NEWS RELEASE

Lac des Iles Underground Exploration Announces Expansion of Newly Discovered C Zone

5/29/2019

TORONTO, May 29, 2019 (GLOBE NEWSWIRE) -- North American Palladium Ltd. ("NAP" or the "Company") (TSX:PDL) (OTC PINK:PALDF) today provides an update on underground exploration at its Lac des Iles Mine ("LDI"), located 90 km north of Thunder Bay, Ontario.

Plan-view image of the 1065-metre level in the Offset Block showing the current underground exploration targets adjacent to the sub-level shrinkage ("SLS") reserves and planned mine development (green lines). Source – NAP, May 29, 2019.
Longitudinal section, looking east, through the Offset Block showing the underground mine development and the position of the B Series and C Zone exploration targets relative to the Offset Zone 1 g/t palladium grade shell and the SLS reserves. Source – NAP, May 29, 2019.

Cross section, looking north, through the Offset Block showing the underground mine development and the position of the B Series and C Zone exploration targets relative to the Offset Zone 1 g/t palladium grade shell and the SLS reserves. Source – NAP, May 29, 2019.

Highlights

- Additional drilling results for the newly-discovered C Zone suggest that a large area of palladium mineralization is present in the immediate footwall to the Offset Zone. Results include:
  - 19.4m with 4.18 g/t Pd (hole 18-514)
  - 25.0m with 3.06 g/t Pd (hole 19-511)
  - 74.9 m with 2.93 g/t Pd, including 19.2m with 6.38 g/t Pd and 5.0m with 9.00 g/t Pd (hole 19-520)
- A new exploration drift is partially complete and will be put into service next month with an initial focus on the Camp Lake exploration target.

“Based on the large and growing number of underground exploration targets, we are increasing our 2019 exploration and definition drilling budget by $5.7M. The additional funding will allow us to accelerate drilling on most of our underground exploration targets, including Camp Lake, Offset Zone satellites and the recently-discovered C Zone,” said Jim Gallagher, President and CEO of North American Palladium.
“The discovery of the C Zone is testimony to the effectiveness of our modeling of the critical structures that control the distribution of the known palladium resources at LDI,” said Dr. Dave Peck, North American Palladium’s Vice-President, Exploration. “With our recently expanded target bank and a larger drilling budget, we are increasingly optimistic about the prospects for significant additions to our palladium mineral inventory at LDI,” added Dr. Peck.

The C Zone has become a major focus for underground exploration because of the encouraging drilling results, the modeled size of the target area and its location relative to existing infrastructure. The C Zone’s close proximity to the existing Offset Zone mining areas means that it would be a low capital cost development opportunity if new resources are defined within it.

Exploration Targets

Recent underground drilling results have confirmed the presence of several discrete exploration targets adjacent to the known mineral reserves in the Offset Zone. The position of these targets relative to known ore zones and existing and planned mining development is illustrated in a series of plan-view and sectional images (Figures 1 to 3). Some of these targets represent lateral or down plunge extensions to the current ore shells. Other targets occur in the hanging wall and footwall to the Offset Zone. Several targets appear to represent pipe-shaped satellite bodies similar to the B2 Zone. Others are tabular and more continuous in form and follow major geological contacts or faults. The recognition of the critical role of structures in controlling the distribution of palladium mineralization at LDI has directly contributed to the growth in exploration targets.

Figure 1 is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/ef5af177-1762-4ab0-9957-2084767643bf

C Zone

The Company recently announced the discovery of the C Zone (see Company news release dated February 11, 2019), which is in the footwall of the Offset Zone in close proximity to the existing mine ramp and the sub-level shrinkage mining areas. Modelling of recent drilling and chip sampling results suggest that the C Zone has the potential for a large strike length (several hundred metres) as well as a significant vertical extent (in excess of 800 metres). For these reasons it became a priority drill target over the last several months. Recent drilling highlights are reported below. True thicknesses are not known at this time.

<table>
<thead>
<tr>
<th>Target</th>
<th>Hole ID</th>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Pd (g/t)</th>
<th>Pt (g/t)</th>
<th>Au (g/t)</th>
<th>3E (%)</th>
<th>Cu (%)</th>
<th>Ni (%)</th>
</tr>
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C Zone 18-514 30.8 46.0 15.2 5.16 0.40 0.50 6.07 0.23 0.18
C Zone incl. 209.0 223.0 14.0 1.97 0.15 0.13 2.24 0.10 0.10
C Zone 19-511 167.5 226.0 58.5 2.11 0.20 0.05 2.36 0.08 0.09
C Zone incl. 187.0 212.0 25.0 3.06 0.26 0.05 3.38 0.09 0.12
C Zone 19-513 14.2 71.0 56.8 2.37 0.25 0.29 2.91 0.10 0.11
C Zone incl. 50.0 71.0 21.0 3.06 0.33 0.34 3.73 0.11 0.12
C Zone 19-517 128.8 183.0 54.2 3.81 0.28 0.31 4.40 0.20 0.15
C Zone incl. 128.8 148.0 19.2 6.38 0.46 0.46 7.29 0.36 0.24
with 142.0 147.0 5.0 9.00 0.60 0.59 10.19 0.46 0.32

*3E = combined Pd + Pt + Au

The analyses reported in this news release were performed by ALS Global in Vancouver, British Columbia. The Company’s rigorous internal quality control and quality assurance protocols are described in detail in the current Technical Report for its LDI (October 2018 – available on SEDAR).

Recent exploration and definition drilling on the C Zone target has shown that it consists of two mineralized trends (Figure 1) including a north-south trend parallel to the central Offset Zone and a southwest-striking trend that generally follows the western contact between the intrusion and the basement rocks and the southeastern domain of the Offset Zone. Palladium mineralization in the C Zone is hosted within geological units that are compositionally distinctive from those that host the Offset Zone resources. Despite this difference, the C Zone palladium mineralization shows similar precious and base metal grades to those observed in the main ore zones at LDI.

Camp Lake Target

The Camp Lake Target is the largest area of prospective geology near the existing underground mine. It is the modelled extension of the Offset Zone south of the Camp Lake fault. The geology of the target remains poorly defined due to the lack of exploration holes that have passed through the Camp Lake fault. As previously reported, Offset Zone-style palladium mineralization has been encountered on widely spaced exploration holes south of the Camp Lake fault. A preliminary exploration target has been developed using recent drilling results and applying approximately the same sense of movement that has been estimated for the sub-parallel Offset fault. Under this assumption the Camp Lake Block is expected to have moved up and west relative to the Offset Block.

Figure 2 is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/fce8ba3a-e19d-4bd1-9d9c-5952d6eaff3b

Mystery Zone

The Company recently began exploration drilling targeting a modeled extension of the Mystery Zone, which hosts a
small inferred mineral resource described in the Company’s most recent Technical Report for LDI. Results obtained from this program will be reported by the Company in future exploration updates.

Figure 3 is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/b6fcc007-9b72-4a99-abe1-89e17af3fe9

B Series Targets

The B2 Zone is the first of several pipe-shaped bodies of higher-grade palladium mineralization that have been identified within or in close proximity to the current mineralization wireframe for the Offset Zone. Most of these bodies demonstrate significant vertical extent – up to 1 km in the case of the B2 Zone and its modelled extension. They also share a common steep southerly plunge. Other examples of pipe-shaped bodies in the Offset Block include the B1 and B3 Zones that are described in the current Technical Report for LDI and in recent exploration news releases. Two additional pipe-shaped targets were recognized earlier this year. Most of these bodies remain exploration targets and will be tested by new underground drill holes planned for later in the year.

Program Expansion

The additional $5.7M in funding will support the completion of approximately 25,000 metres of underground exploration drilling and 75,000 metres of resource definition drilling this year. Drilling will focus on delineating additional resources both east and west of the known Offset Zone reserves and beneath the current bottom of the shaft (Figure 2).

Next month, the Company plans to position a drill in the new exploration drift located at the deepest level of the mine (1065 metre level). This drill will begin exploration drilling on the Camp Lake Target. A second underground exploration drill will continue to test for major extensions to the known B Zone targets (see Figures).

Qualified Person

The technical content of this news release was reviewed and approved by the Company’s Vice-President, Exploration, Dr. Dave Peck. Dr. Peck is a Qualified Person within the meaning of National Instrument 43-101 and a registered Professional Geoscientist with the Association of Professional Geoscientists of Ontario, Engineers and Geoscientists BC, and Engineers Geoscientists Manitoba.

Cautionary Statement on Forward-Looking Information

Certain information contained in this news release constitutes 'forward-looking statements' and 'forward-looking
information’ within the meaning of applicable Canadian securities laws. All statements other than statements of historical fact are forward-looking statements. The words 'target,' 'plan,' 'should,' 'could,' 'estimate,' 'guidance,' and similar expressions identify forward-looking statements. Forward-looking statements in this news release include, without limitation: information pertaining to the Company's proposed dividend; information pertaining to the Company's strategy, strategic process, plans or future financial or operating performance, such as statements with respect to, long term fundamentals for the business, operating performance expectations, project timelines, tailings management plan, mining method change, production forecasts, operating and capital cost estimates, expected mining and milling rates, cash balances, projected grades, mill recoveries, metal price and foreign exchange rates and other statements that express management's expectations or estimates of future performance. Forward-looking statements involve known and unknown risk factors that may cause the actual results to be materially different from those expressed or implied by the forward-looking statements. Such risks include, but are not limited to: the possibility that metal prices and foreign exchange rates may fluctuate, the risk that the Lac des Iles mine may not perform as planned, that the Company may not be able to meet production forecasts, the possibility that the Company may not be able to generate sufficient cash to pay a dividend and/or to service its indebtedness and may be forced to take other actions, inherent risks associated with development, exploration, mining and processing including environmental risks and risks to tailings capacity, employment disruptions, including in connection with collective agreements between the Company and unions and the risks associated with obtaining necessary licenses and permits. For more details on these and other risk factors see the Company's most recent management's discussion and analysis and the Company's annual information form on file with Canadian securities regulatory authorities on SEDAR at [www.sedar.com](http://www.sedar.com) under the heading “Risk Factors.”

Forward-looking statements are necessarily based upon a number of factors and assumptions that, while considered reasonable by management, are inherently subject to significant business, economic and competitive uncertainties and contingencies. The factors and assumptions contained in this news release, which may prove to be incorrect, include, but are not limited to: that the Company will be able to continue normal business operations at its Lac des Iles mine, that metal prices and exchange rates between the Canadian and United States dollar will be consistent with the Company's expectations, that there will be no significant disruptions affecting operations, and that prices for key mining and construction supplies, including labour, will remain consistent with the Company's expectations. The forward-looking statements are not guarantees of future performance. The Company disclaims any obligation to update or revise any forward-looking statements, whether as a result of new information, events or otherwise, except as expressly required by law. Readers are cautioned not to put undue reliance on these forward-looking statements.

About North American Palladium Ltd.

North American Palladium (TSX: PDL) (OTC PINK: PALDF) is a Canadian company with 25 years of production at the
Lac des Iles Mine in a low-risk jurisdiction northwest of Thunder Bay, Ontario. North American Palladium is the world's only pure play palladium producer. With over 600 employees, the Lac des Iles Mine features a unique, world-class ore body and modern infrastructure, including both an underground mine and surface operations.

For further information, please contact:
North American Palladium Investor Relations at 416-360-7374 or ir@nap.com

Source: North American Palladium Ltd.