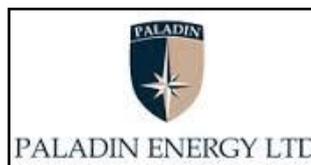
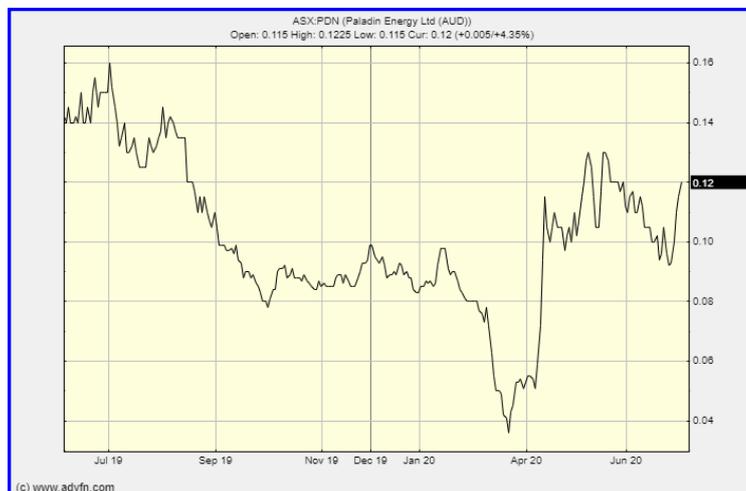


# Uraniumletter INTERNATIONAL

the international independent information and advice bulletin for uranium resource investments

## Special Situation – July 2020 Update

www.paladinenergy.com.au



### Paladin Energy Ltd. (A\$ 0.12)

ASX	: PDN
H+L prices (12 months)	: A\$ 0.16 – 0.04
Issued shares	: 2.03 billion
Market capitalization	: A\$ 243.3 million (US\$ 168.4 million)

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

### Company profile

**Paladin Energy Limited** (“Paladin”) is an Australian-based global uranium. The Company’s **Langer Heinrich Mine** (“LHM”) in **Namibia**, **Paladin’s flagship project**, 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 August 2018.

On **June 30, 2020**, **Paladin** announced the results of the **Langer Heinrich Mine Restart Plan** (“**The Restart Plan**”) which marks the completion of an extensive work package aimed at delivering a reliable mine restart to bring the globally significant Langer Heinrich Mine back into production under the right uranium pricing environment.

### Key highlights are:

- ▶ **Langer Heinrich can be brought back into production for US\$ 81 million of pre-production cash expenditure**, allocated as follows:
  - **operational readiness (US\$ 34 million) required** to mobilise the work force, undertake maintenance and provide the working capital requirements to commence production; and
  - **discretionary capital (US\$ 47 million)** specifically aimed at improving process plant availability and reliability to lift production capacity by more than 10%.
- ▶ **Low restart capital intensity (US\$14/lb) and competitive C1 Cost of Production (US\$27/lb)** confirms **Langer Heinrich is well positioned alongside other Tier 1 operations** to deliver product into a recovering uranium market;
- ▶ **The Restart Plan has confirmed a 17-year mine life for Langer Heinrich with peak production of 5.9Mlb U<sub>3</sub>O<sub>8</sub> per annum for 7 years;**

- ▶ **The Life of Mine Plan outlines three distinct operational phases being Ramp-up (year 1), Mining (year 2-8) and Stockpile (year 9-17).** The utilisation of stockpile material in the Ramp-up phase greatly reduces operational start up risk and provides a strong platform for the operation to move toward name plate capacity within a 12-month period;
- ▶ Langer Heinrich remains fully permitted to resume mining and uranium exports; and
- ▶ **Paladin's cash position of US\$35 million** provides financial flexibility and the Company will only consider a restart when it secures an appropriate term-price contract with sufficient tenor and value to deliver an appropriate return to all stakeholders.

## Key capital, operational and cost highlights:

The release of the Langer Heinrich Restart Plan marks the conclusion of the Company's 18 month prefeasibility and optimisation study work programmes. The selected restart option provides a low risk, reliable restart plan balancing the ability to rapidly respond to strengthening Uranium prices and maximising asset value. Key Capital, Operational and Cost highlights of The Restart Plan are detailed below:

*All operational performance, costs and capital metrics are on a 100% basis for the Langer Heinrich operation. **Paladin** owns 75% of Langer Heinrich (25% owned by CNNC (a leading Chinese nuclear agency).*

The **Langer Heinrich deposit** contains a **JORC (2012) compliant Mineral Resource** of 119.5 million pounds **U<sub>3</sub>O<sub>8</sub>**, using a 250 ppm **U<sub>3</sub>O<sub>8</sub>** cut-off grade across all resource categories.

## Key Operational Metrics

	Ramp-up Phase (Year 1)	Mining Phase (Year 2-8)	Stockpile Phase (Year 9-17)
Mining Rate (TMM Mt pa)	0	28.8	0
Mill Throughput (Mt pa)	3.3 (from stockpile)	5.1	5.3 (from stockpile)
Mill Availability (%)	71	95	95
Mill Feed Grade (ppm)	520	593	336
Process Recovery (%)	88.5	88.4	88.5
<b>Production (Mlb pa U<sub>3</sub>O<sub>8</sub>)</b>	<b>3.3</b>	<b>5.9</b>	<b>3.5</b>
Mining & Stockpile Rehandling Cost (\$M pa) <sup>1,3</sup>	11	72	16
Processing & Maintenance Cost (\$M pa)	57	81	67
G&A and Other (\$M pa)	9	9	9
Capex (\$M pa) <sup>2</sup>	1.5	14.5	13.1

1. Excludes stockpile inventory adjustments. 2. Sustaining, minor improvements, progressive rehab and tailings mgt capex. 3. No in-situ mining occurs in Ramp-up and Stockpile phases. Stockpile re-handling only. 4. Figures quoted in table reflect yearly average over the operational phases.

## Cost Profile

US\$/lb U <sub>3</sub> O <sub>8</sub>	Ramp-up Phase (Year 1)	Mining Phase (Year 2-8)	Stockpile Phase (Year 9-17)	Life of Mine (All 3 phases)
Mining & Stockpile Rehandling <sup>1</sup>	3.3	12.2	4.6	8.7
Processing & Maintenance	16.9	13.7	19.3	16.2
G&A and Other	2.8	1.5	2.6	2.0
<b>Production Cash Cost</b>	<b>23.0</b>	<b>27.4</b>	<b>26.5</b>	<b>26.9</b>
Non-Cash Inventory Adjustments <sup>4</sup>	-	(7.9)	10.5	-
<b>C1 Cost of Production</b>	<b>23.0</b>	<b>19.5</b>	<b>37.0</b>	<b>26.9</b>
Freight & Logistics	0.95	0.95	0.95	0.95
Capex <sup>3</sup>	0.45	2.4	3.7	2.9
Government Royalties <sup>2</sup>	3%	3%	3%	3%

1. Excludes stockpile inventory adjustments. 2. Namibian Royalties of 3% US\$ sales. Excludes 3rd party royalty of A\$0.12/kg. 3. Sustaining, minor improvement, progressive rehab and tailings mgt capital. 4. Opening stockpiles have no book value (written off in 2017/2018).

### ► Sale of 85% interest in Kayelekera Mine, Malawi

On March 13, 2020, **Paladin** completed the sale of its 85% interest in **Kayelekera Mine** in **Malawi** to **Lotus Resources** (65%) and **Lily Resources** (20%).

The sale reduces the Company's cash expenditure by approximately US\$ 5 million and its leased funding C & M costs at completion.

The commercial aspects of the sale were:

- Consideration of A\$ 5.0 million, comprising A\$ 200,000 cash (received) and A\$ 4.8 million in **Lotus Resources** shares issued to **Paladin** (90 million shares were issued at completion at 2 cent per share issuer price). A further A\$ 3.0 million of shares will be issued on the third anniversary of completion of the transaction.
- A 3.5% royalty based on revenue derived from future production of the Kayelekera Mine, capped at A\$ 5.0 million
- The repayment of funds advanced to provide security for US\$ 10.0 million environmental performance bow. The repayment will occur in four annual tranches.
- **Paladin** paid **Lotus** US\$ 2.0 million to fund planned site restoration, including water treatment in recognition of the recent record rainfall at the Kayelekera operations

### ► Other projects

In addition to **Langer Heinrich**, **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>**.

## Restart Plan confirms economic significance of Langer Heinrich Mine



## US\$81M pre-production expenditure required to restart & deliver reliable operations

### Operational Readiness (US\$34M)

Working capital and other cash expenditure to restart baseline operations:

- Perform maintenance on plant and infrastructure
- Replenish reagents, purchase spare parts and other working capital
- Workforce recruitment, mobilization and training. Mobilise key contractors, including mining contractor

Operational Readiness	US\$34M
Maintenance	13
Working capital replenishment	14
Work force and mobilisation	7

### Discretionary capital investment to improve plant availability (US\$47M)

Targeted investments to maximise plant reliability and runtime (c.85% to 95%):

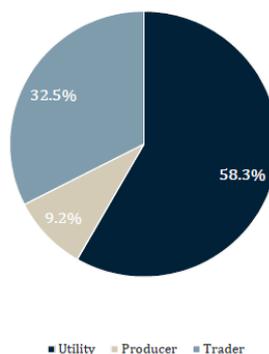
- Product drying and packaging facility upgrade reducing product volumes and transport weight
- Leach feed surge tank to decouple crushing from leach, increasing availability
- Increase water storage mitigating production interruption when primary water supply is disrupted
- Process control upgrade and process equipment changes to increase stability and control
- Address known asset integrity issues – piping, structural and electrical
- Increased tailing capacity 12 months in advance of production needs

Improving Plant Availability and Process Stability	US\$47M
Product drying and packaging	14
Leach surge capacity and water storage	7
Process control and stability	6
Infrastructure asset integrity	16
Tailings dam	4

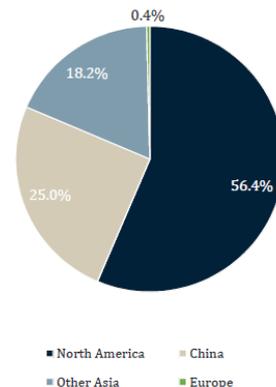
## Langer Heinrich's proven Uranium product

- 43Mlb U<sub>3</sub>O<sub>8</sub> successfully marketed over 10 years
- Delivered product aligned to feedstock specifications of global UF<sub>6</sub> conversion facilities operated by Cameco, Honeywell, Orano and CNNC
- Langer Heinrich never missed a shipment or had a shipment rejected
- Customers know the Langer Heinrich product
- Product packaging upgrade will enable UO<sub>4</sub> or U<sub>3</sub>O<sub>8</sub> production upon restart
- Langer Heinrich has a LOM offtake with CNNC for up to 25% of annual production at approximately the then prevailing spot price
- The CNNC offtake is complimentary to the Company's plan to secure term offtake for the remaining 75% of uncontracted production and provides upside exposure to uranium prices

Langer Heinrich Sales by Customer Group



Utility Sales by Region



## Management and Board of Directors

**Ian Purdy, BCom FCA FAICD, Chief Executive Officer**, has over three decades experience with Australia and international resources companies. He has delivered significant shareholder value through managing and optimising operations, delivering large projects and executing on business improvements and asset sales. Mr Purdy has extensive capital markets experience and a proven track record of delivering company funding requirements. Most recently Mr Purdy was the CFO of Quadrant Energy, one of Australia's largest and most active oil and gas companies producing over 20 percent of the domestic gas production in Western Australia. Prior to his position with Quadrant Energy, Mr Purdy was the Managing Director and CEO of Mirabela Nickel, an Australian ASX-listed nickel producer operating in Brazil. In his time as CEO, he led Mirabela through the transition from construction to full nameplate production.

**Cliff Lawrenson, BCom (Hons), Non Executive Chairman**, has worked extensively in project development and investment banking around the world, including in Australia, USA and Singapore. He is an experienced mining executive and director with deep expertise in the minerals and energy sectors derived from his considerable global experience. M. Lawrenson has a successful track record of leading strategic direction in companies and executing corporate transactions. He is currently Non-Executive Chairman of ASX-listed Pacific Energy.

**Peter Main, Non-Executive Director**, is a mining and finance professional with extensive experience in these sectors spanning more than 30 years. During that time, he has developed an extensive working knowledge of the financial markets with a wealth of contacts and industry experience. Mr Main has spent almost 15 years in a variety of roles in the mining industry from operations through to CEO of a TSX-V listed mining company, obtaining diverse experience across most facets of mining operations. He has spent 20 years in finance, mainly working for investment banks, including 11 years managing the Royal Bank of Canada's (RBC) Australian equity sales and trading business and co-managing RBC's regional business.

**Peter Watson, Non-Executive Director**, is a chemical engineer with more than 35 years' experience in the global resources sector across senior technical, project, and management roles as well as corporate experience in running ASX listed companies. He has held technical and senior executive roles with a number of companies, culminating in his appointment as the MD & CEO of Sedgman. Mr Watson is currently an executive director at Strandline Resources and a non-executive director at New Century Resources.

## Finance

### Consolidated statement of cash flows as at March 31, 2020

	Year to date (9 months) (US\$ million)
<b>Net cash flow from operating activities</b> , of which:	<b>(8.05)</b>
care and maintenance	(6.16)
<b>Net cash flow used for investing activities</b> , of which:	<b>(2.53)</b>
proceeds of the disposal of entities	2.00
Langer Heinrich prefeasibility costs	(3.90)
<b>Net cash flow from financing activities</b> , of which:	
proceeds from issues of equity securities (excluding convertible debt securities)	<b>20.86</b>
<b>Unrestricted cash</b>	<b>35.85</b>

## NAMIBIA – PREMIER GLOBAL URANIUM JURISDICTION

- Namibia is a premier uranium jurisdiction
- Supplies 5% of the world's uranium (>15Mlb pa)
- 40+ years production history
- Stable government with history of supporting investment
- Politically/socially supportive
- Excellent infrastructure:
  - Port
  - Road
  - Rail
  - Water
  - Power



### Investment comments:

On June 30, 2020, **Paladin** announced the results of the **Langer Heinrich Mineral Restart Plan** aimed at delivering a reliable mine restart to bring the globally significant **Langer Heinrich Mine** back into production. The **Restart Plan** has confirmed a **17-year mine life with leak production of 5.9 million pounds U<sub>3</sub>O<sub>8</sub> per annum for 7 years**.

The **Langer Heinrich deposit** contains a **JORC (2012) compliant Mineral Resource of 119.5 million pounds U<sub>3</sub>O<sub>8</sub>, using a 250 ppm U<sub>3</sub>O<sub>8</sub> cut-off grade across all resource categories**.

**Paladin's** next steps are:

- Continue to engage potential customers to secure term-price offtake agreements
- Advance the critical-path elements of the Restart Plan
- Utilising the forward program to publish a revised Ore Reserve
- Continue to preserve the **Langer Heinrich Mine** through cost effective ongoing care and maintenance activities
- Continue to minimize cash burn with all work programs to be funded with **Paladin's** guidance of total expenditures for FY 2021 less than US\$ 100 million

Considering the low achievable life of mine AUSC for **Langer Heinrich**, the Company is well positioned to be one of the world's leading uranium producers under a 12-months execution lead to restart after funding and improved market conditions.

In my February 2020 updated Special Report, at a share price of A\$ 0.09, I already concluded that **Paladin** was significantly undervalued compared to uranium producers focused on the United States. These also stand-by producers showed a negative market performance in the first half of 2020 compared to **Paladin** having gained 33% at a current price of A\$ 0.12.

The Company is included in my 2020 Shortlist of investment recommendations.

**My 2020/2021 price target remains A\$ 0.20.**