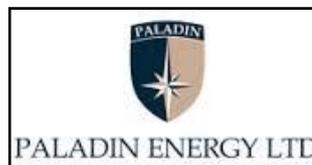
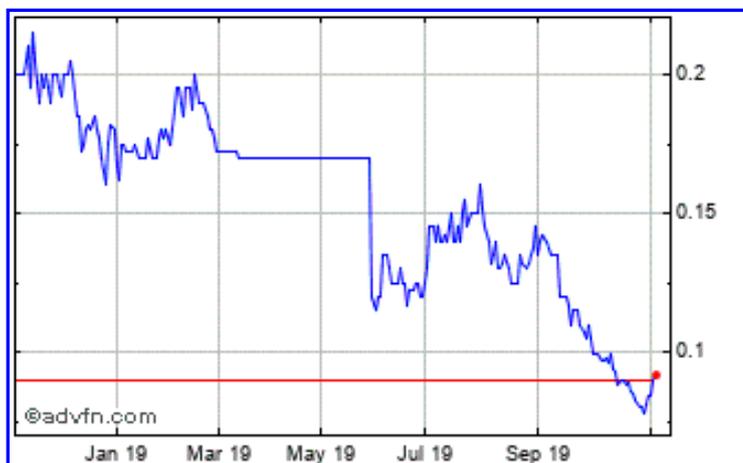


# Uraniumletter INTERNATIONAL

the international independent information and advice bulletin for uranium resource investments

Special Situation – November 2019

www.paladinenergy.com.au



## Paladin Energy Ltd. (A\$ 0.09)

ASX	: PDN
H+L prices (12 months)	: A\$ 0.22 – 0.08
Issued shares	: 2,014 million
Fully diluted	: 2,014 million
Market capitalization	: A\$ 181.3 million (US\$ 128.8 million)

**2020 price target: A\$ 0.20**

## Company profile

**Paladin Energy** (“Paladin”) is an Australian-based global uranium leader with originally two mines in Africa which are both held on care and maintenance.

The **Langer Heinrich Mine** (“LHM”) in **Namibia** is **Paladin’s** **flagship project, which has an historical production capacity of ~5.2Mlb U<sub>3</sub>O<sub>8</sub> annually**. The Company placed LHM into care and maintenance in May 2018. In March 2019, **Paladin** commenced with a two-stage Feasibility Study (PFS) for the possible restart of the LHM and on 14 October 2019 announced the key highlights of phase 1 of the PFS (PFS 1).

## Key Highlights **Langer Heinrich Mine**:

- Estimated capital of US\$80M confirmed for restart at historical production levels of ~5.2Mlb/a
- **Opportunity to increase production to 6.5Mlb/a through additional high return, discretionary capital of US\$30M enhancing access to offtake and financing**
- **Aspirational average life of mine All in Sustaining Cost (AISC) target of US\$30/lb achievable**
- Potential for further AISC improvements of approximately US\$4.50/lb through significant process changes after restart (Subject of PFS2 stream)
- **Maiden Vanadium Mineral Resource of 38.8Mlb V<sub>2</sub>O<sub>5</sub> declared** (122.1Mt @ 145ppm V<sub>2</sub>O<sub>5</sub>)
- 12-month execution lead time to restart Langer Heinrich after funding and improved uranium market conditions

PFS1 is now complete. PFS2 was scheduled through to March 2020. Feasibility Level Studies will not be commenced until market conditions improve.

**CNNC Overseas Uranium Holding**, a wholly owned subsidiary of **China National Nuclear Cooperation** took a 25% stake in **Langer Heinrich** in July 2014.

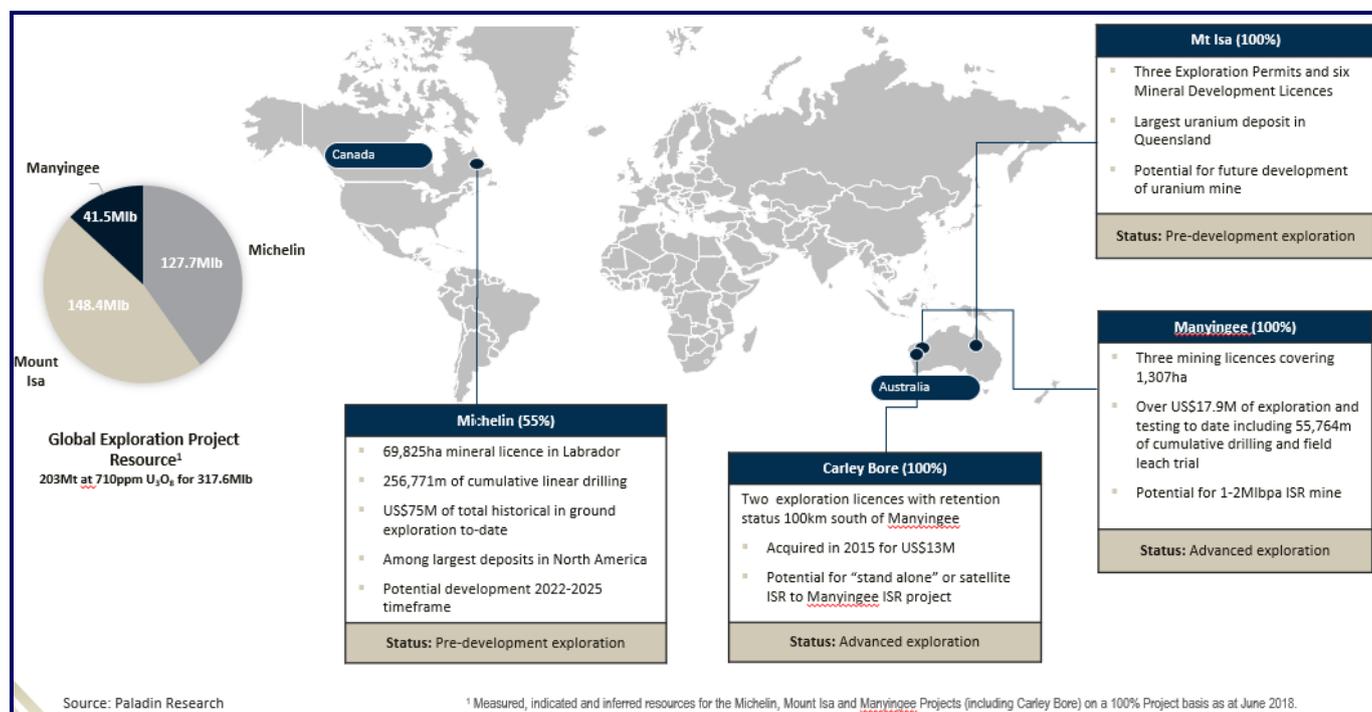
**Paladin** holds an 85% interest in the **Kayelekera Mine** in **Malawi**, which is in the process of being sold to a **Lotus Resources** (ASX: LOT) led joint venture. The government of Malawi holds the remaining 15% interest. The considering of sale comprises A\$ 200,000 in cash, A\$ 4.8 million in **Lotus shares** and a deferred royalty of 3.5% from production capped at A\$ 5 million. The company will also be refunded its US\$ 10 million Environmental Performance Bond and will benefit from a Care and Maintenance cash burn saving of US\$ 5 million/a.

In addition to **Langer Heinrich** and **Kayelekera**, **Paladin's** exploration portfolio consists of projects in **Canada** and **Australia** that have a global combined Mineral Resource inventory of **317.6 Mlb U<sub>3</sub>O<sub>8</sub>**.

The **Michelin** project located in the **Central Mineral Belt of Labrador, Canada**, currently 55% owned by **Paladin**, contains **127.7 Mlb U<sub>3</sub>O<sub>8</sub>** resources, the largest of which is the Michelin deposit.

**Paladin** also wholly owns 3 projects located 15 kilometres north and east of **Mount Isa** in **Queensland, Australia** that include 10 deposits containing **148.3 Mlb U<sub>3</sub>O<sub>8</sub>** across all resources categories and the **Manyingee** and **Carley Bore** projects in **Western Australia** which have a combined Mineral Resource of **41.5 Mlb U<sub>3</sub>O<sub>8</sub>**.

## A GLOBAL SUITE OF EXPLORATION AND DEVELOPMENT ASSETS



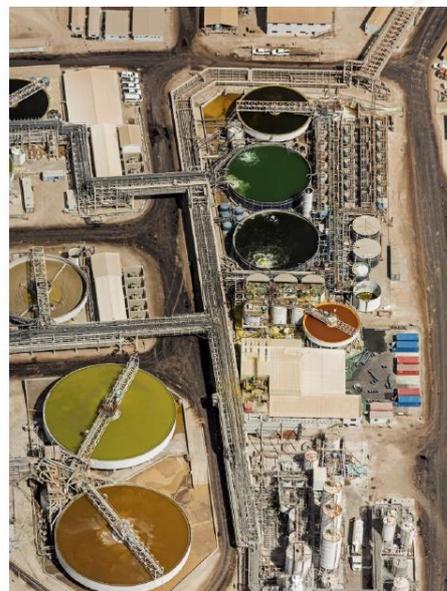
► **Overview of Mineral Resources - JORC (2012) code**

**Langer Heinrich** is a surficial calcrete type uranium deposit containing a **Mineral Resource of 119.6 Mlb** at a grade of 445 ppm U<sub>3</sub>O<sub>8</sub>, using a 250 ppm U<sub>3</sub>O<sub>8</sub> cutoff grade, across all resource categories conforming to the JORC (2012) code, as at 14 October 2019 consisting of:

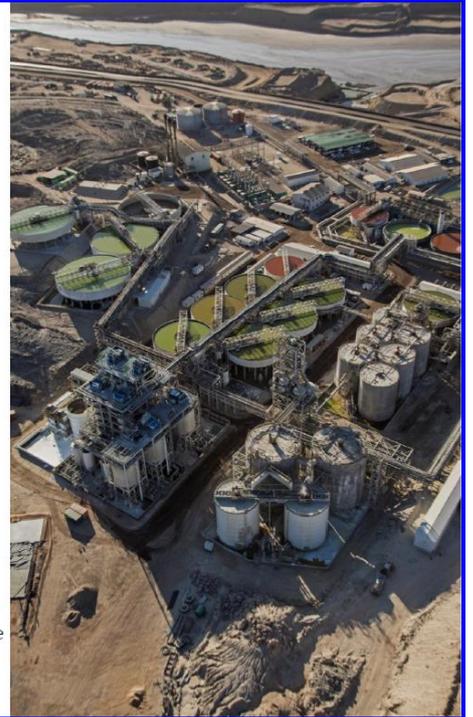
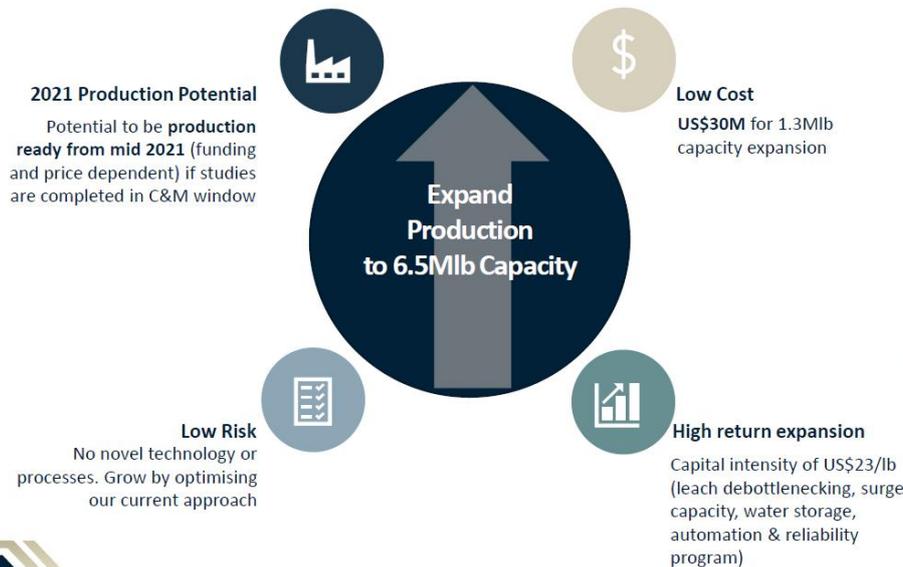
<b>MINERAL RESOURCES</b>	<b>Mt</b>	<b>Grade ppm U3O8</b>	<b>Million pounds U3O8 (100% basis)</b>	<b>Paladin ownership (%)</b>	<b>Paladin attributable (Mlb)</b>
<b>Measured</b>	66.2	490	71.9	75	53.9
<b>Indicated</b>	18.8	435	18.0	75	13.5
<b>Inferred</b>	6.3	420	5.8	75	4.4
<b>Stockpiles</b>	30.8	355	24.0	75	18.0
<b>Total Namibia</b>	<b>122.1</b>	<b>445</b>	<b>119.7</b>	<b>75</b>	<b>89.8</b>
<b>VANADIUM RESOURCES</b>					
Measured	66.2	160	23.3	75	17.48
Indicated	18.8	140	5.8	75	4.35
Inferred	6.3	135	1.9	75	1.43
Stockpiles	30.8	115	7.8	75	5.86
<b>Total Namibia</b>	<b>122.1</b>	<b>145</b>	<b>38.8</b>	<b>75</b>	<b>29.12</b>

## PREFEASIBILITY STUDY HIGHLIGHTS

- Prefeasibility Study (phase 1 – PFS1) confirms 12-month execution lead time to low risk restart Langer Heinrich
- Aspirational average life of mine AISC target **US\$30/lb** achievable
- 5.2Mlb pa production for restart confirmed for capital of US\$80M
- Opportunity to increase production at restart to **6.5Mlb pa** with additional, high return discretionary capital of US\$30M
- Maiden Vanadium Mineral Resource of **38.8Mlb V<sub>2</sub>O<sub>5</sub>** 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



## PALADIN IDENTIFIES LOW COST EXPANSION OPPORTUNITY



## 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 outstanding approval required is the Government of Malawi
- Significantly improves Paladin's forward cash position



## WHY CHOOSE PALADIN AS YOUR URANIUM INVESTMENT?



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 industry project 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



Langer Heinrich production 7 to 8 times total US production!



### Management

**Scott Sullivan, B.Eng., MBA, FAusIMM, GAICD, Chief Executive Officer**, 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.

Mr. Sullivan 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 Caroon Coal project and BHP's share in the NCIG port infrastructure in Newcastle. He was also GM of Peabody Energy's Wambo Coal operations in the Hunter Valley.

**Anna Sudlow, BCom CPA AICD MBA, Chief Financial Officer**, has more than 20 years of experience across the energy and resources sectors specialising in corporate finance and funding, investor relations and commercial management. She commenced her career at Woodside Energy, progressing into senior functional roles across treasury and portfolio management; thereafter working with small cap ASX listed companies in senior leadership positions with a focus in finance and commercial. Ms Sudlow previously held the position of CFO at Transborders Energy, where she has been their CFO since 2017.

**David Riekie, Non-Executive Director, B. Econ. Dip Acc. CA, MAICD** 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. Mr. Riekie was a corporate reconstruction specialist with Price Waterhouse. He has overseen, exploration and resource development, scoping and feasibility studies, production, optimisation and rehabilitation initiatives. He has special interest in the energy and energy storage sector, primarily through energy storage minerals and commodities with special knowledge of uranium, oil and gas, graphite, lithium, nickel, copper and cobalt. He is a Non-Executive Director of remote power generation and energy solutions specialist, ASX listed Zenith Energy.

**Daniel Harris, B.Sc, Non-Executive Director**, is a seasoned and highly experienced mining executive and director. Most recently, He 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 and Strategic Minerals Corporation and was also the former Vice President of EV-RAZ Plc in Moscow. He 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. Mr. Harris currently a Non-executive Director Australian Vanadium and is a Non-executive Director of Queensland Energy and Minerals.

**John Hodder, B.Sc, B.Com, Non-Executive Director**, has extensive experience in generating and 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. Mr. Hodder spent ten years in the mining and oil and gas industries before completing an MBA at London Business School. He established the Commonwealth Development Corporation (CDC) mining, oil and gas investment department in 1995 and was responsible for its investment activities for eight years. He was director of a number of junior mining companies and has significant experience of operating and investing in Africa.

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. In 2014, he was one of three principals who established Tembo Capital, a mining-focused private equity fund group.

**Andrea Betti, CA, AGIA, B.Com, MBA, Company Secretary**, is an accounting and corporate governance professional with more than 20 years' experience in accounting, corporate governance, corporate advisory, finance and corporate banking. She has acted as CFO and Company Secretary for companies in the private and publicly listed sectors, as well as senior executive roles in the banking and finance industry.

**Michael Drake, B.Eng, MBA, General Manager Business Development and Projects**, brings 25 years of diversified study, projects and operational leadership experience to Paladin.

He has undertaken executive leadership roles in Australia, South America, Papua New Guinea and Indonesia, and was recently the General Manager of Processing at Newcrest's Lihir Gold Mine. Mr. Drake has previously held Program Director roles in BHP's major capital projects program in Nickel, Copper and Iron Ore.

## **Finance**

On 13 September 2019, **Paladin** announced that it had successfully completed a private placement of approximately 262.8 million ordinary shares to raise A\$ 30.2 million and on 8 October it completed a Share Purchase Plan issuing approximately 13 million shares to raise A\$ 1.49 million.

As at 30 September 2019, the Group's unrestricted cash and cash equivalents were US\$ 40.1 million (excluding restricted cash of US\$ 11.2 million). Debt in the form of secured notes totalled US\$ 132.1 million.

## Investment comments:

Having completed a PFS for the possible restart of the **Langer Heinrich Mine**, **Paladin Energy** announced on 14 October 2019 the key highlights which included a capital of US\$ 80 million only for restart at historic production levels of ~ 5.2 Mlb/a and an average life of mine AISC of US\$ 33/lb.

Of particular note however was the ability to expand Langer Heinrich Production capacity to 6.5 Mlb/a for an incremental capital amount of US\$ 30 million (total capital for restart to 6.5Mlb capacity US\$ 110 million). This would reduce the average life of mine AISC to US\$ 29/lb.

**The Langer Heinrich deposit contains a JORC (2012) compliant Mineral Resource of 119.6 Mlb U<sub>3</sub>O<sub>8</sub> at a grade of 445 ppm U<sub>3</sub>O<sub>8</sub>, using a 250 ppm U<sub>3</sub>O<sub>8</sub> cutoff grade, across all resource categories. In addition to Langer Heinrich and Kayelekera, Paladin has a global exploration portfolio with combined Mineral Resources of 317.6 Mlb U<sub>3</sub>O<sub>8</sub>.**

Paladin is well advanced on selling its 85% interest in the **Kayelekera Mine** in **Malawi** to focus the Company's efforts on the development of the **Langer Heinrich Mine** to be production ready from mid-2021. The **Kayelekera** sale is expected to be completed by the end of 2019.

Considering the low achievable average life of mine AISC of US\$ 29/lb, at a current market valuation of US\$ 129 million, including a cash position of US\$ 40 million, I consider **Paladin Energy** to be significantly undervalued compared to uranium producers focused on the United States.

**My 2020 price target is A\$ 0.20.**