



PALADIN ENERGY LTD

PREFEASIBILITY STUDY OUTCOMES

14 October 2019

ASX: PDN

DISCLAIMER AND NOTES

JORC AND NI 43-101 MINERAL RESOURCES AND ORE RESERVES

This presentation contains summary information about the Company's activities current as at the date of this presentation. The information in this presentation is of a general background nature and does not purport to be complete or contain all the information investors would require to evaluate their investment in the Company, nor does it contain all the information which would be required in a prospectus or product disclosure statement prepared in accordance with the Corporations Act 2001 (Cth). The Company is not responsible for updating, nor undertakes to update, this presentation. This presentation should be read in conjunction with the Company's other periodic and continuous disclosure announcements, available at <http://www.paladinenergy.com.au>.

This presentation includes statements that may be deemed "forward-looking statements". All statements in this presentation, other than statements of historical facts, that address future production, reserve or resource potential, exploration drilling, exploitation activities and events or developments that the Company expects to occur, are forward-looking statements.

Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from the expectations expressed in the forward-looking statements. Factors that could cause actual results to differ materially from the expectations expressed those in forward looking statements include market prices, exploitation and exploration successes, continued availability of capital and financing and general economic, market or business conditions and risk factors associated with the uranium industry generally.

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In this presentation, for those deposits that are reported as conforming to the Joint Ore Reserves Committee (JORC) 2004 or 2012 code, the terms Inferred Mineral Resources, Indicated Mineral Resources, Measured Mineral Resources, Ore Reserves, Proved Ore Reserves, Probable Ore Reserves and Competent Person are equivalent to the terms Inferred Mineral Resources, Indicated Mineral Resources, Measured Mineral Resources, Mineral Reserves, Proven Mineral Reserves, Probable Mineral Reserves and Qualified Person, respectively, used in Canadian National Instrument 43-101 (NI 43-101).

The information in this presentation relating to the Mineral Resources and Ore Reserves for all of the Company's deposits other than Langer Heinrich, Michelin, Jacques Lake and Manyingee was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that this information has not materially changed since it was last reported. Refer to the Resource and Reserve Tables slide in the Appendix of this presentation.

Competent Persons Statement

The Mineral Resource estimates for the Langer Heinrich deposit were prepared by David Princep of Gill Lane Consulting. Mr. Princep has visited the Project on numerous occasions since 2003, with the most recent being in July 2016. Mr. Princep is a Fellow of the Australasian Institute of Mining and Metallurgy and a Chartered Professional Geologist. Mr. Princep has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC 2012). Mr Princep approves of and consents to the inclusion of the information in this announcement in the form and context in which it appears.



A photograph of two Black men, likely miners, wearing hard hats and safety glasses. The man in the foreground is smiling and looking slightly to the right. He is wearing a white hard hat and clear safety glasses. The man behind him is also smiling and looking towards the camera. He is wearing a white hard hat with a yellow stripe and a circular tag with the number '76' on it. He is also wearing dark safety glasses. Both men are wearing light-colored, possibly khaki, work shirts. The background is slightly blurred, showing what appears to be an industrial setting, likely a mine. There are some geometric shapes overlaid on the image: a large, light blue star-like shape in the top right corner and a large, dark blue and white geometric shape in the bottom left corner.

A FIRST PRODUCER IN A RECOVERED URANIUM MARKET

LANGER HEINRICH

A LOW COST, LONG LIFE URANIUM MINE

WE ARE NOT STANDING STILL...

WE ARE PLANNING FOR A RAPID, RELIABLE RESTART



Verify C&M practices to ensure asset is preserved for low-cost restart

Learn from 10 years of operation to ensure restart is safe, predictable and successful. Verify rights and obligations

Define further potential improvements and cost reduction initiatives to enhance value. Aspirational achievable target AISC¹ US\$30/lb



Prefeasibility study for **rapid, low-risk restart (PFS1)** completed in October 2019.

Note: Concept Study results are $\pm 30\%$ accuracy
PFS1 results are $\pm 25\%$ -15%
¹ AISC: All in Sustaining Cost



PREFEASIBILITY STUDY HIGHLIGHTS



Prefeasibility Study (phase 1 – PFS1) confirms 12-month execution lead time for low risk restart



Aspirational average life of mine AISC of US\$30/lb achievable



5.2Mlbpa production for restart confirmed for capital of US\$80M



Opportunity to increase production at restart to 6.5Mlbpa with additional, high return discretionary capital of US\$30M



Maiden Vanadium Mineral Resource of 38.8Mlb V₂O₅ declared



Potential for further AISC improvements as identified in the Concept Study of approximately US\$4.50/lb through significant process changes to be studied in Phase 2 of the PFS



PFS1 HAS CONFIRMED RAPID RESTART PLAN

- PFS1 confirms Concept Study results of comparatively low initial restart expenditure requirements of ~US\$80M for ~5.2 Mlbpa production capacity



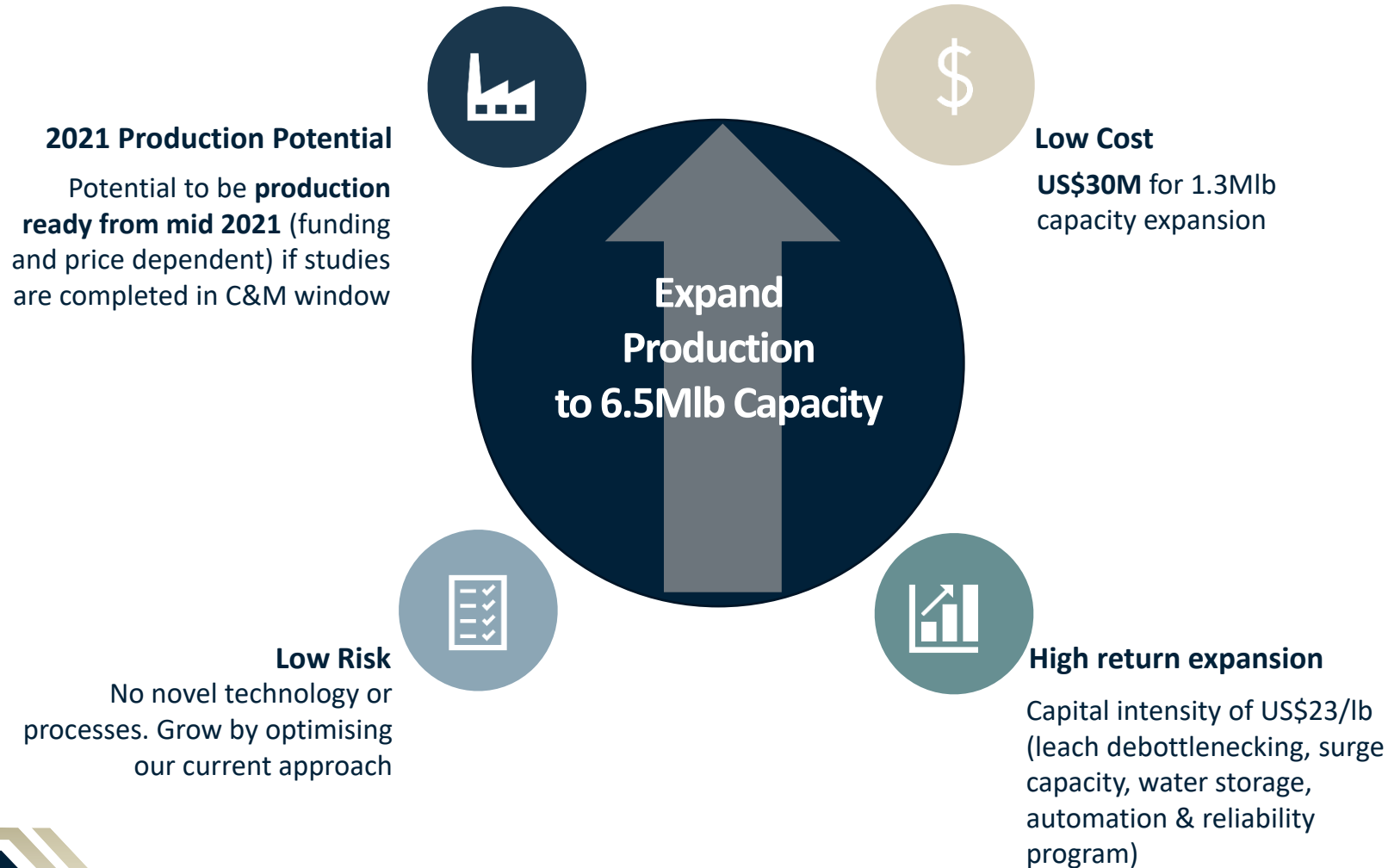
Plant Repair & De-
Preservation Costs
US\$38M



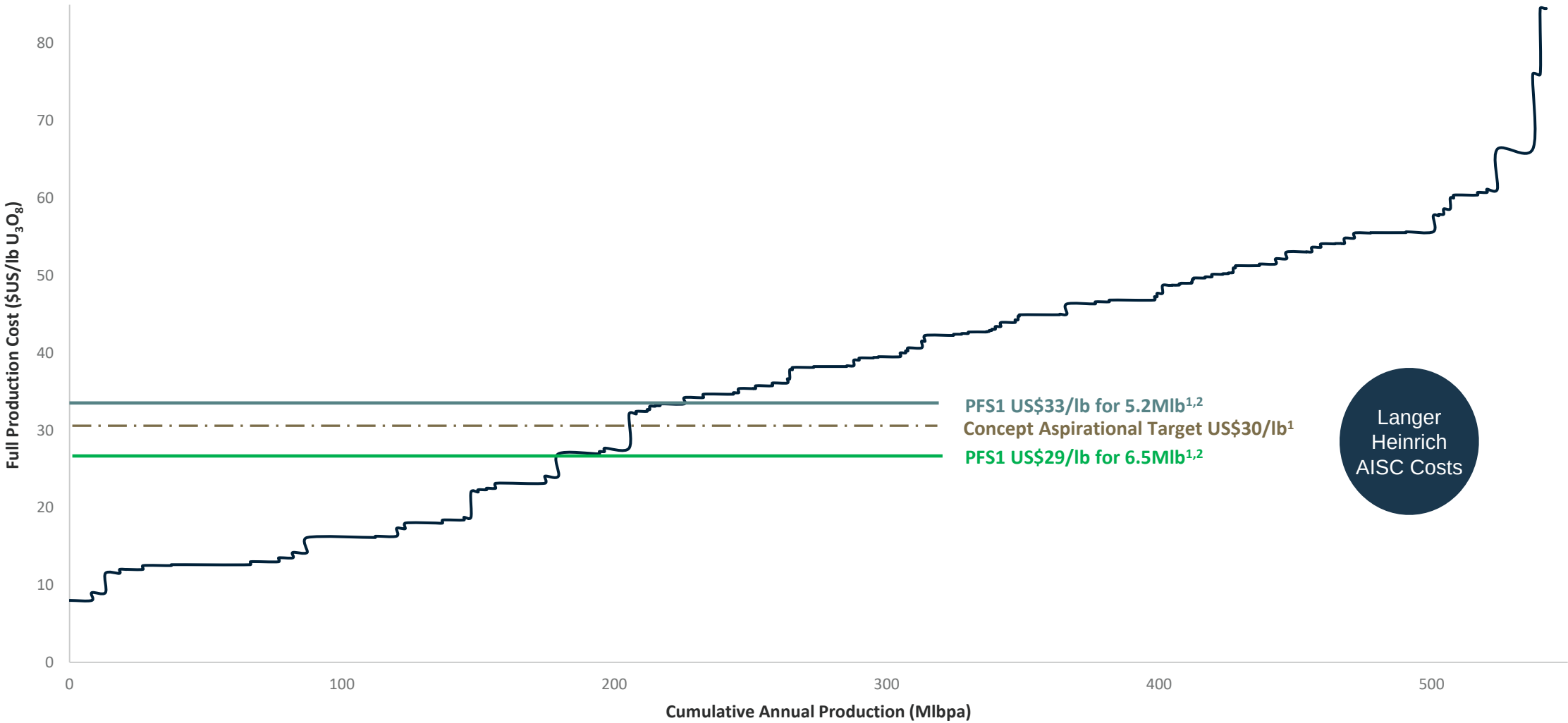
Operations Restart Costs
US\$42M
(includes: first fill of reagents,
recommissioning, mobilisation of
equipment and tailings dam
costs)



PALADIN IDENTIFIES LOW COST EXPANSION OPPORTUNITY



WORLD WIDE PRODUCT COST CURVE – ALL PROJECTS



Source: UxC Production Cost Report 2019 – August 2019
Note ¹ AISC: All in Sustaining Cost based on the results of Paladin's Langer Heinrich Concept Study completed in February 2019; ² ASX Prefeasibility Study Announcement 14 October 2019



RAPID PRODUCTION RESTART ON URANIUM PRICE RECOVERY

DESCRIPTION	STATUS	TIMING	PURPOSE
Concept Study	✓	Completed February 2019	- Found no fatal flaws - Generated improvement options
Prefeasibility Study 1 (Rapid Restart)	✓	Prefeasibility Study 1 - completed October 2019	RAPID RESTART STUDY (PFS1) - Detailed restart plan - Low risk production expansion by incremental debottlenecking reduces AISC to US\$29/lb (life of asset) - Maiden Vanadium Mineral Resource
Prefeasibility Study 2 (Process Optimisation)	In Progress on greatly reduced scope	Prefeasibility Study 2 – complete test work of options selection February 2020	PROCESSING UPGRADE STUDY (PFS2) - Opportunities to reduce costs by ~US\$4.50/lb - Reasonable prospects of Vanadium production - Reduced scope to preserve cash. Will complete engineering at a later stage
Feasibility Study 1 (Rapid Restart)	Not committed	Undertake closer to restart decision – 9 months required	+/- 10% accuracy - Enable Rapid Restart to be triggered and clear path into production

1st uranium producer back into production





CONTACT US

HEAD OFFICE

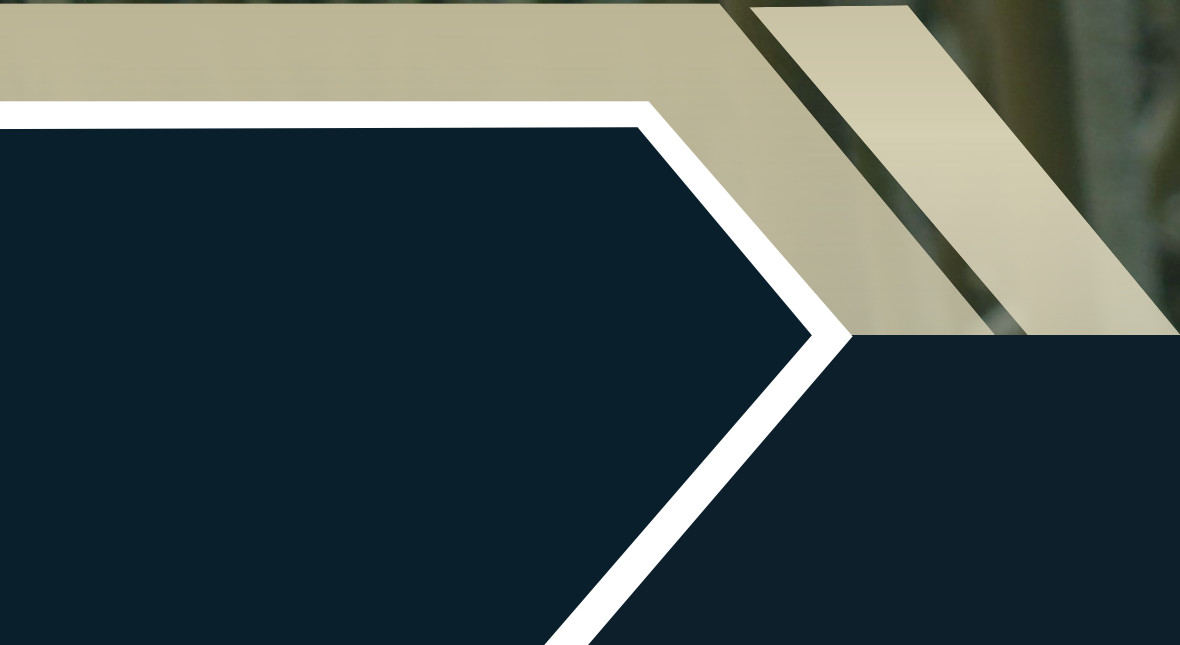
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APPENDIX



RESOURCE & RESERVE TABLES

30 June 2019

Ore Reserves	Mt	Grade ppm U ₃ O ₈	Mlb U ₃ O ₈	Paladin Ownership (%)	Paladin Attributable (Mlb)
Namibia	Langer Heinrich				
Proven	42	525	48.5	75	36.4
Probable	13.1	485	14	75	10.5
Stockpiles	30.8	355	24	75	18
Total Namibia	85.9	455	86.5	75	64.9
Malawi	Kayelekera				
Proven	0.4	1,170	1	85	0.85
Probable	5.3	880	10.4	85	8.84
Stockpiles	1.6	755	2.6	85	2.21
Total Malawi	7.3	870	14	85	11.9
Total Ore Reserves	93.2	490	100.5		76.8

Vanadium Mineral Resources	Mt	Grade ppm V ₂ O ₅	Mlb V ₂ O ₅ (100% basis)	Paladin Ownership (%)	Paladin Attributable (Mlb)
Namibia	Langer Heinrich				
Measured ¹	66.2	160	23.3	75	17.5
Indicated ¹	18.8	140	5.8	75	4.4
Inferred ¹	6.3	135	1.9	75	1.4
Stockpiles ¹	30.8	115	7.8	75	5.9
Total Namibia	122.1	145	38.8	75	29.1

¹Refer ASX Announcement dated 14.10.2019 "Feasibility Study Delivers Improved Financials and Production Capacity For Langer Heinrich" p6; ²Refer ASX Announcement dated 21.11.08 "Significant Resource Upgrade for Kayelekera"; ³Refer ASX Announcement dated 31.01.2018 "Correction to 30 June 2017 Annual Report" pp13-15; ⁴Refer SEDAR lodgment (TSX:FRG) dated 8.9.2009 "Frontier Reports Positive Preliminary Economic Assessment for Michelin Uranium Project"; ⁵Refer Announcement (ASX:SMM) dated 19.10.2010 "Resource Upgrade for the Valhalla Uranium Deposit"; ⁶Refer ASX Announcement dated 16.04.2012 "Quarterly Activities Report for period ending 31 March 2012"; ⁷Refer ASX Announcement dated 15.04.2011 "Quarterly Activities Report for period ending 31 March 2011"; ⁸Refer ASX Announcement dated 31.08.2011 "30 June 2011 Annual Report" p29; ⁹Refer ASX Announcement dated 17.01.2012 "Quarterly Activities Report for period ending 31 December 2011"; ¹⁰Refer ASX Announcement dated 13.07.2012 "Quarterly Activities Report for period ending 30 June 2012"; ¹¹Refer ASX Announcement (ASX:EMX) dated 12.02.2014 "Energia Delivers Significant Uranium Resource Upgrade"; ¹²Refer ASX Announcement dated 14.01.2014 "Manyingee Minerals Resources - Amendment"; ¹³Refer ASX Announcement dated 10.12.2008 "Maiden Uranium Resource at Valhalla North Project"; ¹⁴Refer ASX Announcement dated 30.08.12 "30 June 2012 Annual Report" p27 and 129; ¹⁵Refer ASX Announcement dated 29.08.2013 "30 June 2013 Annual Report" p24.

The Group is not aware of any new information or data that materially affects the information in the relevant market announcements all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

Mineral Resources		Mt	Grade ppm U ₃ O ₈	Mlb U ₃ O ₈ (100% basis)	Paladin Ownership (%)	Paladin Attributable (Mlb)
Namibia	Langer Heinrich					
Measured ¹		66.2	490	71.9	75	53.9
Indicated ¹		18.8	435	18.0	75	13.5
Inferred ¹		6.3	420	5.8	75	4.4
Stockpiles ¹		30.8	355	24	75	18.0
Total Namibia		122.1	445	119.6	75	89.7
Malawi	Kayelekera					
Measured ²		0.7	1,010	1.7	85	1.4
Indicated ²		12.7	700	19.6	85	16.7
Inferred ²		5.4	620	7.4	85	6.3
Stockpiles ²		1.6	755	2.6	85	2.2
Total Malawi		20.4	695	31.3	85	26.6
Canada						
Measured	Michelin ³	17.6	965	37.6	55	18.8
	Rainbow ⁴	0.2	920	0.4	55	0.2
Indicated	Gear ⁴	0.4	770	0.6	55	0.3
	Inda ⁴	1.2	690	1.8	55	0.9
	Jacques Lake ³	13	630	18	55	9.0
	Michelin ³	20.6	980	44.6	55	22.3
	Nash ⁴	0.7	830	1.2	55	0.6
	Rainbow ⁴	0.8	860	1.4	55	0.7
Inferred	Gear ⁴	0.3	920	0.6	55	0.3
	Inda ⁴	3.3	670	4.8	55	2.4
	Jacques Lake ³	3.6	550	4.4	55	2.2
	Michelin ³	4.5	985	9.9	55	5.0
	Nash ⁴	0.5	720	0.8	55	0.4
	Rainbow ⁴	0.9	810	1.6	55	0.8
Total Canada		67.7	860	127.7	55	63.9
Australia						
Measured	Valhalla ⁵	16	820	28.9	100	28.9
Indicated	Andersons ⁶	1.4	1,450	4.6	100	4.6
	Bikini ⁷	5.8	495	6.3	100	6.3
	Duke Batman ⁸	0.5	1,370	1.6	100	1.6
	Odin ⁹	8.2	555	10	100	10.0
	Skal ¹⁰	14.3	640	20.2	100	20.2
	Valhalla ⁵	18.6	840	34.5	100	34.5
	Carley Bore ¹¹	5.4	420	5	100	5.0
	Manyingee ¹²	8.4	850	15.7	100	15.7
Inferred	Andersons ⁶	0.1	1,640	0.4	100	0.4
	Bikini ⁷	6.7	490	7.3	100	7.3
	Duke Batman ⁸	0.3	1,100	0.7	100	0.7
	Honey Pot ¹³	2.6	700	4	100	4.0
	Mirrioola ¹⁴	2	560	2.5	100	2.5
	Odin ⁹	5.8	590	7.6	100	7.6
	Skal ¹⁰	1.4	520	1.6	100	1.6
	Valhalla ⁵	9.1	640	12.8	100	12.8
	Watta ¹⁵	5.6	400	5	100	5.0
	Warwai ¹⁵	0.4	360	0.3	100	0.3
	Carley Bore ¹¹	17.4	280	10.6	100	10.6
	Manyingee ¹²	5.4	850	10.2	100	10.2
Total Australia		135.4	635	189.8	100	189.8
Total Mineral Resources		345.6	615	468.4		369.9

