

### DISCLAIMER AND NOTES

### JORC AND NI 43-101 MINERAL RESOURCES AND ORE RESERVES

This presentation includes certain 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 Paladin Energy Ltd (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 those in the forward-looking statements. Factors that could cause actual results to differ materially from those in forward looking statements include market prices, exploitation and exploration successes, and continued availability of capital and financing and general economic, market or business conditions.

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In the following 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 technical information in this is extracted from the report entitled Paladin Energy Ltd 2018 Annual Report released on 28 August 2018 and is available to view on <a href="https://www.paladinenergy.com.au">www.paladinenergy.com.au</a>. The company confirms that it is not aware of any new information or data that materially affect the information included in the original announcement and, in the case of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not materially modified from the original market announcement.

Some of the information in this presentation, in relation to the mineral resources and ore reserves for all deposits except 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 JORC Code 2012 on the basis that the information that the estimates are derived from has not materially changed since it was last reported.



## **CORPORATE PROFILE**

### WHO IS PALADIN?



An ASX listed independent uranium company with a focus in Africa, Australia and Canada



14 years of production history across two mines in Africa, Langer Heinrich (Namibia) and Kayelekera (Malawi)



Both mines are on care and maintenance (C&M), preserving our resource and shareholder value in the current low uranium price environment



Non-core assets reviewed to preserve cash leading to the sale of the Kayelekera mine



Large and globally diversified uranium exploration portfolio – ~320Mlb¹

### MARKET SNAPSHOT ASX: PDN as at 22 August 2019

Shares on issue	1,752M
Share price A\$	13.5c
Market capitalisation A\$	236.5M
Market capitalisation US\$2	160.8M
Unrestricted Cash US\$ <sup>3</sup>	25.4M
Debt US\$4	132.1M

### **SUBSTANTIAL SHAREHOLDERS** as at 31 July 2019

Tembo	12.76%
Paradice Investment Management	9.58%
Value Partners	9.06%
НОРИ	6.87%
China Investment Corporation	5.49%
BlueBay Asset Management	5.07%



<sup>&</sup>lt;sup>1</sup> Measured, indicated and inferred resources for the Michelin, Mount Isa and Manyingee Projects (including Carley Bore) on a 100% Project basis <sup>2</sup> A\$/US\$ exchange rate 0.68

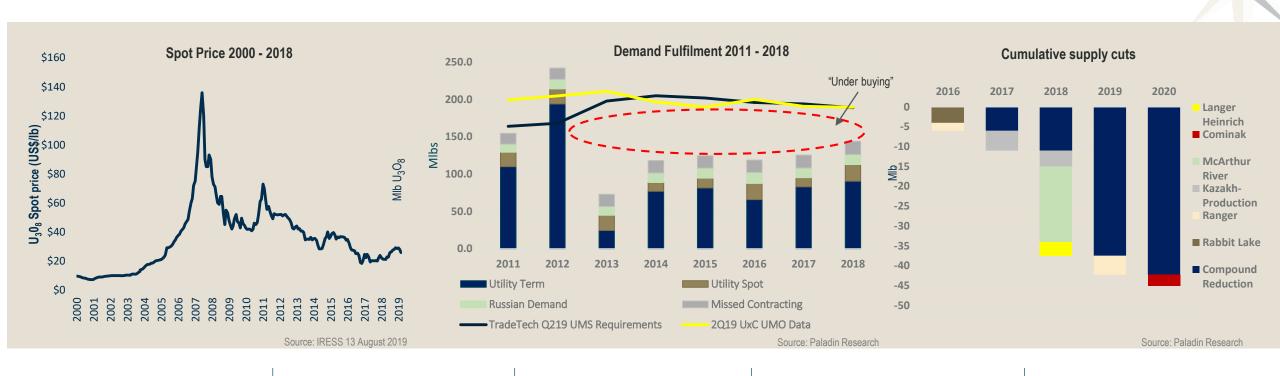
<sup>&</sup>lt;sup>3</sup> As at 30 June 2019 and excluding restricted cash of US\$11m

<sup>&</sup>lt;sup>4</sup> As at 30 June 2019. 9% interest/10% PIK due January 2023



A solid long-term outlook

## THE URANIUM STORY IS COMPELLING



Spot uranium prices are at historic lows

The nuclear power industry is consuming more uranium than pre-Fukushima with growth in China, India and elsewhere

Utilities have been "under buying" at an average rate of 80Mlb per year relative to consumption European and US utilities are running down stockpiles and contract positions put in place pre-Fukushima

Mined supply is being rapidly cut back



## **SUPPLY SIDE FACTORS**

### **KEY MARKET OBSERVATIONS**



Stocks drawn down >400Mlb and +40Mlb taken out of the supply side in recent years (including Ranger 2019)



Significant decrease in exploration spend since Fukushima, supply side projects reduced by 90% (670 projects to 90 now)



New project development timelines stretched:

- Permitting uncertainty remains in many jurisdictions
- May require significantly higher incentive prices +US\$60-\$80/lb
- Production from new mines likely many years after incentive prices reached



When long-term contracting returns, enrichment tails will increase, reducing the contribution of secondary production to the market



Kazakhstan production flat @ <60Mlb to 2021. 15% IPO + (ve) for transparency. Changed from volume-based to value-based marketing





Rate of development of new mines cannot match the growth case and unable to respond in time to price increases



Potential for short-term price spikes



Mines currently on C&M have a significant restart timeline advantage

Source: UxC Uranium Production Cost Study - September 2019



### **DEMAND SIDE FACTORS**

#### **GLOBAL WARMING**

- Nuclear energy is a low cost and low emission base load energy source
- Global impetus to reduce carbon emissions and global warming
- Intergovernmental Panel on Climate Change (IPCC) REPORT Limit global warming increase to 1.5°C
  - China Plans to have 56 reactors operating by 2020 and 180 reactors, or 220% increase, by 2030 to reduce its reliance on coal
  - India following suit with 21 reactors into operation by 2031
  - 17 new reactors in Saudi Arabia announced in 2018

#### **ELECTRIC VEHICLE MARKET**

 Forecasts show sales of electric vehicles increasing from a record 2 million worldwide in 2018, to rise to 10 million in 2025 and surging to 28 million in 2030



THE GOOD, THE BAD AND THE UGLY: LIMITING TEMPERATURE RISE TO 1.5°C



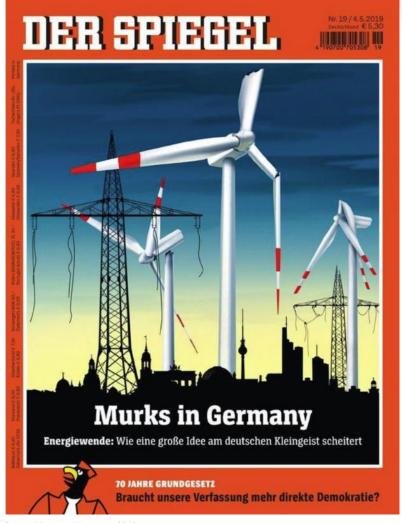
#### Source

- Intergovernmental Panel on Climate Change (IPCC) Report by ©Climate Council of Australia Limited 2018
- Bloomberg NEF Electric Vehicle Outlook 2019



## SENTIMENT MOVING BACK TO NUCLEAR

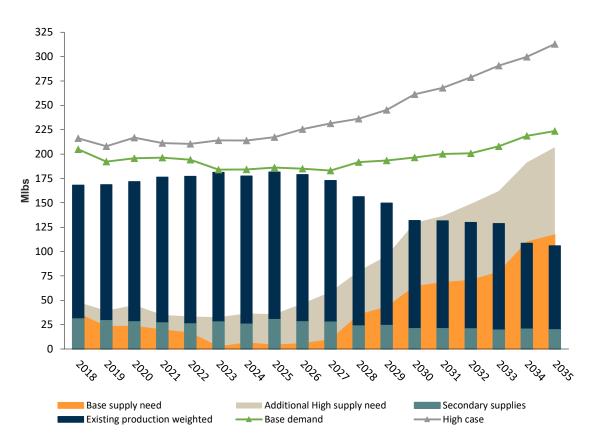
- Nuclear energy is gaining increased support, even from former opponents (Source: Michael Shellenberger https://www.youtube.com/watch?v=N-yALPEpV4w)
- Over two decades of climate change conferences (Berlin 1995) with little to show for it
- Carbon emission continue to increase
- Germany failing to meet goals
  - €160B investment results in zero progress in reducing emissions and 50% higher electricity prices than France (75% Nuclear in energy mix)
  - Increased reliance on lignite coal and Russian gas
  - Competitive disadvantage for Germany industry
- Renewables are not the answer by themselves
  - Not base load, highly variable, low availability eg: wind turbine 28%
  - Require gas or coal to offset variability which has resulted in reductions in nuclear energy use which is zero carbon
    - A\$750M worth of "Elon Musk Honsdale" battery installations to back up one wind turbine for one month



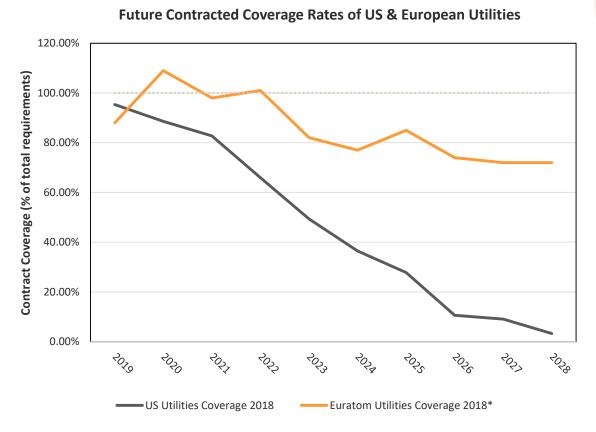




## DEMAND GROWTH FAR EXCEEDS SUPPLY CAPABILITY







US contract coverage reaching critical lows

Source: Paladin Research and UxC Uranium Production Cost Study – September 2019 Note\*: Euratom - European Atomic Energy Community





A LOW COST, LONG LIFE URANIUM MINE

## WE ARE NOT STANDING STILL...

WE ARE PLANNING FOR A RAPID, RELIABLE RESTART

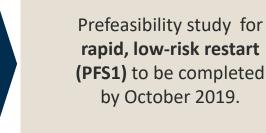


#### **CONCEPT STUDY COMPLETED TO OPTIMISE RESTART:**

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 target AISC1 US\$30/lb



by October 2019.





## RAPID PRODUCTION RESTART ON URANIUM PRICE RECOVERY

DESCRIPTION	STATUS	TIMING	PURPOSE	
Concept Study		Completed February 2019	<ul> <li>Identify, detail and compare multiple restart options</li> <li>Rank on risk and return</li> </ul>	
Prefeasibility Study	In Progress	Prefeasibility Study 1 – Oct 2019 Prefeasibility Study 2 – Mar 2020	<ul> <li>1. RAPID RESTART STUDY (PFS1)</li> <li>Select single go forward plan</li> <li>Optimise current facility, debottleneck</li> <li>2. PROCESSING UPGRADE STUDY (PFS2)</li> <li>Back end upgrade</li> <li>Front end upgrade</li> </ul>	
Feasibility Study 1 (Rapid Restart)	Not committed	TBC 6 – 9 Months	<ul> <li>Lower costs</li> <li>+/- 10% accuracy</li> <li>Enable Rapid Restart to be triggered and clear path into production</li> </ul>	

1<sup>st</sup> uranium producer back into production



## OPTION 1. RAPID RESTART STUDY (PFS1)

 Comparatively low initial restart capital requirements of circa US\$78M (excludes C&M costs)



- Process largely as-is with a focus on debottlenecking and process optimisation
- Potential to be production ready from early-mid
   2021 (funding and price dependent)





# OPTION 2. PROCESSING UPGRADE STUDY (PFS2)

### FURTHER ENCHANCEMENTS TO LANGER HEINRICH AFTER THE RAPID RESTART







### **BACK END UPGRADE**\*

- To reduce reagent costs and recover vanadium, water recovery from tailings and pressure leach
- 12-15 month Prefeasibility Study (currently in-progress) to select process flow sheet changes, followed by 6 month Feasibility Study.
   Decision to proceed further will be made in October 2019
- Execution most likely after plant restarted (FY22 or later)

### FRONT END UPGRADE \*

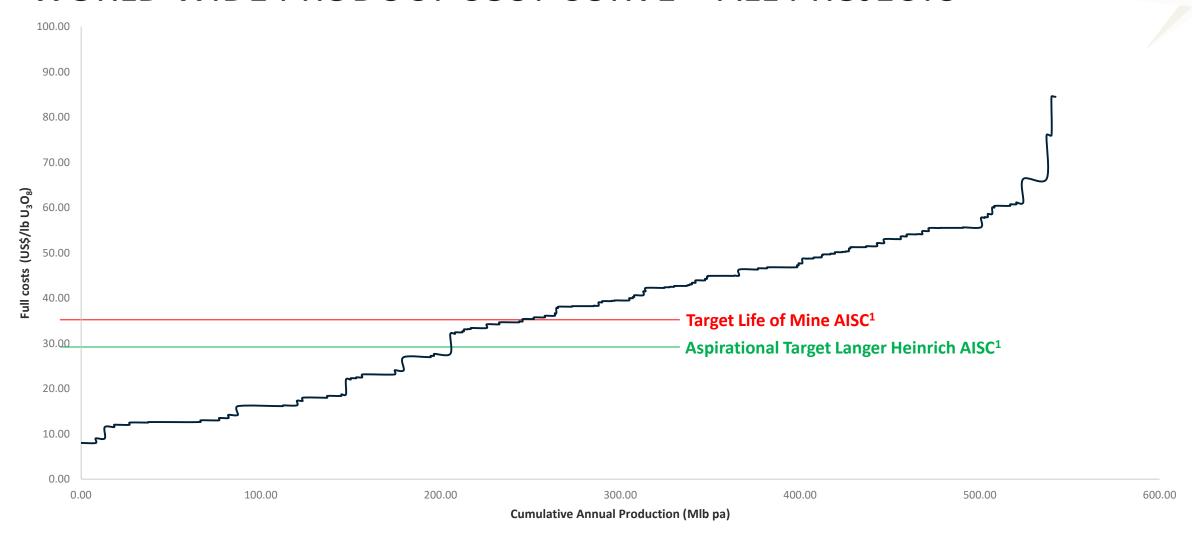
- Selectively upgrading low-grade ore to deliver higher leach feed grades and maintain Uranium production at ~5Mlbpa
  - 6-9 month Feasibility Study to plan implementation
  - Feasibility deferred until required end FY27



Note\*: Paladin Concept Study February 2019.

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# WORLD WIDE PRODUCT COST CURVE – ALL PROJECTS

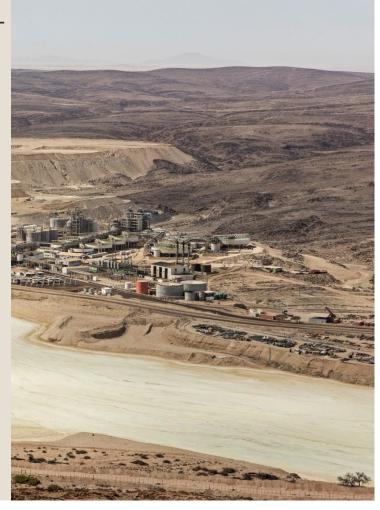




Source: UxC Production Cost Report 2019 – August 2019 Note <sup>1</sup> AISC: All in Sustaining Cost

# PALADIN (AFRICA) LTD (PAL) SALE ANNOUNCED

- PAL to be sold to Lotus Resources Pty Ltd (subsidiary Hylea Resources). PAL holds an 85% interest in Kayelekera Mine and associated leases
- Consideration for the sale:
  - A\$5M
    - A\$200,000 cash
    - A\$4.8M in shares (A\$1.8M on completion subject to 12 month escrow, A\$3M on third anniversary)
  - Deferred royalty of 3.5% from production capped at A\$5M
- US\$10M Environmental performance bond to be refunded:
  - US\$4M on completion; US\$1M first anniversary; US\$2M second anniversary;
     US\$3M third anniversary
- US\$5M pa saving to Paladin on C&M costs
- Key approvals include Hylea shareholder approval, Paladin noteholder consent (both received) and Government of Malawi approvals
- Significantly improves Paladin's forward cash position





## **CONCLUSION**



Diversified portfolio of developed mines and exploration projects with significant leverage to upward movements in the uranium price



Lead time and capital associated with a re-start to bring Langer Heinrich back into production is shorter and lower than new projects



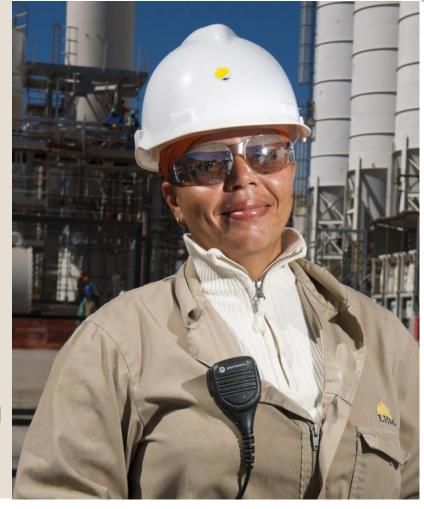
Lower incentive price into production than peers and well positioned on the cost curve



Proven product and market experience



Paladin is focused on minimising expenditure in the current low uranium price environment, while positioning itself for a low risk, well defined path back into production with any sustained price recovery







### **CONTACT US**

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#### **INVESTOR RELATIONS**

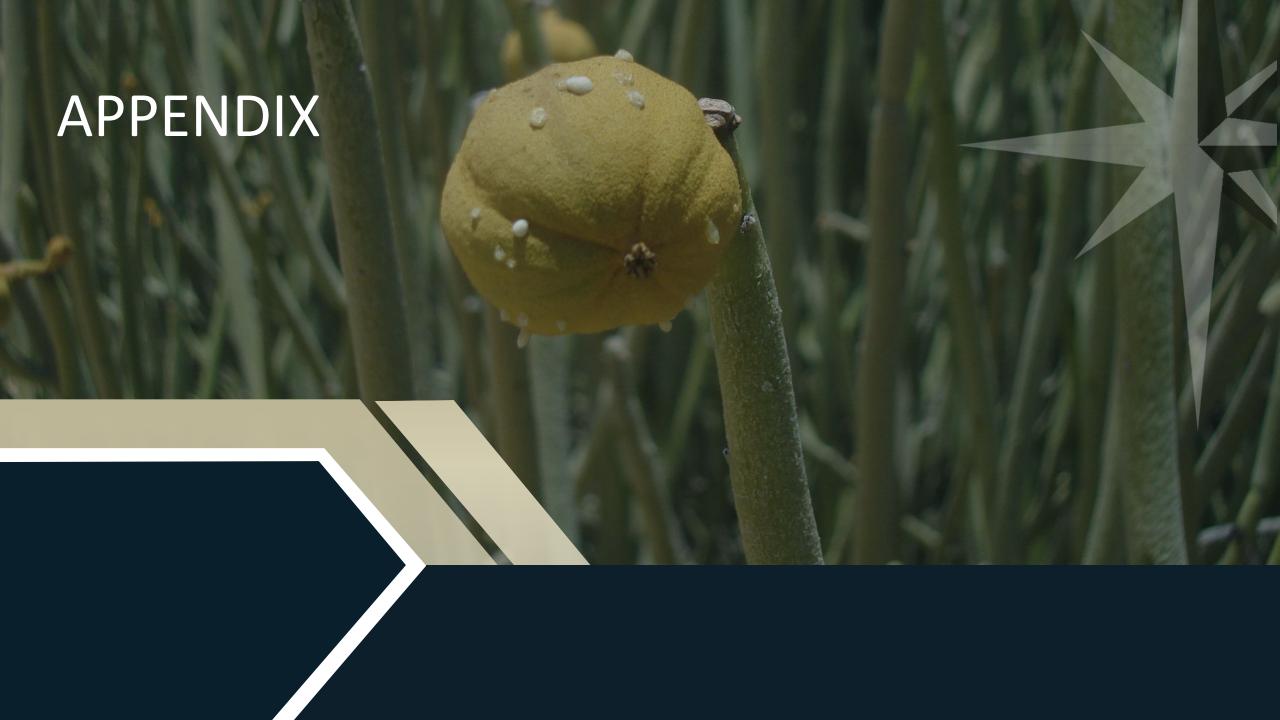
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## MEET OUR BOARD OF DIRECTORS



Rick Crabb - Non-Executive Chairman

Mr Crabb practiced as a solicitor form 1980 to 2004 and was a founder of boutique law firm Blakiston & Crabb in 1992. He left the partnership before it was merged into national player Gilbert + Tobin.

As a lawyer Mr Crabb specialised in mining, corporate and commercial law. He has provided legal counsel in relation to finance, marketing, government agreements and construction contracts for numerous resource development projects throughout Australia and Africa.

Mr Crabb now focuses on his public company directorships and investments. Mr Crabb holds Bachelor of Jurisprudence (Honours), Bachelor of Laws and Master of Business Administration from the University of Western Australia.



David Riekie - Non-Executive Director

Mr Riekie is an experienced ASX Director at both the Executive and Non-executive level.

He has operated in a variety of countries globally and throughout Africa; notably Namibia and Tanzania.

He has throughout his career provided corporate, strategic and compliance services to a variety of organisations operating in the Resource and Industrial sector, usually enterprises seeking expansion capital and listing on ASX.

He has been directly responsible for successful capital raising, stakeholder engagement, acquisition and divestment programmes.



Daniel Harris - Non-Executive Director

Mr Harris is a seasoned and highly experienced mining executive and director. Most recently, Mr Harris was interim CEO and Managing Director of ASX-listed Atlas Iron until January 2017 when he resumed his role as a Non-executive Director and is Chairman of the Audit and Risk Committee.

Mr Harris has been involved in all aspects of the industry for more than 40 years and held both COO and CEO positions in Atlantic Ltd and Strategic Minerals Corporation and was also the former Vice President of EVRAZ Plc in Moscow.

Mr Harris is a consultant and member of the Advisory Board of Black Rock Metals in Montreal and is a consultant and advisor to GSA Environmental in the UK.



John Hodder - Non-Executive Director

Mr Hodder has extensive experience in arranging private equity and debt deals with a focus on mining within developing countries especially Africa. He has also sat on a number of listed and private boards.

Mr Hodder is a geologist with a Bachelor of Science in Geological Sciences and a Bachelor of Commerce in Finance and Commerce from the University of Queensland.

Mr Hodder also worked at Suncorp and Solaris as a Fund Manager focusing on the resources sector, managing an index-linked natural resource portfolio of \$1.25bn.



## MEET OUR SENIOR MANAGEMENT



Scott Sullivan - Chief Executive Officer

Mr Sullivan brings 30 years of diversified mining experience to Paladin, across multiple commodities and projects domestically and internationally.

His experience spans strategic planning in mines and smelters; feasibilities; commissioning; mine expansion and restructuring; mine, port and rail infrastructure; project management; sustainability and government and has a strong emphasis on operational optimisation.

He was most recently General Manager of Newcrest's large and complex Telfer gold-copper mine in the Pilbara region of Western Australia. Prior roles include CEO and Managing Director roles with ASX-listed companies centred in West Africa and the US.

He was Asset President of NSW Energy Coal at BHP, being directly responsible for the operation and rapid expansion of one of Australia's iconic and highest producing coal mines, Mt Arthur, along with the Caroona Coal project and BHP's share in the NCIG port infrastructure in Newcastle.



Anna Sudlow - Chief Financial Officer

Anna is a highly qualified CFO with more than 20-years' experience across the energy and resources sectors specialising in corporate finance, strategy, investor relations and commercial management.

Anna has joined Paladin from Transborders Energy, where she was their CFO. Anna has previously performed senior finance roles as Commercial and Investor Relations Manager at Tap Oil Limited and as Strategic Planning & Portfolio Manager and Treasurer at Woodside Energy Ltd.

Anna has a Bachelor of Commerce and MBA from the University of WA, a Graduate Certificate in Applied Finance from the Securities Institute of Australia, is a CPA and a graduate of the AICD.

Anna currently sits on the Board of the Leeuwin Ocean Adventure Foundation and is Acting Chair of the Board.



Andrea Betti - Company Secretary

Ms Betti is an accounting and corporate governance professional with more than 20 years' experience in accounting, corporate governance, corporate advisory, finance and corporate banking.

Ms Betti has acted as Chief Financial Officer and Company Secretary for companies in the private and publicly listed sectors, as well as senior executive roles in the banking and finance industry.

Ms Betti joined the Paladin Group in August 2015 and was appointed Joint Company Secretary in April 2018.



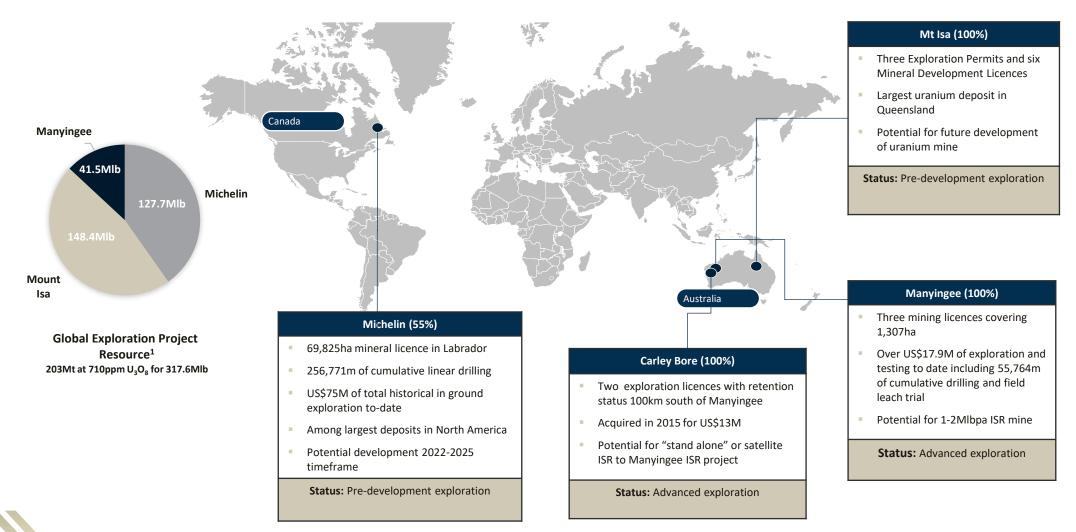
## **RESOURCE & RESERVE TABLES**

#### 30 June 2019

Ore Reserves		Mt	Grade ppm U₃O <sub>8</sub>	MIb U <sub>3</sub> O <sub>8</sub>	Paladin Ownership (%)	Paladin Attributable (Mlb)	
<u>Namibia</u>	mibia 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	
<u>Malawi</u>	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	

Mineral Resource		Mt	Grade ppm U₃O <sub>8</sub>	Mlb U <sub>3</sub> O <sub>8</sub> (100% basis)	Paladin Ownership (%)	Paladin Attributable (Mlb)
<u>Namibia</u>	Langer Heinr					
Measured		60.7	515	68.7	75	51.5
Indicated		21.5	460	21.7	75	16.3
Inferred		8.7	470	9	75	6.8
Stockpiles		30.8	355	24	75	18.0
Total Namibia		121.7	460	123.4	75	92.6
<u>Malawi</u>	Kayelekera					
Measured		0.7	1,010	1.7	85	1.4
Indicated		12.7	700	19.6	85	16.7
Inferred		5.4	620	7.4	85	6.3
Stockpiles		1.6	755	2.6	85	2.2
Total Malawi		20.4	695	31.3	85	26.6
Canada_						
Measured	Michelin	17.6	965	37.6	55	18.8
	Rainbow	0.2	920	0.4	55	0.2
Indicated	Gear	0.4	770	0.6	55	0.3
	Inda	1.2	690	1.8	55	0.9
	Jacques Lake	13	630	18	55	9.0
	Michelin	20.6	980	44.6	55	22.3
	Nash	0.7	830	1.2	55	0.6
	Rainbow	0.8	860	1.4	55	0.7
Inferred	Gear	0.3	920	0.6	55	0.3
imerred	Inda	3.3	670	4.8	55	2.4
	Jacques Lake	3.6	550	4.4	55	2.2
	Michelin	4.5	985	9.9	55	5.0
	Nash	0.5	720	0.8	55	0.4
	Rainbow	0.9	810	1.6	55	0.8
Total Canada	Railibow	<b>67.7</b>	860	127.7	55	63.9
Australia		67.7	800	127.7	33	03.9
Measured	Valhalla	16	820	28.9	100	28.9
Indicated	Andersons	1.4	1,450	4.6	100	4.6
maicatca	Bikini	5.8	495	6.3	100	6.3
	DIKITI	5.6	433	0.3	100	0.3
	Duke Batman	0.5	1,370	1.6	100	1.6
	Odin	8.2	555	10	100	10.0
	Skal	14.3	640	20.2	100	20.2
	Valhalla	18.6	840	34.5	100	34.5
	Carley Bore	5.4	420	5	100	5.0
	Manyingee	8.4	850	15.7	100	15.7
Inferred	Andersons	0.1	1,640	0.4	100	0.4
	Bikini	6.7	490	7.3	100	7.3
	Duke Batman	0.3	1,100	0.7	100	0.7
	Honey Pot	2.6	700	4	100	4.0
	Mirrioola	2.0	560	2.5	100	2.5
	Odin	5.8	590	7.6	100	7.6
	Skal	1.4	520	1.6	100	1.6
	Valhalla	9.1	640	12.8	100	12.8
	Watta	5.6	400	5	100	5.0
	Warwai	0.4	360	0.3	100	0.3
	Carley Bore	17.4	280	10.6	100	10.6
	Manyingee	5.4	850	10.2	100	10.2
Total Australia		135.4	635	189.8	100	189.8
Total Mineral Re	esources	345.2	620	472.2		372.8

# A QUALITY GLOBAL SUITE OF EXPLORATION ASSETS



<sup>&</sup>lt;sup>1</sup> Measured, indicated and inferred resources for the Michelin, Mount Isa and Manyingee Projects (including Carley Bore) on a 100% Project basis as at June 2018

