

130 Adelaide St. West Suite 2116 Toronto, ON M5H 3P5 **News Release** 

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# North American Palladium Ltd. Discovers a New High Grade Zone at Depth

#### **Highlights**

- New High Grade Zone discovered to a depth of 903 metres over a strike length of 300 metres and remains open in all directions.
- New High Grade Zone contains a 54 metre intercept grading 5.44 g/tonne palladium including 10.5 metres grading 10.32 g/tonne palladium.
- Strike length of Main High Grade Zone extended to 390 metres and remains open to the north and at depth

**North American Palladium Ltd.** is pleased to announce that deep core drilling at the Company's Lac des Iles property has resulted in the discovery of a new high grade zone. From May 10, 2001 to August 15, 2001 three diamond drill rigs completed 17 holes (15,553 metres) and extended 12 previously drilled holes (2,871 metres). This drilling was focused on the down plunge extension of the Main High Grade Zone (previously referred to as the "High-Grade Shear Ore") and the newly discovered Offset High Grade Zone below 560 metres (Figures 1&2).

The Offset High Grade Zone appears beneath a recently discovered fault and is offset approximately 250 metres west of the Main High Grade Zone. The Offset High Grade Zone has been traced from a vertical depth of 560 metres to 903 metres and has been drilled over a 300 metre strike length. This zone not only remains open to the south and at depth, but also towards surface beneath the fault (Figure 3). Movement on the fault is interpreted to be oblique normal, resulting in displacement of the Roby Zone towards surface. In the Offset High Grade Zone, hole 01-052 contained 54 metres grading 5.44 g/tonne palladium which includes a 10.5 metre intercept grading 10.32 g/tonne palladium. In addition hole 01-020 contains 13.3 metres grading 11.19 g/tonne palladium and hole 01-059 contains 12.90 metres grading 8.69 g/tonne palladium.

The Main High Grade Zone strike length has been extended to 390 metres, and as seen on the attached longitudinal section (Figure 4), it is cut-off by the fault at depths ranging from 390 metres to the south to 625 metres to the north but remains open to the north and down plunge. In the Main High Grade Zone hole 01-055 contains 15 metres grading 7.88 g/tonne palladium and hole 01-056 contains 9 metres grading 11.87 g/tonne palladium.

These results support the possibility of an underground mining operation below the ultimate pit depth of 400 metres. A structural analysis will be conducted to better understand the nature of the faulting followed by a resource estimate. Additional drilling will be required from surface to determine the full extent of both High Grade Zones and engineering studies will be required to assess the underground mining potential.

In 1999 and 2000 ore definition drilling delineated the Main High Grade Zone to a depth of 550 metres and 6 deep step-out holes intersected the zone at a depth of 620 metres. A provisional geological interpretation based on the deep drilling indicated potential faulting at depth with a possible displacement of the Roby Zone. Initial drill results from hole 01-007 in April 2001 provided further evidence of a displacement. The 17 holes drilled as part of this program confirmed that the High Grade Zone was displaced an average of 250 metres to the west of the existing High Grade Zone beneath an identified fault. The displaced zone beneath the fault is referred to as the Offset High Grade Zone. As a result of this information, 12 holes previously drilled in 2000 and 2001 were extended to intercept the Offset High Grade Zone. In total, 20 holes intersected the High Grade Zone, both above (Main High Grade Zone) and below (Offset High Grade Zone) the fault. Figure 2 illustrates three of these holes intersecting both zones. The early detection of the offset led to the extension of pre-existing drill holes and ultimately the intersection of the High Grade Zone twice in 20 of these holes. This reduced exploration expenses significantly while permitting the Company to achieve its exploration goals for 2001.

The focus of the exploration program for the remainder of 2001 will shift to the Breccia Ore in the southwestern extension of the Roby Zone. Near surface drilling will be conducted up to a depth of 500 metres in an attempt to delineate an additional near surface palladium resource.

Mr. M.J. Lavigne, Vice-President, Exploration for the Company, supervised the 2001 exploration program. The samples were prepared by ALS Chemex in the Thunder Bay facility and assayed at its laboratory in Vancouver. ALS Chemex uses standard fire assay procedures to produce a precious metal bead and analyzes the bead by inductively coupled plasma-mass spectrometry (ICP-MS) to determine the palladium, platinum and gold content. Copper and nickel are determined by inductively coupled plasma-atomic emission spectrometry (ICP-AES). Accurassay Laboratories of Thunder Bay assayed selected duplicate samples.

North American Palladium will host a conference call on Thursday, September 27, 2001 at 10:00 Eastern Time to discuss the exploration results. Keith Minty, President and Chief Executive Officer and Maurice Lavigne, Vice President-Exploration will host the conference call. The conference call can be listened to by dialing (416) 641-6656 in Toronto and 1-800-379-4140 elsewhere in North America. The rebroadcast number is (416) 626-4100 and the pass code is 19780149#.

# SELECTED MINERALIZED INTERSECTIONS PHASE 2 - 2001 DRILL RESULTS

## Main High Grade Zone

Hole ID	From	То	Interval	Palladium	Platinum	Gold	Copper	Nickel	True Width	Vertical Depth	Remarks
	(metres)	(metres)	(metres)	(g/tonne)	(g/tonne)	(g/tonne)	%	%	(metres)	(metres)	
01-006	642.00	652.00	10.00	5.72	0.22	0.03	0.00	0.04	9.0	516.00	
01-050	664.10	675.00	10.90	3.91	0.29	0.08	0.05	0.08	10.0	540.00	
01-055	654.00	669.00	15.00	7.88	0.41	0.53	0.05	0.10	12.0	545.00	
incl	654.00	663.00	9.00	11.00	0.54	0.59	0.06	0.12	7.2	540.00	
incl	657.00	660.00	3.00	16.50	0.67	1.26	0.10	0.19	2.4	541.00	
01-056	684.00	693.00	9.00	11.87	0.53	0.51	0.04	0.09	8.5	597.00	
incl	684.00	690.00	6.00	15.25	0.61	0.31	0.04	0.07	5.7	596.00	
01-059	651.00	660.00	9.00	4.02	0.23	0.07	0.01	0.04	7.5	558.00	
01-063	633.00	636.00	3.00	3.90	0.14	0.05	0.02	0.05	2.5	496.00	
01-064	658.75	670.50	11.75	2.57	0.20	0.21	0.05	0.05	11.0	550.00	
01-065	702.00	708.00	6.00	3.15	0.25	0.11	0.00	0.04	5.0	623.00	
and	727.50	735.00	7.50	3.16	0.23	0.04	0.00	0.03	6.5	647.00	Breccia Ore
01-069	600.00	606.00	6.00	4.50	0.26	0.14	0.02	0.04	5.0	507.00	
01-070	699.00	705.00	6.00	4.10	0.19	0.03	0.00	0.04	5.5	616.00	
01-074	426.00	438.00	12.00	6.17	0.37	0.14	0.01	0.05	10.0	404.00	
incl	426.00	429.00	3.00	16.35	0.84	0.12	0.00	0.04	2.5	397.00	
01-075	463.00	480.00	17.00	4.21	0.22	0.08	0.00	0.04	14.5	457.00	
incl	468.00	474.00	6.00	7.68	0.33	0.04	0.00	0.04	5.1	452.00	
01-076	486.00	498.00	12.00	4.75	0.26	0.07	0.01	0.04	8.5	493.00	
incl	489.00	492.00	3.00	8.80	0.56	0.10	0.01	0.06	2.1	483.00	

### Offset High Grade Zone

Hole ID	From	То	Interval	Palladium	Platinum	Gold	Copper	Nickel	True Width	Vertical Depth	Remarks
	(metres)	(metres)	(metres)	(g/tonne)	(g/tonne)	(g/tonne)	%	%	(metres)	(metres)	
01-008	939.90	969.00	29.10	4.98	0.32	0.37	0.11	0.14	25.5	770.00	
01-020	906.00	942.00	36.00	6.53	0.40	0.50	0.14	0.19	29.5	743.00	
incl	916.70	930.00	13.30	11.19	0.53	0.51	0.12	0.17	10.9	736.00	
incl	919.50	924.00	4.50	15.37	0.59	0.48	0.14	0.18	3.7	730.00	
and	1008.00	1017.00	9.00	3.94	0.44	0.51	0.22	0.20	7.5	794.00	Breccia Ore
01-047	1000.10	1019.30	19.20	5.08	0.35	0.36	0.10	0.11	16.5	850.00	
incl	1002.20	1007.10	4.90	8.00	0.48	0.22	0.04	0.08	4.2	837.00	
incl	1014.50	1017.00	2.50	6.52	0.52	0.90	0.22	0.21	2.1	850.00	
and	1062.00	1070.60	8.60	4.27	0.36	0.11	0.12	0.24	7.5	866.00	Breccia Ore
incl	1069.00	1070.60	1.60	10.95	0.73	0.16	0.36	0.85	1.4	866.00	
01-050	916.50	951.00	34.50	5.55	0.33	0.37	0.09	0.12	29.0	758.00	
incl	919.50	924.00	4.50	10.47	0.52	0.63	0.14	0.21	3.8	738.00	
incl	945.00	948.00	3.00	9.80	0.66	1.03	0.16	0.20	2.5	755.00	
01-052	973.50	1027.50	54.00	5.44	0.37	0.41	0.08	0.12	50.5	886.00	
incl	973.50	984.00	10.50	10.32	0.68	0.82	0.12	0.16	9.8	849.00	
incl	1020.00	1026.00	6.00	8.50	0.59	0.36	0.10	0.16	5.6	885.00	
01-055	932.70	979.50	46.80	4.87	0.31	0.27	0.08	0.10	43.5	803.00	
incl	934.50	936.00	1.50	9.30	0.50	0.34	0.04	0.08	1.4	757.00	
incl	948.00	966.00	18.00	8.41	0.48	0.47	0.08	0.12	16.7	793.00	
incl	960.00	963.00	3.00	11.25	0.50	0.28	0.04	0.14	2.8	791.00	
01-056	1001.95	1014.00	12.05	5.35	0.37	0.29	0.08	0.09	11.0	874.00	
incl	1003.50	1008.50	5.00	10.16	0.68	0.37	0.08	0.12	4.6	870.00	
01-059	944.10	957.00	12.90	8.69	0.51	0.31	0.04	0.08	11.5	799.00	
incl	946.00	951.00	5.00	12.98	0.68	0.47	0.06	0.09	4.5	792.00	
01-065	898.75	912.00	13.25	6.41	0.44	0.42	0.04	0.08	10.0	804.00	
incl	898.75	903.00	4.25	10.47	0.72	0.69	0.09	0.09	3.2	797.00	

#### Offset High Grade Zone (data from extended holes from previous drilling)

Hole ID	From	То	Interval	Palladium	Platinum	Gold	Copper	Nickel	True Width	Vertical Depth	Remarks
	(metres)	(metres)	(metres)	(g/tonne)	(g/tonne)	(g/tonne)	%	%	(metres)	(metres)	
00-126	728.33	780.60	52.27	5.01	0.38	0.26	0.10	0.09	44.1	580.00	
incl	730.18	735.00	4.82	12.26	0.65	0.44	0.12	0.10	4.1	550.00	
incl	762.10	765.05	2.95	9.37	0.78	0.65	0.22	0.25	2.5	569.00	
00-127	831.00	837.00	6.00	5.25	0.34	0.57	0.10	0.13	5.2	620.00	
incl	831.00	834.00	3.00	8.00	0.55	0.91	0.17	0.19	2.4	618.00	
and	867.00	873.00	6.00	3.35	0.19	0.07	0.03	0.08	5.2	637.00	Breccia Ore
00-149	732.00	760.70	28.70	3.32	0.27	0.17	0.14	0.15	24.0	577.00	
and	835.50	843.00	7.50	3.84	0.29	0.13	0.06	0.09	6.2	731.00	Breccia Ore
and	865.50	871.50	6.00	3.33	0.32	0.29	0.14	0.12	5.1	659.00	Breccia Ore
00-150	861.25	903.00	41.75	4.81	0.33	0.29	0.07	0.10	38.0	667.00	
incl	862.95	865.50	2.55	8.85	0.56	0.63	0.16	0.18	2.3	640.00	
incl	878.45	890.10	11.65	8.04	0.49	0.47	0.10	0.13	10.6	659.00	
incl	884.00	886.50	2.50	11.60	0.61	0.42	0.08	0.14	2.3	655.00	
00-204	1122.70	1146.00	23.30	4.07	0.28	0.06	0.02	0.06	21.5	903.00	
00-205	1094.70	1134.00	39.30	5.88	0.35	0.35	0.07	0.11	36.5	882.00	
incl	1094.70	1104.00	9.30	11.50	0.64	0.62	0.08	0.13	8.6	861.00	
incl	1125.00	1128.00	3.00	10.90	0.54	0.36	0.09	0.17	2.8	880.00	
00-251	855.00	867.40	12.40	3.54	0.46	0.33	0.16	0.14	11.0	592.00	

**North American Palladium's Lac des Iles Mine** is Canada's only primary producer of platinum group metals and is one of the largest open pit bulk mineable palladium reserves in the world. **Palladium** use in the auto industry continues to be an important component in controlling exhaust emissions as mandated by more stringent hydrocarbon emissions standards for cars, particularly in the United States, Europe and Japan.

For further information contact: Keith C. Minty - President & CEO

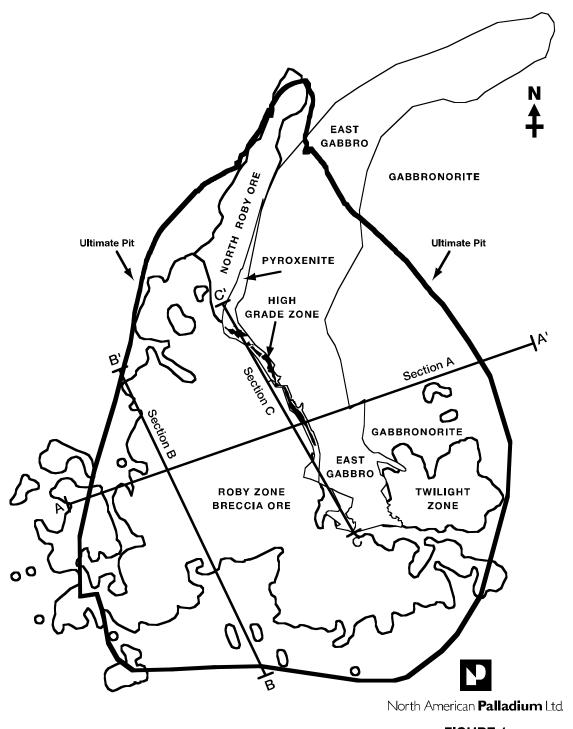
Tel: (416) 360-2656 Fax: (416) 360-7709

or

George D. Faught - Vice President Finance & CFO

Tel: (416)360-2650 Fax: (416) 360-7709

Forward-Looking Statements - Some statements contained in this release are forward-looking and, therefore, involve uncertainties or risks that could cause actual results to differ materially. Such forward-looking statements include comments regarding mineral reserve and resource statements, exploration program performance and engineering studies. Factors that could cause actual results to differ materially include metal price volatility, economic and political events affecting metal supply and demand, fluctuations in ore grade, ore tonnes milled, geological, technical, mining or processing problems, exploration programs and future results of exploration programs at the Lac des Iles Mine, future profitability and production. The Company disclaims any obligation to update forward-looking statements.



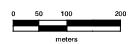


FIGURE 1 Simplified Geology of The Roby Zone

Location Plan for Sections A, B & C

