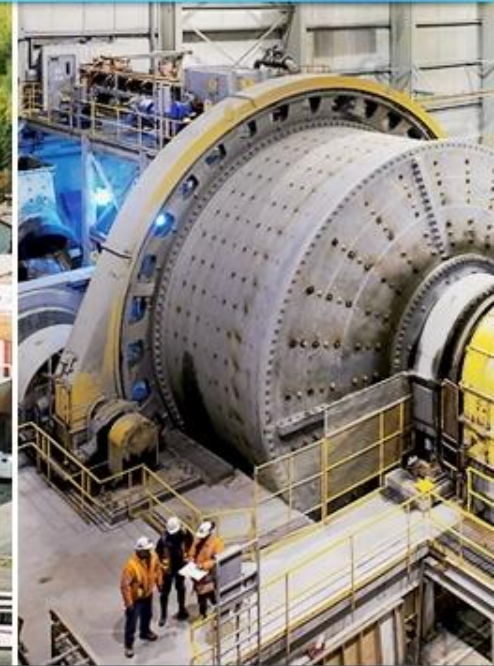




# North American Palladium Ltd.



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

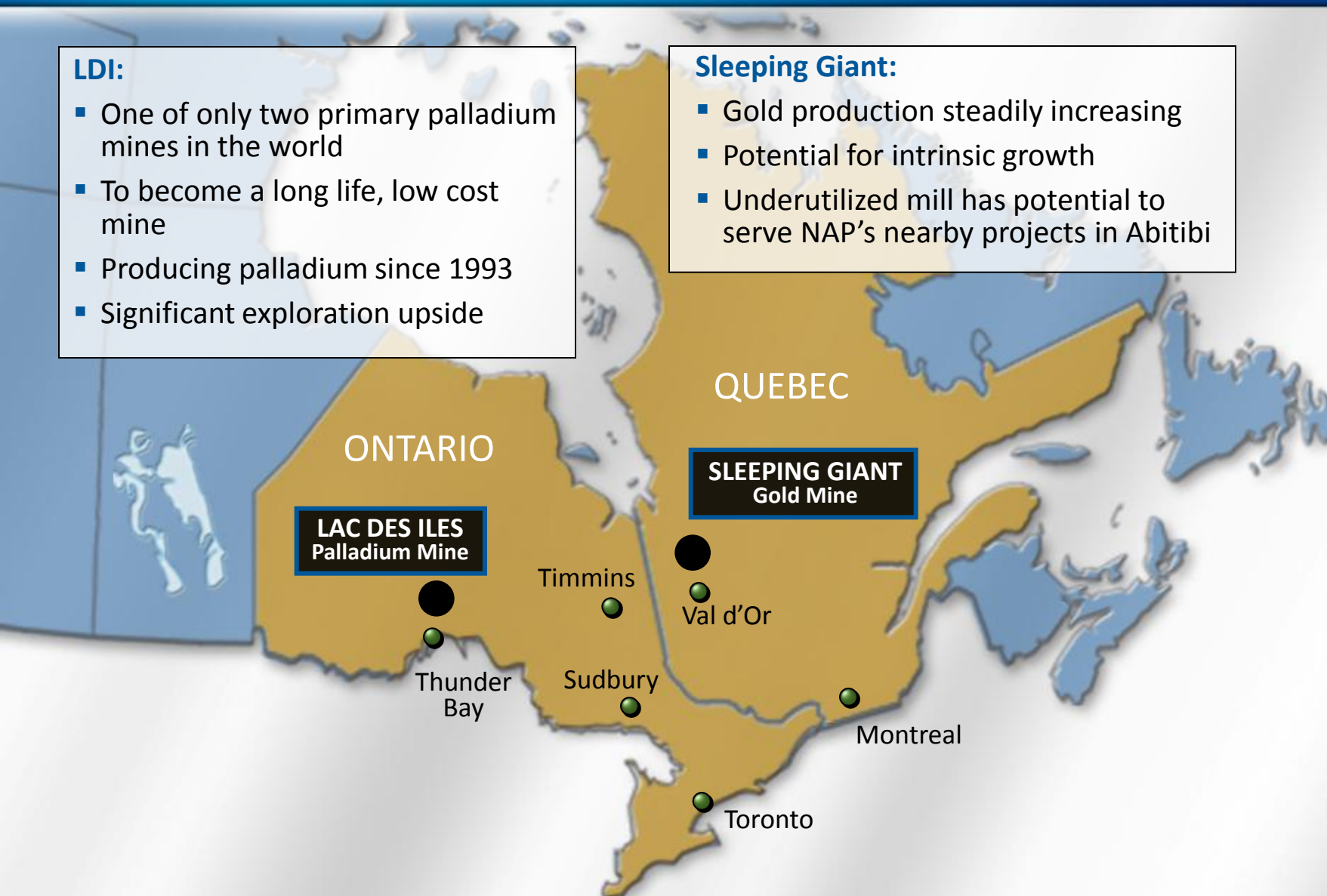


## LDI:

- 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, PDL.WT.B

Share Price

US\$3.46

Shares/ Warrants Outstanding

Shares: 147 M / Warrants: 19 M

Market Capitalization

US \$509 M

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

NYSE Amex – 1,872,179

TSX – 301,459

2008 High/Low

US \$9.28/\$0.91

US \$582/\$164

2009 High/Low

US \$3.68/\$1.03

US \$406/\$171

2010 High/Low

US \$5.26/\$3.02

US \$564/\$413

Major Shareholder

Kaiser Francis Oil Company (26%)

Analyst Coverage

Matthew O'Keefe  
George Topping  
Chris Thompson  
Michael Parkin  
Rik Visagie  
Andrew Mikitchook  
Daniel Greenspan

Cormark Securities  
Stifel Nicolaus  
Haywood Securities  
Bank of America Merrill Lynch  
Octagon Capital  
GMP Securities  
Macquarie



North American Palladium Ltd.

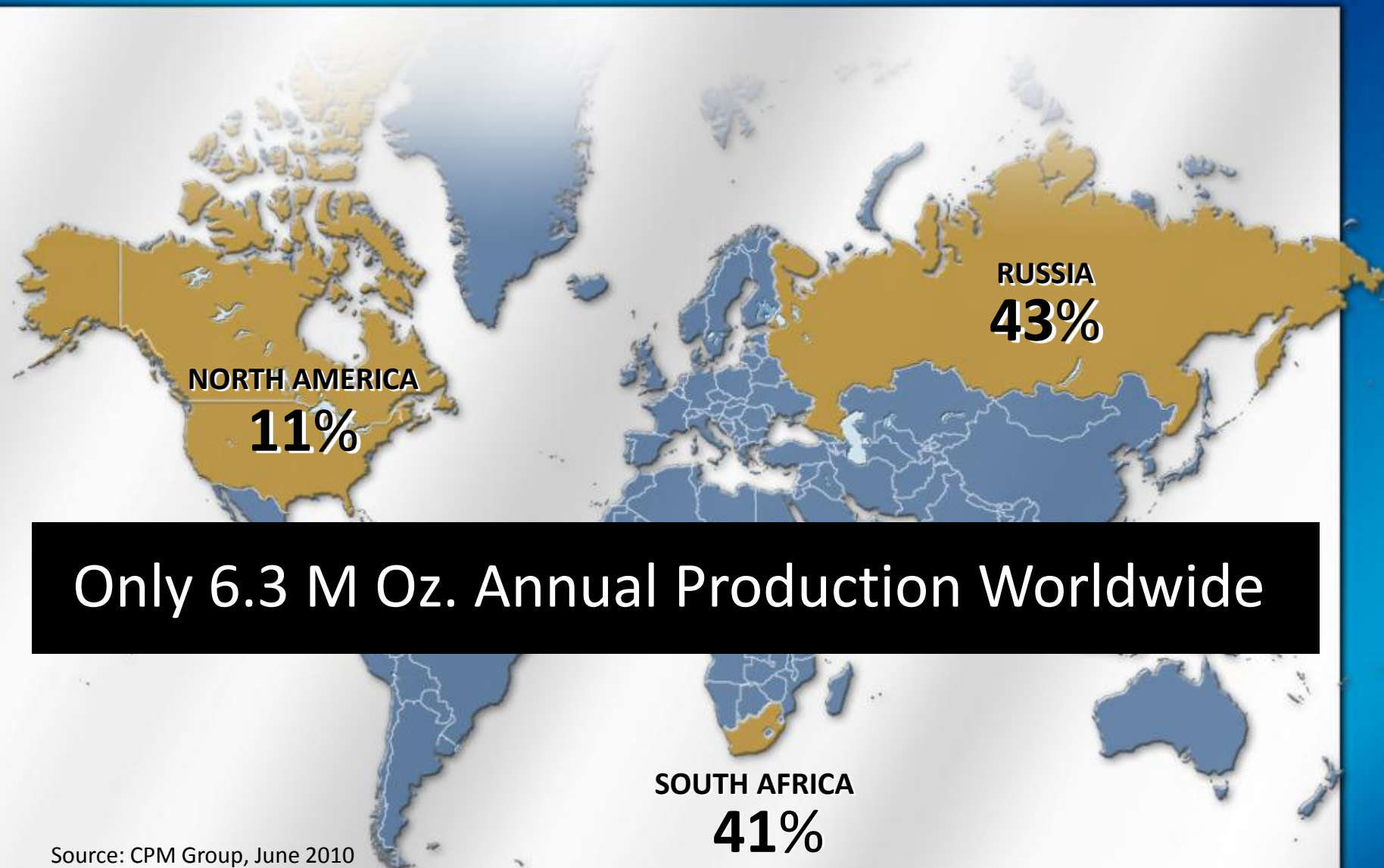
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# Palladium Market

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# Palladium Market: Mine Supply



Only 6.3 M Oz. Annual Production Worldwide

Source: CPM Group, June 2010

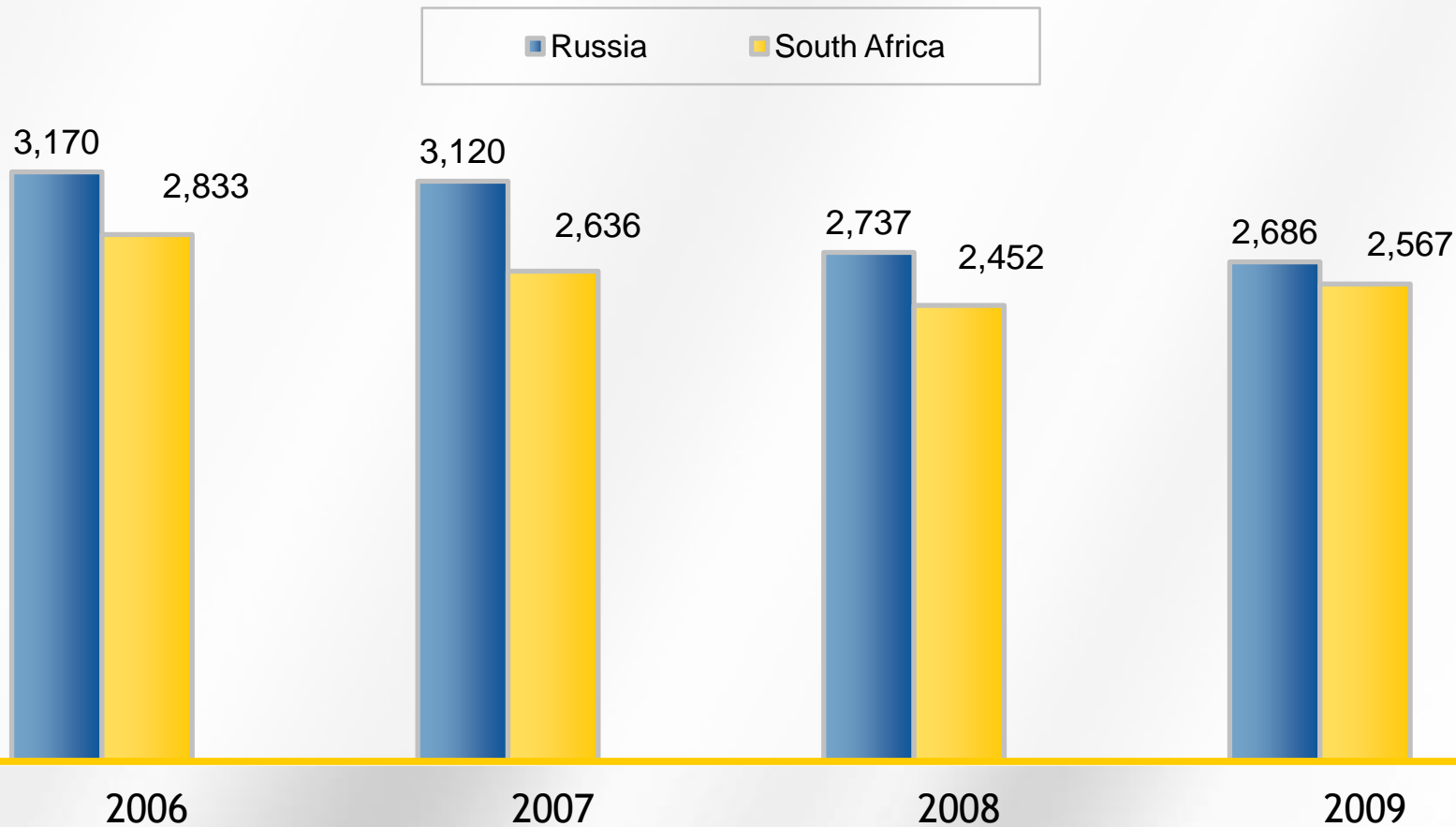
Note: Excludes secondary supply of 1.34 M oz.

# Palladium Market: Supply



## CONSTRAINED SUPPLY

(000's ounces)



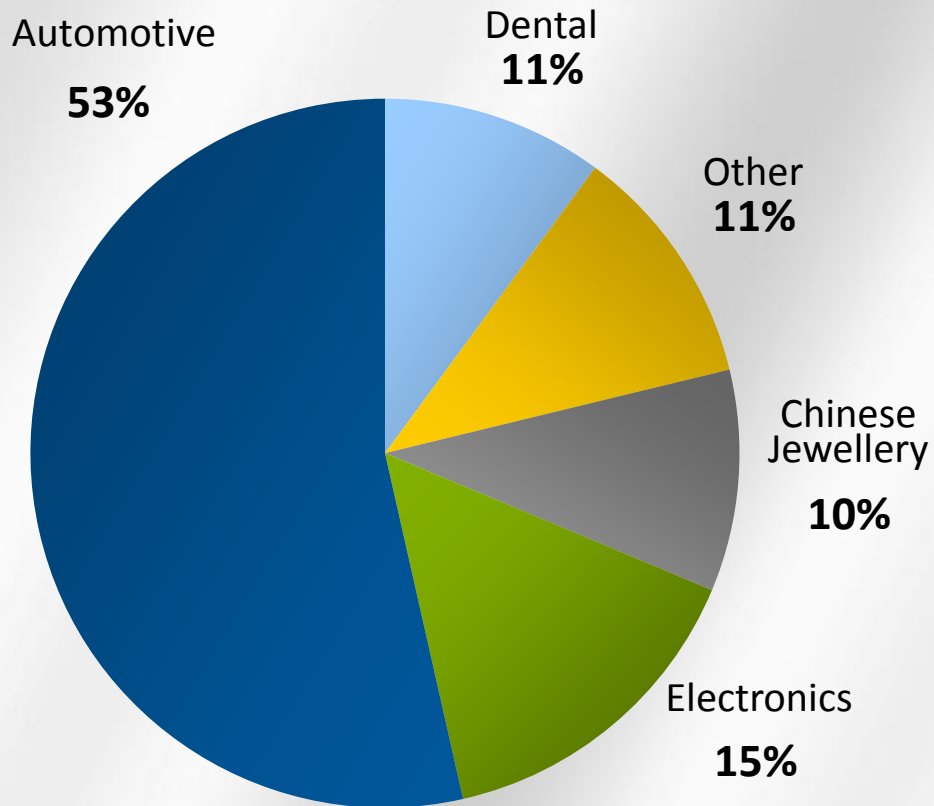
Source: CPM Group, June 2010



# Palladium Market: Demand



## 2009 DEMAND



Source: CPM Group, June 2010

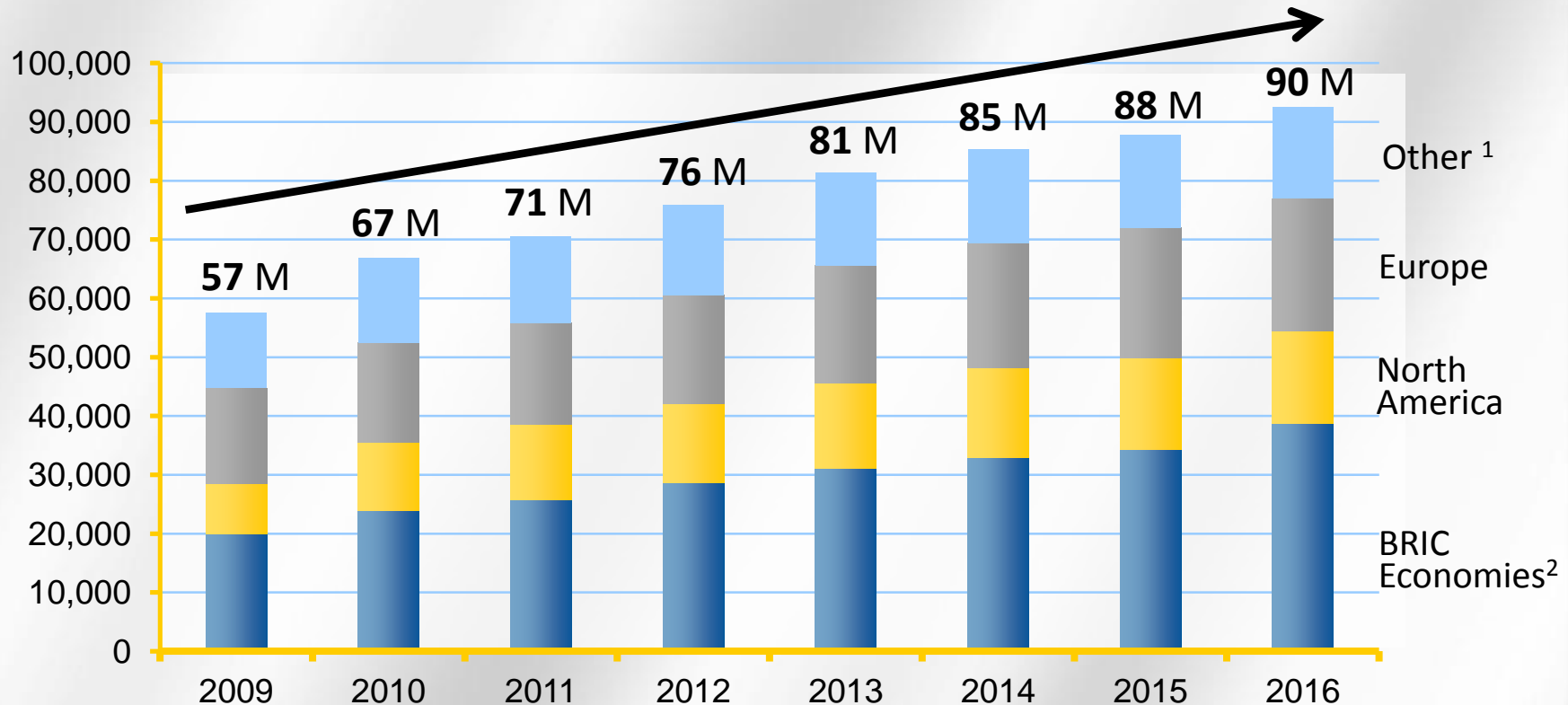
Notes: Other includes chemical and petroleum catalysts, jewellery (excluding China), and other minor uses of palladium

# Palladium Market: Demand



## Global Light Vehicle Production

(000s)



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			

# 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 sales<sup>1</sup>
- Forecasted to be 14% of overall market by 2020<sup>2</sup>

## 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 2020<sup>2</sup>

1. CPM Group, June 2010

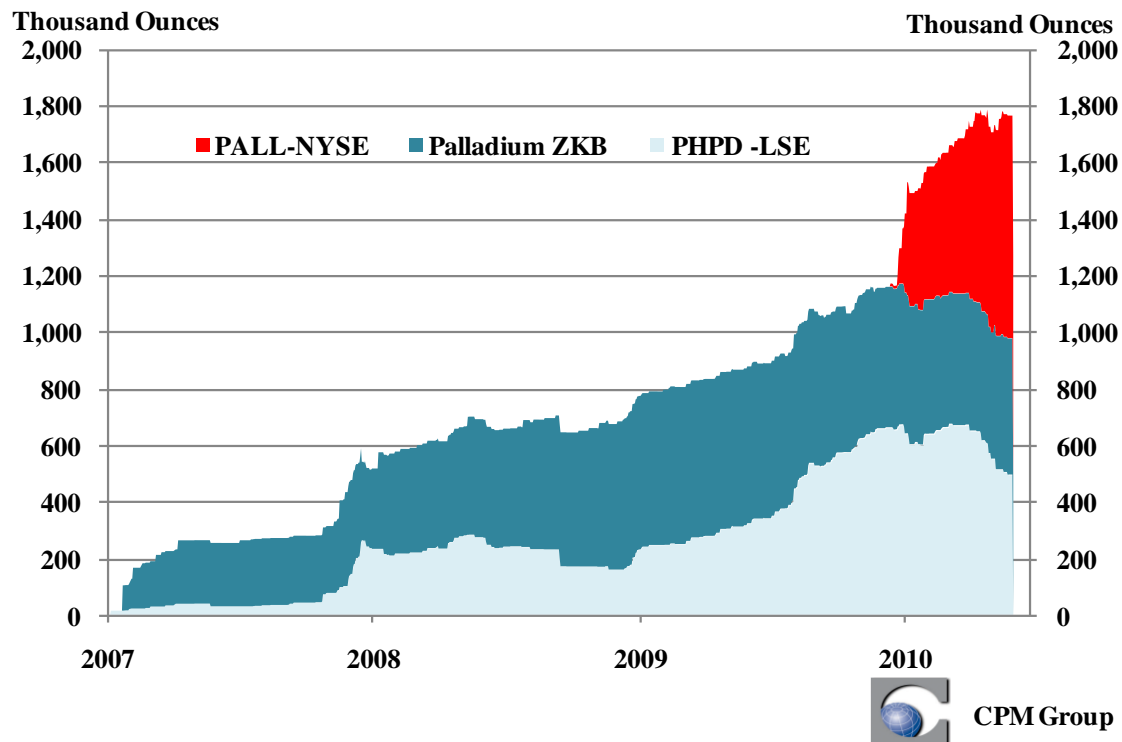
2. Stefan Bratzel, director of the Centre of Automotive Management in Germany; as reported in Mitsui Global Precious Metals "Pole Position" Report, June 2010



# Palladium Market: Demand

ETFs: 1.8M ounces

Exchange Traded Funds' Physical Palladium Holdings



**FIX** GROUP



*London*  
**STOCK EXCHANGE**



**TOKYO**  
STOCK EXCHANGE



**NYSE**

# Palladium Market: Increasing Value



Price forecasted to exceed US\$600 beyond 2011

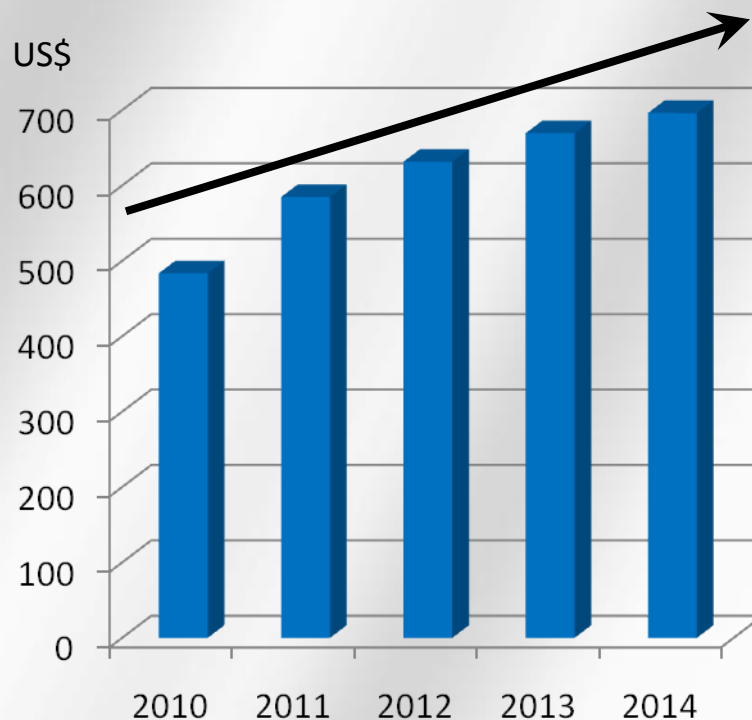
RECENT PERFORMANCE OF PALLADIUM



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

**Recent High:** US\$565 (April 2010)

5-YEAR FORECAST – AVERAGE ANNUAL PRICE





North American Palladium Ltd.

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# Lac des Iles Palladium Mine

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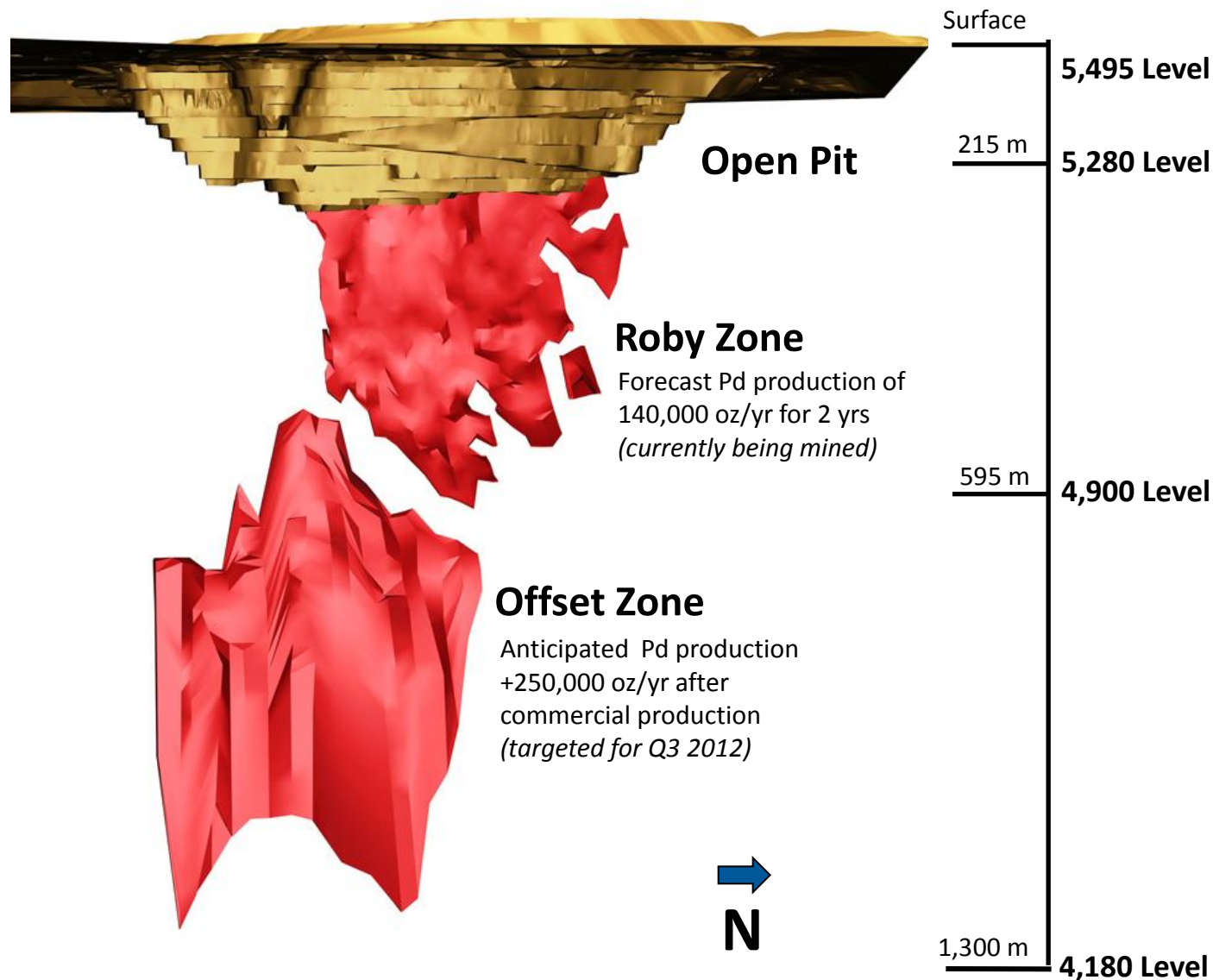
# LDI: A World Class Mine



- 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



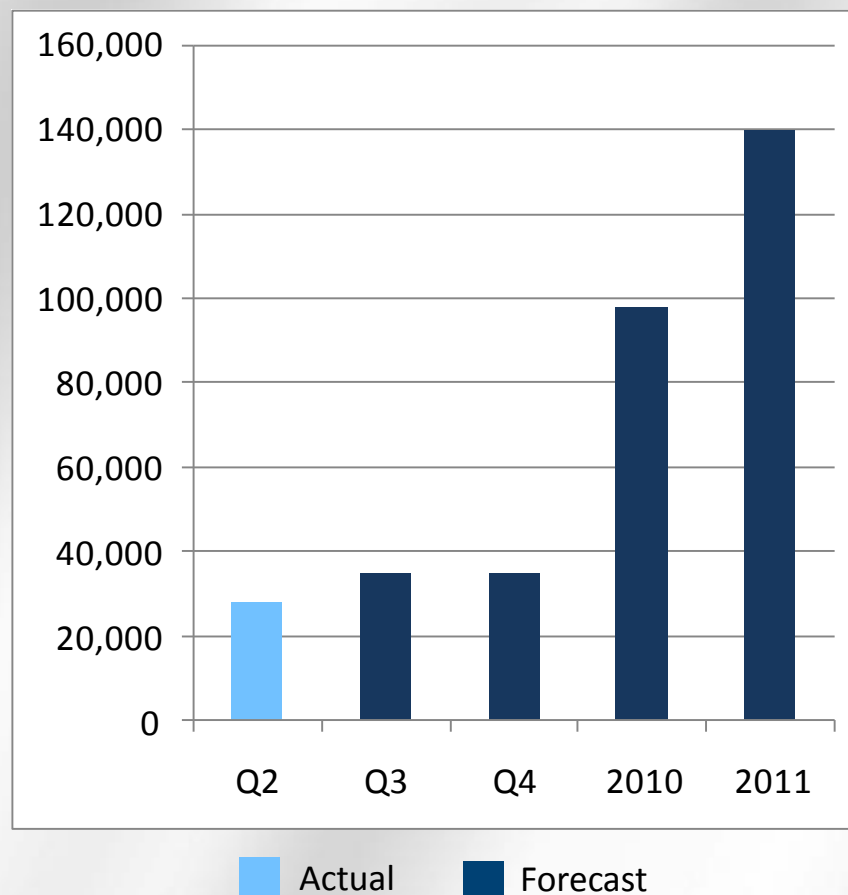
# Roby Zone Operating Metrics



- 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

Pd. Oz.

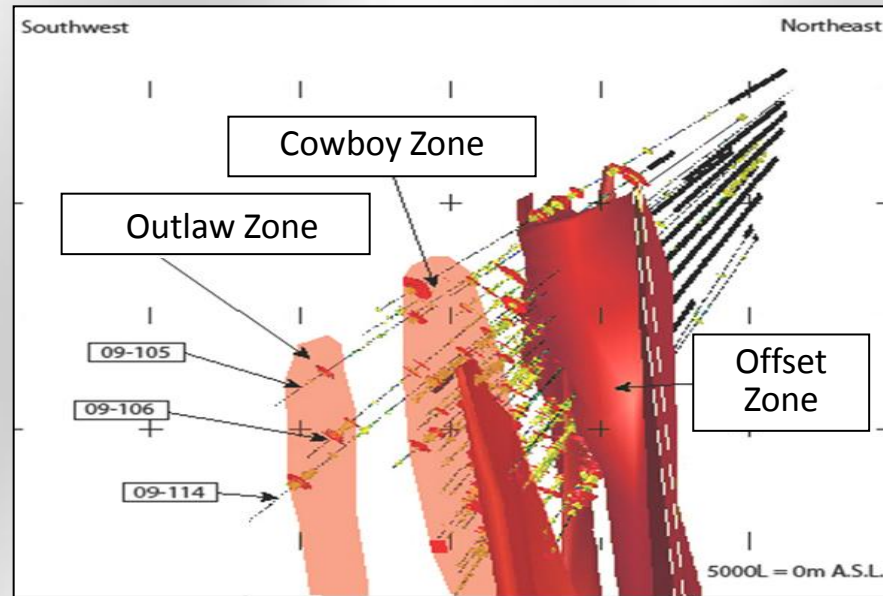


\* Based on current by product metal prices and Canadian/US dollar exchange rate

# Offset Zone Geology



- Offset Zone is the fault-displaced continuation of the Roby Zone
- Palladium mineral resources at May 2010<sup>1</sup>:
  - 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**

# 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
<b>\$450</b> (Base Case)	<b>16.7</b>	<b>256</b>	<b>138</b>
\$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.

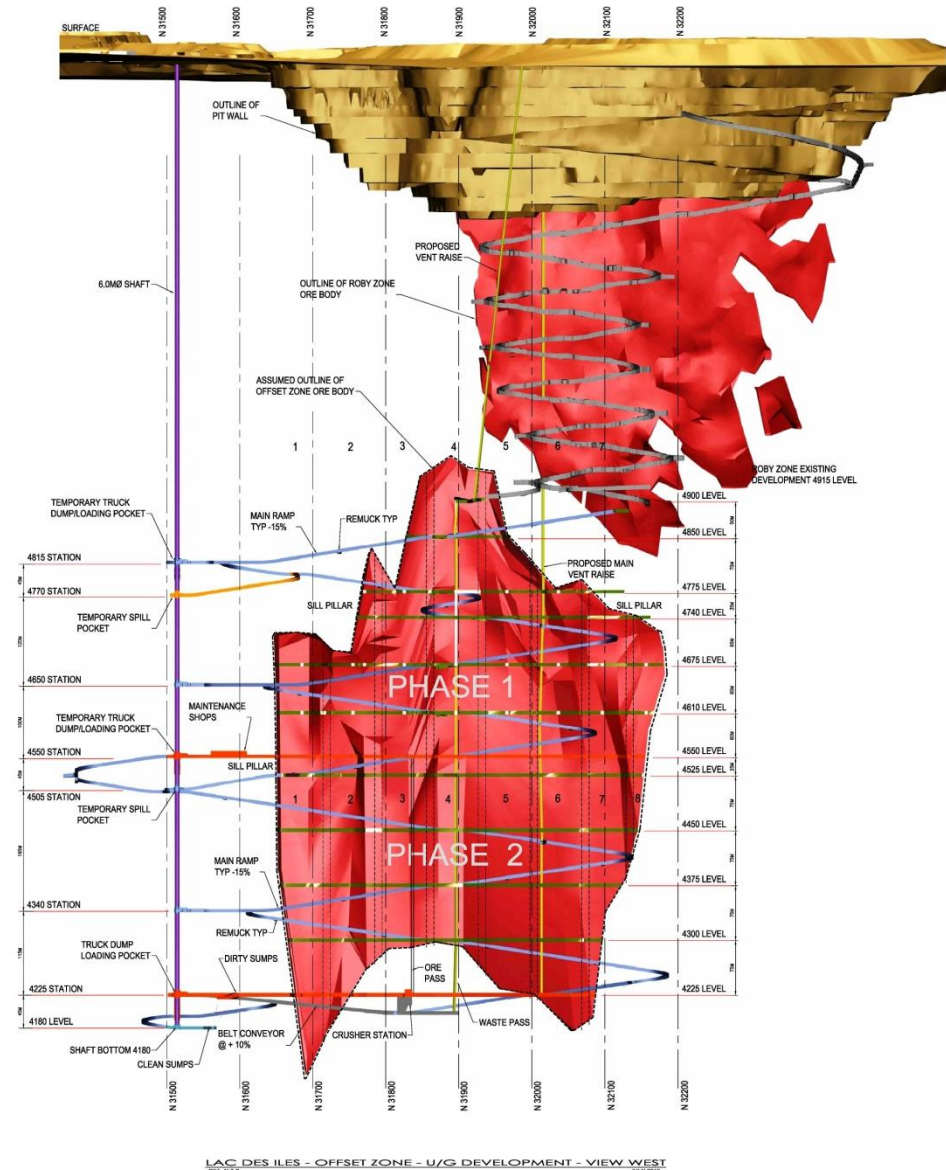
Payback Period:  
46 months



# Offset Zone Mining Plan

## NAP to become a very low cost palladium producer

- Super Shrinkage mining method:
  - Similar to Agnico-Eagle's Goldex mine
  - Incorporates a footwall ramp, a production shaft & ventilation raise
  - Blast large mining blocks 60m x 75m with 10m rib pillars
  - Due to the rock conditions, no backfilling is anticipated
  - Highly mechanized operation
- Plan to raisebore a shaft to surface from the 4,815 level to commence commercial production
- Subsequently sink the shaft to bottom (4,180 level)



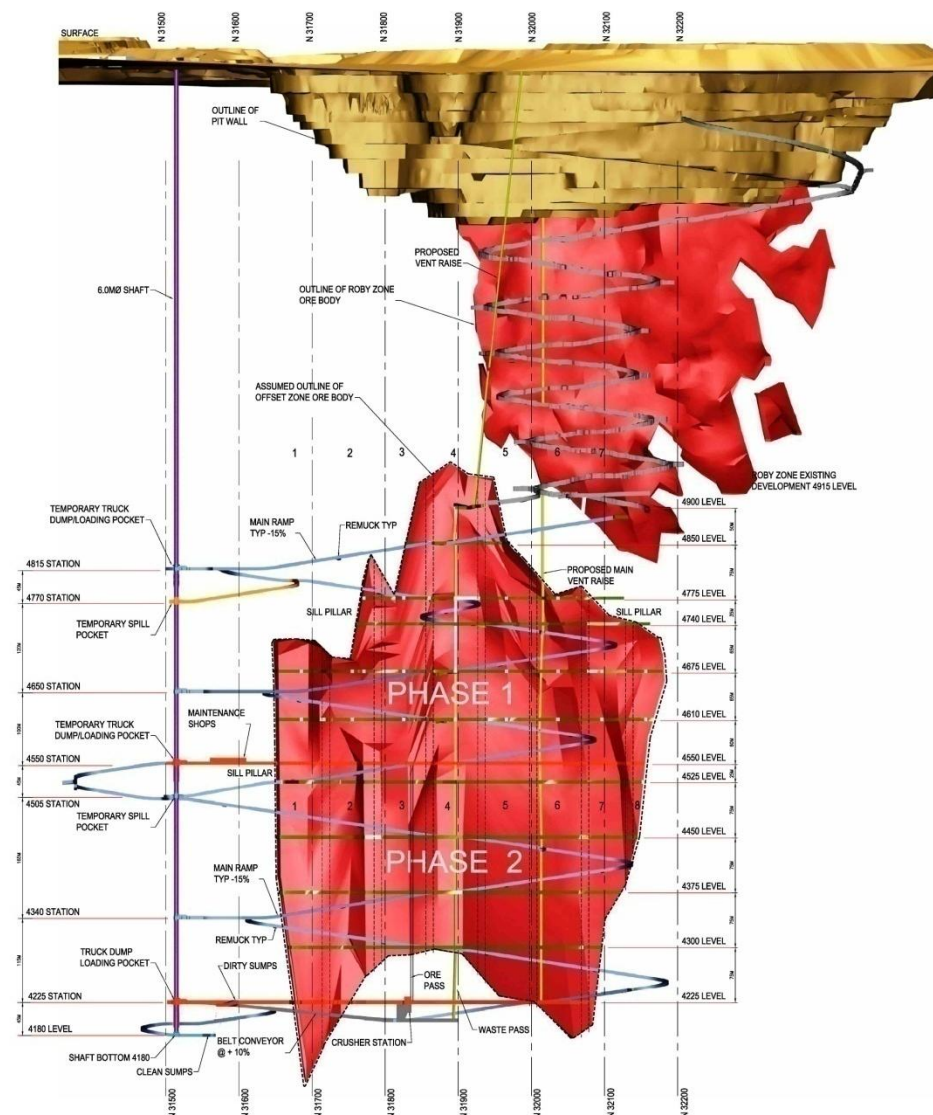
# Offset Zone Mining Plan



- Target mining rate:
  - 3,500 tpd (Q3 2012)
  - 5,500 tpd (Q4 2014)
- Anticipating 10% mining dilution (at 3.0 g/t Pd) and 90% mining recovery
- Assumes 82% Pd mill recovery

Mine Operating Costs	C\$/t
Mining	\$25.53
Processing	\$12.41
General & Administration	\$3.33
Contingencies	\$2.00
<b>Total</b>	<b>\$43.27</b>

- LOM cash costs US\$132/oz Pd



# Offset Zone Production

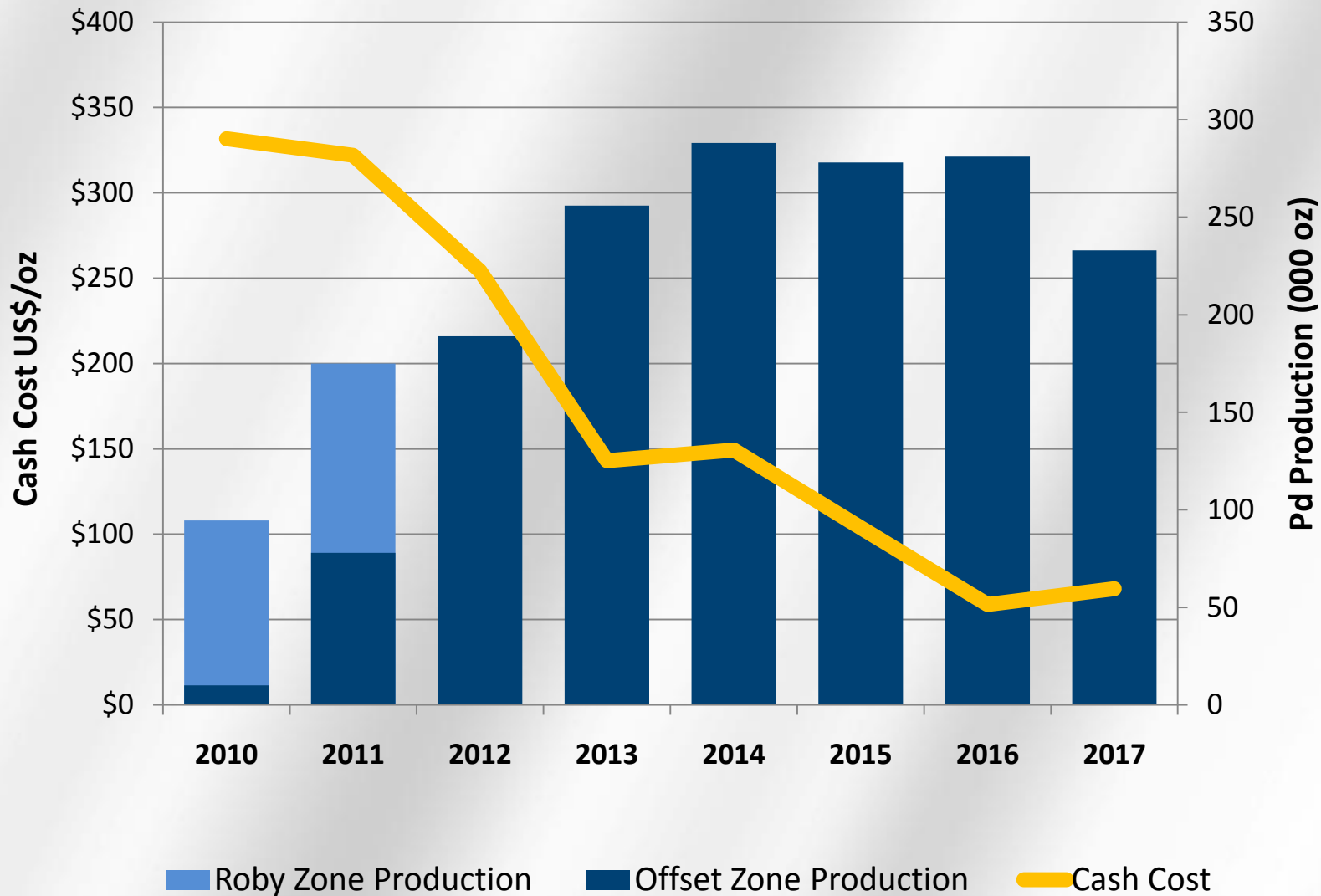
## Scoping Study Estimated Production Schedule

Production	Year	Tonnes Milled (000's)	Avg. Diluted Grade (g/t Pd)	Pd Oz Production (000's)	Cash Cost (US\$/oz)
<b>Pre-Commercial</b>	2010	68	6.2	10	403
	2011	485	6.6	78	250
<b>3,500 tpd</b>	2012 <sup>1</sup>	1,264	6.1	189	254
	2013	1,728	6.0	256	143
<b>5,500 tpd</b>	2014 <sup>2</sup>	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
	<b>LOM</b>	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

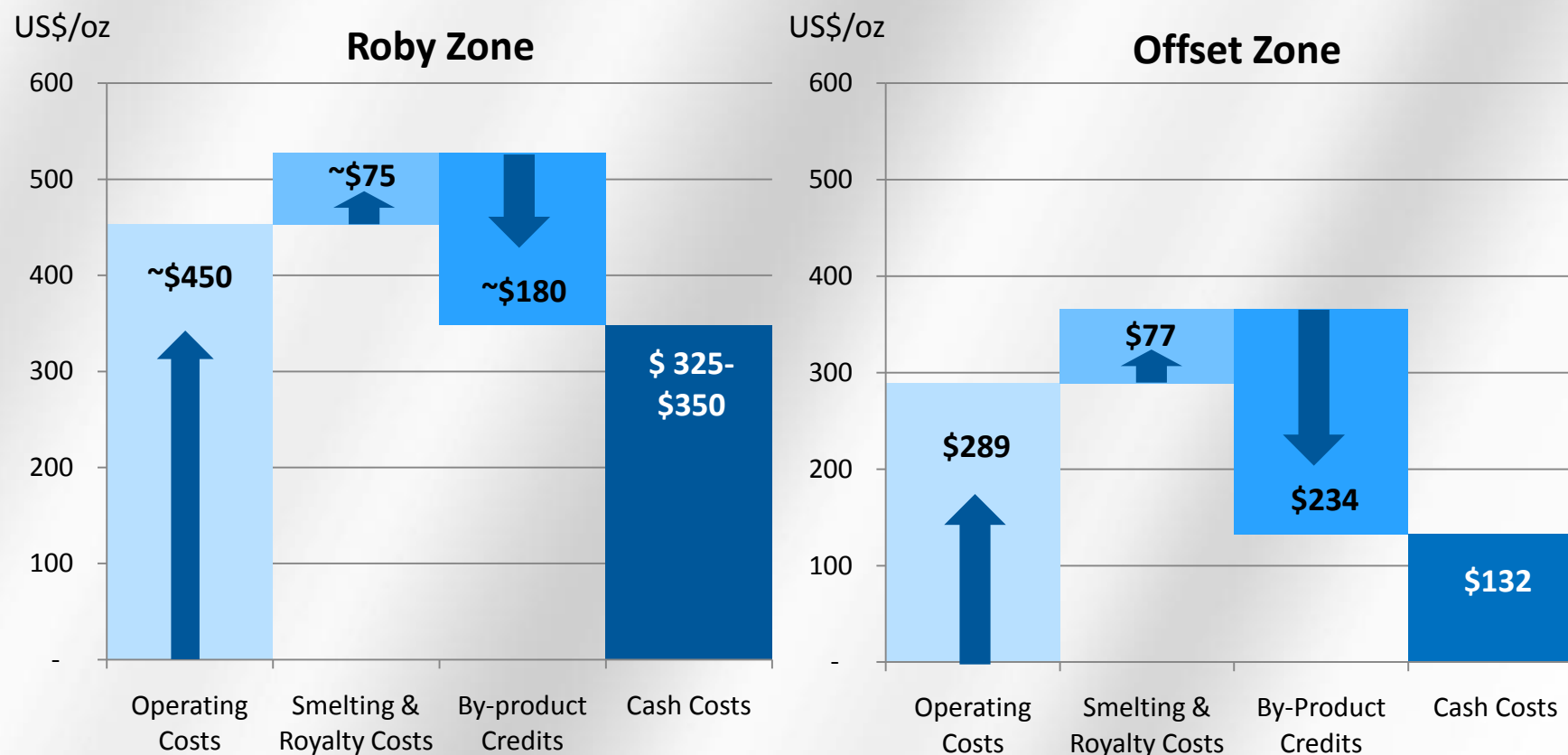




# LDI: Reducing Cash Costs



## 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
<b>Subtotal</b>	<b>\$179.5 M</b>
<i>Contingency (13.7%)</i>	<i>\$24.6 M</i>
<b>Total</b>	<b>\$204.1 M</b>

# Offset Zone Next Steps

Next steps to commercial production (3,500 tpd), targeted for Q3 2012:



Construction of the hoisting plant



Raiseboring and furnishing the upper 690 m of the production shaft



Raiseboring the ventilation raise from the 4,850 level



Developing the ramp and levels down to the 4,550 level



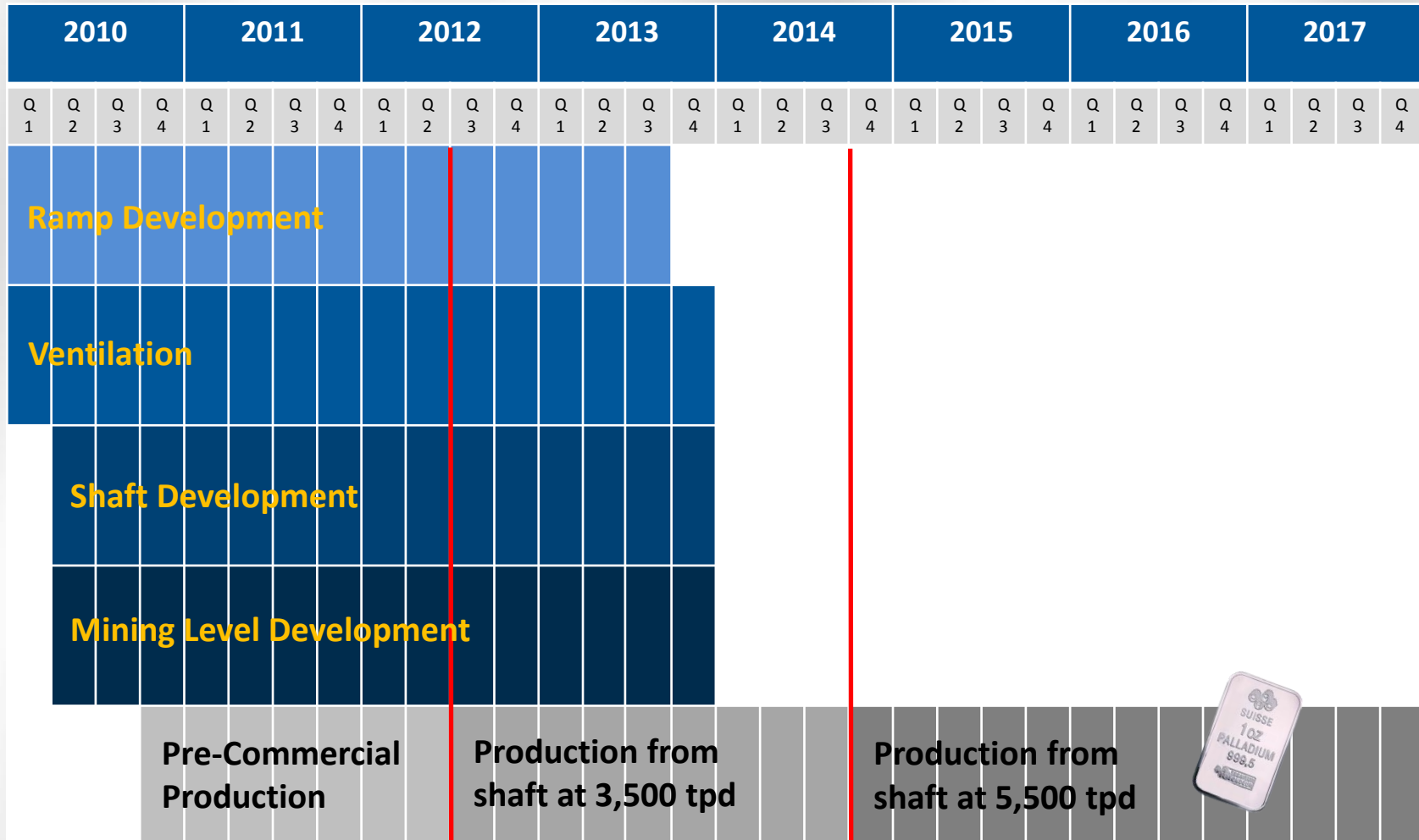
Developing the 4,550 level haulage and sill drifts



Definition drilling (69,500 m)

**\$35 Million in capital expenditures allocated for remainder of 2010**

# Offset Zone Development Schedule





# 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.



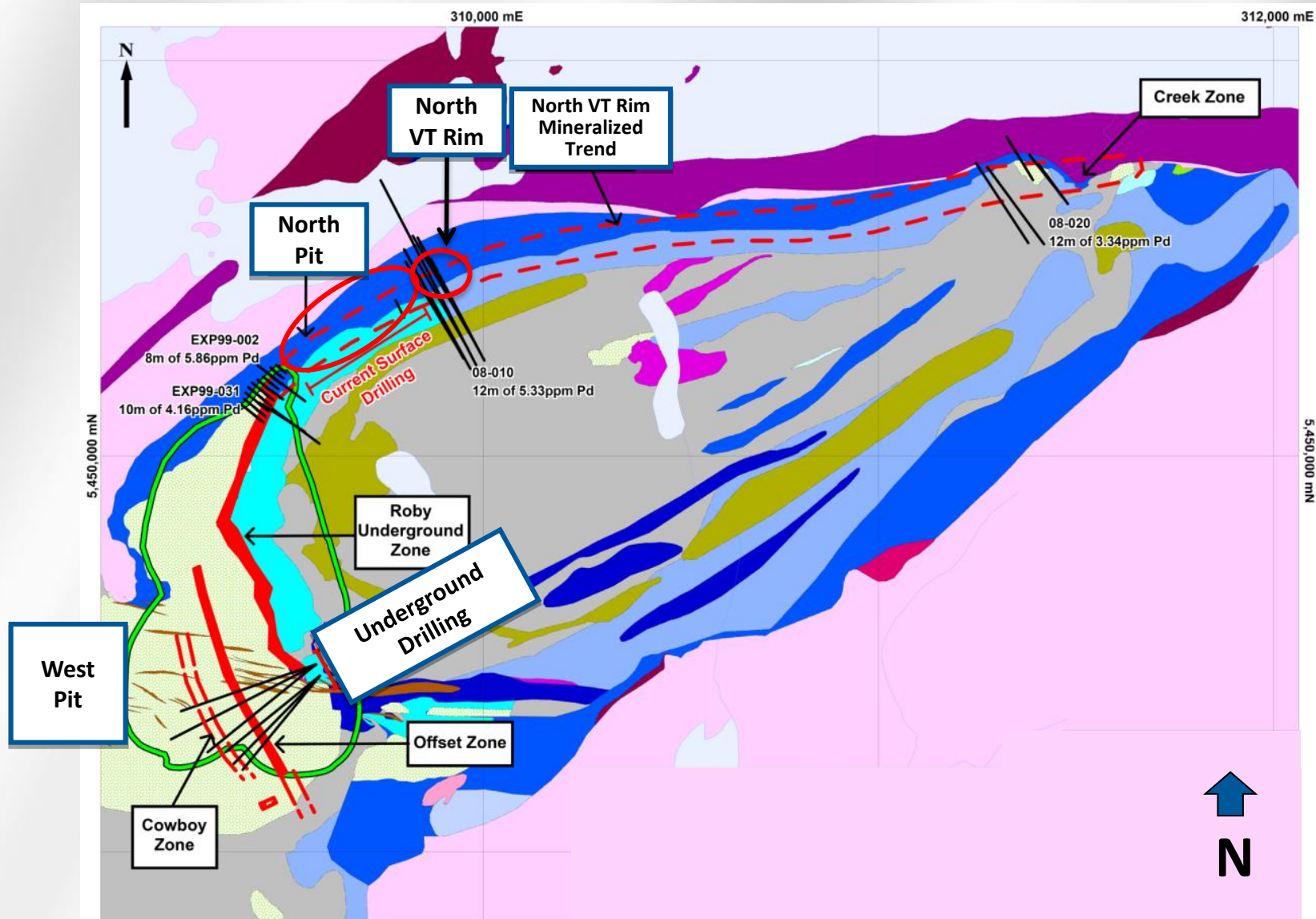
# LDI: 2010 Exploration Program



- 19 geologists and technicians at the Thunder Bay exploration office
- 22,000-acre land package has historically been underexplored
- Significant \$15 M 2010 exploration program:
  - \$12 M for 53,000 metres of drilling for Offset Zone
  - \$3 M for 15,000 metres of drilling West Pit & other surface areas
- Exploration objectives:
  - Identify additional resources
  - Update resource estimate
  - Facilitate mine development planning



# LDI: Exploration Upside Near Mine







North American Palladium Ltd.

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# Sleeping Giant Gold Mine

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# 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

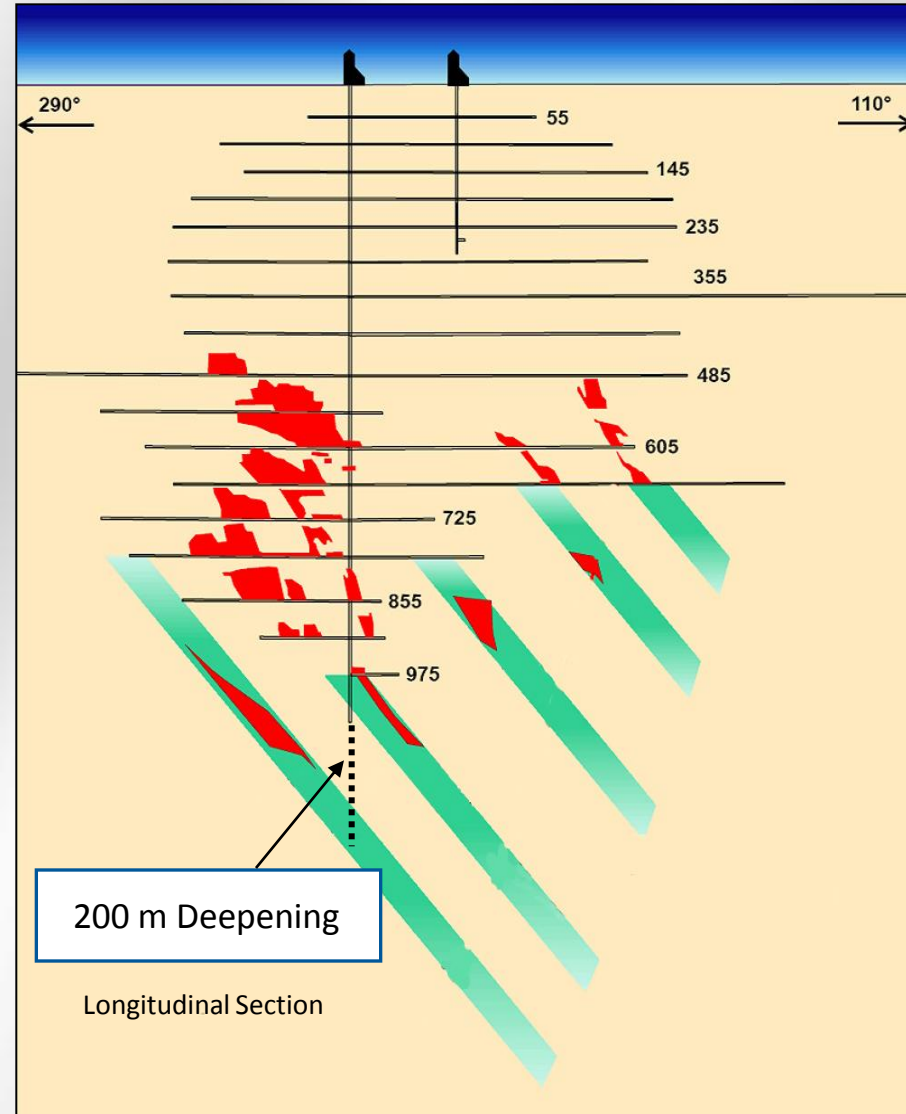
\* See Cautionary Note to U.S. Investors in Appendix



# 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



# Sleeping Giant: Underutilized Mill

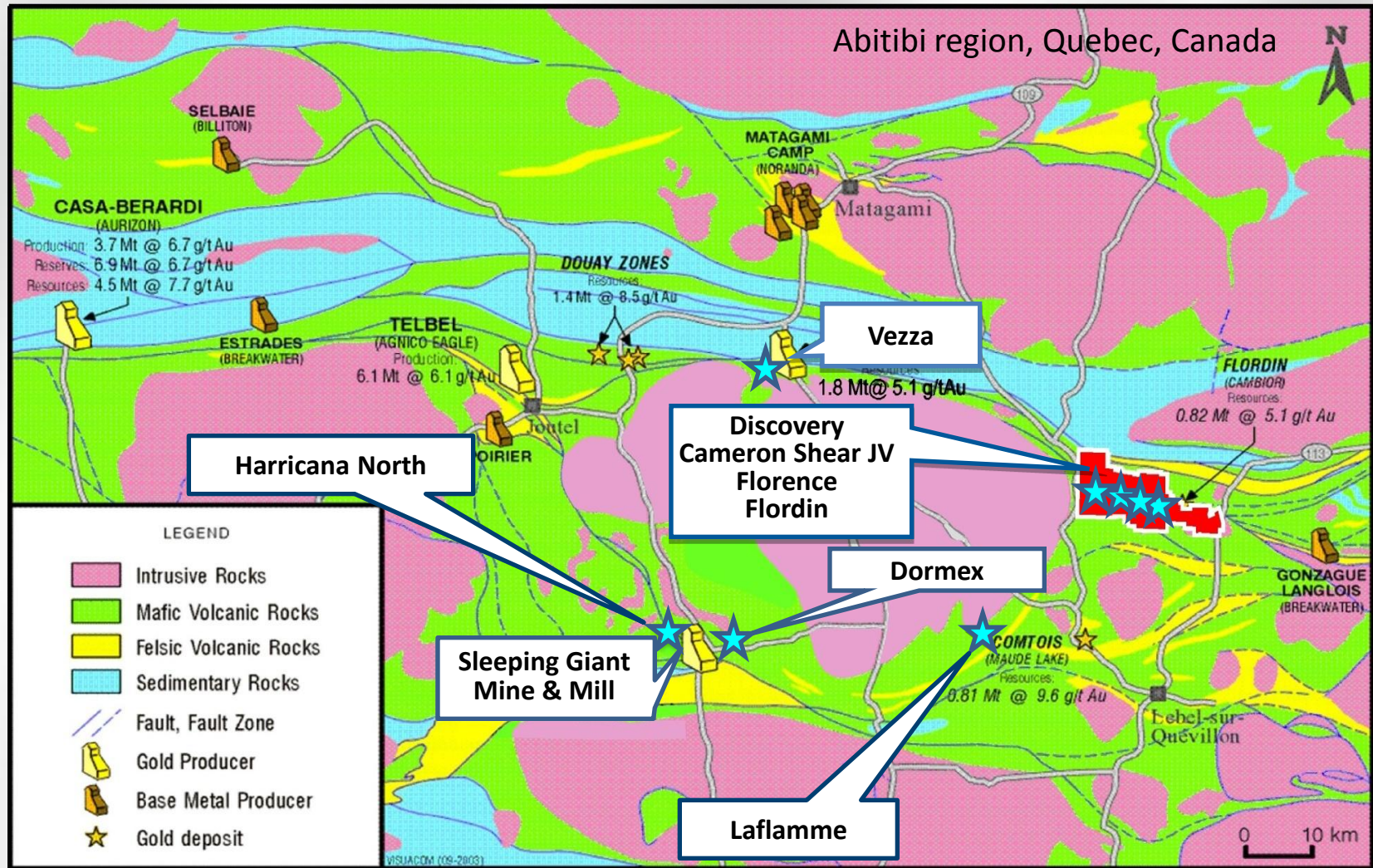
- 900 tpd mill has excess capacity
- Potential to serve NAP's other gold projects in Abitibi region
- Can be easily expanded
- Mill expansion study underway





# Gold Division: 2010 Exploration

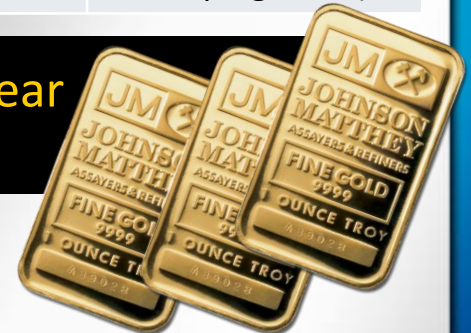
70 Km Land Package Surrounding Sleeping Giant Mill



# Gold Assets – Organic Growth

Project	Resources*	2010 Exploration Program <i>Metres</i> <i>Cost</i>		Trucking Distance to Mill	Ag Production Potential
<b>Veza</b>	<u>Measured &amp; Indicated:</u> 288,000 oz Au <u>Inferred:</u> 121,000 oz Au			70 Km	40-50,000 oz (over 7-9 yrs)
<b>Discovery</b>	<u>Measured &amp; 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)
<b>Flordin</b>	<u>Measured &amp; 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)
<b>Dormex</b>	TBD	7,000 m (surface)	\$1.2 M	Adjacent	TBD (potential fold of Sleeping Giant)

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.



# Gold Division: 2010 Exploration Program



- \$6 million, 53,000-metre drill program for gold division
- 19 geologists and technicians at Val d'Or exploration office
- Exploring Sleeping Giant and adjacent landholdings in the Abitibi region



Goal to build gold division to production of 250,000 oz per year

# Initiatives for Remainder of Year



Grow palladium production at LDI

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Complete reserve & resource report for LDI by YE

---



Complete development ramp into Offset Zone by YE

---



Deepen mine shaft at Sleeping Giant by YE

---



Improve operating results at Sleeping Giant

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Determine expansion plans for gold assets by YE

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North American Palladium Ltd.

FINANCIAL  
**STRENGTH**

**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](http://www.nap.com)

## Investor Relations:

Camilla Bartosiewicz  
Manager, Investor Relations & Corporate Communications  
[camilla@nap.com](mailto:camilla@nap.com)  
416-360-7971 ext. 226





North American Palladium Ltd.

## **Appendices & Further Information**

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Reserves & Resources	Slides 51-57
2010 LDI Drill Results	Slides 58-61

# Senior Management

## **Bill Biggar – President and CEO**

An accomplished businessman with extensive experience in mining and in a broad range of industries. Mr. Biggar has held senior positions with Barrick Gold Corporation, Horsham Corporation and Magna International. He also has over 12 years of experience as an investment banker and private equity investor. A Chartered Accountant, he holds Master of Business Administration and Bachelor of Commerce (with distinction) degrees from the University of Toronto.

## **Jeff Swinoga – Vice President, Finance and CFO**

Eighteen years of experience in the resource, mining and finance industries. Mr. Swinoga has held CFO positions with HudBay Minerals and MagIndustries, and was Director, Treasury Finance of Barrick Gold Corporation for seven years. A Chartered Accountant, he also has an MBA from University of Toronto and an honours economics degree from University of Western Ontario.

## **Dave Passfield – Vice President, Operations**

A professional engineer by training, Mr. Passfield has 30 years experience in open-pit and underground operations. Mr. Passfield has held key management positions with several major Canadian and international mining companies and has operating experience in Canada and overseas.

## **Michel Bouchard – Vice President, Exploration and Development**

Mr. Bouchard has been involved in exploration, development, and operations in the mining industry for the past 25 years. He is credited with contributing to the discovery of the Bouchard Hebert Mine in northwest Quebec. Previously Mr. Bouchard held senior positions with Audrey Resources, Lyon Lake Mines and SOQUEM. Mr. Bouchard was formerly President and CEO of Cadiscor Resources Inc.

## **Trent Mell – Vice President, Corporate Development and General Counsel**

Mr. Mell has previously worked at the corporate head offices of Barrick Gold Corporation and Sherritt International. Prior to joining the mining industry, Mr. Mell worked with Stikeman Elliott LLP, where he practiced securities law. Mr. Mell has published papers on NI 43-101, and holds a B.A., a B.C.L. (with distinction) and a LL.B. (with distinction), all from McGill University, as well as a Masters degree in Securities Law from Osgoode Hall Law School.

# Offset Zone Scoping Study Summary



Mineral Resource Estimate	<p><b><u>Indicated Category</u></b></p> <p>8.6 million tonnes grading 6.29 g/t Pd, 0.419 g/t Pt, 0.395 g/t Au, 0.110% Cu, 0.136% Ni</p> <p><b><u>Inferred Category</u></b></p> <p>3.3 million tonnes grading 5.70 g/t Pd, 0.352 g/t Pt, 0.233 g/t Au, 0.074% Cu, 0.095% Ni</p>
Potentially Mineable Resource (after mining dilution & recovery)	<p><b><u>Indicated Category:</u></b></p> <p>8.5 million tonnes grading 6.00 g/t Pd; 0.40 g/t Pt; 0.38 g/t Au; 0.105% Cu; 0.132% Ni</p> <p><b><u>Inferred Category:</u></b></p> <p>2.8 million tonnes grading 5.23g/t Pd; 0.33g/t Pt; 0.23 g/t Au; 0.073% Cu; 0.094% Ni</p>
Mining Dilution	10% (@ 3.0 g/t)
Mining Recovery	90%
Processing Recovery (Pd)	82%
Palladium Produced	1.6 million ounces
Platinum Produced	97,000 ounces
Gold Produced	85,000 ounces
Nickel Produced	8.5 million pounds
Copper Produced	17.3 million pounds
Pre-Production Capital Expenditures	\$204.1 million
Development Capital Expenditures	\$71.9 million
Sustaining Capital Expenditures	\$7.9 million
<b><u>Mine Site Operating Costs:</u></b>	
Mining Cost (\$/t)	\$25.53
Processing Cost (\$/t)	\$12.41
General & Administration Cost (\$/t)	\$ 3.33
Contingencies (\$/t)	\$ 2.00
Total Operating Cost (\$/t)	\$43.27
LOM Cash Cost (per ounce)	\$132
IRR (pre-tax)	16.7%
IRR (post-tax)	16.0%
LOM	8 years
Undiscounted Cash flow (pre-tax)	\$256 million
NPV (5%) (pre-tax)	\$138 million
Payback Period	46 months



# Resources and Reserves

1. **Cautionary Note to U.S. Investors Concerning Mineral Reserves and Mineral Resources**
2. **Lac des Iles mine**  
Mineral Resources – December 31, 2008
3. **Lac des Iles mine – Offset Zone**  
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4. **Sleeping Giant mine**  
Mineral Reserves and Resources – March 31, 2010
5. **Discovery Project**  
Mineral Resources – August 1, 2008
6. **Flordin Property**  
Mineral Resources – March 31, 2010

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Michel Bouchard, P. Geo, Vice President, Exploration & Development, for North American Palladium Ltd., is the Qualified Person who supervised the preparation of the technical data in this presentation.

Please refer to North American Palladium's Annual Information Form for the year ended December 31, 2009 and applicable technical reports available on [www.sedar.com](http://www.sedar.com), [www.sec.gov](http://www.sec.gov) and [www.nap.com](http://www.nap.com) for further information.

# Cautionary note to U.S. investors concerning mineral reserves and mineral resources



Mineral reserves and mineral resources have been calculated in accordance with National Instrument 43-101 as required by Canadian securities regulatory authorities. For United States reporting purposes, Industry Guide 7, (under the Securities and Exchange Act of 1934), as interpreted by Staff of the Securities Exchange Commission (SEC), applies different standards in order to classify mineralization as a reserve. In addition, while the terms “measured”, “indicated” and “inferred” mineral resources are required pursuant to National Instrument 43-101, the U.S. Securities and Exchange Commission does not recognize such terms. Canadian standards differ significantly from the requirements of the SEC, and mineral resource information contained herein is not comparable to similar information regarding mineral reserves disclosed in accordance with the requirements of the U.S. Securities and Exchange Commission. U.S. investors should understand that “inferred” mineral resources have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. In addition, U.S. investors are cautioned not to assume that any part or all of NAP's mineral resources constitute or will be converted into reserves. For a more detailed description of the key assumptions, parameters and methods used in calculating NAP's mineral reserves and mineral resources, see NAP's most recent Annual Information Form/Form 40-F on file with Canadian provincial securities regulatory authorities and the SEC.

# Lac des Iles Mine



## Mineral Resources – December 31, 2008 (Note: next update expected in Q4, 2010)

Location	Tonnes (000's)	Pd (g/t)	Pt (g/t)	Au (g/t)	Cu (%)	Ni (%)	PdEq (g/t)	Pd (000 oz)
<b>Measured Resources</b>								
Roby Open Pit	3,722	1.99	0.23	0.17	0.075	0.065	3.77	238
Roby Stockpiles	763	2.09	0.19	0.18	0.060	0.079	3.79	51
<b>Indicated Resources</b>								
Roby Open Pit	2,565	2.20	0.24	0.18	0.078	0.068	4.07	181
Roby RGO Stockpile	13,365	0.97	0.12	0.08	0.034	0.056	2.00	417
Roby Underground	3,292	7.61	0.44	0.33	0.062	0.077	10.46	805
Offset Underground*	12,331	5.02	0.38	0.37	0.114	0.133	8.28	1,990
<b>Total M&amp;I Resources</b>	<b>36,038</b>	<b>3.18</b>	<b>0.26</b>	<b>0.22</b>	<b>0.072</b>	<b>0.086</b>	<b>5.29</b>	<b>3,682</b>
<b>Inferred Resources</b>								
Offset Underground*	4,637	4.9	0.4	0.3	0.12	0.13	8.0	730

\* Superseded by May 2010 update; see next page

### Notes:

1. CIM definitions were followed for the estimation of Mineral Resources. Mineral Resources for the Roby Open Pit were estimated at a cut-off grade of 1.8 g/t PdEq, within an optimized pit shell run below the current pit survey (Oct. 2008). Mineral Resources in stockpiles were estimated at a cut-off grade of 1.9 g/t PdEq. Mineral Resources for the Roby and Offset Zones underground were estimated at a cut-off grade of 5.8 g/t PdEq.
2. Cut-off grades were determined under the assumption that a production rate of 14,000 tpd would be resumed in the event of restarting operations.
3. PdEq factors were calculated separately for each area, based on operating cost and metallurgical performance estimates appropriate for those areas.
4. Metal price assumptions of US \$350/oz palladium, US\$1,400/oz platinum, US\$850/oz gold, US\$6.50/lb nickel and US\$2.00/lb copper were used in the estimation of Pd/Eq and cut-off grade. A US\$/C\$ exchange rate of 1.11 was used.

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# Lac des Iles Mine: Offset Zone



## Mineral Resource Estimate – May 2010

Category	Tonnes (000's)	Pd (g/t)	Pt (g/t)	Au (g/t)	Ni (%)	Cu (%)	Pd (000 oz)
Indicated	8,628	6.29	0.419	0.395	0.136	0.110	1,745
Inferred	3,322	5.70	0.352	0.233	0.095	0.074	609

### Notes:

1. Prepared by Mr. Richard Routledge, M.Sc., P. Geol., Senior Consulting Geologist for Scott Wilson RPA, an independent Qualified Person within the meaning of NI 43-101. CIM definitions were followed for the estimation of Mineral Resources.
2. The resource wireframe was constructed at a cut-off of 4 g/t Pd and a minimum five-metre horizontal mining width. Assays were capped at various levels depending on metal grade distributions. Resources were estimated to the 4070 Mine Level (-930 m elevation), a maximum depth of 1,430 m.

The Offset Zone resource estimate is available on [www.sedar.com](http://www.sedar.com), [www.sec.gov](http://www.sec.gov) and [www.nap.com](http://www.nap.com).



# Sleeping Giant Mine



## Mineral Reserves & Resources – March 31, 2010

Type	Tonnes	Au (g/t)	Au Contained ounces
<b>Reserves</b>			
Proven	91,000	8.91	26,000
Probable	96,000	9.79	30,000
<b>Resources</b>			
Measured	213,000	8.32	57,000
Indicated	243,000	12.9	101,000

### Notes:

1. Source: NI 43-101 Technical Report, March 31, 2010
2. The mineral reserve and mineral resource estimate for the Sleeping Giant mine was prepared by Mr. Vincent Jourdain, P.Eng., Ph.D, a qualified person under NI 43-101, assuming a long-term gold price of Cdn.\$850. The effective date of the estimate is December 31st, 2009.
3. Grade capping was carried out on a vein-by-vein basis using the historical values of 60 g/t in zones 2, 7 and 9; 90 g/t in Zone 8; and 100 g/t in Zone 50. Reserves were evaluated from drill hole results using the polygonal method on inclined longitudinal sections. A specific gravity of 2.85 t/m<sup>3</sup> was used. Shrinkage Stopes the intersections are internally diluted (at zero grade) to minimum true thickness of 1.8 metres; for Long Hole or Room and Pillar stopes the intersections are internally diluted (at zero grade) to minimum true thickness of 1.8 metres. An external dilution of 15% (at zero grade) and a mining recovery of 95% are applied to the Shrinkage stopes; an external dilution of 25% (at zero grade) and a mining recovery of 95% are applied to the Long Hole stopes; and an external dilution of 15% (at zero grade) and a mining recovery of 85% are applied to the Room and Pillar stopes.
4. This estimate conforms with National Instrument 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101). U.S. investors should refer to the company's most recent 40F/Annual Information Form for an overview on how Canadian standards differ significantly from U.S. requirements. Mineral Resources, having demonstrated economic viability, are not Mineral Reserves.

# Discovery Project



## Mineral Resources – August 1, 2008

Type	Tonnes	Au (g/t)	Au (Contained Oz)
<b>Mineral Resources</b>			
Measured	3,000	8.95	900
Indicated	1,279,000	5.74	236,000
Inferred	1,546,000	5.93	294,000

### Notes:

1. Source: NI 43-101 Technical Report, August 1, 2008
2. The mineral resource estimate for the Discovery Project was prepared by Mr, Carl Pelletier, B.Sc., P.Geo. of InnovExplo, an independent qualified person under NI 43-101, assuming a gold price of U.S.\$850 in the first 5 years, and U.S.\$750 thereafter. Applied varying cut-off grades depending on the type of mining method contemplated.
3. The effective date of the estimate is June 17, 2008.
4. This estimate conforms with National Instrument 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101). U.S. investors should refer to the company's most recent 40F/Annual Information Form for an overview on how Canadian standards differ significantly from U.S. requirements. Mineral Resources, having demonstrated economic viability, are not Mineral Reserves.

For further information, please refer to the report titled "Technical Report on the Scoping Study and Mineral Resource Estimate for the Discovery Project (according to Regulation 43-101 and Form 43-101F1) dated August 1, 2008 and prepared by InnovExplo Inc. It is filed on [www.sedar.com](http://www.sedar.com) under Cadiscor Resources Inc.

# Flordin Property



## Mineral Resources – March 31, 2010

Type	Tonnes	Au (g/t)	Au (Contained Oz)
<b>Mineral Resources</b>			
Measured	30,000	4.60	4,000
Indicated	649,000	4.24	88,000
Inferred	1,451,000	3.63	169,000

### Notes:

1. Source: NI 43-101 Technical Report, March 31, 2010
2. The mineral resource estimate for the Flordin property was prepared by Mr. Carl Pelletier, B.Sc., P.Geo. and Mr. Bruno Turcotte, M.Sc., P.Geo. of InnovExplo, both of whom are independent qualified persons under NI 43-101, using a cut-off grade of 2 g/t.
3. The effective date of the estimate is February 23, 2010.
4. This estimate conforms with National Instrument 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101). U.S. investors should refer to the company's most recent 40F/Annual Information Form for an overview on how Canadian standards differ significantly from U.S. requirements. Mineral Resources, having demonstrated economic viability, are not Mineral Reserves

# 2010 LDI Drill Results – Roby Zone



## Roby Extension Drilling Results

Drill Hole	From (m)	To (m)	Length (m)	Pd g/t	Pt g/t	Au g/t	Cu %	Ni %	Co %
10-101	184	186	2	3.6	0.32	0.07	0.01	0.04	0.01
10-102	164	182	18	5	0.27	0.07	0.01	0.04	0.01
10-103	137	144	7	7.64	0.94	0.12	0.01	0.05	0.01
10-104	135	137	2	5.25	0.41	0.54	0.03	0.06	0.01
10-105	160	166	6	24.31	1.17	0.86	0.04	0.08	0.01
Including	164	165	1	109	4.82	2.35	0.05	0.08	0.01
10-106	117	128	11	5.89	0.32	0.28	0.02	0.06	0.01
Including	121	128	7	6.84	0.37	0.38	0.03	0.07	0.01
10-107	121	124	3	12.9	0.73	0.33	0.03	0.07	0.01
10-108	95	98	3	9.95	0.37	0.15	0.01	0.06	0.01
10-109	78	80	2	3.12	0.38	0.14	0.05	0.06	0.01
10-110	Abandoned								
10-111	180	184	4	5.43	0.43	0.12	0.01	0.03	0.01
10-112	160	162	2	3.03	0.3	0.17	0.01	0.06	0.01
10-113	No significant values								
10-114	141	152	11	5.31	0.33	0.27	0.01	0.05	0.01
Including	146	152	6	8.06	0.44	0.08	0.01	0.04	0.01
10-115	No significant values								
10-116	135	139	4	5.99	0.31	0.07	0.01	0.04	0.01
10-117	101	104	3	4.82	0.45	1.3	0.07	0.15	0.01
10-118	175	180	5	13.42	0.96	1.2	0.11	0.16	0.01
10-119	135	146	11	6.89	0.36	0.15	0.01	0.05	0.01
10-120	104	107	3	4.56	0.23	0.02	0.02	0.04	0.01
10-121	123	141	18	6.70	0.41	0.67	0.13	0.12	0.01
10-122	160	169	9	6.86	0.35	0.08	0.01	0.04	0.01
Including	160	165	5	8.36	0.47	0.11	0.03	0.04	0.01

*Issued on June 7, 2010 - update on the drill results from the 2010 exploration program . These results are the first tranche of drill results from a 53,000 metre 2010 drill program underway at LDI and were not included in the resource update for the Offset Zone.*



# 2010 LDI Drill Results – Offset Zone



## Program: Offset In-Fill (10-200 series)

Drill Hole	From (m)	To (m)	Length (m)	Pd g/t	Pt g/t	Au g/t	Cu %	Ni %	Co %
10-201	259	299	40	6.89	0.40	0.39	0.085	0.122	0.007
Including	259	269	10	11.68	0.61	0.30	0.056	0.115	0.009
10-202	291	306	15	3.23	0.26	0.65	0.116	0.136	0.006
10-203	NSA								
10-204	338	407	69	5.09	0.30	0.25	0.062	0.098	0.006
Including	384	393	9	8.02	0.52	0.17	0.048	0.104	0.005
Including	397	407	10	11.50	0.57	0.58	0.129	0.148	0.007
10-205	359	374	15	7.04	0.43	0.67	0.188	0.189	0.008
Including	401	434	33	6.22	0.35	0.23	0.061	0.080	0.005

## Program: Upper Offset

Drill Hole	From (m)	To (m)	Length (m)	Pd g/t	Pt g/t	Au g/t	Cu %	Ni %	Co %
10-301	368	389	21	4.65	0.35	0.28	0.096	0.113	0.007
10-302	266	284	18	9.56	0.58	0.34	0.084	0.142	0.007
Including	269	274	5	14.31	0.83	0.41	0.057	0.126	0.008
10-303	305	310	5	5.62	0.46	0.39	0.096	0.146	0.007
10-304	154	165	11	7.50	0.45	0.48	0.124	0.164	0.008
Including	159	165	6	9.28	0.53	0.57	0.142	0.193	0.007
10-305	297	298	2	5.68	0.51	0.05	0.010	0.100	0.010
10-306	195	212	17	4.85	0.32	0.44	0.070	0.100	0.010
10-306	204	208	4	6.62	0.39	0.78	0.120	0.140	0.010

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# 2010 LDI Drill Results – Offset Zone



## Program: 4900 Vent Raise

Drill Hole	From (m)	To (m)	Length (m)	Pd g/t	Pt g/t	Au g/t	Cu %	Ni %	Co %
10-330	72	83	11	10.72	0.65	0.58	0.13	0.16	0.01
Including	75	81	6	15.27	0.89	0.77	0.14	0.18	0.01
10-331	77	82	5	2.2	0.2	0.19	0.07	0.1	0.01
10-332	61	69	8	5.36	0.32	0.3	0.06	0.12	0.01
Including	61	65	4	7.44	0.43	0.38	0.05	0.14	0.01
10-333	72	81	9	6.53	0.38	0.5	0.09	0.13	0.01
Including	72	78	6	8.2	0.4	0.68	0.1	0.15	0.01
10-334	70	81	11	8	0.47	0.24	0.08	0.1	0.01
Including	74	79	5	13.14	0.68	0.29	0.09	0.13	0.01

## Program: South Offset (Directional)

Drill Hole	From (m)	To (m)	Length (m)	Pd g/t	Pt g/t	Au g/t	Cu %	Ni %	Co %
10-501	701	709	8	9.65	0.53	0.56	0.116	0.123	0.006
10-501	1029	1047	18	2.44	0.36	0.26	0.209	0.163	0.009
10-501	1138	1157	19	3.53	0.45	0.36	0.118	0.114	0.008
10-502	703	708	5	8.46	0.45	0.49	0.114	0.101	0.006

*Issued on June 7, 2010 - update on the drill results from the 2010 exploration program . These results are the first tranche of drill results from a 53,000 metre 2010 drill program underway at LDI and were not included in the resource update for the Offset Zone.*

# 2010 LDI Drill Results – Offset Zone



## Program: Deep Offset

Drill Hole	From (m)	To (m)	Length (m)	Pd g/t	Pt g/t	Au g/t	Cu %	Ni %	Co %
10-551	1286	1314	28	6.02	0.40	0.60	0.21	0.27	0.01
Including	1290	1297	7	12.33	0.63	0.43	0.10	0.18	0.01
Including	1369	1387	18	5.50	0.44	0.82	0.17	0.19	0.01

## Program: North Offset

Drill Hole	From (m)	To (m)	Length (m)	Pd g/t	Pt g/t	Au g/t	Cu %	Ni %	Co %
09-954	217	232	15	9.01	0.48	0.49	0.064	0.109	0.008
Including	222	227	5	18.63	0.83	0.81	0.096	0.133	0.008
09-955	218	234	16	8.20	0.53	0.47	0.060	0.104	0.008
Including	223	230	7	12.99	0.75	0.41	0.046	0.103	0.008
09-956	NSA	Overshot target							
09-958	NSA	Overshot target							
09-959	NSA	Overshot target							
09-960	NSA	Overshot target							

*Issued on June 7, 2010 - update on the drill results from the 2010 exploration program . These results are the first tranche of drill results from a 53,000 metre 2010 drill program underway at LDI and were not included in the resource update for the Offset Zone.*