mineral resource estimate for Lynx (3.0 g/t Au cut-off)

Zone	Indicated			Inferred		
	Tonnes <sup>(1)</sup>	Grade (g/t)	Ounces Au <sup>(1)</sup>	Tonnes <sup>(1)</sup>	Grade (g/t)	Ounces Au <sup>(1)</sup>
Lynx – Nov 2018	1,746,000	8.13	456,000	2,005,000	9.70	625,000
Lynx – May 2018	1,254,000	7.51	303,000	2,257,000	7.48	543,000
<b>Change</b>	<b>+492,000</b>	<b>+0.62</b>	<b>+153,000</b>	<b>-252,000</b>	<b>+2.22</b>	<b>+82,000</b>

Note: (1) Values are rounded to nearest thousand which may cause apparent discrepancies.

## WINDFALL MINERAL RESOURCE ESTIMATE WITH LYNX UPDATE

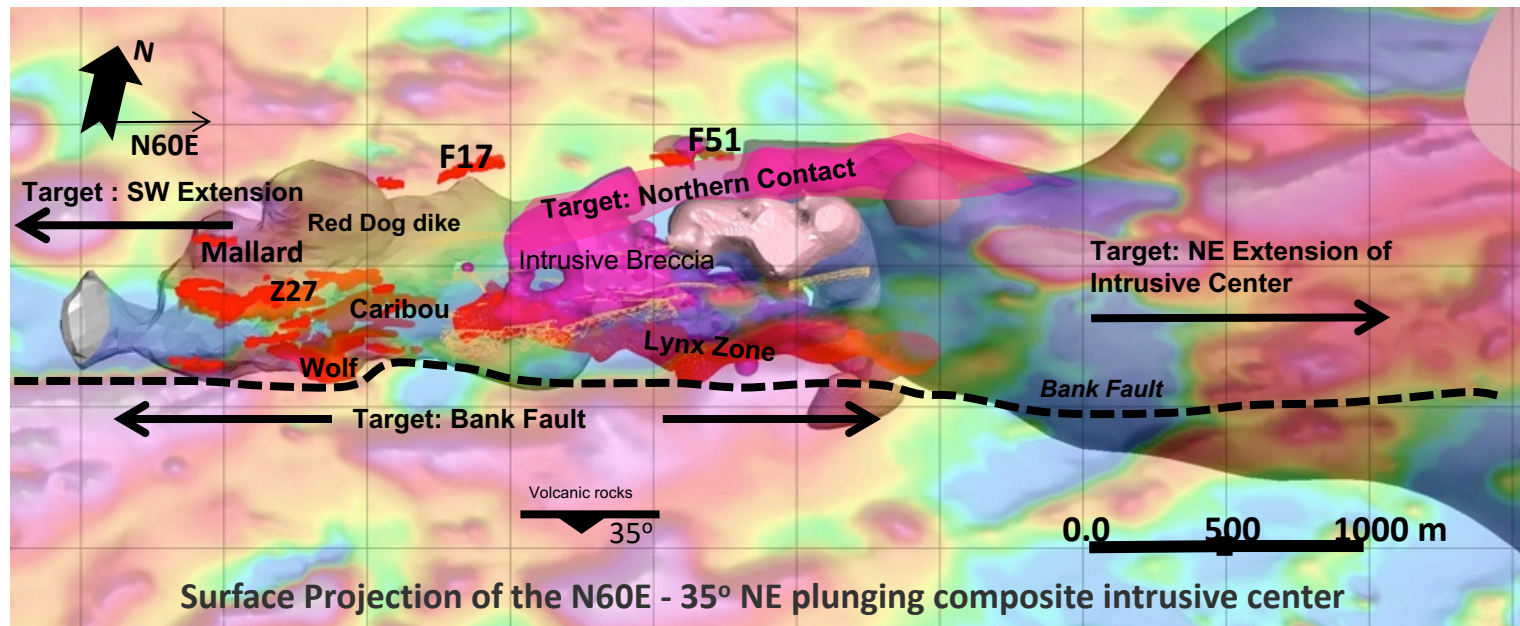
Zone	Indicated			Inferred		
	Tonnes <sup>(1)</sup>	Grade (g/t)	Ounces Au <sup>(2)</sup>	Tonnes <sup>(1)</sup>	Grade (g/t)	Ounces Au <sup>(2)</sup>
Lynx	1,746,000	8.13	456,000	2,005,000	9.70	625,000
Zone 27	628,000	8.69	175,000	852,000	7.28	199,000
Caribou	318,000	7.12	73,000	2,767,000	5.80	516,000
Underdog	147,000	9.00	43,000	4,380,000	6.77	953,000
Other	34,000	6.58	7,000	348,000	6.37	71,000
<b>Total</b>	<b>2,874,000</b>	<b>8.17</b>	<b>754,000</b>	<b>10,352,000</b>	<b>7.11</b>	<b>2,366,000</b>



# WINDFALL AND LYNX DEPOSITS INTRUSIVE RELATED MINERALIZATION

- SW Extension: up plunge extensions of mineralized corridors
- NE Extension: potential for new discoveries
- Near Deposit: northern contact, Bank Fault plus extensions and new zones in known corridors

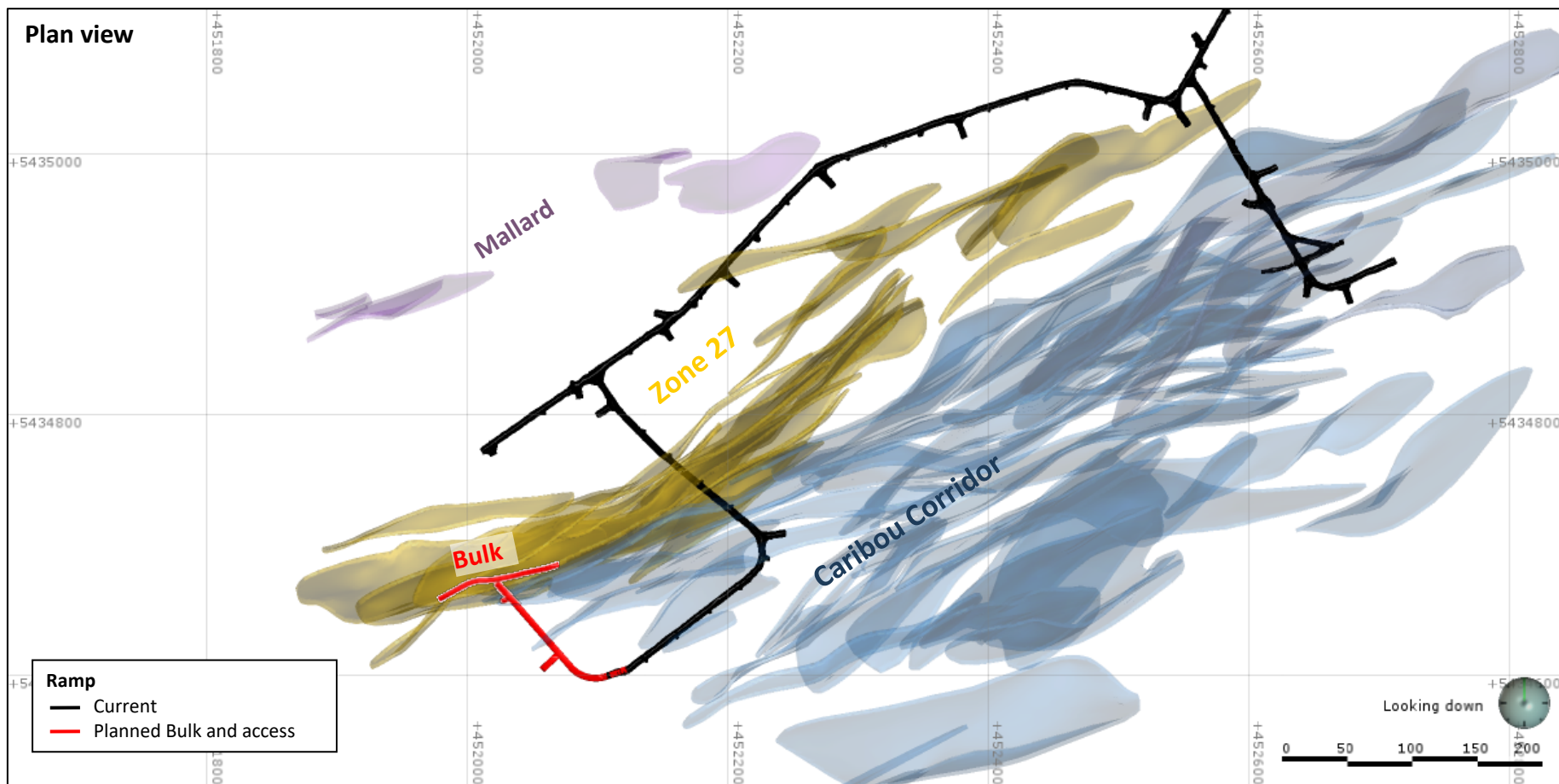
← 5 Km →



Surface Projection of the N60E - 35° NE plunging composite intrusive center



# ZONE 27 BULK SAMPLE







## ZONE 27 BULK SAMPLE

### OSISKO WINDFALL INITIAL BULK SAMPLE RETURNS 9.7 g/t Au HEAD GRADE

#### *39% Higher Grade than Resource Model*

(Toronto, December 18, 2018) Osisko Mining Inc. (OSK:TSX. "Osisko" or the "Corporation") is pleased to provide preliminary results from Zone 27 bulk sampling. The Zone 27 bulk sample is the first of three planned 5,000 tonne samples in the ongoing evaluation work at the Windfall project.

Results below represent 2,078 tonnes mined from Zone 27 wireframe 115. The balance of 2,922 tonnes will be processed in the new year, with reconciled results from the full 5,000 tonne sample expected to be available by March 2019.

The average head grade obtained from the 2,078 tonnes is 9.7 g/t Au and 5.5 g/t Ag. These initial results successfully confirm prior drill hole information and the visible mineralization along the mined portion of Zone 27. The average head grade from the sample is 39% higher than indicated in the resource block model for this area of Zone 27 (7.0 g/t Au). Results are presented in the table below:

#### Zone 27 Preliminary Bulk Sample Results

<b>Tonnes Milled (Dry)</b>	<b>Mill Head Grade g/t Au</b>	<b>Mill Head Grade g/t Ag</b>	<b>Total Contained Gold Oz.</b>	<b>Total Contained Silver Oz.</b>
<b>2,078</b>	<b>9.7</b>	<b>5.5</b>	<b>650</b>	<b>366</b>



## ZONE 27 BULK SAMPLE





# PEA Highlights

## Base Case

Gold price US\$1,300/oz, Silver price US\$17.00/oz, Exchange rate C\$1.00 = US\$0.78, 5% discount rate

**IRR after taxes and mining duties 32.7%**

**NPV after taxes and mining duties C\$413.2 million**

**Pre-Production Construction costs (*including C\$51.8 M contingency*) C\$397.3 million**

**Peak-year payable production 248,000 oz (year 1)**

**Average LOM payable production 218,000 oz**

**Net gold payable recovery 92.4%**

**Average diluted gold grade 6.7 g/t Au**

**Life of mine (LOM) 8.1 years**

**Total mineralized material mined 8,914,000 tonnes**

**Contained gold in mined resource 1,915,000 oz**

**Payable gold LOM 1,769,000 oz**

**Payable silver LOM 557,000 oz**

**All-in Sustaining Costs net of by-product credits and royalties over LOM US\$704.00/oz**

**Estimated All-in cost (CAPEX plus OPEX) US\$879.00/oz**

**Total unit operating cost C\$126.47/ tonne milled**

**Gross revenue C\$2.96 billion**

**Operating cash flow C\$1.12 billion**

**Mine start-up/Full production Q2 2022/Q3 2022**

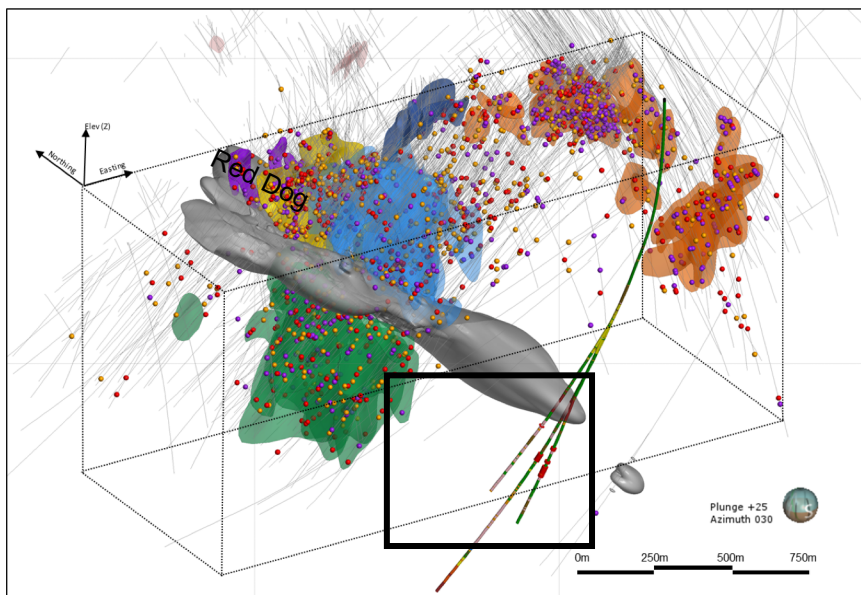
**NPV before taxes and mining duties C\$625.4 million**

**IRR before taxes and mining duties 39.7%**





# TRIPLE 8 DISCOVERY



## Zones

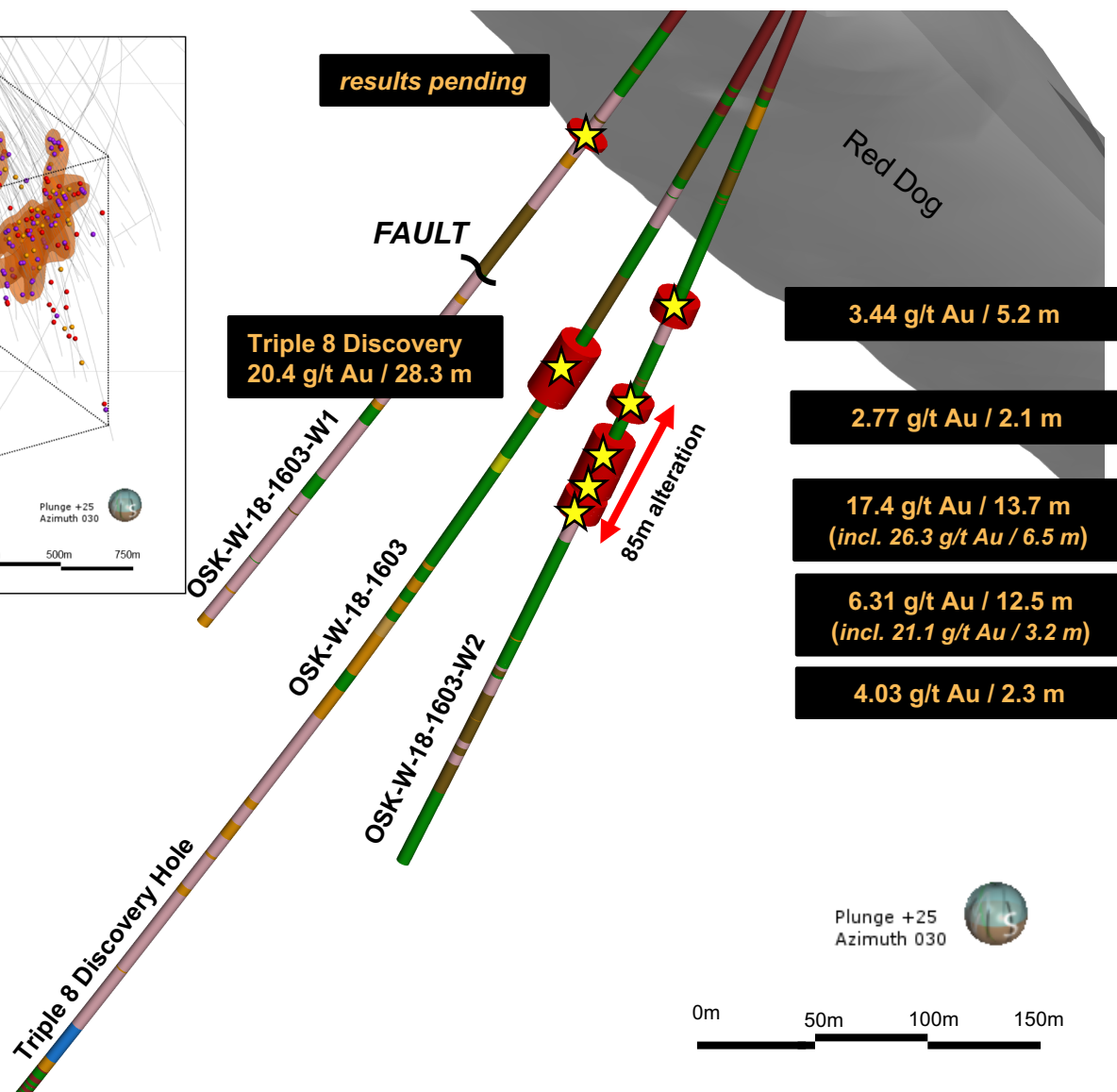
- Zone 27
- Caribou
- Bobcat
- Underdog
- Lynx
- F-Zones

## Lithologies

- Mafic volcanics
- Felsic volcanics
- Gabbro
- Pre-mineral felsic porphyry (I2P)
- Syn-mineral felsic porphyry (I1P)
- Red Dog

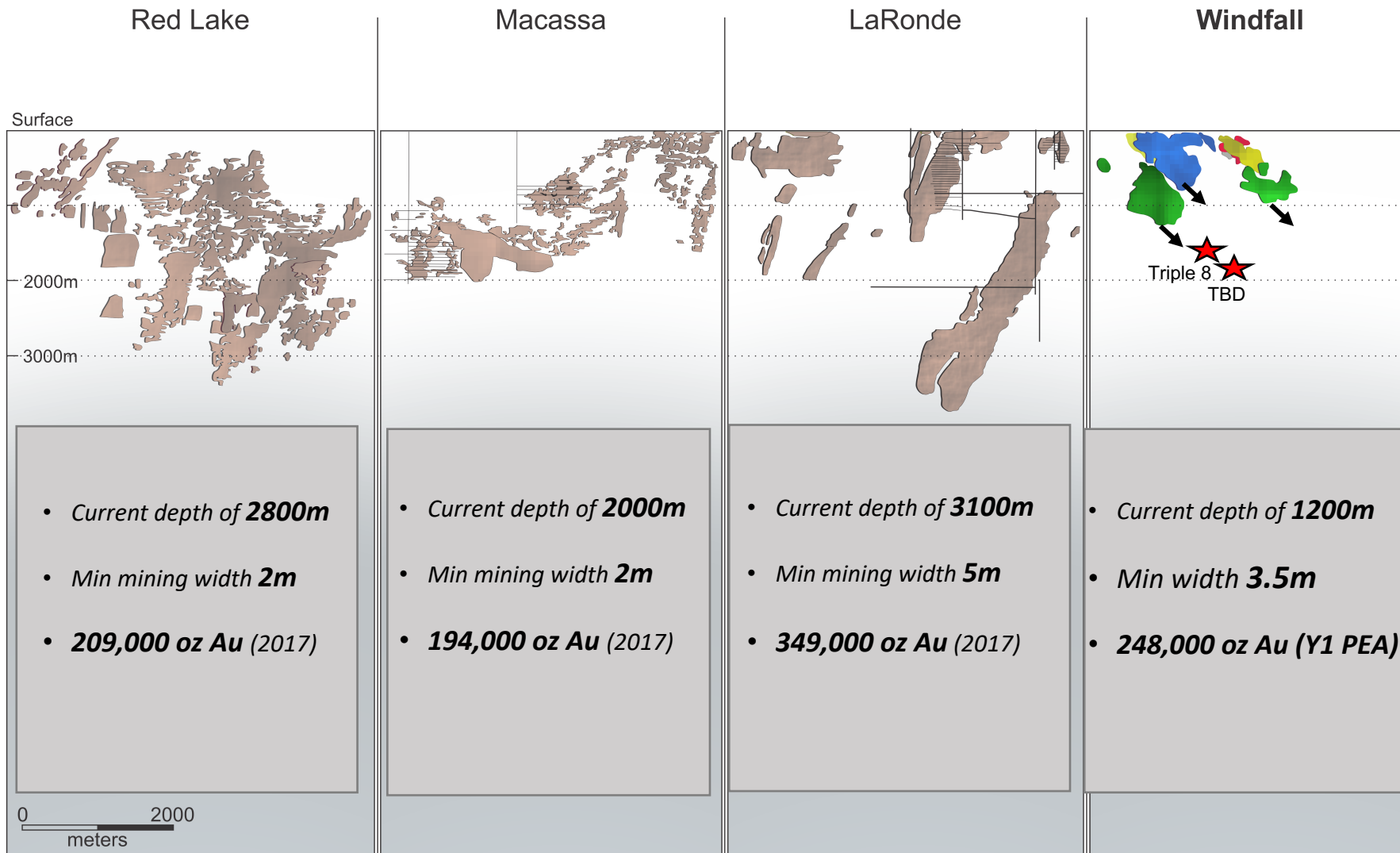


Mineralized intervals



# Major Canadian Archean Gold Deposits – Vertical Extent

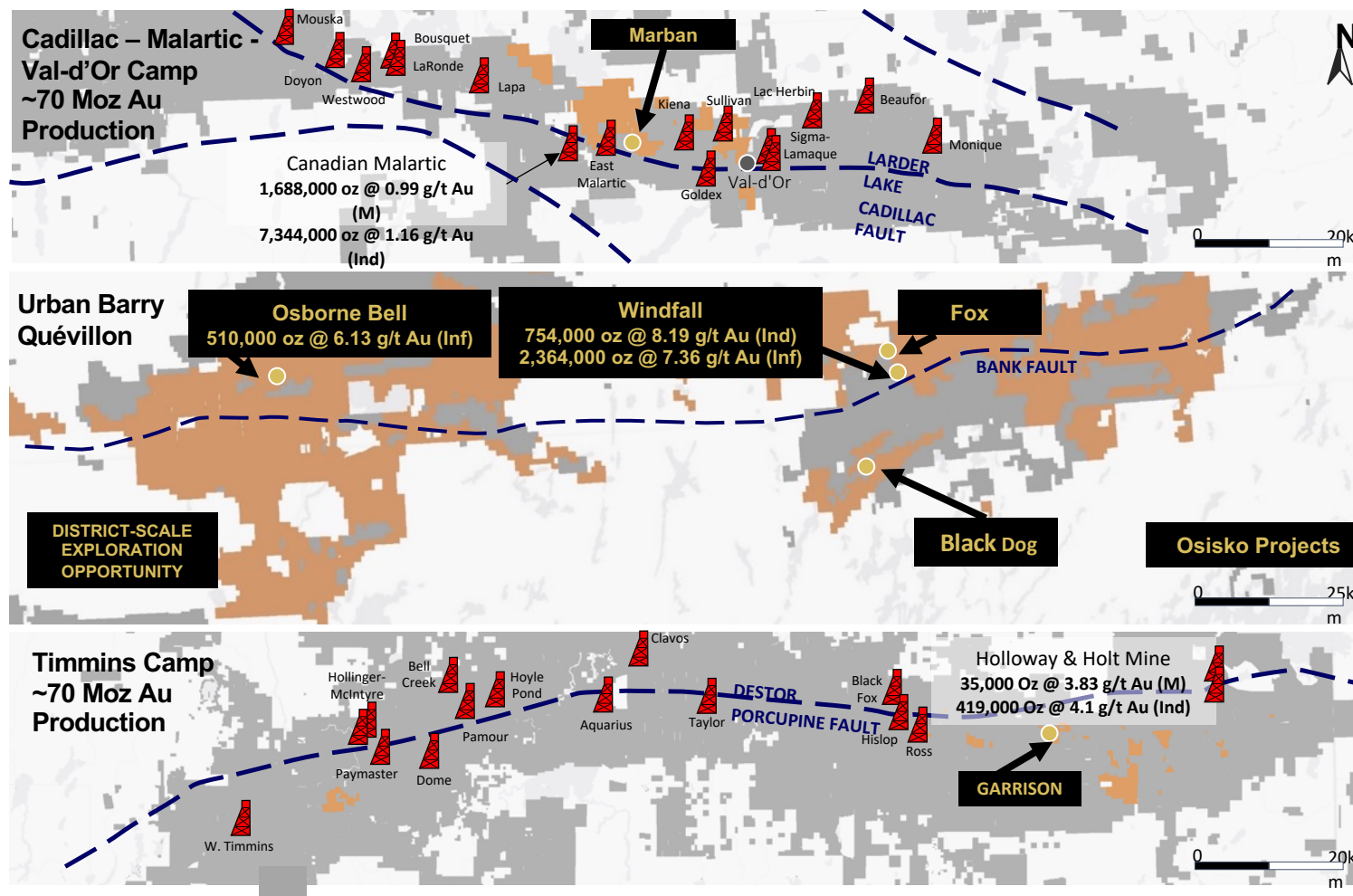
## *Windfall Remains Open At Depth - Strong Potential to Grow*





# AN EMERGING MINING DISTRICT

## District-Scale: Over 3500 km<sup>2</sup> Property Position







# **SUMMARY AND CATALYSTS 2019**

- **Well financed: \$150M in cash and equities**
- **Four resource stage properties in Québec and Ontario**
- **Moving up to 15 drills in January - Windfall remains open at depth**
- **Positive resource update from Lynx, positive bulk results Zone 27**
- **Ramp progressing now to Lynx**
- **Excellent discovery potential on 3500 km<sup>2</sup> property**
- **Osborne Bell and regional exploration back to the forefront**
- **2019: infill and expansion drill results, bulk sample results, full Windfall resource update, feasibility**