River Valley Palladium Project: Advancing Through PFS in 2022
SAFE HARBOUR STATEMENT

This report includes forward-looking statements covered by the Private Securities Litigation Reform Act of 1995. Because such statements deal with future events, they are subject to various risks and uncertainties and actual results for fiscal year 2010 and beyond could differ materially from the Company’s current expectations. Forward-looking statements are identified by words such as “anticipates,” “projects,” “expects,” “plans,” “intends,” “believes,” “estimates,” “targets,” and other similar expressions that indicate trends and future events.

QUALIFIED PERSON STATEMENT

The information in this presentation that relates to Exploration Results or Mineral Resources is based on information compiled, reviewed or prepared by Dr. Bill Stone. Dr. Stone is a Qualified Person, as defined by National Instrument 43-101, and has reviewed and approved the technical content of this presentation.

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Certain information presented, including discussions of future plans and operations, contains forward-looking statements involving substantial known and unknown risks and uncertainties. These forward-looking statements are subject to risk and uncertainty, many of which are beyond control of company management. These may include, but are not limited to, the influence of general economic conditions, industry conditions, fluctuations of commodity prices and foreign exchange rate conditions, prices, rates, environmental risk, industry competition, availability of qualified staff and management, stock market volatility, timely and cost-effective access to sufficient working capital or financing from internal and external sources. Actual results, performance, or achievements may differ materially from those expressed or implied by these forward-looking statements.
**PROJECT OVERVIEW**

**FACTS**

- **Primary Metals:** Pd, Pt, Cu
- **Project Stage:** Pre-Feasibility
- **Location:** near Sudbury, Ontario
- **Updated Mineral Resources:** 2.25 Moz Pd+Pt+Au (M+I) & 1.7 Moz (Inf.)
- **Land Position:** 107 km²
- **Diamond Drilling:** 733 holes totalling >155,000 metres
- **NAM Ownership:** 100%

**UPCOMING MILESTONES**

- Pre-Feasibility Study, H2-2022
- Rhodium evaluation to determine potential payability
- Exploration drilling and geophysics
  (Dana South Zone, Banshee Zone)

Mineralized zones of the giant River Valley Palladium Project, near Sudbury, Ontario
LOCATION & INFRASTRUCTURE

• The River Valley Project located within 100 road-km from the City of Sudbury in northern Ontario, Canada.

• Sudbury hosts a world-class Ni-Cu (PGM) mining district and major mineral processing and metal recovery facilities.
RIVER VALLEY HISTORY

1999
Signed option-JV agreement with Anglo Platinum

2000
Drill hole discovery of PGM

2008
Anglo 50% earn-in after investing $30 million in exploration

2010
Acquired Anglo’s 50% interest for 100% ownership

2012
Mining leases granted; environmental baseline studies conducted

2015
Pine Zone footwall discovery

2017
Restarted project exploration and development

2019
Updated Mineral Resource Estimate (MRE) and 1st engineering study; PEA completed

2021
Pre-Feasibility Study, commenced in April. Updated MRE announced in October.
**Project covered by NAM Mining Leases (purple) and buffered by Mining Claims (green).**

- Two Mining Leases (450 and 451) cover all the original River Valley Deposit. The two leases each have surface and mining rights, 21-year renewal terms and are subject to annual lease payments to the provincial government.

- Mining Leases granted 2011 and 2012.

- Map-staked Mining Claims cover the Mustang Zones of the deposit and the East and West Buffer areas.

- Total land area = 107 sq km

- Banked Credits on ML450 = $11.5M, which covers the holding costs of the Mustang and buffer claims until expiry.
RIVER VALLEY PROJECT 2022 GO-FORWARD PLAN

- Geomechanical and hydrogeological engineering site investigation studies
- Geotechnical engineering site investigation studies
- Terrestrial, aquatics, surface water and hydrology environmental studies
- Initial Mineral Reserve Estimate for 2022
- Mine planning and site optimization designs
- Community consultations and engagements
- Exploration trenching and drilling
- **Complete Pre-Feasibility Study**
- Follow up on PFS recommendations towards permitting and feasibility
2019 PRELIMINARY ECONOMIC ASSESSMENT

RIVER VALLEY PEA SUMMARY

Processing Capacity: 6,000,000 tpa
Throughput: 20,000 tpd
Mine Life: 14 years
Grade: 0.88 g/t PdEq
Production: 119,000 oz/pa
Pre-Production Capital: $495M
LOM Average Cash Cost: $709/oz
Pre-Tax NPV (5%): $261M
After-Tax NPV (5%): $138M
Pre-Tax IRR: 13%
After-Tax IRR: 10%

CAD unless otherwise noted  Based on US$1,200/oz Pd; $1,050 Pt; $3.25/lb Cu  PdEq = palladium equivalent grade
## PEA SENSITIVITIES

<table>
<thead>
<tr>
<th>% Change in Palladium Price</th>
<th>-20%</th>
<th>-15%</th>
<th>-10%</th>
<th>-5%</th>
<th>Base Case</th>
<th>+5%</th>
<th>+10%</th>
<th>+15%</th>
<th>+20%</th>
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<tr>
<td>Palladium Price (US$/oz)</td>
<td>960</td>
<td>1,020</td>
<td>1,080</td>
<td>1,140</td>
<td><strong>1,200</strong></td>
<td>1,260</td>
<td>1,320</td>
<td>1,380</td>
<td>1,440</td>
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<tr>
<td>After-Tax NPV (5%) (C$ M)</td>
<td>-23</td>
<td>15</td>
<td>58</td>
<td>97</td>
<td><strong>138</strong></td>
<td>178</td>
<td>219</td>
<td>259</td>
<td>299</td>
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<tr>
<td>After-Tax IRR (%)</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td><strong>10</strong></td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>15</td>
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</table>

The table above shows how a changing palladium price affects the resulting after tax net present value (5%) and after-tax IRR for the River Valley Project according to the 2019 PEA.

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1 March 25, 2022 spot palladium price: US$2,400/oz (Kitco)
### 2021 UPDATED MINERAL RESOURCE ESTIMATE RESULTS

At cut-offs of CDN$15/t NSR (pit constrained) and CDN$50/t NSR (out-of-pit), the 2021 Updated Mineral Resource Estimate consists of:

- 89.9 Mt grading 0.54 g/t Pd, 0.21 g/t Pt, 0.04 g/t Au and 0.06% Cu, or CDN$47.58/t NSR in the **Measured and Indicated** classifications; and

- 94.0 Mt grading 0.35 g/t Pd, 0.16 g/t Pt, 0.04 g/t Au and 0.06% Cu, or CDN$31.69/t NSR in the **Inferred** classification.

#### Contained Metal Contents at CDN$15/t Cut-Off

<table>
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<tr>
<th>Metal</th>
<th>Measured M+I</th>
<th>Indicated M+I</th>
<th>Inferred</th>
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<tr>
<td>Pd</td>
<td>1,568,300 oz</td>
<td>1,073,700 oz</td>
<td>1,073,700 oz</td>
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<tr>
<td>Pt</td>
<td>606,400 oz</td>
<td>480,600 oz</td>
<td>480,600 oz</td>
</tr>
<tr>
<td>Au</td>
<td>106,700 oz</td>
<td>94,200 oz</td>
<td>94,200 oz</td>
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<tr>
<td>Cu</td>
<td>114.7 Mlbs</td>
<td>88.1 Mlbs</td>
<td>88.1 Mlbs</td>
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<tr>
<td>Rh</td>
<td>53,800 oz</td>
<td>43,700 oz</td>
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<tr>
<td>Ag</td>
<td>759,800 oz</td>
<td>756,000 oz</td>
<td>756,000 oz</td>
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</table>

*see Appendix (slide 29) for full results summary and NSR calculations

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1 M+I = Measured + Indicated classifications
2021 UPDATED MINERAL RESOURCE ESTIMATE RESULTS

- Predominant contribution of Pd + Pt (88.4%) to the NSR is particularly noteworthy
- Such true PGM mineral deposits are rare in safe, secure and established mining jurisdictions globally
2022 PRE-FEASIBILITY STUDY OBJECTIVES

- Study announced 12 April 2021; completion slated for H2 2022.
- Improve NPV/CAPEX ratio from 2019 PEA.
- Apply modern processing technology to increase metal recoveries and concentrate grades.
- Optimize value-per-tonne of mineralized material moved in an open-pit mining operation – 2021 updated MRE.
- Integrate recent, improved pricing for payable metals at River Valley.
- Incorporate site plan engineering, environmental studies and community consultations and engagements.

1 projected timeline at least 15 months.
NORTHERN AREA FOCUS

- Pine-Dana-Lismer Zones area (4 km strike length of the total 16 km strike length).
- Focus area for the 2019 PEA and 2022 PFS
- Highest grades
- Measured and Indicated Mineral Resources dominate
- Mineralized Zones outcrop
- Road accessible from Sudbury
- Banshee Zone to be upgraded by drilling to Indicated Mineral Resources for possible conversion to Mineral Reserves
- Pardo Zone to be evaluated for drilling into Mineral Resources

Geological map of the northern area of the River Valley Palladium deposit near Sudbury, Ontario. PGM mineralized zones projected to surface. Note that the Pine Zone is covered. Mineral Resource Estimates using $15/t NSR cut-off. The Huronian, Grenville and Nipissing geological units excluded for illustration clarity.
**Higher Grade PGM Mineralization**

<table>
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<tr>
<th>Zone</th>
<th>DDH</th>
<th>From (m)</th>
<th>To (m)</th>
<th>Interval (m)</th>
<th>Pd g/t</th>
<th>Pt g/t</th>
<th>Au g/t</th>
<th>3E g/t</th>
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<tr>
<td>Dana North</td>
<td>DN22012-MET1*</td>
<td>2</td>
<td>300</td>
<td>298</td>
<td>1.357</td>
<td>0.449</td>
<td>0.086</td>
<td>1.931</td>
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<tr>
<td></td>
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<td>156</td>
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<td>144</td>
<td>1.893</td>
<td>0.395</td>
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<td>2.598</td>
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<tr>
<td></td>
<td>and</td>
<td>154</td>
<td>187</td>
<td>63</td>
<td>2.520</td>
<td>0.850</td>
<td>0.150</td>
<td>3.500</td>
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<td>Dana North</td>
<td>DN011**</td>
<td>72</td>
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<td>1.700</td>
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<td>0.120</td>
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<td>0.350</td>
<td>8.000</td>
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<td>66</td>
<td>110</td>
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<td>2.850</td>
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<td>0.100</td>
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<td>1.000</td>
<td>0.200</td>
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<td>358</td>
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<td>0.480</td>
<td>0.090</td>
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<td>359</td>
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<td>803</td>
<td>509</td>
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<td>294</td>
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<td>4</td>
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<td>0.060</td>
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<td>377</td>
<td>382</td>
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<td>4.980</td>
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<td>420</td>
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<td>0.080</td>
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<td>419</td>
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<td>2.950</td>
<td>0.820</td>
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<td>245</td>
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<td>5</td>
<td>3.200</td>
<td>1.088</td>
<td>0.161</td>
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<td>0.144</td>
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<td>2.853</td>
<td>0.908</td>
<td>0.191</td>
<td>5.753</td>
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</table>

*Metallurgical holes demonstrating strong continuity of mineralization; The Dana North hole ended in strong mineralization

**True widths approximately 65%-80% of intersection widths

Higher Grade Drill Hole Intercepts in the Northern Area of River Valley Deposit

- The higher-grade mineralized intercepts reflect presence of higher-grade PGM mineralization sub-domains within the River Valley Palladium Deposit.
- In addition, 1800 kg of material blasted from outcrops and trenches at Dana North and Dana South for metallurgical testwork in 1999 graded 4.2 g/t Pd, 1.2 g/t Pt, 0.15 g/t Rh, 0.22 g/t Au and 0.32% Cu
- The nature, distribution and controls on the higher-grade sub-domains is under investigation
- Northern Area of the River Valley deposit includes the Pine Zone, Dana North Zone, Dana South Zone, Banshee Zone and Lismers North Zone
MINERAL PROCESSING RECOVERY STUDIES

Previous Metallurgy Study (SGS Canada Inc. 2013)
- **Material:** fresh drill core samples from Dana North and Dana South zones
- **Primary & Regrind Sizes for Locked Cycle Test:** $P_{80}=71 \mu m$ and $P_{80}=19 \mu m$, respectively
- **Bulk Concentrate Grades:** 16% Cu, 2% Ni, 189 g/t PGM
- **Metal Recoveries:** 84% Cu, 22% Ni, 69% PGM
- **Smelter Payable Metals:** Pd, Pt, Au, Cu, Ni probable; Rh likely; Co, Ag possible.
- **Deleterious Metals:** NONE! *(no talc)*
- **Conclusion:** A sulphide concentrator could effectively process River Valley deposit material

Next Steps
- Improve recoveries to produce bulk concentrate with minimum grades of 18%-20% Cu and 200-250 g/t Pd+Pt+Au (plus Rh, other minor PGMs, Co, Ag)
- Further investigate the effects of grade variability on metal recovery and concentrate grade
ENVIRONMENTAL STUDIES

2002-2004 Work
• Devlin Environmental Consulting Services
• Plant ecology and surface water surveys
• Acid rock drainage study – limited potential for acid rock drainage
• Results: No evidence of threatened terrestrial species in the area.

2012 Study
• DST Consulting Engineers
• Surface Water, Sediment and Benthics Study
• Baseline surface water and sediment sampling and analyzes
• Results: Heavy metal concentrations detected and attributed to atmospheric transport and deposition from Sudbury area smelters

2020-2022 Studies
• Story Environmental Inc. (Haileybury, Ontario)
• Environmental baseline programs including surface water quality programs, hydrological data collection, fish community and fish habitat studies
• First Nations engagement, including Stage 2 Archaeological Assessment
2022 EXPLORATION PLAN: BANSHEE ZONE INFILL AND EXPANSION DRILLING

- Strategic location between the key Dana Zones to the north and the Lismer Zones to the east
- Ground IP Survey completed in 2021
- Infill and expansion drilling planned in 2022 to advance Mineral Resources from Inferred to Indicated classification and expand Mineral Resources to depth.
- Initial phase of expansion drilling completed in August 2021: four holes totalling 1,277 m; mineralization intersected in each of the four holes
- 9 remaining holes to be drilled in 2022
2022 EXPLORATION PLAN: DANA SOUTH ZONE RESOURCE EXPANSION DRILLING

Dana South Zone

- Higher-grade mineralized outcrop discovery in 2016, 50-100 m east of the known Mineral Resources at Dana South Zone

- Discovery confirmed in 2020 and association with large, under-tested IP chargeability feature recognized

- Trenching, channelling, mapping and sampling undertaken in 2021 to investigate possible linkage of this mineralization to the Dana South Zone

- Positive results to be followed-up with drill program in 2022

**Figure 1.** Location of the four sampled channels (C1 to C4) in Dana South-Southeast Trench, 50 m to 100 m east of the Dana South Mineral Resource. Note that the palladium mineralization in the trench area is open to the north, west and possibly to the south. Details of the Dana South Mineral Resource estimate are available on the Company website (www.newagemetals.com) and on SEDAR.
2022 EXPLORATION PLAN:
DEVELOP BLUE-SKY EXPLORATION TARGETS

Pseudo-Longitudinal Projection

View looking to the southwest at the 3D models of the Dana North, South and Pine Zones. Note that the view is along the strike direction of the Pine Zone and that Dana South is separated from Dana North by a fault.

Undrilled and under-drilled exploration targets remain to be tested down-dip of Dana South and down-plunge of Dana North.
2022 EXPLORATION PLANS: DEVELOP DEEP DRILLING TARGETS

- Lac des Iles Mine shipping PGM concentrate 800 km to Sudbury for >20 years
- Sudbury mines produce PGM as by-product of Ni-Cu mining for >60 years
- The average maximum drilling depth at River Valley is only 220 m below surface; deepest hole (DS001) ended in PGM mineralization at 575 m depth below surface in Dana South Zone
- Drilling more such deep holes could reveal underground mining potential (as see at Lac des Iles and Creighton Mine) at the River Valley Project
- Cautionary Note: The presence of such deep mineralization at Lac des Iles Mine and Creighton Mine is not indicative of mineralization at the River Valley Property
River Valley Project Development and Exploration Plans

**PEA (2019)**
- Drilling
- Environmental
- Metallurgy
- Geotechnical

**PFS (2021-2022)**
- Initial Mineral Reserve Estimate and Mine Plan
- Updated Metallurgical Studies (incl. Rh)
- Site Engineering & Environmental Studies

**FS (2023-)**
- Advanced Metallurgy
- Advanced Mine/Site Designs and Mineral Reserve Estimate
- Environmental Impact Statement

*Exploration drilling to expand Mineral Resources and find new Mineral Resources at River Valley to continue*
Competitive Advantages

• 100% ownership of a multi-million ounce district-scale North American Palladium asset

• At CDN$15/t NSR pit constrained cut-off, contained metal contents are:
  o 2.3 Moz Pd+Pt+Au in the Measured & Indicated classifications; and
  o 1.6 Moz Pd+Pt+Au in the Inferred classification.

• Located 100 km east of Sudbury metallurgical facilities

• $40M invested to date in exploration programs and project development studies at River Valley

• Positive Preliminary Economic Assessment (2019) complete based on $1,200 Pd/oz (Pd price as of March 15, 2022= $2,365/oz)

• Pre-Feasibility Study based on markedly higher Pd price to be completed H2 2022

• Blue-sky exploration upside along 16 km prospective contact, in the footwall and at depth below the known mineralization
THANK YOU

FOR MORE INFORMATION CONTACT US AT:

📞 1-613-659-2773

✉️ info@newagemetals.com

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REGIONAL GEOLOGICAL SETTING

• River Valley is the largest and easternmost of the Paleoproterozoic EBL ("East Bull Lake") suite of intrusions

• River Valley is a gabbro-norite-anorthosite intrusion hosted in high-grade metamorphic paragneissese of the Grenville Province

• Platinum Group Metal (PGM)-Copper sulphide deposit discovered on basal (eastern) contact in 1999
Property Geology & Mineralized Zones

- River Valley Palladium Deposit occurs on footwall contact of the River Valley Intrusion.

- Deposit strike-length totals 16 km from Dana-Pine-Pardo Zones in the north to Mustang (aka River Valley Extension) in the south.

- Dips are moderately to steeply dipping southwest or northeast (overturned).

- Deposit offset along cross-cutting faults into many separate mineralized zones.

- Open to expansion by drilling at depth and in footwall.

Geological map of River Valley Property area (adapted from Holwell et al., 2014)
CONTACT TYPE PGM MINERALIZATION

- Contact-type disseminated PGM-Cu sulphide mineralization occurs mainly in the distinctive Breccia Unit in the basal marginal zone of the intrusion.

- Boundary Unit and Inclusion-Bearing Unit as less important hosts.

- Exploration targets in the Layered Unit remain untested.

- PGM most closely associated with chalcopyrite.

- Mineralization similar to Lac des Iles Mine deposit, NW Ontario.

Stratigraphic Column:

- Layered Units: gabbro>leucogabbro>anorthosite>melagabbro, diabase dikes, trace sulphide: <100 ppb Pt+Pd.

- Inclusion-Bearing Unit: <25% fragments; primarily xenoliths of leucogabbro in gabbro-leucogabbro matrix; diabase dikes: trace-3% sulphide, 100-500 ppb, locally >1,000 ppb Pt+Pd.

- Breccia Unit: 35% fragments; primarily xenoliths of melagabbro-gabbro in matrix matrix material; diabase dikes; "back-injected" felsic dikes: 1-5% sulphide, <100 ppb, locally >10,000 ppb Pt+Pd.

- Boundary Unit: footwall fragments and xenoliths of melagabbro-gabbro, diabase dikes; "back-injected" felsic dikes: <1% sulphide, <200 ppb Pt+Pd.

- Footwall Breccia Unit: >75% footwall fragments (trace sulphide).

- Footwall/Hangingwall: Paro gneiss and migmatite, Huronian Sediment.

Source: WSP (2019)
EXPLORATION MODEL

• The exploration methodology is IP geophysics and follow-up drill testing of NE-trending chargeability anomalies.

• In 2015, drill testing a chargeability high identified in previous IP surveys led to discovery of the Pine Zone in the footwall to the Dana North Zone.

• 2017/2018 IP surveys identified many additional chargeability highs in the footwall to the northern area of the River Valley deposit (see image to the left).

• Many of those chargeability highs remain to be drill tested.

• The remaining 12 km of the footwall contact to the south (not included on the map) remains to be IP surveyed.

• In 2021, IP coverage was extended to cover Banshee Zone.

Colour image of 2018 merged IP chargeability surveys at 250 m level (approx. 70 m below surface). The image shows many untested IP anomalies similar to Pine Zone that extend northeast (externally) from the footwall contact of the River Valley Intrusion. Note the Pine Zone is not exposed at surface. AEM = airborne electromagnetic.

Mineral Resources

- Dana North Zone
- Pine Zone
- Dana South Zone
- Banshee Zone
- Lismer North Zone
- Lismer Ridge Zone

Area of historical drilling

Weak AEM conductors

IP anomalies similar to the Pine Zone

Note the Pine Zone is not exposed at surface.
## MINERAL RESOURCE ESTIMATES 2021

**Pit Constrained Cut-off = CDN$15/t NSR and Out-Of-Pit = CDN$50/t NSR Cut-offs**

<table>
<thead>
<tr>
<th></th>
<th>Tonnes '000</th>
<th>Pd g/t</th>
<th>Pt g/t</th>
<th>Rh g/t</th>
<th>Au g/t</th>
<th>Cu%</th>
<th>Ni%</th>
<th>Co%</th>
<th>NSR (C$/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>15,488</td>
<td>0.70</td>
<td>0.25</td>
<td>0.02</td>
<td>0.05</td>
<td>0.07</td>
<td>0.02</td>
<td>0.003</td>
<td>59.54</td>
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<tr>
<td>Indicated</td>
<td>74,152</td>
<td>0.51</td>
<td>0.20</td>
<td>0.02</td>
<td>0.04</td>
<td>0.06</td>
<td>0.01</td>
<td>0.002</td>
<td>45.08</td>
</tr>
<tr>
<td>Measured + Indicated</td>
<td>89,640</td>
<td>0.54</td>
<td>0.21</td>
<td>0.02</td>
<td>0.04</td>
<td>0.06</td>
<td>0.01</td>
<td>0.002</td>
<td>47.58</td>
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<tr>
<td>Inferred</td>
<td>94,268</td>
<td>0.35</td>
<td>0.16</td>
<td>0.01</td>
<td>0.03</td>
<td>0.04</td>
<td>0.02</td>
<td>0.002</td>
<td>31.69</td>
</tr>
</tbody>
</table>

### NOTES

1. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
2. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
3. The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.
4. The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council. Numbers may not add exactly due to rounding.
5. The Mineral Resource Estimate is based on US$ metal prices of $1,850/oz Pd, $900/oz Pt, $1,600/oz Au, $3.00/lb Cu, $16/lb Co, $6.50/lb Ni, $8,000/oz Rh, $18.50/oz Ag. The US$-CDN$ exchange rate used was 0.75.
6. The NSR estimates use flotation recoveries of 80% for Pd, 80% for Pt, 80% for Au, 85% for Cu, 25% for Co, 90% for Ni, 80% for Rh and 65% for Ag and smelter payables of 80% for Pd, 80% for Pt, 85% for Au, 85% for Cu, 50% for Co, 90% for Ni, 80% for Rh and 65% for Ag.
7. The pit optimization used a mining cost of $2.25/t mined, combined processing and G&A costs of CDN$15/t, and pit slopes of 50°. The out-of-pit Mineral Resources used underground mining, processing and G&A cost of CDN$50/t.
BOARD OF DIRECTORS

HARRY BARR
CHAIRMAN & CEO
Founder, Chairman and CEO of International Metals Group
30+ years of experience in the mining industry, focus on acquisition, finance and development of mineral projects on international scale
Oversaw over 300 option/joint venture agreements with major, mid-tier, and junior mining companies

COLIN BIRD
DIRECTOR
30+ years of international experience in developing, financing, operating and managing nickel, copper, gold and coal mines
A UK chartered mining engineer
Currently serving as Non-Executive Chairman of Jubilee Metals Group, Executive Chairman of Xtract Resources, Galileo Resources, Bezant Resources and Tiger Royalties and Investments

CHRIS BERLET
DIRECTOR
Currently serving as the President & CEO, Director of Canuc Resources, and Stakeholder Gold Corp.
30 years of experience in both finance and the mineral industries
Graduate of Mining Engineering from Queen’s University (Canada); Diploma in Accounting & Finance from London School of Economics and Political Science (UK); CFA Charter Holder (USA)

JOHN LONDRY
DIRECTOR
Held senior positions with Camflo, Noranda Exploration, Hemlo Gold Mines, and Battle Mountain Gold
30 years of experience in both finance and the mineral industries
Received his B.Sc. and M.Sc. degrees in Geology from the University of Windsor

RON HIEBER
DIRECTOR
Former head of worldwide exploration for Anglo Platinum
Internationally recognized expert, in Platinum Group Metals
Geology graduate of Rhodes University, South Africa; PGM Specialist
NEW AGE LEADERSHIP

HARRY BARR
CHAIRMAN & CEO

ROBERT GUANZON
CFO

CHARLOTTE BROWN
CORPORATE SECRETARY

RICHARD ZEMOROZ
PROJECT GEOLOGIST

GORDON CHUNNET,
B.Sc.
PGM SPECIALIST, ADVISOR

BILL STONE,
PHD, P. Geo.
CONSULTING GEOSCIENTIST, PGM SPECIALIST

Axiom Exploration
CONSULTING GEOSCIENTISTS; LITHIUM, RARE METALS SPECIALIST

CURT FREEMAN
CONSULTING GEOLOGIST

ALI HASSANALIZADEH,
M.Sc., P. Geo., MBA
ADVISORY BOARD, CONSULTING GEOLOGIST
PALLADIUM MARKET FUNDAMENTALS

• Supply deficit since 2012. Auto industry demand ~85%. Temporary auto chip shortage decreasing demand for palladium. Forecasted recovery expected in H2 20222

• More valuable than gold ($/oz)

• Favourable outlook due to tightening emissions legislation

• Hybrid cars require more palladium than conventional internal combustion engine vehicles

PALLADIUM PRICE (USD)

PALLADIUM DEFICIT ('000 oz)
PGMs – GREEN METALS

• Most palladium is used in catalytic converters for cars which is an anti-pollution device found in ICE vehicles. Many countries have been adopting more stringent environmental standards, which in turn mandates auto-manufacturers to use more palladium in catalytic converters.

• Hydrogen Fuel Cell EVs – an emerging technology, utilize platinum. Toyota has recently stated that both hybrid and fuel cell vehicles remain essential to its carbon reduction plans going forward.¹

• Extensive research is being conducted to assess palladium and platinum's application in:
  • Hydrogen production and storage (Hydrogen economy)
  • Innovative battery technology (Platinum Group Metals – Lion Battery Technologies inc.)

¹Heraeus Precious Metals Appraisal – 17 January 2022
NORTH AMERICA’S MAJOR PGM PRODUCERS

Impala Canada
Formerly North American Palladium.

Sibanye Stillwater
# Palladium Supply and Demand

## Regional Supply

<table>
<thead>
<tr>
<th>Region</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>2,500</td>
<td>2,555</td>
<td>1,845</td>
<td>2,655</td>
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<tr>
<td>Zimbabwe</td>
<td>380</td>
<td>385</td>
<td>405</td>
<td>415</td>
</tr>
<tr>
<td>Russia</td>
<td>2,670</td>
<td>2,870</td>
<td>2,810</td>
<td>2,585</td>
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<tr>
<td>Canada</td>
<td>575</td>
<td>515</td>
<td>480</td>
<td>500</td>
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<tr>
<td>USA</td>
<td>460</td>
<td>460</td>
<td>470</td>
<td>500</td>
</tr>
<tr>
<td>Other</td>
<td>395</td>
<td>395</td>
<td>385</td>
<td>335</td>
</tr>
<tr>
<td>Refined Global Production (koz)</td>
<td>6,980</td>
<td>7,180</td>
<td>6,395</td>
<td>6,990</td>
</tr>
<tr>
<td>Growth (%)</td>
<td>-1.20</td>
<td>2.87</td>
<td>-10.93</td>
<td>9.30</td>
</tr>
</tbody>
</table>

## Demand

### Net Autocatalyst Demand
- 2018: 6,260
- 2019: 6,275
- 2020: 5,390
- 2021: 5,380

### Net Jewelry Demand
- 2018: 155
- 2019: 155
- 2020: 145
- 2021: 145

### Net Industrial Demand
- 2018: 1,475
- 2019: 1,365
- 2020: 1,290
- 2021: 1,220

### Total Gross Demand
- 2018: 10,355
- 2019: 10,390
- 2020: 9,220
- 2021: 9,535

### Recycling
- 2018: 2,465
- 2019: 2,595
- 2020: 2,395
- 2021: 2,780

### Net Demand
- 2018: 7,890
- 2019: 7,795
- 2020: 6,825
- 2021: 6,755

### Balance
- 2018: (910)
- 2019: (615)
- 2020: (430)
- 2021: 235

Source: SFA Oxford
### PLATINUM SUPPLY AND DEMAND

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
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<tbody>
<tr>
<td><strong>REGIONAL SUPPLY</strong></td>
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<td></td>
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</tr>
<tr>
<td>South Africa</td>
<td>4,470</td>
<td>4,405</td>
<td>3,255</td>
<td>4,540</td>
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<tr>
<td>Zimbabwe</td>
<td>465</td>
<td>460</td>
<td>480</td>
<td>495</td>
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<tr>
<td>Russia</td>
<td>665</td>
<td>710</td>
<td>705</td>
<td>645</td>
</tr>
<tr>
<td>Canada</td>
<td>210</td>
<td>215</td>
<td>195</td>
<td>215</td>
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<tr>
<td>USA</td>
<td>135</td>
<td>135</td>
<td>135</td>
<td>150</td>
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<tr>
<td>Other</td>
<td>180</td>
<td>185</td>
<td>175</td>
<td>160</td>
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<tr>
<td>Refined Global Production (koz)</td>
<td>6,125</td>
<td>6,110</td>
<td>4,945</td>
<td>6,205</td>
</tr>
<tr>
<td>Growth (%)</td>
<td>0.10</td>
<td>-0.24</td>
<td>-19.07</td>
<td>25.48</td>
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<tr>
<td><strong>DEMAND</strong></td>
<td></td>
<td></td>
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<tr>
<td>NET AUTOCATALYST DEMAND</td>
<td>1,680</td>
<td>1,335</td>
<td>1,015</td>
<td>1,360</td>
</tr>
<tr>
<td>Growth (%)</td>
<td>-14.90</td>
<td>-20.54</td>
<td>-23.97</td>
<td>33.99</td>
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<tr>
<td>NET JEWELRY DEMAND</td>
<td>1,740</td>
<td>1,595</td>
<td>1,150</td>
<td>1,380</td>
</tr>
<tr>
<td>Growth (%)</td>
<td>-7.80</td>
<td>-8.33</td>
<td>-27.90</td>
<td>20.00</td>
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<tr>
<td>NET INDUSTRIAL DEMAND</td>
<td>1980</td>
<td>2040</td>
<td>1940</td>
<td>2150</td>
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<tr>
<td>Growth (%)</td>
<td>10.60</td>
<td>3.03</td>
<td>-4.90</td>
<td>10.82</td>
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<tr>
<td><strong>TOTAL</strong></td>
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<tr>
<td>GROSS DEMAND</td>
<td>7355</td>
<td>6985</td>
<td>5845</td>
<td>6720</td>
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<td>RECYCLING</td>
<td>1955</td>
<td>2020</td>
<td>1745</td>
<td>1835</td>
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<tr>
<td>NET DEMAND</td>
<td>5400</td>
<td>4965</td>
<td>4100</td>
<td>4885</td>
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<td><strong>BALANCE</strong></td>
<td>725</td>
<td>1,145</td>
<td>845</td>
<td>1,320</td>
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</table>

Source: SFA Oxford
# Rhodium Supply and Demand

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regional Supply</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>625</td>
<td>640</td>
<td>475</td>
<td>635</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>40</td>
<td>40</td>
<td>45</td>
<td>45</td>
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<tr>
<td>Russia</td>
<td>75</td>
<td>80</td>
<td>80</td>
<td>75</td>
</tr>
<tr>
<td>Canada</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>USA</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
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<td>Refined Global Production (koz)</td>
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<td>635</td>
<td>790</td>
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<tr>
<td>Growth (%)</td>
<td>-0.40</td>
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<td>-20.13</td>
<td>24.41</td>
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<tr>
<td><strong>Demand</strong></td>
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<tr>
<td>Net Autocatalyst Demand</td>
<td>565</td>
<td>630</td>
<td>550</td>
<td>580</td>
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<tr>
<td>Growth (%)</td>
<td>-0.10</td>
<td>11.50</td>
<td>-12.70</td>
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<td>Net Industrial Demand</td>
<td>210</td>
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<td>135</td>
<td>115</td>
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<tr>
<td>Growth (%)</td>
<td>32.00</td>
<td>-21.43</td>
<td>-18.18</td>
<td>-14.81</td>
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<tr>
<td>Total</td>
<td>1110</td>
<td>1155</td>
<td>1015</td>
<td>1060</td>
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<tr>
<td>Recycling</td>
<td>340</td>
<td>355</td>
<td>335</td>
<td>360</td>
</tr>
<tr>
<td>Net Demand</td>
<td>770</td>
<td>800</td>
<td>680</td>
<td>700</td>
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<tr>
<td>Balance</td>
<td>5</td>
<td>(5)</td>
<td>(45)</td>
<td>90</td>
</tr>
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</table>

Source: SFA Oxford