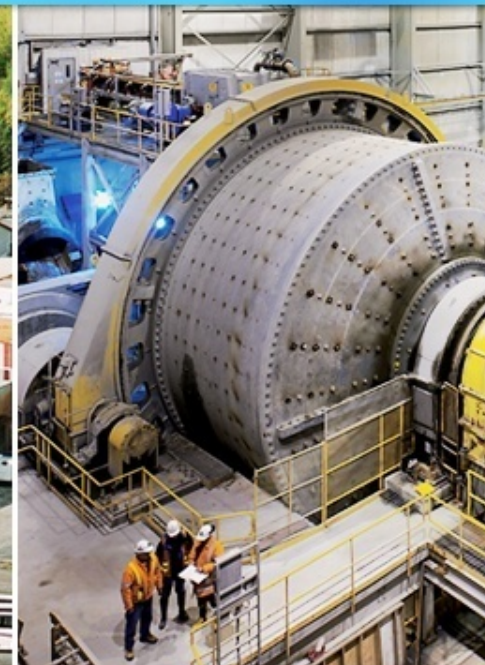




North American Palladium Ltd.



a growth-oriented precious metals producer

William J. Biggar
President & CEO

**INVESTOR
PRESENTATION**
September 2010



Forward Looking Statements

Certain information included in this presentation, including any information as to our future exploration, financial or operating performance and other statements that express management's expectations or estimates of future performance, constitute forward-looking statements within the meaning of the 'safe harbor' provisions of the *United States Private Securities Litigation Reform Act of 1995* and Canadian securities laws. The words 'expect', 'believe', 'will', 'intend', 'estimate' and similar expressions identify forward-looking statements. Forward-looking statements are necessarily based upon a number of estimates, factors, and assumptions that, while considered reasonable by management, are inherently subject to significant business, economic and competitive uncertainties, risks and contingencies, including the possibility that metal prices, foreign exchange assumptions and operating costs may differ from management's expectations. These factors may cause the actual financial results, performance or achievements of North American Palladium to be materially different from the Company's estimated future results, performance or achievements expressed or implied by those forward-looking statements. The forward-looking statements are not guarantees of future performance. For more details on these estimates, risks, factors, and assumptions, see the Company's most recent Form 40-F/ Annual Information Form on file with the U.S. Securities and Exchange Commission and Canadian provincial securities regulatory authorities. The Company cautions the reader that the Offset Zone preliminary economic assessment ("PEA") has been prepared by third parties and is based on a number of assumptions, any one of which, if incorrect, could materially change the projected outcome discussed in this presentation. In addition, there can be no assurance that the Company's Lac des Iles or Sleeping Giant mines will operate as anticipated or that other properties can be successfully developed. Management expectations for development of the Offset Zone may change based on the results of the PEA. 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. Additionally, the forward-looking statements contained herein are presented solely for the purpose of conveying management's expectations or estimates of future performance and may not be appropriate for other purposes.

All dollar amounts in Canadian currency unless otherwise stated.



NAP: An Attractive Investment



Growth-oriented precious metals producer in mining-friendly jurisdictions:



Lac des Iles, one of only two primary palladium mines in the world, to become a long life, low cost operation



Sleeping Giant gold mine offers foundation for growth



Robust pipeline of projects to increase palladium and gold production



Significant commitment to palladium and gold exploration



Experienced senior management and operating teams



Strong balance sheet, \$150 million cash and no long-term debt*



Attractive stock price relative to analyst targets and peer group multiples

* As of June 30, 2010



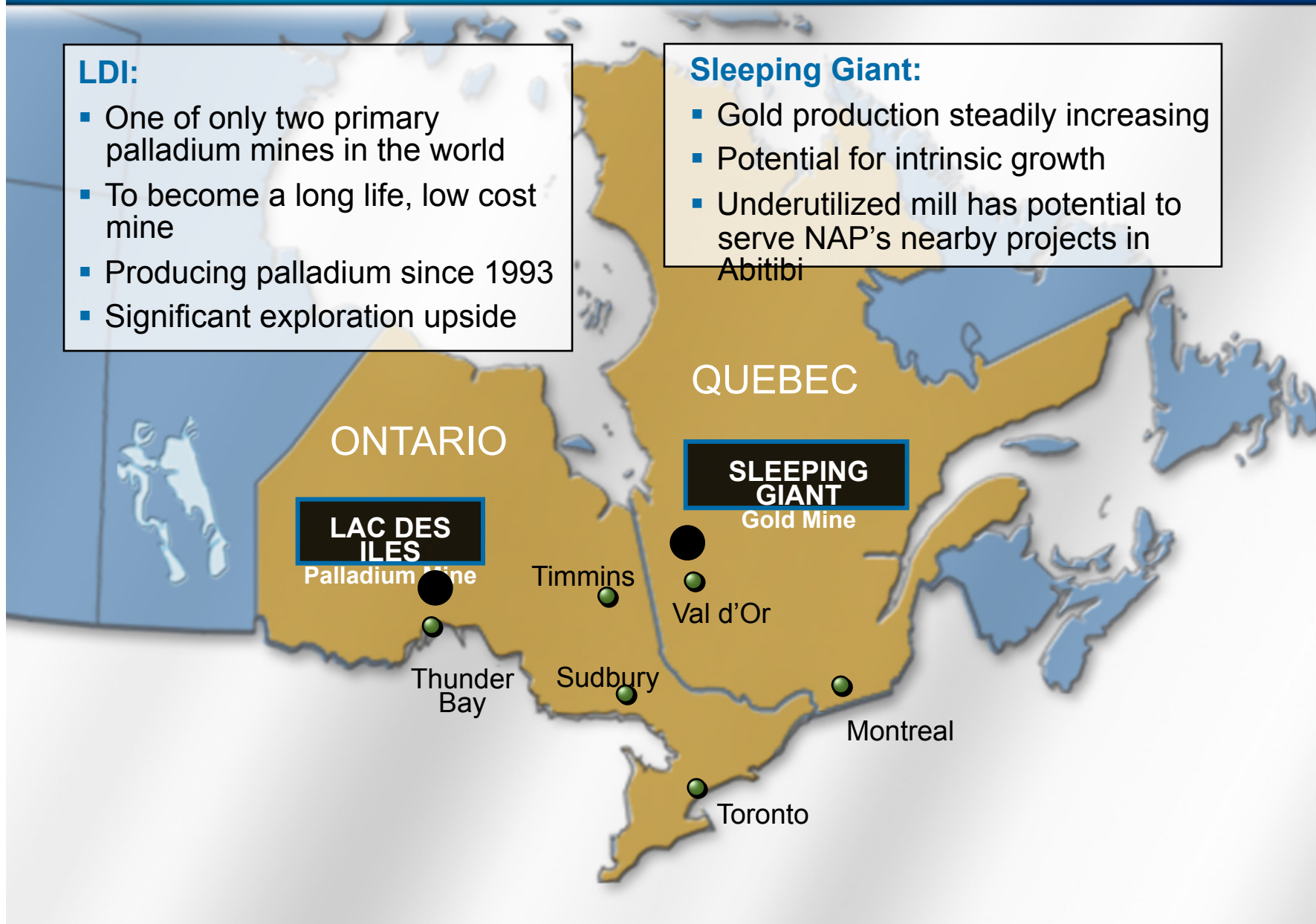
Diversified Precious Metals Producer

LDI:

- One of only two primary palladium mines in the world
- To become a long life, low cost mine
- Producing palladium since 1993
- Significant exploration upside

Sleeping Giant:

- Gold production steadily increasing
- Potential for intrinsic growth
- Underutilized mill has potential to serve NAP's nearby projects in Abitibi





Market Statistics: A Very Liquid Stock

Stock Symbols

NYSE Amex: **PAL**, TSX: **PDL**, *PDL.WT.A*,

Share Price

PDL.WT.B
US\$3.91

Shares/ Warrants Outstanding

Shares: 147 M / Warrants: 19 M

Market Capitalization

US \$575 M

6-Month Average Daily
Trading Volume
(March – August)

NYSE Amex – 1,872,179

TSX – 301,459

2008 High/Low

Share Price (PAL)

Palladium (US \$/ounce)

US \$9.28/\$0.91

US \$574/\$164

2009 High/Low

US \$3.51/\$1.06

US \$406/\$176

2010 High/Low

US \$5.26/\$2.99

US \$565/\$399

Major Shareholder

Kaiser Francis Oil Company (26%)

Analyst Coverage

Matthew O'Keefe

Cormark Securities

George Topping

Stifel Nicolaus

Chris Thompson

Haywood Securities

Michael Parkin

Bank of America Merrill Lynch

Rik Visagie

Octagon Capital

Andrew Mikitchook

GMP Securities

Daniel Greenspan

Macquarie



North American Palladium Ltd.

Palladium Market





Palladium Market: Mine Supply



Only 6.3 M Oz. Annual Production Worldwide

Source: CPM Group, June 2010
Note: Excludes secondary supply of 1.34 M oz.

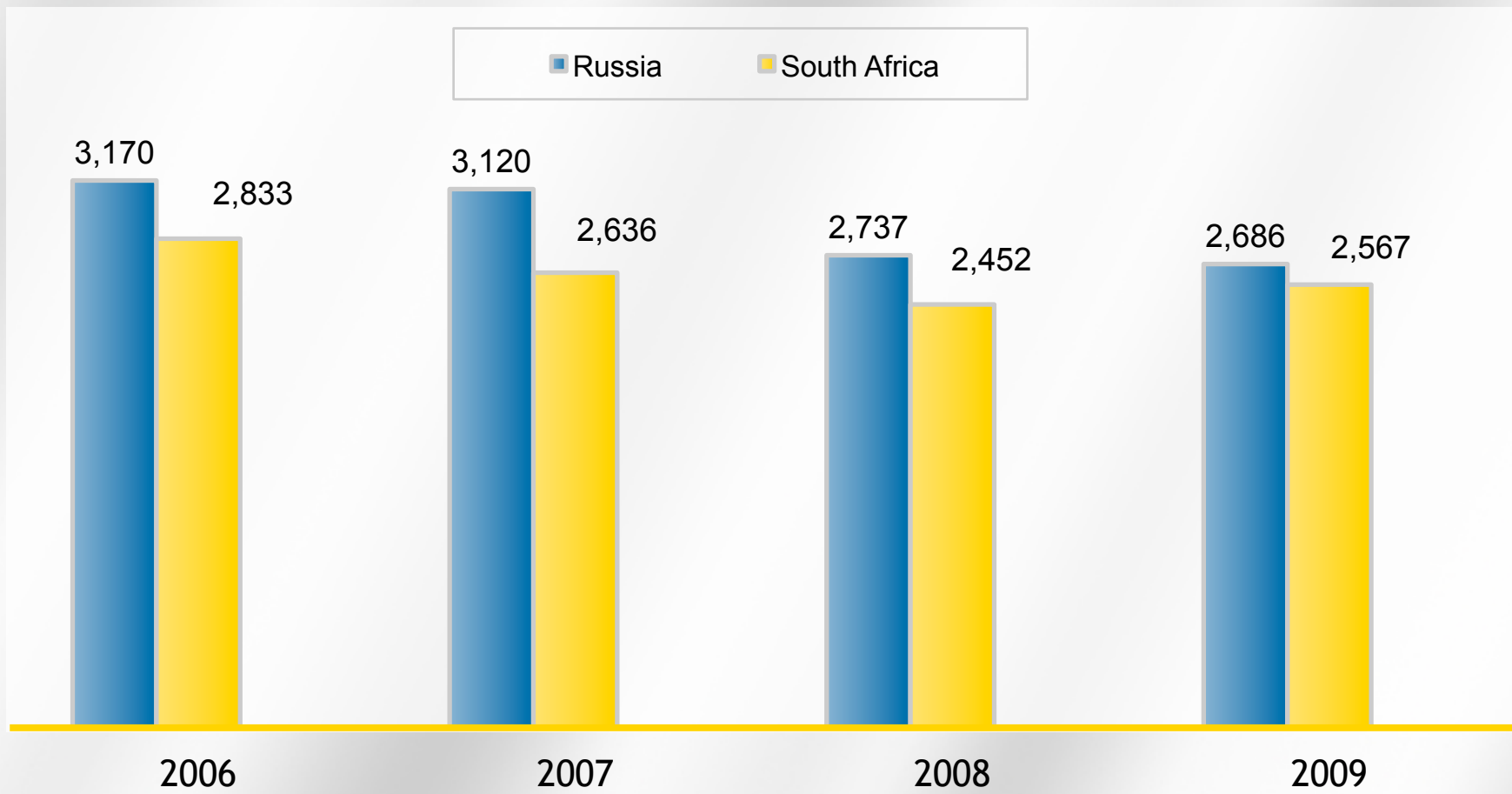
SOUTH
AFRICA
41%



Palladium Market: Supply

CONSTRAINED SUPPLY

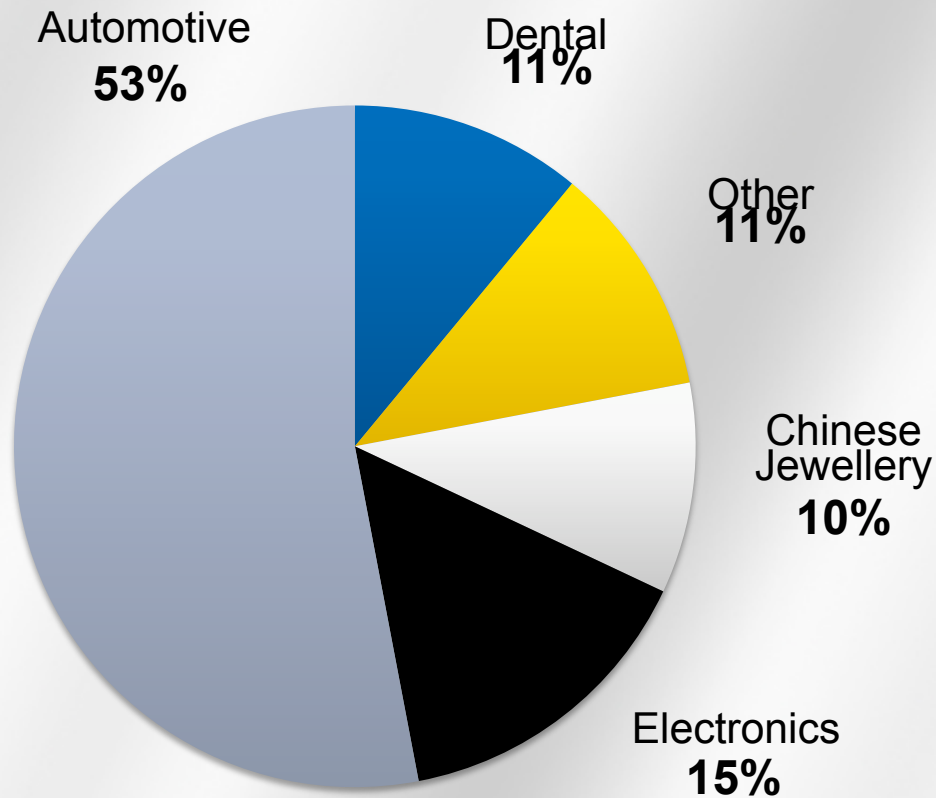
(000's ounces)



Source: CPM Group, June 2010

Palladium Market: Demand

2009 DEMAND

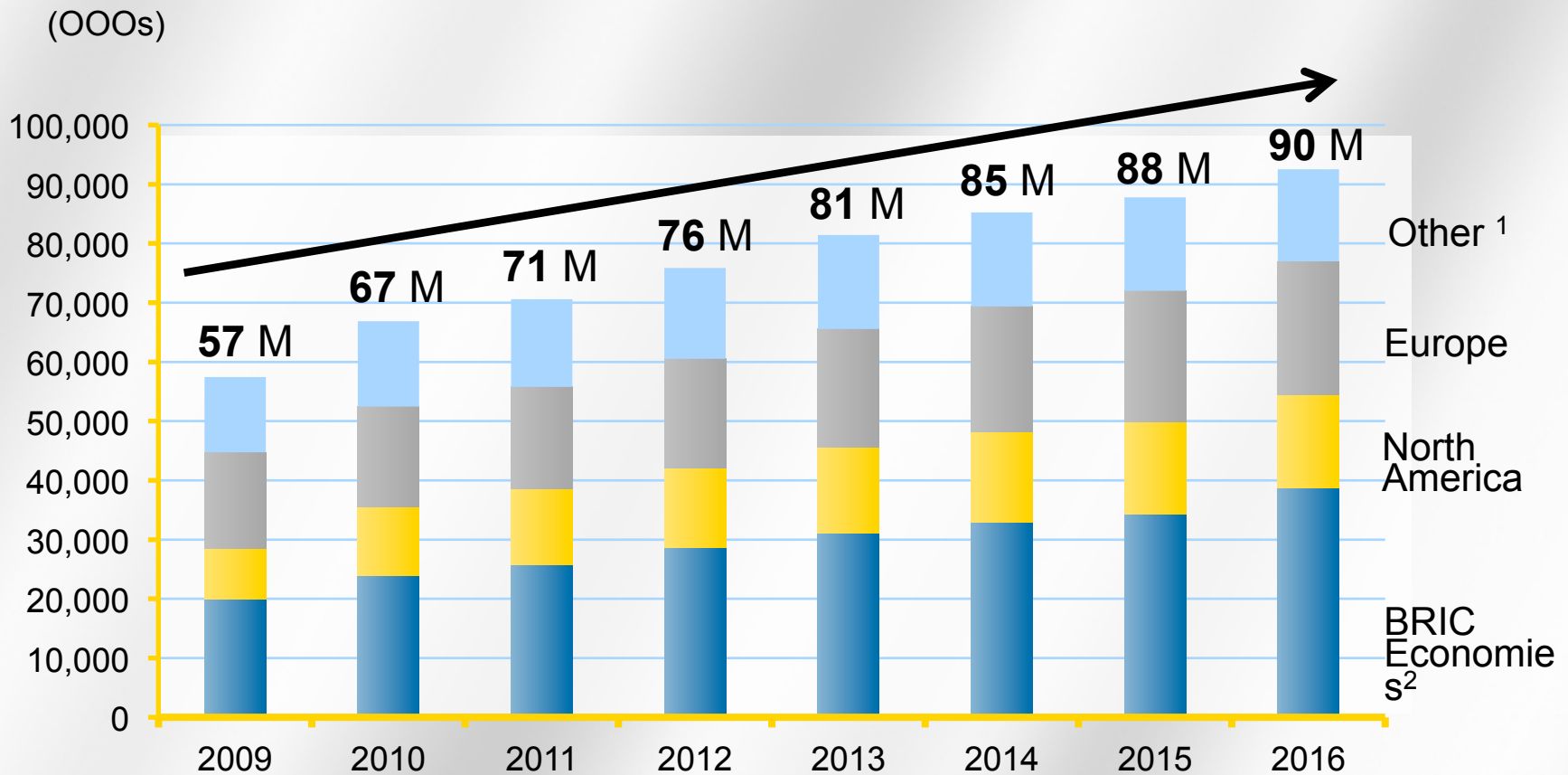


Source: CPM Group, June 2010
Notes: Other includes chemical and petroleum catalysts, jewellery (excluding China), and other minor uses of palladium



Palladium Market: Demand

Global Light Vehicle Production



Source: CSM Worldwide Inc., May 2010

1. Other includes: Japan, Korea, Middle East and Africa

2. BRIC Economies include: Greater China, South America and South Asia



Palladium Market: Demand

Adoption of Emission Control Standards

		2005	2006	2007	2008	2009	2010	2011	2012
Europe		Euro IV				Euro V			
China	Beijing	Euro III		Euro IV					
	Nationwide	Euro II		Euro III		Euro IV			
India	Select Cities	Euro III				Euro IV			
	Nationwide	Euro II				Euro III			
Russia		Euro I	Euro II		Euro III		Euro IV		
USA		Tier 2 and LEV II							
Brazil		Prconve 3		Prconve 4		Prconve 5			

Source: CPM Group

Use of Palladium in Catalytic Converters



Gasoline Engines

- Use 90% + palladium

Diesel Engines

- Historically used platinum due to technical requirements
- Now 25% palladium, with scope to increase to 50% due to advent of low sulphur diesel fuel



Hybrids & Other New Power Forms

- Neutral impact on PGM use
- Gasoline hybrids tend to use as much palladium as normal gasoline engines
- Currently account for only 1% of global cars sales¹
- Forecasted to be 14% of overall market by 2020²

Electric

- No requirement for catalytic converters
- Challenged by lack of infrastructure to recharge, high costs, long charging periods and short driving range
- Forecasted to account for only 2% of global car sales by 2020²

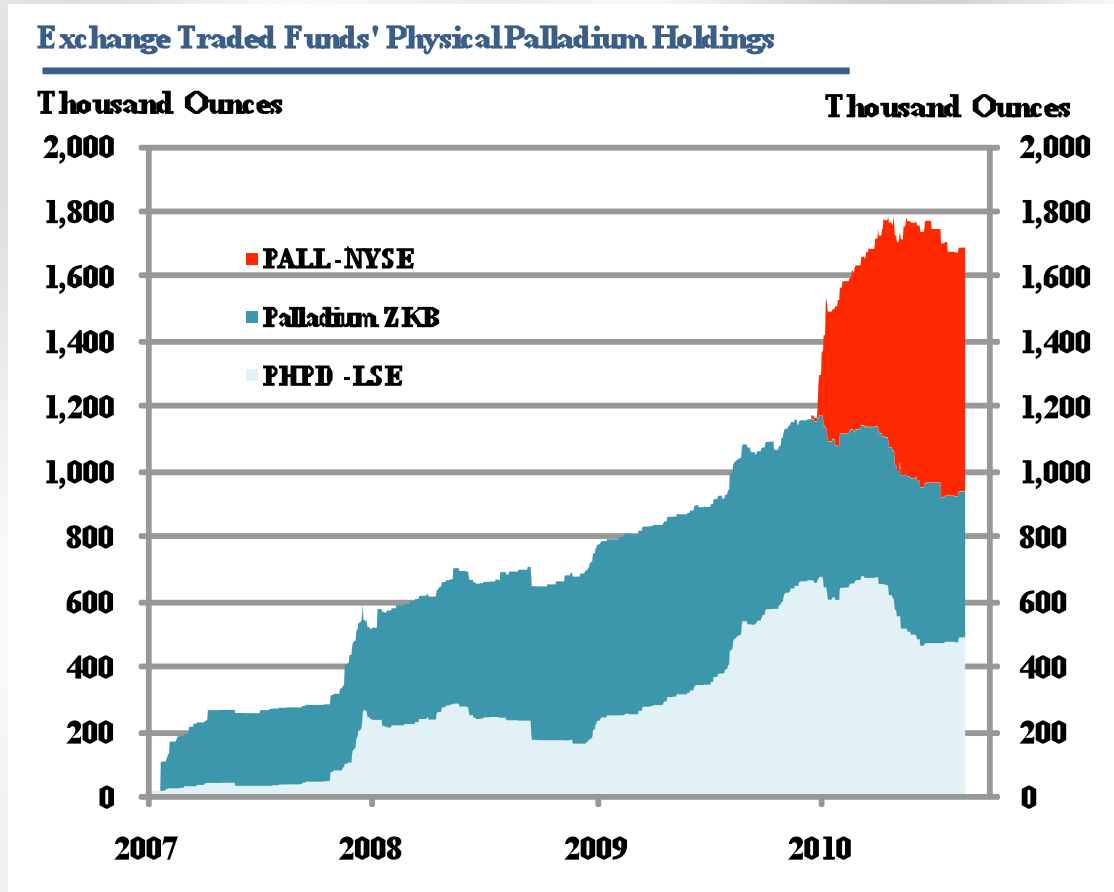
1. CPM Group, June 2010

2. Stefan Bratzel, director of the Centre of Automotive Management, and Gernot Sui Global Precious Metals "Pole Position" Report, June 2010



Palladium Market: Demand

ETFs: 1.8M ounces



SIX GROUP



London
STOCK EXCHANGE



TOKYO
STOCK EXCHANGE



NYSE

Source: CPM Group, as of Sept. 13, 2010



Palladium Market: Increasing Value

Price forecasted to exceed US\$600 beyond 2011

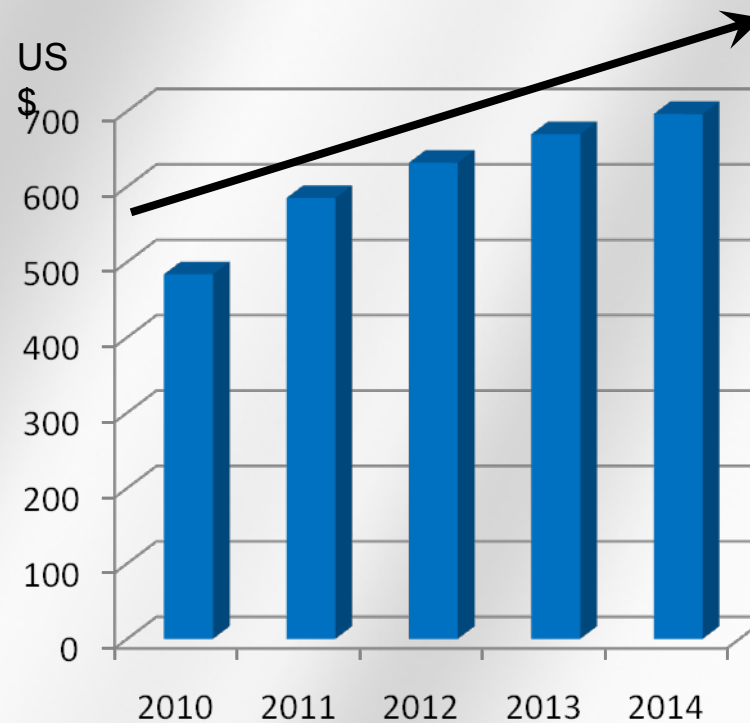
RECENT PERFORMANCE OF PALLADIUM



Historic High: US\$1,090 (2001)

Recent High: US\$565 (April 2010)

5-YEAR FORECAST – AVERAGE ANNUAL PRICE





North American Palladium Ltd.

Lac des Iles
Palladium Mine





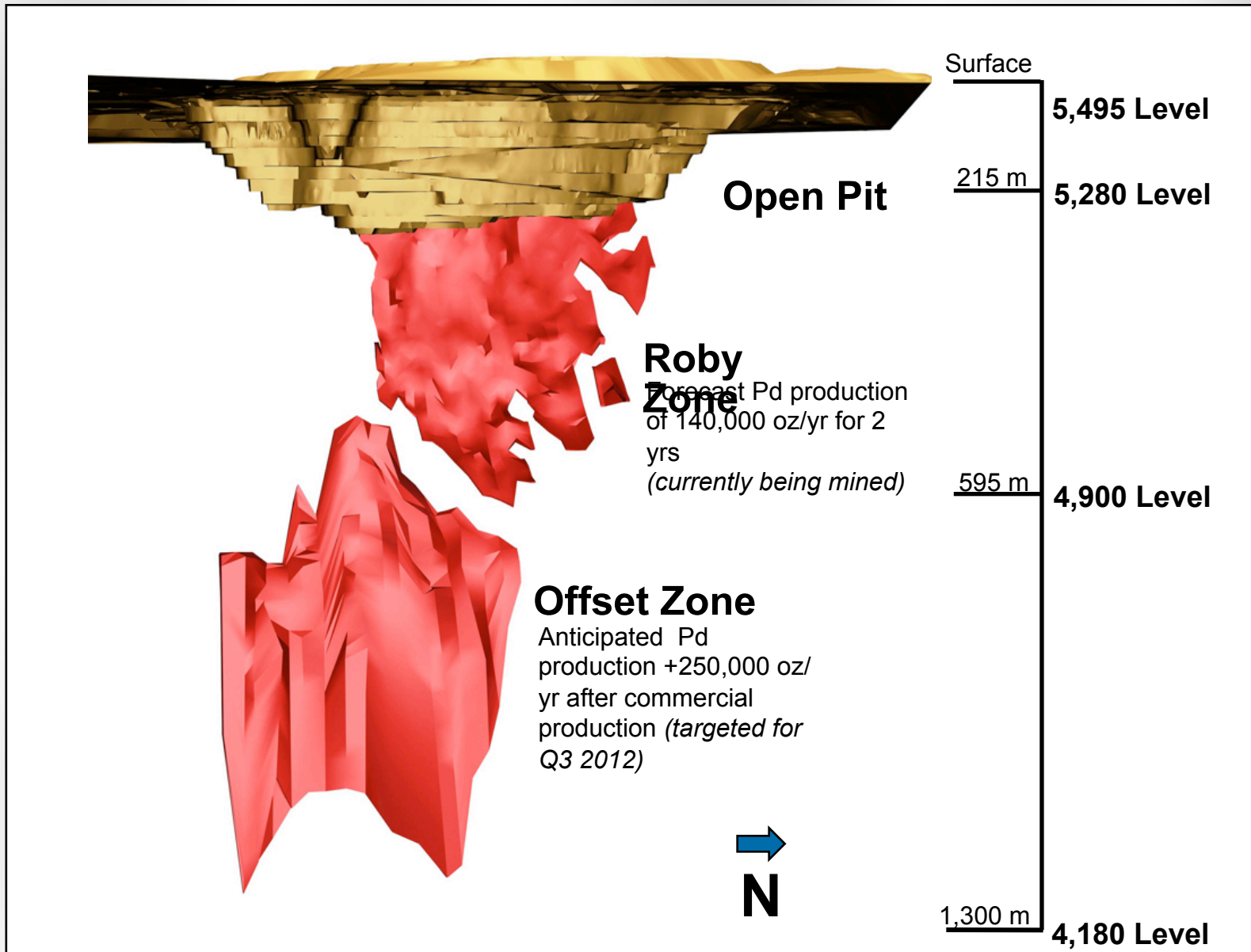
LDI: A World Class Mine



- Open pit commenced operations in 1993
- Underground mining from the Roby Zone began in 2006
- 180 employees
- 15,000 tpd mill
- \$500 M invested in infrastructure and mineral rights to date



LDI: Underground Ore Body

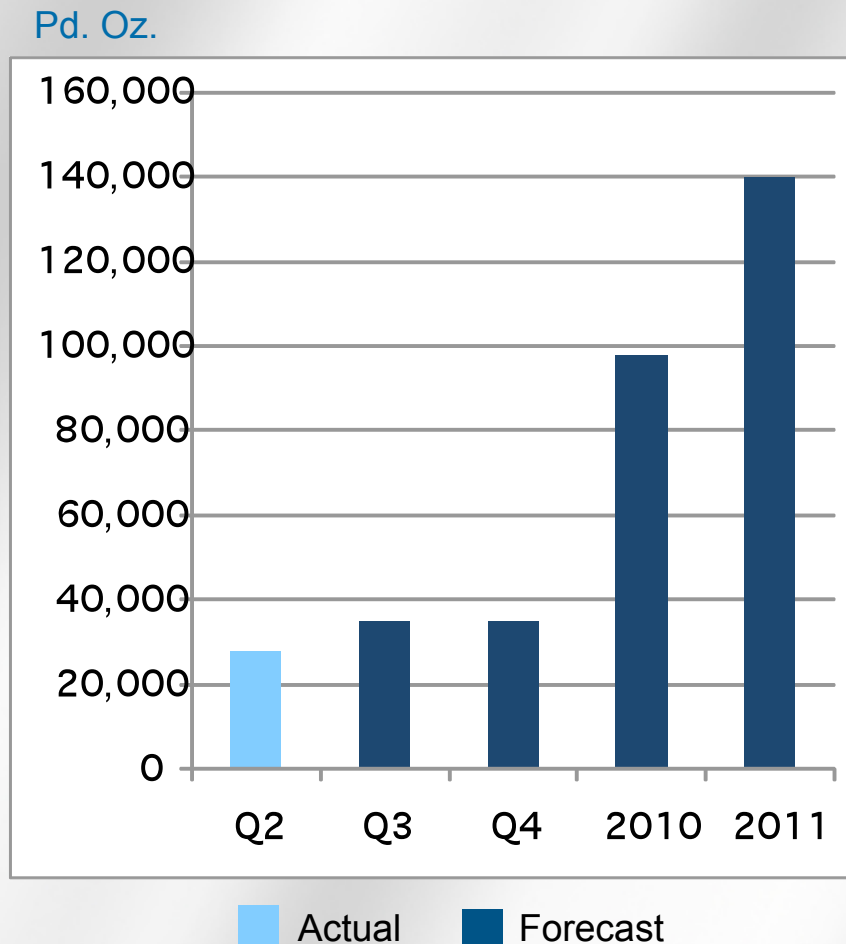




Roby Zone Operating Metrics

- Restarted April 1, 2010 – ahead of schedule & under budget
- Mined via ramp access at rate of 2,600 tpd
- Q2 2010 Production:
 - 27,839 oz of Pd
 - US\$304/oz cash costs
 - 5.78 g/t avg. Pd grade
 - 79.4% Pd recovery
- 2010 Guidance:
 - Remainder of 2010: 70,000 oz
 - Cash costs: US\$325-\$350/oz*
- 2011 Guidance:
 - Annual: 140,000 oz/yr

Roby Zone Production

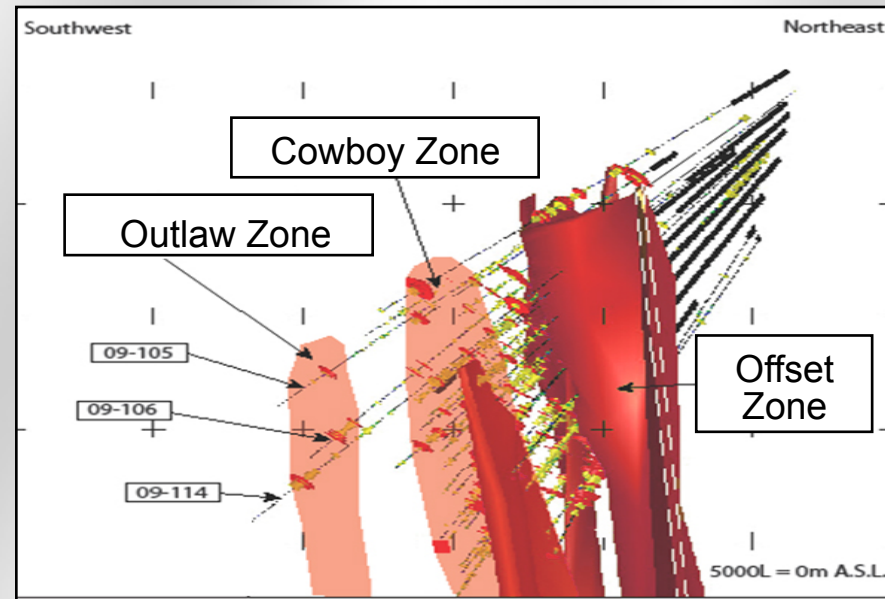


* Based on current by product metal prices and Canadian/US dollar exchange rate



Offset Zone Geology

- Offset Zone is the fault-displaced continuation of the Roby Zone
- Palladium mineral resources at May 2010¹:
 - 1.7 million ounces Indicated (at 6.29 g/t)
 - 0.6 million ounces Inferred (at 5.70 g/t)
- Offset Zone is open in all directions
- Two new zones discovered in 2009 – Cowboy and Outlaw (*not included in May 2010 Resource Estimate*)
- 2010 drilling extended upper part of Offset Zone (*not included in May 2010 Resource Estimate*)



Continued exploration has potential to increase resources & extend mine life

1. See Cautionary Note to U.S. Investors in Appendix



Offset Zone Scoping Study Economics

Robust economics:

Palladium Price US\$/oz	IRR (%) (pre-tax)	NPV at 0% discount (C\$ Millions)	NPV at 5% discount (C\$ Millions)
\$400	11.7	176	77
\$450 (Base Case)	16.7	256	138
\$500	21.6	337	198
\$588 (CPM Forecast*)	29.8	\$479	305

Significant exploration potential:

- +2 yrs. to mine life (at similar grades, base case) yields:
 - 19.4% IRR
 - \$225M NPV at a 5% discount rate

Note: CPM forecasts palladium to average US\$588/oz (in constant dollars) over the next 8 years

Scoping Study estimated cost accuracy: +/- 15%

Base Case Assumptions:

Palladium Price: US \$450/oz

Exchange Rate: C\$1.05: US\$1.00

Byproduct Metal Prices (US\$):
\$1,533 /oz Pt, \$1,200/oz Au, \$3.00/lb Cu, \$8.80/lb Ni

LOM: 8 yrs.

Payback Period: 46 months

VIDEO





Offset Zone Production

Scoping Study Estimated Production Schedule

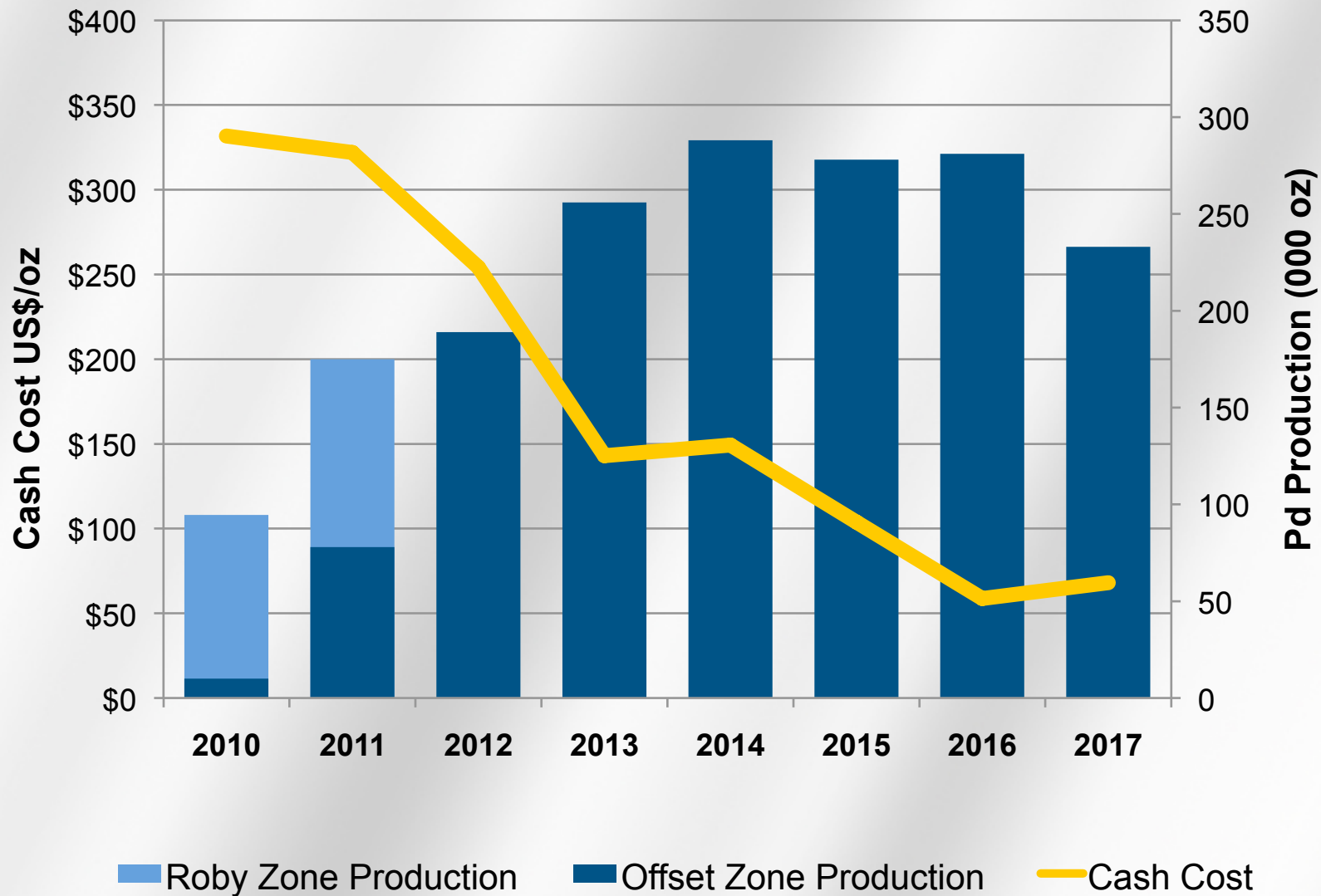
Production	Year	Tonnes Milled (000's)	Avg. Diluted Grade (g/t Pd)	Pd Oz Production (000's)	Cash Cost (US \$/oz)
Pre-Commercial	2010	68	6.2	10	403
	2011	485	6.6	78	250
3,500 tpd	2012 ¹	1,264	6.1	189	254
	2013	1,728	6.0	256	143
5,500 tpd	2014 ²	2,000	5.9	288	149
	2015	2,000	5.7	278	104
	2016	2,000	5.7	281	59
	2017	1,771	5.3	232	68
	LOM	11,300	5.8	1,613	132

1. Commercial production from the shaft at 3,500 tpd is expected in Q3 2012.

2. Production from the shaft at 5,500 tpd is expected in Q4 2014.



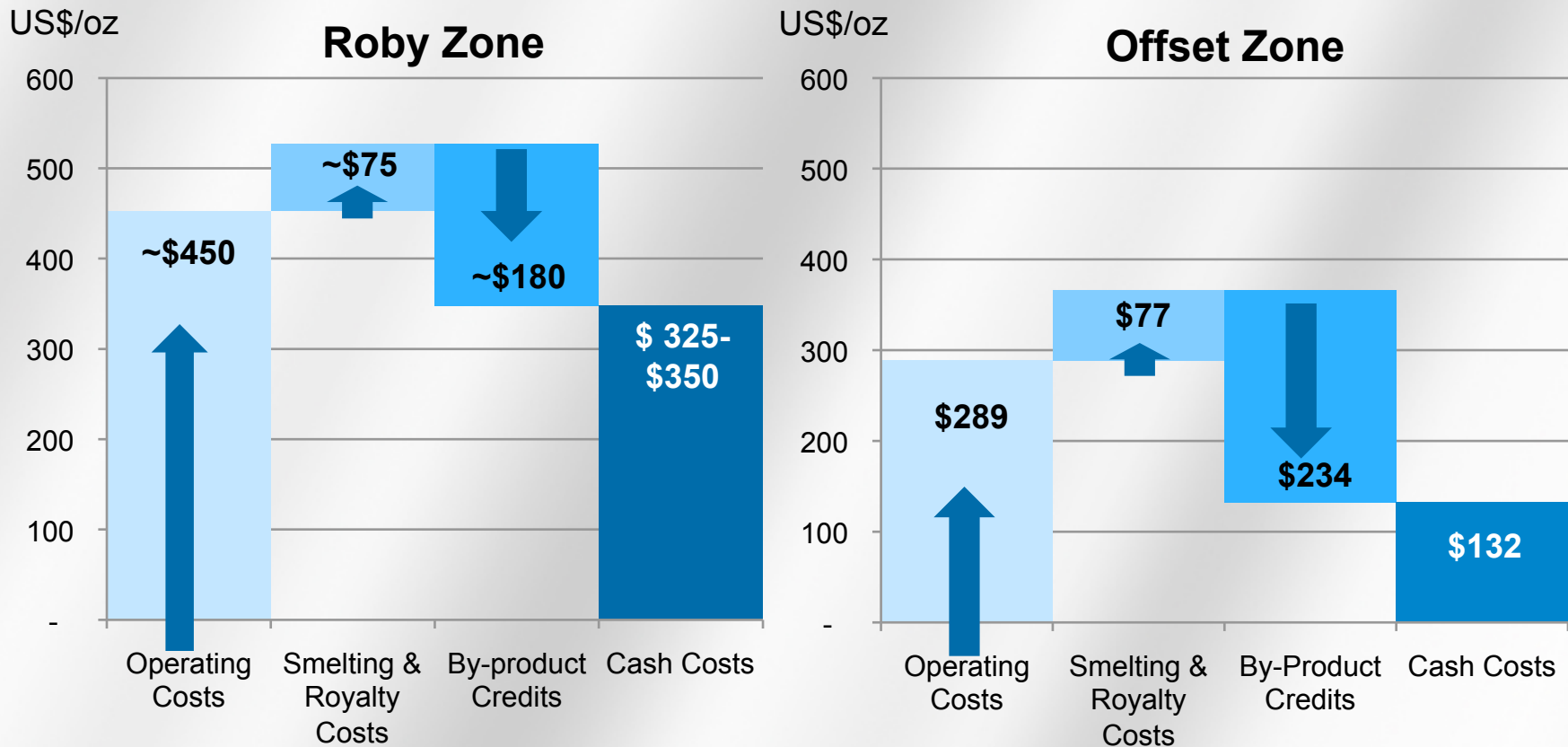
LDI: Long Life, Low Cost Production





LDI: Reducing Cash Costs

LOM Cash Costs Per Ounce of Palladium Produced



Offset Zone Estimated Operating Costs: includes mining, milling & processing, G&A and opex contingencies.



Offset Zone Capital Expenditures

- Pre-commercial production capital expenditures estimated at \$204.1 M (*including \$24.6 M contingency*):
 - 2010: \$35.4 M
 - 2011: \$116.7 M
 - 2012 (Q1-Q3): \$52 M
- Capital expenditures for development post commercial production are estimated at \$71.9 M (*including \$7.2 M contingency*):
 - 2012 (Q4): \$11.6 M
 - 2013: \$30.1 M
 - 2014: \$30.2 M

Capital Expenditures	Pre-Commercial Production (2010 – Q3 2012)
Definition Drilling	\$7.0 M
Waste Development	\$42.7 M
Surface, Shaft, and Service Facilities	\$99.2 M
U/G Infrastructure Development & Construction	\$3.4 M
Mining Equipment	\$14.2 M
Surface Equipment	\$0.2 M
Engineering	\$2.5 M
Project Management	\$10.3 M
Subtotal	\$179.5 M
<i>Contingency (13.7%)</i>	<i>\$24.6 M</i>
Total	\$204.1 M



Low Execution Risk

- Over 17 years of mining & milling experience at LDI
- Established fully permitted and under utilized facilities
- Strong management & operating team in place with a solid track record in underground development
- Initial development already in progress:
 - Roby Zone ramp expansion to 4,700 level
 - Service cage & production hoist were recently purchased
 - Raiseboring scheduled to start in Nov. 2010
- Brownfield expansion vs. greenfield project
 - No long lead items (*e.g. hoist already purchased*)
 - No capex currency risk as all expenditures are in C\$



Offset Zone Scoping Study Summary



Long life, low cost palladium production

- Commercial production from shaft targeted for Q3 2012
- Production of +250,000 oz/yr after commercial production
- LOM cash costs of US\$132/oz



Robust project economics*

- 16.7% IRR (pre-tax)
- 16.0% IRR (post-tax)
- \$256 million undiscounted cash flow (pre-tax)
- \$138 million NPV (5%, pre-tax)
- 46 month payback period



Significant exploration upside

- Continued exploration can further increase production and extend mine life
- Potential to increase resources at Offset Zone, which is open in all directions
- Potential from parallel Cowboy & Outlaw zones



Low execution risk

- +17 years of mining & milling experience at LDI
- Established infrastructure with fully permitted, under utilized facilities
- Brownfield expansion vs. greenfield project



Well funded to pursue development

- \$150 million in cash & no long-term debt

* Base case assuming palladium price of US\$450/oz and a Canadian to U.S. dollar exchange rate of 1.05.



North American Palladium Ltd.

Sleeping Giant Gold Mine



Sleeping Giant: A Foundation for Growth



- Acquired in May 2009 for \$32 M
- Previously operated by IAMGOLD
- First step in NAP's evolution into a diversified precious metals producer
- Reduces risk associated with a single mine operation
- Commercial production declared January 1, 2010

Sleeping Giant: A Foundation for Growth



RESOURCES*

Measured & Indicated
Average Grade

158,000 oz Au
10.6 g/t Au

Inferred
Average Grade

101,000 oz Au
12.9 g/t Au

Contained Mineralization

214,000 oz Au

HISTORICAL PRODUCTION

Avg. Annual Production by
Previous Operator
(5 years)

58,000 oz Au

Cumulative Production
(over 20 years)

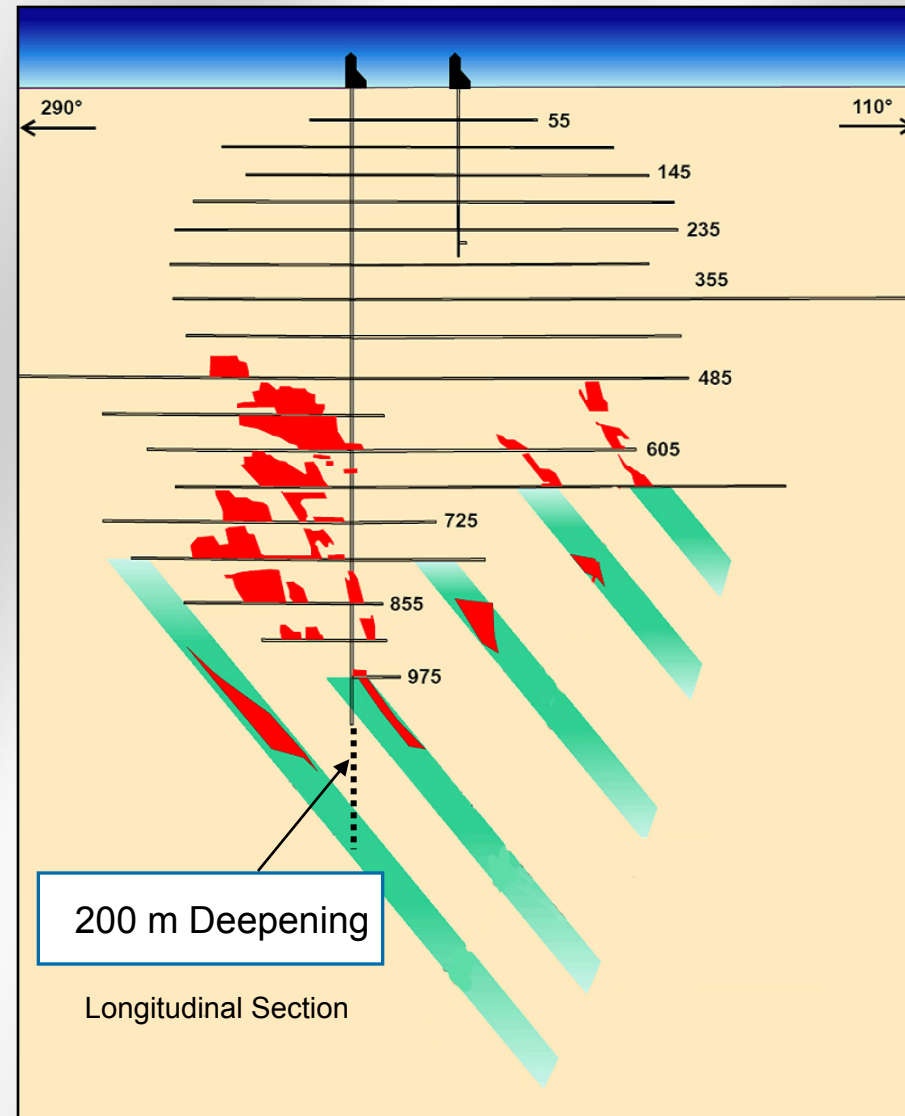
1 M oz Au

* See Cautionary Note to U.S. Investors in Appendix

Sleeping Giant: A Foundation for Growth



- Currently deepening the Sleeping Giant mine shaft by 200 metres to gain access to 3 new mining levels – *target completion December, 2010*
- 2010 exploration program:
 - 30,000 metres of underground extensional drilling
 - Cost: \$2.1 M
 - Goal to define and extend the zones within the current mine and at depth





Sleeping Giant: Operating Metrics

Production Steadily Increasing

- Q1 Production:
 - 4,863 oz Au
- Q2 2010 Production:
 - 4,237 oz of Au
 - US\$1,545*/oz cash costs
 - 5.71 g/t avg. gold grade
 - 95.4% Au recovery
- Ongoing measures to mitigate ramp-up issues:
 - Tighter drilling
 - Focus on shrinkage and long-hole stopes vs. room and pillar stopes
 - New higher grade zones to be developed



* See cautionary note to Investors in MD&A



Sleeping Giant: Underutilized Mill

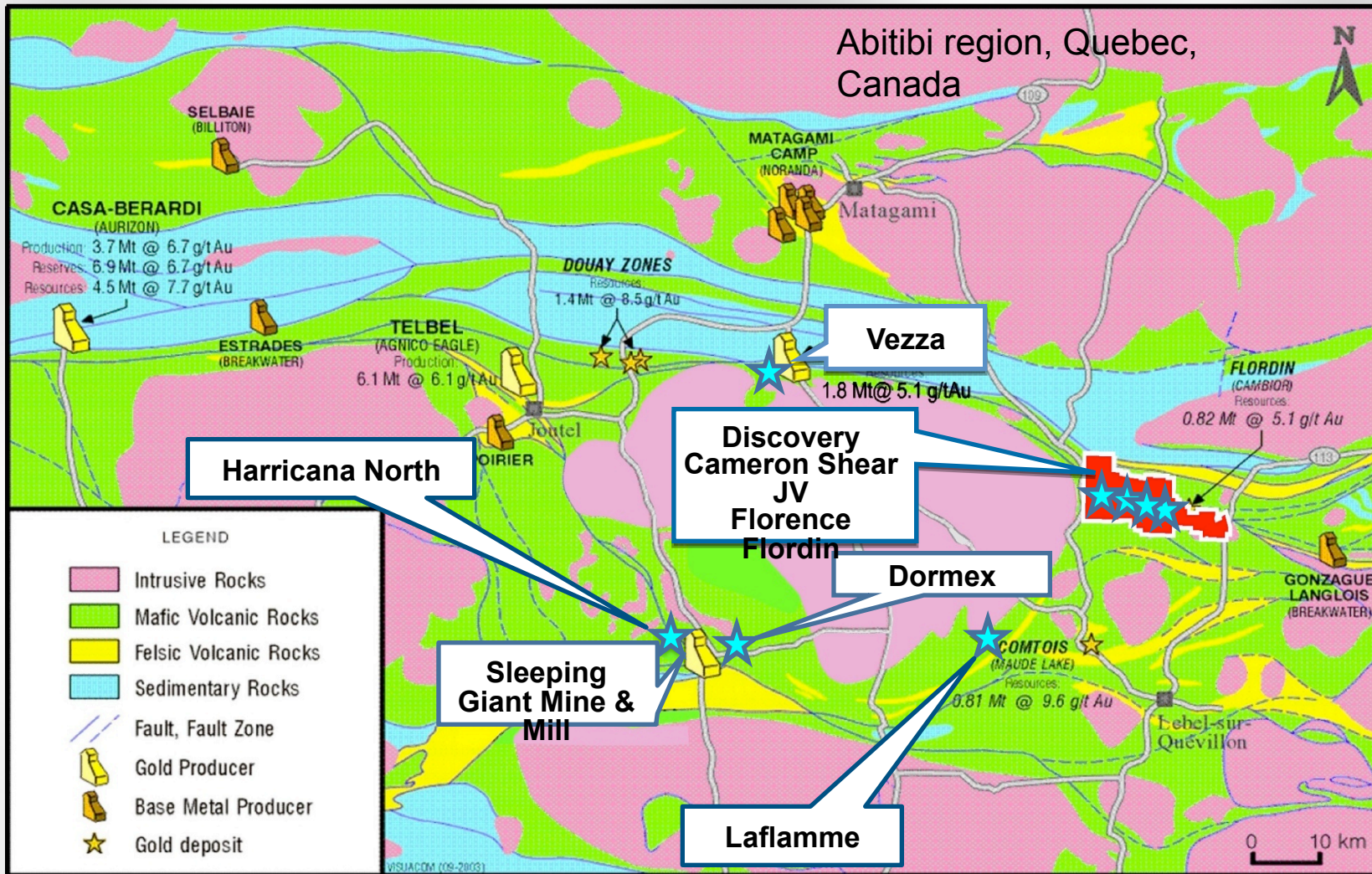
- 900 tpd mill has excess capacity
- Potential to serve NAP's other gold projects in Abitibi region
- Can be easily expanded
- Mill expansion study underway





Gold Division: 2010 Exploration

70 Km Land Package Surrounding Sleeping Giant Mill





Gold Assets – Organic Growth

Project	Resources*	2010 Exploration Program		Trucking Distance to Mill	Ag Production Potential
		Metres	Cost		
Veza	<u>Measured & Indicated:</u> 288,000 oz Au <u>Inferred:</u> 121,000 oz Au			70 Km	40-50,000 oz (over 7-9 yrs)
Discovery	<u>Measured & Indicated:</u> 237,000 oz Au <u>Inferred:</u> 294,000 oz Au	4,000 m (surface)	\$0.5 M	80 Km	44,000 oz (over 4 yrs)
Flordin	<u>Measured & Indicated:</u> 92,000 oz Au <u>Inferred:</u> 169,000 oz Au	10,000 m (infill drilling)	\$1.6 M	70 km	TBD (potential open pit)

Potential to produce in the range of 125,000 oz per year from expanded Sleeping Giant mill



*See Cautionary Note to U.S. Investors Concerning Estimates of Measured, Indicated and Inferred Resources. Report sources can be found in the appendix.



Attractive Stock Price



Analyst Coverage:

Matthew O'Keefe
Cormark Securities

George Topping
Stifel Nicolaus

Chris Thompson
Haywood Securities

Michael Parkin
Bank of America
Merrill Lynch

Rik Visagie
Octagon Capital

Andrew Mikitchook
GMP Securities

Daniel Greenspan
Macquarie



North American Palladium Ltd.

FINANCIAL
STRENGTH
H

STRONG
MANAGEMENT
TEAM

PIPELINE
OF
PROJECTS
TO
INCREASE
PRODUCTION

INVESTING
IN FUTURE
GROWTH



Shareholder Information

North American Palladium's vision is to build a mid-tier diversified precious metals company operating in mining friendly jurisdictions. Highly leveraged to palladium, the Company is also building its exposure to gold, and focused on acquiring high quality near-term producing gold assets. NAP's experienced management and technical teams have a significant commitment to exploration and are dedicated to building shareholder value.

Corporate office:

130 Adelaide Street West, Suite 2116
Toronto, Ontario M5H 3P5

Stock Symbols:

NYSE Amex – PAL
TSX – PDL, PDL.WT.A, PDL.WT.B

Website:

www.nap.com

Investor Relations:

Camilla Bartosiewicz
Manager, Investor Relations & Corporate
Communications
camilla@nap.com
416-360-7971 ext. 226