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ASX Announcement
4 November 2021

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ASX code: PDN

Langer Heinrich Mine Restart Plan Update, Mineral Resource and Ore Reserve Update

Paladin Energy Limited (ASX:PDN OTCQX:PALAF) (**Paladin** or the **Company**) is pleased to provide an update to the Langer Heinrich Mine Restart Plan[1] (the **Restart Plan Update**), and to present an update to the Mineral Resources and Ore Reserves Estimates for the Langer Heinrich Mine (**LHM**, **Langer Heinrich** or the **Project**).

Since the Restart Plan Update in June 2020, Paladin has continued an extensive work stream over the past 15 months to further de-risk restart activities at LHM and provide a low risk, well-defined pathway to production.

Highlights

- The Restart Plan Update confirms the restart cost estimate of US$81M and a 17 year mine life supported by Ore Reserves of 84.8Mt with an average U_3O_8 grade of 448ppm
- Life of mine production target increased to 77.4Mlb of U_3O_8 (previously 76.1Mlb)
- Estimated Life of Mine C1 Costs are updated to US$27.40/lb (previously US$26.90/lb), primarily due to increased estimated contract mining rates
- The Company has confirmed an estimated project execution timeframe of 18 months from project commencement to first production, with full production achieved after a further 15 months
- The restart work technical programs are now complete and have reinforced Paladin's confidence in LHM as a robust, competitive long-life operation ready to rapidly restart production in the right uranium price environment
- Paladin continues to engage with global nuclear energy utilities with the intent of securing uranium offtake contracts with sufficient duration and value to underpin the restart of LHM. The Company notes an increase in market queries from utilities and an increase in long term market pricing
- Paladin will now focus attention on exploring value enhancement opportunities at Langer Heinrich and across the Company's broader asset portfolio including:
  - Concept studies are underway for potential LHM value ehancement opportunities including: vanadium recovery and sales; increased low grade stockpile phase production rate; application of ore sorting technology; mine life extension through lower cut off grade resource processing; resource expansion; further cost optimisation; and recovery improvements
  - Considering an optimised LHM project execution plan exploring the possibility to self-fund early works in FY2022 and fast track first production when a decision to restart is made

[1] ASX Announcement 'Langer Heinrich Mine Restart Plan' released on 30 June 2020.

- Establish development and exploration pathways across Paladin's three large, high grade exploration projects in Canada and Australia
- Continue assessing M&A opportunities complementary to our existing global project and exploration portfolio.

With unrestricted cash reserves of US$40.5M at 30 September 2021, the Company maintains a disciplined and patient approach to restarting the Langer Heinrich Mine and has the financial flexibility to respond rapidly to improving uranium market conditions.

Paladin CEO, Ian Purdy said "*The Restart Plan Update is the conclusion of an extensive work stream aimed at further de-risking the ramp up and operational readiness of the globally significant Langer Heinrich uranium mine. The workstreams reinforce our confidence in Langer Heinrich as a low risk, robust, long-life operation that is poised for a restart to take advantage of the improving uranium market conditions.*

As the world continues to move towards a decarbonised economy, Paladin is in a unique and enviable position of having a robust capital structure with no corporate debt and a project with a low-risk pathway to production with strong economics and importantly a well-known product from our 10 years of prior operation. We will continue to position Paladin to be ready to restart operations under the right uranium price environment. The improving structural outlook for uranium markets and Paladin's opportunity to positively contribute to the decarbonisation of global electricity generation provides the platform for an exciting period ahead for Paladin and I look forward to updating you on our progress."

EXECUTIVE SUMMARY

Langer Heinrich Mine Restart Plan Update

The Langer Heinrich Mine Restart Plan Update reflects the extensive work programs which have been undertaken since the Langer Heinrich Mine Restart Plan (the **Restart Plan**) was completed on 30 June 2020.

The Restart Plan Update has reconfirmed or updated key capital and operating costs and production profile assumptions derisking the pathway to bring Langer Heinrich back into production. First production from Langer Heinrich is anticipated to be within 18 months of the decision to restart. However the recent work has identified and scoped early works that may be undertaken to provide flexibility and reduce the project delivery schedule. The Restart Plan Update includes an initial Ramp Up Phase treating existing stockpiles, a high production Mining Phase and then a lower grade phase treating the remaining stockpiles.

Key highlights from the Restart Plan Update include:

- Restart capital cost assumption re-affirmed at US$81M
- Confirmation of a 17 year estimated mine life for Langer Heinrich with the life of mine production target increased from 76.1Mlb to 77.4Mlb of U_3O_8
- Ore Reserves of 84.8Mt with an average U_3O_8 grade of 448ppm support the 17 year life of mine plan
- An optimised process plant delivering performance and recovery improvements. The mine plan remains in three phases being:
    - Ramp up to full production extended by three months to 15 months
    - High production Mining Phase extended by nine months (Years 2 to 9)
    - Low grade, low volume, Stockpile Phase reduced by one year (Years 10 to 17)

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- Estimated Life of Mine C1 Cost of Production has been confirmed at US$27.40/lb for the updated mine plan, reflecting more detailed consumables analysis and updated mining contractor rates.

The work programs included significant on-site work programs in Namibia as well as extensive engagement with a range of external consultants. Key workstreams as part of the Restart Plan Update include:

- Detailed mine planning to support engagement with mining contractors
- Detailed 'as-built' update of key design documentation, process flow modelling and preliminary engineering of proposed modifications to support engineering and procurement package development
- Validation of mining costs through an 'Expression of Interest' (**EOI**) process and third party independent review
- Further de-risking of the technical and operational scope through extensive plant condition surveys and analysis of downtime and equipment capacity, enhanced process dynamic modeling and scenario analysis
- Development of a contract and procurement strategy, identification of long lead work programs and engagement of original equipment manufacturers, vendors and suppliers
- Detailed restart schedule development, including the identification and scoping of possible early works activities
- Operational readiness planning and scheduling
- Reconfirmation that all permits required for restart are, or are reasonably expected to be, in place for production and that Langer Heinrich has contractual and legislative access to critical Government supplied services of water and power.

The principal external consultants used during this phase of the project were:

Company	Key Contact /Competent Person	Contribution
Gill Lane Consulting Pty Ltd	David Princep	Mineral Resource model, geomodelling, cut-off grade, Mineral Resource Estimate
AMC Consultants Pty Ltd (AMC)	David Varcoe	Pit optimisation, mine plan and schedule, EOI for mining contractors, mining costing, Ore Reserve Estimate
Majesso Consulting Pty Ltd	Calogero (Coogee) Barbuzza	Third Party mine plan and costing review, EOI mining contractor review, recommended mining costs and equipment selection
Elemental Engineering Pty Ltd	John Vagenas	Metallurgical database and analysis, process design input, plant performance data base and analysis, steady state and dynamic process simulation
Lycopodium Minerals Pty Ltd	Alastair Holden	Process design and deliverables (mass and water balance, process flow diagrams, process & instrumentation diagrams, mechanical equipment lists, equipment load lists, process description, drawings, calculations) capex, opex, Monte Carlo analysis (@Risk)

The workstreams reinforce the Company's confidence in Langer Heinrich as a low risk, robust, long-life operation. Discussions with the Namibian Government and a range of local contractors are ongoing to ensure a rapid mobilisation and commencement of work streams when a decision is made to restart.

Comparison of Key Plan Assumptions[1,2]

Variables	Restart Plan Update	Restart Plan
Restart Costs (US$M)	80.8	80.8
LOM C1 Cost (US$/lb)	27.4	26.9
Peak U_3O_8 annual Production Target (Mlb)	6.0	5.9
Mine Life (Years)	17	17
Total Life of Mine U_3O_8 Production Target (Mlb)	77.4	76.1
Restart Capital Intensity (US$/lb) [3]	13.5	13.7
Basis of Mine Plan	97% Ore Reserves and 3% Mineral Resources[4]	Mineral Resources
Basis of Capital Estimate[5]	P80	P70
Corporate Debt (US$M)	Nil	150
Cash at Bank (US$M)[6]	40.5	34.2
AUD/USD exchange rate	0.69	0.69
USD/NAD exchange rate	16.6	16.6

1. The key assumptions are presented for the Project on a 100% ownership basis. Paladin has a 75% economic interest in the Project, via Paladin's 75% shareholding in Langer Heinrich Mauritius Holdings Limited
2. No adjustments have been made to costs for future inflation estimates
3. Capital restart costs divided by peak annual production volume
4. The basis of the mine plan production target is 97% underpinned by the Ore Reserves (12% Probable Ore Reserve and 85% Proved Ore Reserve) estimated at the Langer Heinrich Project pursuant to the JORC Code (2012 edition). The remaining 3% of the production target is underpinned, in the last year of production in the mine plan (Year 17), by Mineral Resource estimates pursuant to the JORC Code (2012 edition) included in the mine schedule (such that 2% of the production target is underpinned by the Measured category of Mineral Resource and the remaining 1% is underpinned by the Indicated category of Mineral Resource)
5. Probability (in percentage terms) of achieving the target restart capital costs
6. Restart Plan Update as at 30 September 2021, Restart Plan as at 30 June 2020

Restart Costs[1]

	US$M
Refurbish & Repair	35
Plant Upgrades	30
Other (including working capital and contractor and staff mobilisation)	16
TOTAL	**81**

1. Restart Costs have been calculated using a 70% Namibian Dollar (NAD) and 30% USD currency profile. The currency profile and exchange rates utilised are subject to change and will be based on market conditions and contract terms at the time of restart.

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Key Operational Assumptions[1,2]

Variables	Ramp Up Phase (15 months)	Mining Phase (Years 2 – 9)	Stockpile Phase (Years 10 – 17)
Mining Rate (total material movement Mt pa)[3]	0	27.0	0
Mill throughput (Mt pa)	3.5 (from stockpile)	5.4	5.5 (from stockpile)
Mill availability (%)	78%	95%	95%
Mill Feed Grade (PPM)	508	571	301
Process Recovery (%)	90%	90%	90%
Production Target (Mlb U_3O_8 pa)	3.6	6.0	3.3
Mining & Re-handling Costs (US$M pa)	16	85	20
Processing & Maintenance Cost (US$M pa)	53	72	61
G&A and Other Costs (US$M pa)	10	10	10
Capital Costs (US$M pa)[4,5]	7	15	16

1. Operational Costs have been calculated using a 60% USD and 40% NAD currency profile. The currency profile and exchange rates utilised are subject to change and will be based on market conditions and contract terms at the time of restart
2. No adjustments have been made to costs for future inflation estimates
3. Total material movement includes total ore and waste mined
4. Sustaining, minor improvement, progressive rehabilitation and tailings management capital for the life of the mine
5. An additional US$18.8M rehabilitation capital expenditure is forecast to be incurred post-production

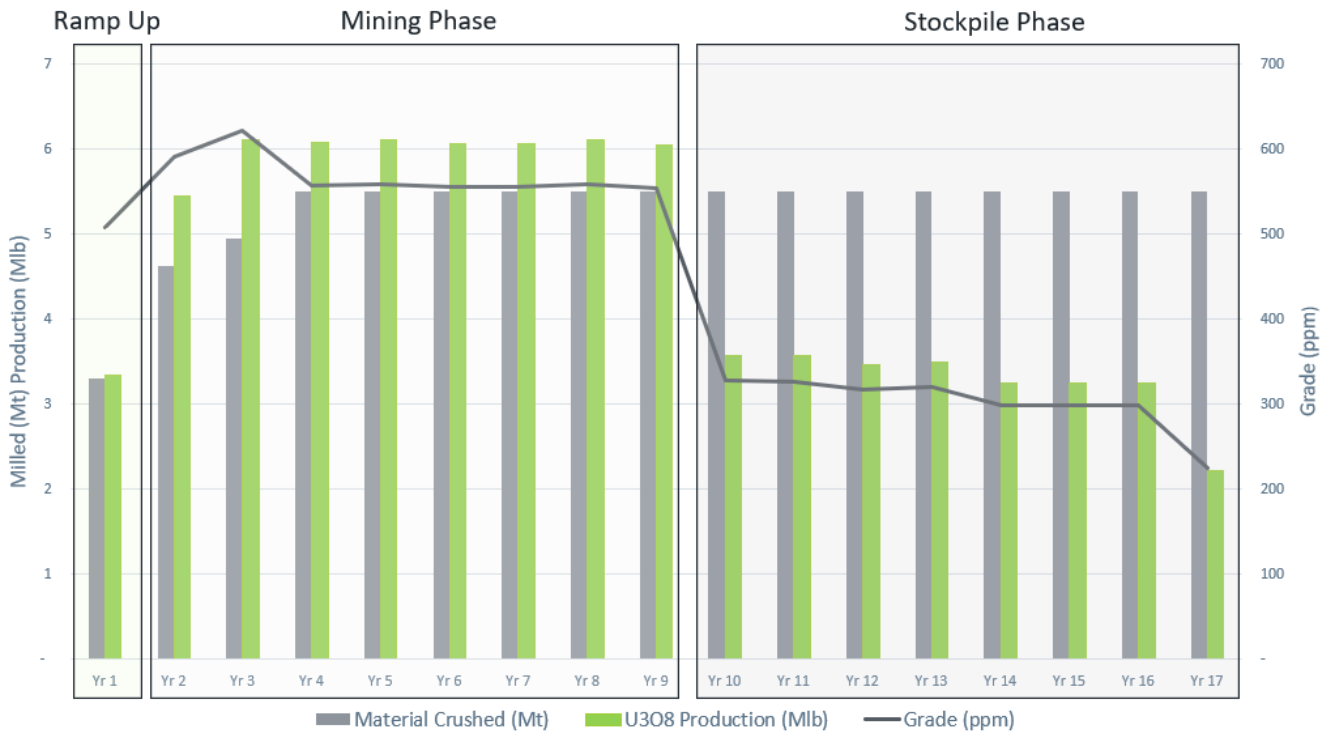
Cost Profile[1]

US$/lb U_3O_8	Ramp Up Phase (15 months)	Mining Phase (Years 2 – 9)	Stockpile Phase (Years 10 – 17)	Life of Mine
Mining & Stockpile Re-handling[2]	4.6	14.0	6.2	**10.8**
Processing & Maintenance	14.9	11.8	18.8	**14.4**
G&A and Other	2.8	1.7	3.1	**2.2**
Production Cash Cost	**22.3**	**27.5**	**28.1**	**27.4**
Non-Cash Inventory Adjustments[3]	0.0	(8.0)	14.4	**0.0**
C1 Cost of Production	**22.3**	**19.5**	**42.5**	**27.4**
Freight & Logistics	1.0	1.0	1.0	**1.0**
Capex[4]	2.0	2.5	4.8	**3.2**
Government Royalties[5]	3%	3%	3%	**3%**
Export Levy[6]	0.25%	0.25%	0.25%	**0.25%**

Refer to footnotes on following page

1. No adjustments have been made to costs for future inflation estimates
2. Excludes stockpile inventory adjustments
3. Opening stockpiles have no book value (written off in 2017/2018)
4. Sustaining, minor improvement, progressive rehabilitation and tailings management capital for the life of the mine, excluding US$18.8M rehabilitation capital expenditure forecast to be incurred post-production
5. Namibian Royalties of 3% of US$ revenues net of shipping and packaging costs. Excludes third party royalty of A$0.12/kg
6. Export Levy of 0.25% of US$ revenues

Production Target Profile



Uranium Marketing Update

Paladin continues to engage with global nuclear energy utilities with the intent of securing uranium offtake contracts with sufficient duration and value to underpin the restart of the LHM. The Company notes an increase in market queries from utilities and an increase in long term market pricing. As such, Paladin has commenced participating in formal market requests for product as well as continuing discussions with our strategic customer, CNNC Overseas Uranium Holdings Limited (CNNC), and other potential strategic customers.

With unrestricted cash reserves of US$40.5M at 30 September 2021, the company maintains a disciplined and patient approach to restarting the Langer Heinrich Mine and has the financial flexibility to respond to market conditions. Paladin will only restart operations after securing additional long term contracts for uranium offtake with sufficient duration and value to deliver an appropriate return to stakeholders and to aim to ensure the economic returns required are met.

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Next Steps

With a robust and well-defined restart plan at LHM, Paladin will focus immediate efforts on exploring the upside optionality across the Company's asset portfolio including:

- Concept studies are underway for potential LHM value enhancement opportunities including: vanadium recovery and sales; increased low grade stockpile phase production rate; application of ore sorting technology; mine life extension through lower cut off grade resource processing; resource expansion; further cost optimisation; and recovery improvements
- Considering an optimised LHM project execution plan by exploring the possibility to self-fund early works in FY2022 and fast track first production when a decision to restart is made
- Establish development and exploration pathways across Paladin's three large, high grade exploration projects in Canada and Australia
- Continue assessing M&A opportunities complementary to Paladin's existing global project and exploration portfolio.

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Paladin Energy Mineral Resource and Ore Reserve Estimates Update: Langer Heinrich Mine

The estimates of Mineral Resources and Ore Reserves in this announcement replace the estimates of Mineral Resources and Ore Reserves for the Langer Heinrich project reported in the Company's 2021 Annual Report, which Paladin announced to the ASX on 27 August 2021.

Mineral Resources and Ore Reserves are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, December 2012 (the 2012 JORC Code) as required by the Australian Securities Exchange (ASX). The summary information immediately below should be read in conjunction with the enclosed supporting technical information (JORC Code, 2012 Edition – Table 1).

The feasibility-level study, on which the updated Mineral Resources and Ore Reserves estimated below are based, is the Restart Plan Update detailed in this announcement.

Summary Updated Mineral Resources

Location	Classification	Millions of Tonnes (Mt)	Grade U_3O_8 (ppm)	Contained U_3O_8 (Mlb)	Grade V_2O_5 (ppm)	Contained V_2O_5 (Mlb)
In situ -open pit	Measured	79.1	450	78.6	145	25.5
In situ -open pit	Indicated	23.5	375	19.5	120	6.3
In situ -open pit	Inferred	11.0	345	8.4	115	2.7
Total In situ	**All**	**113.6**	**425**	**106.5**	**140**	**34.5**
MG[1] stockpiles	Measured	6.3	510	7.1	165	2.3
LG[2] stockpiles	Measured	20.2	325	14.5	105	4.7
Total	**All**	**140.1**	**415**	**128.1**	**135**	**41.5**

Notes: 200ppm U_3O_8 cut-off applied to in-situ Mineral Resources – 250ppm U_3O_8 cut-off applied to stockpiles at the time of mining. Mineral Resources reported on a 100% ownership basis, of which Paladin has a 75% interest. The Measured and Indicated U_3O_8 Mineral Resources are inclusive of those Mineral Resources modified to produce the Ore Reserves (as reported below). Depleted for mining. Tonnage information has been rounded and as a result the figures may not add up to the totals quoted.

1 "MG" refers to medium grade
2 "LG" refers to low grade

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Summary Updated Ore Reserves

Location	Classification	Millions of Tonnes (Mt)	Grade U_3O_8 (ppm)	Contained U_3O_8 (Mlb)
In situ -open pit	Proved	48.3	488	52.0
In situ -open pit	Probable	10.0	464	10.2
Stockpiles	Proved	26.5	369	21.6
Total	**All**	**84.8**	**448**	**83.8**

Notes: Ore Reserves are reported on a dry basis. Proved Ore Reserves are inclusive of ore stockpiles. 250ppm cut-off applied. Tonnage figures have been rounded and may not add up to the totals quoted. Ore Reserves reported on a 100% ownership basis, of which Paladin has a 75% interest. Vanadium does not report to Ore Reserves.

Mineral Resources have been adjusted to reflect the latest mining reconciliation work and minor changes in the stockpile Mineral Resource.

The total Langer Heinrich Mineral Resource was previously reported[2] at 122Mt with a grade of 445ppm U_3O_8 containing 119.7Mlb U_3O_8 and 122Mt with a grade of 145ppm V_2O_5 containing 38.8Mlb V_2O_5 using a cut-off grade of 250ppm U_3O_8.

Ore Reserves have been updated based on the new underlying Mineral Resource estimate and an optimised mine plan which is not materially different to previous versions. Ore Reserves were previously reported[3] at 85.9Mt with a calculated weighted average grade of 458ppm U_3O_8 containing 86.5Mlb U_3O_8.

Those previous reports are now being replaced by the Mineral Resources and Ore Reserves estimates in this announcement. Additional information relating to the estimation of the Mineral Resources and Ore Reserves is contained in Appendices A and B, Competent Person information is contained in Appendix C. JORC Table 1 is presented in Appendix D.

The Langer Heinrich Mine Restart Plan Update detailed in this announcement is 97% based on the updated Ore Reserve and 3% based on Mineral Resources (but excludes the Inferred Mineral Resource).

[2] ASX Announcement 'Langer Heinrich Mine Restart Plan' released on 30 June 2020.

[3] Reported most recently in Paladin's 2021 Annual Report announced to the ASX on 27 August 2021.

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THE RESTART PLAN UPDATE DETAILS

Background

Paladin owns 75% of the Langer Heinrich Mine, located in Namibia. The remaining 25% is owned by CNNC Overseas Uranium Holdings Limited (CNNC). The Langer Heinrich Mine commenced operations in 2007 and has produced and sold over 43Mlb of U_3O_8 to date. The mine was transitioned into care and maintenance in August 2018 due to the sustained low uranium price.

Langer Heinrich Mine Restart Plan Update

Paladin released the Langer Heinrich Mine Restart Plan in June 2020. The extensive work programs undertaken in the Restart Plan Update re-confirm the key highlights of the low risk, reliable Restart Plan:

Key Economic Parameters for Langer Heinrich Mine Restart Plan Update

1. Capital restart costs divided by peak annual production volume.

Restart Costs

The Restart Plan Update capital assumptions re-affirm that the Langer Heinrich Mine can return to production and deliver reliable operations with restart capital of US$81M (100% basis).

There is no change to the restart capital of US$81M from the Restart Plan released in June 2020, however there has been some re-classification of expenditure and scope refinement. Some items previously classified as Plant Upgrades (including the infrastructure asset integrity scope) have now been included as Refurbish & Repair items. As a result of the process improvement optimisation, there is no longer the requirement for some items previously included in the restart scope. The basis of the estimate in the Restart Plan Update has been verified and validated with vendors and independent third parties.

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Restart Costs[1] Reconciliation

Category	Restart Plan Update (US$M)	Restart Plan (US$M)
Refurbish & Repair	34	13
Plant Upgrades	30	47
Other (including working capital and mobilisation)	17	21
TOTAL	**81**	**81**

1. Restart Costs have been calculated using a 70% NAD and 30% USD currency profile. The currency profile and exchange rates utilised are subject to change and will be based on market conditions and contract terms at the time of restart.

Items included in the June 2020 scope that have been revised and re-estimated are:

- Leach Feed Surge Tanks replaced by two smaller tanks
- Hydrosort #2 structure redesigned
- Product Drying and Packaging Plant re-estimated
- Upgrade of Bladder A for water storage
- Process control upgrades
- Pumping, piping and instrument upgrades
- Thickener & pumping upgrades
- Infrastructure integrity (civil & structural) repairs.

The new upgrades and process modifications included in the Restart Plan Update include:

- Run of Mine Bin and Chute modifications
- Scrubber Feed Chute replacement
- Dust Collection installation
- Primary Cyclone replacement, and the addition of a second Primary Cyclone bank
- Steam injectors replacement with new design
- Thickener Feed Well new design and replacement
- Tailings Dewatering system inclusion
- Tailings Line upgrades
- Sodium Diuranate Overflow Filter installation
- Additional Product Thickener
- NamWater Supply pump upgrade
- Swakop River Supply replacement
- Centralised Control Room utilising an existing building on site.

Risk analysis using Monte Carlo Simulations (event modelling) has been undertaken using @Risk software to verify capital expenditure probabilities and estimated ranges. The @Risk modelling confirmed a confidence level of P80 in the restart capital expenditure which includes appropriate contingency.

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Key Operational Assumptions

The Restart Plan Update confirms an estimated remaining production life for Langer Heinrich of 17 years, and has resulted in an optimised process plant delivering performance and recovery improvements, resulting in an increased production target over the life of the mine.

The Restart Plan Update increases the life of mine production target by 1.3Mlb to 77.4Mlb, with estimated peak production increased to 6.0Mlb per annum from 5.9Mlb per annum over the extended Mining Phase.

The mine plan remains in three distinct operational phases.

Ramp Up Phase (Months 1 – 15)

- Ramp up to full production extended by 3 months to 15 months (validated by McNulty Curves)
- The utilisation of stockpile material in the Ramp Up Phase remains and provides a strong platform to transition to nameplate capacity within a 15-month period
- Year One production target remains at 3.3Mlb, with 4.4Mlb production target over the full Ramp Up Phase
- Processing medium grade stockpile at 508ppm grade following further analysis and modelling of the stockpile data.

Mining Phase (Month 16 to Year 9)

- Mining Phase extended by nine months to eight years (Years 2 to 9) with an increased annual production target
- Seven years targeting increased production from 5.9Mlb pa to 6.0Mlb pa U_3O_8
- Production target during the Mining Phase has increased due to medium grade ore volumes, plant recovery improvements resulting from metallurgical database analysis, dynamic process modelling and proposed improvements to the plant
- Processing mineralisation between 470 to 1,050ppm grade (average 571ppm)
- The average grade has been updated as a result of increased medium grade ore defined in the pits, which lowers the average grade but allows for higher production rates in the optimised mine schedule.

Stockpile Phase (Year 10 to Year 17)

- Stockpile Phase reduced by one year to eight years (Years 10 to 17)
- Production target of 3.3Mlb pa U_3O_8
- Seven years of processing stockpiles at 301ppm grade
- Mineral Resource also processed in Year 17 at an average 218ppm grade.

The mine plan results in a production target of 77.4Mlb of U_3O_8, 85% of which is underpinned by Proved Ore Reserves, 12% of which is underpinned by Probable Ore Reserves, 2% of which is underpinned by Measured Mineral Resources and 1% of which is underpinned by Indicated Mineral Resources. The Ore Reserves and Mineral Resources estimates underpinning the Production Target have been prepared by Competent Persons in accordance with the JORC Code (2012 edition).

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Cost Profile

The Restart Plan Update confirms a Life of Mine C1 Cost of Production of US$27.40/lb with the updated mine plan and more detailed consumables analysis. It also confirms that Langer Heinrich remains well positioned versus other Tier 1 operations to deliver product into a recovering uranium market.

The Ramp Up Phase continues to reflect the utilisation of existing stockpile material to feed the processing plant, which significantly reduces mining costs whilst the operation transitions to nameplate capacity. The peak mining activity and mining costs occur during the Mining Phase, when the high material movement is used to feed the processing plant and build up the low-grade stockpiles that will support processing during the Stockpile Phase.

Mining and Re-handling costs reflect 51% of total Production Cash Costs during the Mining Phase, with Processing and Maintenance costs comprising 43%. Mining and Re-handling costs reduce to 22% of total Production Cash Costs during the Stockpile Phase, with 67% of costs relating to Processing and Maintenance.

Whilst the overall cost profile remains consistent with the Restart Plan, there have been some changes in the underlying components of the Restart Plan Update as follows:

Production and Mine Plan

- Total life of mine U_3O_8 forecast production target in the Restart Plan Update has increased from 76.1Mlb in the Restart Plan to 77.4Mlb
- The production target is underpinned by the Mineral Resource and Ore Reserves detailed in this announcement which have been prepared by Competent Persons in accordance with the requirements in the JORC Code
- The Restart Plan Update has further optimised the production profile by optimising pit shells
- The Ramp Up Phase has been extended by three months to 15 months to allow for a more conservative ramp up profile consistent with McNulty Curves. Year One production is maintained at a target of 3.3Mlb
- The Mining Phase has been extended by nine months to eight years, with a small production increase from 5.9Mlb per year to 6.0Mlb per year
- The Stockpile Phase is reduced by one year as stockpiled ore has been reclassified from low to medium grade, and this reduces the low-grade ore processed during the Stockpile Phase.

Costs

- Mining & stockpile re-handling costs have increased in the Restart Plan Update resulting from responses to an expression of interest process with mining contractors, and third-party review of the mine plan and mining costs
- Processing & maintenance costs have decreased as a result of revised vendor pricings for reagents, and improved consumption rates to be achieved through proposed process improvements
- Other production cash costs have slightly increased due to updated estimates
- Freight & logistics costs have increased slightly. The cost assumption in the Restart Plan Update is based on the expectation that the current increase in freight and logistics costs will revert to a more normalised cost profile by the time of commencement of shipping, and over the life of the mine
- Production capital expenditure has increased due to the further refinement of tailings disposal capital cost.

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Uranium Offtake and Pricing

Consistent with the information provided in the Restart Plan, Langer Heinrich currently has a Life of Mine uranium offtake with CNNC, which holds a 25 % interest in the Langer Heinrich Mine. The offtake is for up to 25% of future production at approximately the then prevailing uranium spot price. The Offtake Agreement is a separate arrangement between different entities to the Shareholders' Agreement with CNNC.

The restart of the Langer Heinrich Mine will only be considered upon the Company securing additional long term contracts with sufficient duration and value to underpin an appropriate return to stakeholders and to aim to ensure the economic returns required are met. The duration, structure and pricing of the proposed term contracts are subject to bilateral negotiations with potential customers and are commercially sensitive and confidential. Given the commercially sensitive and confidential nature of the Company's ongoing discussions with potential customers, the Company will not be providing guidance on the hurdle price required to support a decision to restart the Langer Heinrich Mine.

Funding

Funding for the restart of the Langer Heinrich Mine has not yet been sought or secured.

The Company considers that based on the Restart Plan Update and the positive Net Present Value (NPV) for the Langer Heinrich Mine restart, there is a reasonable basis to assume that the necessary funding for restart can be obtained, supported by the following:

- The Restart Plan Update economics support a decision to invest, and provide a low risk, reliable restart plan
- The Langer Heinrich Mine is located in a premier mining jurisdiction in Namibia, and has a 10 year track record of successfully producing and selling over 43Mlb of U_3O_8 to date
- Historically, funding was provided by external financiers for the construction of the Langer Heinrich Mine and subsequent expansions
- Modest restart capital requirement of US$81M when compared to a greenfields development
- The restart of the Langer Heinrich Mine will only be considered upon the Company securing additional long term contracts with sufficient duration and value to underpin an appropriate return to stakeholders and to aim to ensure the economic returns required are met
- The Company has a robust capital structure and has no corporate debt
- Paladin successfully raised A$218.7M in an oversubscribed equity raising in March 2021
- The Board and management have substantial experience in funding and developing projects in Australia and overseas and have an appropriate mix of skills to oversee and direct the Restart Plan Update from funding through to the restart of operations.

On this basis, and with a cash balance of US$40.5M at 30 September 2021, the Company is well positioned to enter into any future funding arrangements. Discussions with potential financiers will be progressed as appropriate. No decision has been made as to the nature or timing of the funding.

Access to Utilities and Permits Confirmed

The Restart Plan Update has confirmed that all permits required for restart are, or are reasonably expected to be, in place for production and that Langer Heinrich has contractual and legislative access to critical Government supplied services of water and power.

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Risks and Sensitivities

Key risks identified in relation to Paladin and LHM were detailed in the Equity Raising Presentation – March 2021 released to the ASX on 17 March 2021. There have been no material changes to the risks for Paladin or LHM since that announcement.

Key risks and sensitivities identified during the Restart Plan Update include, but are not limited to:

- Movements in the uranium price
- Adverse movements in the USD/NAD and AUD/USD exchange rates
- Access to funding
- Increased capital expenditure costs
- Delayed restart decision or commencement of production
- Increased mining and operating costs
- Inability to achieve mining production rates, uranium grade in Mineral Resource, recovery and dilution assumptions and metallurgical recovery rates
- Reliable supply of sufficient power and water supplies by government owned and operated utilities
- Increased freight and logistics costs and supply chain and resource disruptions due to events such as COVID-19
- Other key risks are detailed in the Company's Equity Raising Presentation – March 2021 released to the ASX on 17 March 2021.

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Summary of Mineral Resource information required by ASX Listing Rule 5.8.1

ASX Listing Rule comment	Paladin response
Geology and geological interpretation	Langer Heinrich is a calcrete-hosted secondary uranium deposit associated with valley-fill sediments in an extensive Tertiary palaeodrainage system.
Sampling and sub-sampling techniques	The vast majority of drilling used in the mineral resource estimate comprises RC drilling and downhole radiometric logging. A number of additional factors were determined and used to deconvolve an equivalent U_3O_8 grade, according to a well-defined and documented procedure. Sleeve calibrations on radiometric probes are completed prior to logging each drill hole. Where required for validation of radiometric derived grades samples are split off the drill rig using either rotary or riffle splitters.
Drilling techniques	RC, Diamond and Percussion drilling techniques have been used at the Langer Heinrich deposit with all drilling post 1998 being RC.
The criteria used for classification, including drill and data spacing and distribution. This includes separately identifying the drill spacing used to classify each category of mineral resources (inferred, indicated and measured) where estimates for more than one category of mineral resource are reported	The mineral resource has been classified on the basis of drilling density throughout the deposit as well as the validity of the underlying data. Measured material has been defined where the drill spacing is predominantly 50m x 50m or less. Indicated material has been defined where the drill spacing is greater than 50m x 50m and less than 100m x 100m (including areas of staggered 50m x 100m). Inferred material has been defined by drill spacing predominantly 100m x 100m.
Sample analysis method	Grade values for the majority of the data in the mineral resource dataset are sourced from downhole total gamma radiometric logging using calibrated probes and following the application of appropriate factors. Downhole radiometric values are periodically validated by chemical (ICP-MS) assays. As the deposit is monomineralic, vanadium values within the mineral resource estimate have been derived from the molar equivalence between uranium and vanadium within the mineral carnotite. This equivalence was confirmed by a specific selective extraction assay method developed by the Company.
Estimation methodology	Multi Indicator Kriging (MIK) and the application of a block support correction factor to define a mineral resource estimate.
Cut-off grade(s), including the basis for the selected cut-off grade(s)	The cut-off grade used to report mineral resources is 200ppm U_3O_8 and is based on the calculation of the marginal cut-off grade using values defined as part of the Restart Plan Update.
Mining and metallurgical methods and parameters, and other material modifying factors considered to date	The block support correction factor applied to the MIK estimate is based on processing plant reconciliations for the period of mining and processing from January 2007 to May 2018. Refer to the remainder of this announcement in relation to the modifying factors.

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Summary of Ore Reserve information required by ASX Listing Rule 5.9.1

ASX Listing Rule comment	Paladin response
The material assumptions and the outcomes of a pre-feasibility study or feasibility study	The Langer Heinrich Mine Restart Plan Update develops work completed as part of a previous Pre-feasibility study (PFS). The new work is considered to be at Feasibility standard.
The criteria used for classification, including the classification of the mineral resources on which the ore reserves are based and the confidence in the modifying factors applied	The classification used in the Mineral Resource estimate is based on the competent person's knowledge of the Project and is assigned based on drill density information. The classifications used for the Ore Reserve are based on direct translation of Measured Mineral Resource to Proved Ore Reserve and Indicated Mineral Resource to Probable Ore Reserve. The modifying factors support this conversion. No Inferred Mineral Resource is used in the mine planning process.
The mining method selected and other mining assumptions, including mining recovery factors and mining dilution factors	Mining method is conventional open pit mining as was used successfully at the operation until mining ceased. Pit designs are practical and based on updated geotechnical assessments. Mineral Resources located in isolated locations, at significant depth or under infrastructure are omitted from the mine plan and Ore Reserves.
The processing method selected and other processing assumptions, including the recovery factors applied and the allowances made for deleterious elements	Processing method is based on the existing processing plant using conventional methods including crushing and screening, ore beneficiation, alkaline leaching, counter-current decantation, ion exchange, precipitation and calcining. Final product is dried and drummed for sale.
Basis for cut-off grades	Ore Reserve cut-off grades are 250ppm. This value is above the marginal breakeven grade and is the same as the historical cut-off which is supported by metallurgical test work and processing history treating the Langer Heinrich ores. Vanadium recovery is not considered as part of the Ore Reserves.
Estimation methodology	Mineral Resources have been estimated using multiple indicator kriging (MIK) with block support correction. Primary model panel dimensions are 12.5 mE x 12.5 mN x 3 mRL. Estimates assume that final grade control sampling based on blast holes sampled by radiometric probing will be available prior to final mining. Reconciliation of historical production was undertaken and used to fine tune the Mineral Resource estimation process.
Material modifying factors, including the status of environmental approvals, mining tenements and approvals, other governmental factors and infrastructure requirements for selected mining methods and for transportation to market	All permits required for restart are, or are reasonably expected to be, in place for production. These include, but are not limited to, corporate, mining, environmental, health & safety and supplier agreements, permits, licences, permissions and approvals. Open pit designs were updated based on the latest Mineral Resource and using updated geotechnical information. Stockpile tonnes and grades were adjusted to align with the reconciliation. No Inferred Mineralisation is included in the mine plan.

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The information in this announcement satisfies the requirements of ASX Listing Rules 5.8.2 and 5.9.2.

This release has been authorised for release by the Board of Directors of Paladin Energy Ltd.

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About Paladin

Paladin Energy Limited (ASX: PDN OTCQX:PALAF) is an Australian listed uranium company focused on maximising the value of its 75% stake in the Langer Heinrich Uranium Mine in Namibia.

Langer Heinrich is a globally significant, long-life operation, having already produced over 43Mlb U_3O_8 to date. Operations at Langer Heinrich were suspended in 2018 due to low uranium prices.

Beyond Langer Heinrich, the Company also owns a large global portfolio of uranium exploration and development assets. Nuclear power remains a cost-effective, low carbon option for electricity generation.

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APPENDIX A

LANGER HEINRICH UPDATED MINERAL RESOURCE ESTIMATE

The LHM is located at the foot of the Langer Heinrich Mountain in the Namib Desert in western Namibia. The operation is 80 km east of the major seaport of Walvis Bay and the tourist town of Swakopmund (refer to Figure 1).

Figure 1
Project location

The Langer Heinrich Uranium Project is covered by two Mining Licences, ML140 and ML172.

Gill Lane Consulting principal, David Princep, prepared the re-estimation of U_3O_8 Mineral Resources at LHM, in accordance with the JORC Code[4].

The Mineral Resource estimate has been updated so that the Ore Reserve estimate (which is also

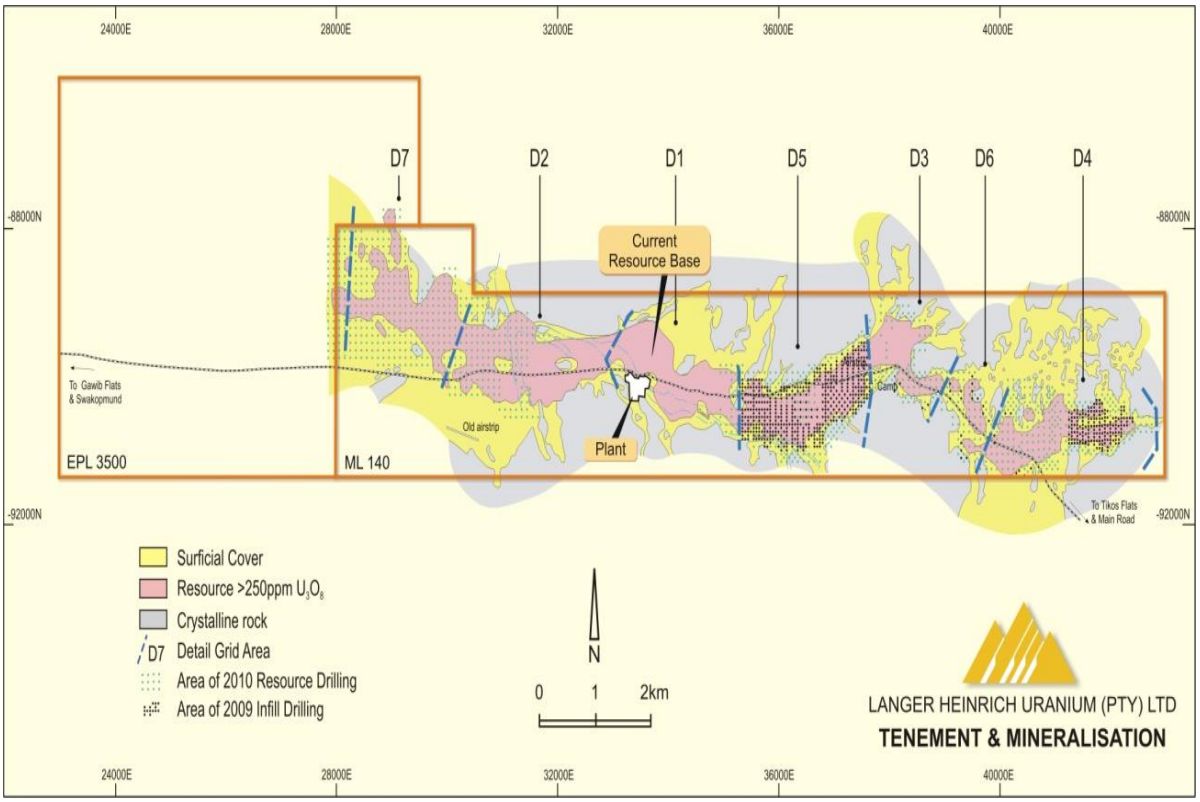
[4] Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, The JORC Code 2012 Edition, Effective 20 December 2012, mandatory from 1 December 2013. Prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).

reported in accordance with the JORC Code) and detailed mine planning studies may be undertaken. The Mineral Resource was estimated using all drilling available up to and including the date of this report.

The only substantive differences between the Mineral Resource estimate outlined in this report and the previous estimate used for the PFS is the use of a smaller panel size more suitable for mine planning and default application of the block support correction factors and adjustment to stockpile inventories. The Mineral Resource estimate employed a specific block support correction factor to align the modelled tonnes, grade, and metal with that reconciled to ore processed and stockpiled during the 10 years of operation of the mine.

Langer Heinrich is a calcrete-hosted secondary uranium deposit associated with valley-fill sediments in an extensive Tertiary palaeodrainage system. Uranium occurs as carnotite, an oxide mineral containing both uranium and vanadium, deposited as thin films lining cavities and fracture planes and as grain coatings and disseminations. The deposit extends over a 15 km length. Mineralisation is near-surface, between one and thirty metres thick, and between 50 and 1,100 metres wide depending on the width of the palaeovalley. After calcrete development and mineralisation, parts of these sediments were eroded because of uplift that caused rejuvenated river flows - the largest being the Gawib River that in part follows the palaeovalley and has dissected and modified both the calcrete and associated mineralisation. Refer to Figure 2.

Figure 2
Local geology



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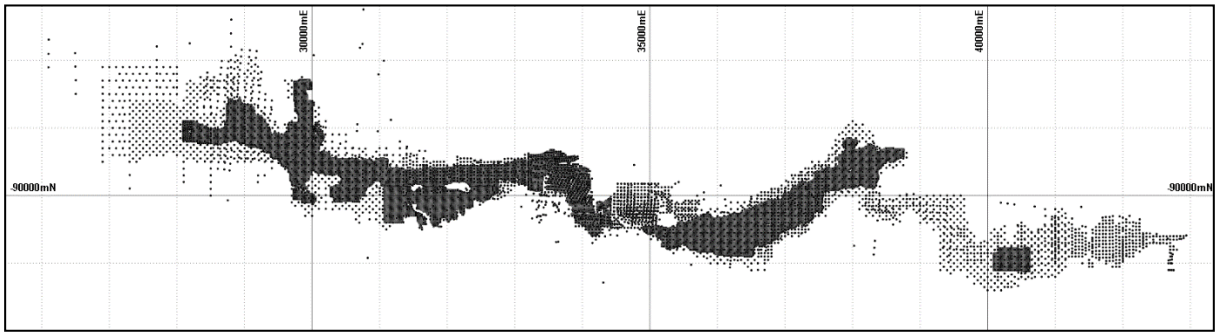
The deposit was discovered in 1973 after a government-sponsored airborne radiometric survey of the area. Between 1974 and 2000 Gencor and Acclaim undertook extensive percussion, RC and diamond drilling, excavated a series of bulk sample test shafts, mined a large-scale costean and trial open pit, operated a trial dry screening plant and undertook detailed metallurgical, engineering, and hydrological studies.

Paladin undertook an extensive drilling program on the project from 2004 to 2010. From 2010 through to 2016, a programme of close spaced pre-mining grade control drilling was undertaken. Refer to Figure 3.

Figure 3
Project drill locations



Mineral Resources defined by drilling on a regular 50 m x 50 m spacing or closer have been allocated to the Measured category. Areas in which 50 m x 50 m drill coverage is incomplete have been allocated to the Indicated category and mineralisation in areas drilled at 100 x 100 m spacing have been allocated to the Inferred category.

There are 100 Paladin RC drill holes with U_3O_8 determinations by both X-ray fluorescence (XRF) analysis and down-hole radiometric logging. Analysis indicates a close correlation between the two values. All Paladin radiometric U_3O_8 values, after application of appropriate casing and water factors, used in the mineral resource estimation process were factored to 96% of their resultant value. This in effect provides an allowance for formation and disequilibrium factors.

Variograms of U_3O_8 grades indicate that the continuity of grades is relatively poor over even quite short distances. This is backed up by comparisons of nearest neighbour samples in drill holes and test shafts. However, the overall continuity of mineralisation, associated with the geological continuity, is quite strong in plan and section view. Within this mineral resource estimate, V_2O_5 grades have been assumed to be equivalent to the molar ratio contained within the only identified uranium mineral present, carnotite.

Mineral Resources have been estimated at a number of cut-off grades using multiple indicator kriging (MIK) with block support correction. Primary model panel dimensions are 12.5 mE x 12.5 mN x 3 mRL. Estimates assume that final grade control sampling at approximately 3.5 mE x 3.56 mN x 1 mRL spacing based on blast holes sampled by radiometric probing will be available prior to final mining and a selective mining unit of approximately 4 mE x 4 mN x 3 mRL is used. Refer to Table 1.

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Table 1
Langer Heinrich Updated Mineral Resource Estimate

Uranium Mineral Resources	Measured			Indicated			Inferred			Total		
	Mt	Grade ppm U_3O_8	Mlb U_3O_8	Mt	Grade ppm U_3O_8	Mlb U_3O_8	Mt	Grade ppm U_3O_8	Mlb U_3O_8	Mt	Grade ppm U_3O_8	Mlb U_3O_8
In situ	79.1	450	78.6	23.5	375	19.5	11.0	345	8.4	113.6	425	106.5
MG ROM stockpiles	6.3	510	7.1	-	-	-	-	-	-	6.3	510	7.1
LG ROM stockpiles	20.2	325	14.5	-	-	-	-	-	-	20.2	325	14.5
Total	**105.6**	**430**	**100.2**	**23.5**	**375**	**19.5**	**11.0**	**345**	**8.4**	**140.1**	**415**	**128.1**

Vanadium Mineral Resources	Measured			Indicated			Inferred			Total		
	Mt	Grade ppm V_2O_5	Mlb V_2O_5	Mt	Grade ppm V_2O_5	Mlb V_2O_5	Mt	Grade ppm V_2O_5	Mlb V_2O_5	Mt	Grade ppm V_2O_5	Mlb V_2O_5
In-situ	79.1	145	25.5	23.5	120	6.3	11.0	115	2.7	113.6	140	34.5
MG ROM Stockpiles	6.3	165	2.3	-	-	-	-	-	-	6.3	165	2.3
LG ROM Stockpiles	20.2	105	4.7	-	-	-	-	-	-	20.2	105	4.7
Total	**105.6**	**140**	**32.5**	**23.5**	**120**	**6.3**	**11.0**	**115**	**2.7**	**140.1**	**135**	**41.5**

Notes: 200ppm U_3O_8 cut-off applied to in-situ mineral resources – 250ppm U_3O_8 cut-off applied to stockpiles at the time of mining. Mineral Resources reported on a 100% ownership basis, of which Paladin has a 75% interest. The Measured and Indicated U_3O_8 Mineral Resources are inclusive of those Mineral Resources modified to produce the Ore Reserves (as reported below). Depleted for mining. Tonnage information has been rounded and as a result the figures may not add up to the totals quoted.

The LHM hosts a number of mineralised stockpiles that are proposed to be processed. The highest grade stockpile is medium grade MG3. MG3 is a medium grade stockpile (+400ppm U_3O_8), with all other stockpiles are classed as low grade (250 to 400 ppm U_3O_8).

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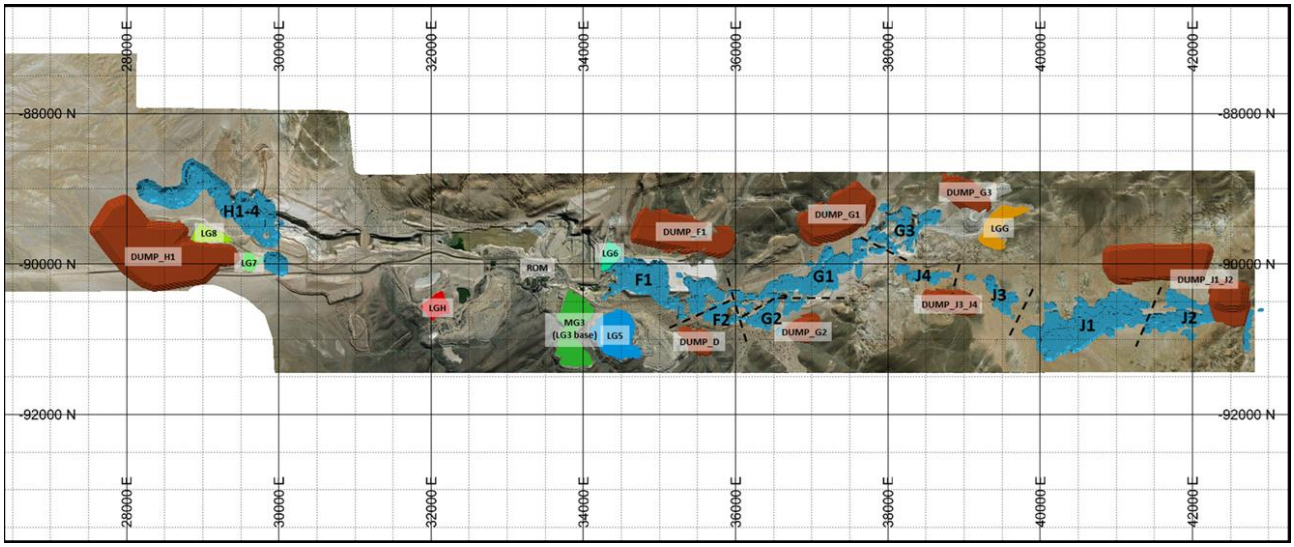
Figure 4
Stockpile locations



A review of the stockpiles was completed in 2021 based on mining and processing reconciliation and the findings led to determining the stockpile bulk density for low grade (LG) at 1.95 t/m^3 which is now consistent across all stockpiles. The final stockpile Mineral Resource is reported below in Table 2 (which Mineral Resource is also included within Table 1 above).

Table 2
Final stockpile Mineral Resources (after adjustment)

Stockpile	Millions of tonnes (Mt)	Grade ppm U_3O_8	Mlb U_3O_8	Grade ppm V_2O_5	Mlb V_2O_5
LGH	1.1	318	0.76	103	0.25
LGG	2.1	326	1.49	106	0.48
LG5	13.7	327	9.91	106	3.2
LG6	1.3	323	0.90	105	0.29
LG7	1.0	318	0.68	103	0.22
LG8	1.0	321	0.75	104	0.24
Total LG stockpiles	20.2	325	14.49	105	4.70
MG3	6.3	508	7.08	165	2.29
Total stockpiles	**26.5**	**369**	**21.58**	**119**	**6.99**

Notes: Cut-off grade of 250ppm U_3O_8 applied at the time of mining.

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APPENDIX B

LANGER HEINRICH UPDATED ORE RESERVE ESTIMATE

Langer Heinrich Ore Reserves are based on the updated Mineral Resource estimate referred to in this report. The Ore Reserve estimate was prepared by consultant AMC Consultants Pty Ltd (AMC). The Langer Heinrich Mine operated successfully for a period of over 10 years. The studies and mine planning supporting this updated Ore Reserve estimate are consistent with the approach taken during the previous operating period however cost data has been updated and learnings from the previous operation applied to deliver an improved proposed mining and processing strategy.

This updated Mineral Resource estimate model was used by AMC for mine planning without the need for any additional ore loss or dilution factoring as these were effectively built into the Mineral Resource estimate. This assumption was developed based on analysis of extensive historical production reconciliation.

AMC undertook a review of the geotechnical information available for the LHM and the current performance and condition of the pit slopes. This review and the assessment of the pit slope stability was used to estimate strength parameters which were used to recommend pit slope design parameters. AMC notes there is currently limited available geotechnical data and has recommended additional drilling and testing be undertaken to support future pit design processes with more robust data.

Based on the back analysis of existing data and a factor of safety assessment, the pit slope design parameters as shown in Table 3 are recommended.

Table 3
Pit slope design parameters

Parameter	Wall Height <60 m	60 m < Wall Height < 90 m
Batter face angle	62°	62°
Bench height	9 m	9 m
Berm width	5 m	5 m
Overall slope angle	45°	41°
Geotechnical berm width	N/A	15 m

AMC undertook pit optimisation work using the in situ JORC Measured and Indicated Mineral Resource estimates to provide guidance for detailed pit designs.

Pit optimisation is driven by a block-by-block analysis of revenues less royalties, operating costs and pit geometry based on the pit slope angles. The pit optimisation is based on the Measured and Indicated ore blocks only. A fixed cut-off grade of 250 ppm U_3O_8 was used. The cost drivers used for the pit optimisation were based on those underpinning the Restart Plan Update, as detailed throughout this announcement.

A mineral processing plant and supporting infrastructure exists at the site. Operating parameters for the plant are based on historical performance and updated modelling. An allowance is made for minor plant refurbishments and flowsheet improvements to be applied on restart. Plant operating costs were estimated by Paladin and its sub consultants. Based on previous operating experience and updated studies an allowance is made for site general administration costs, product shipping and supporting infrastructure costs including management of tailings.

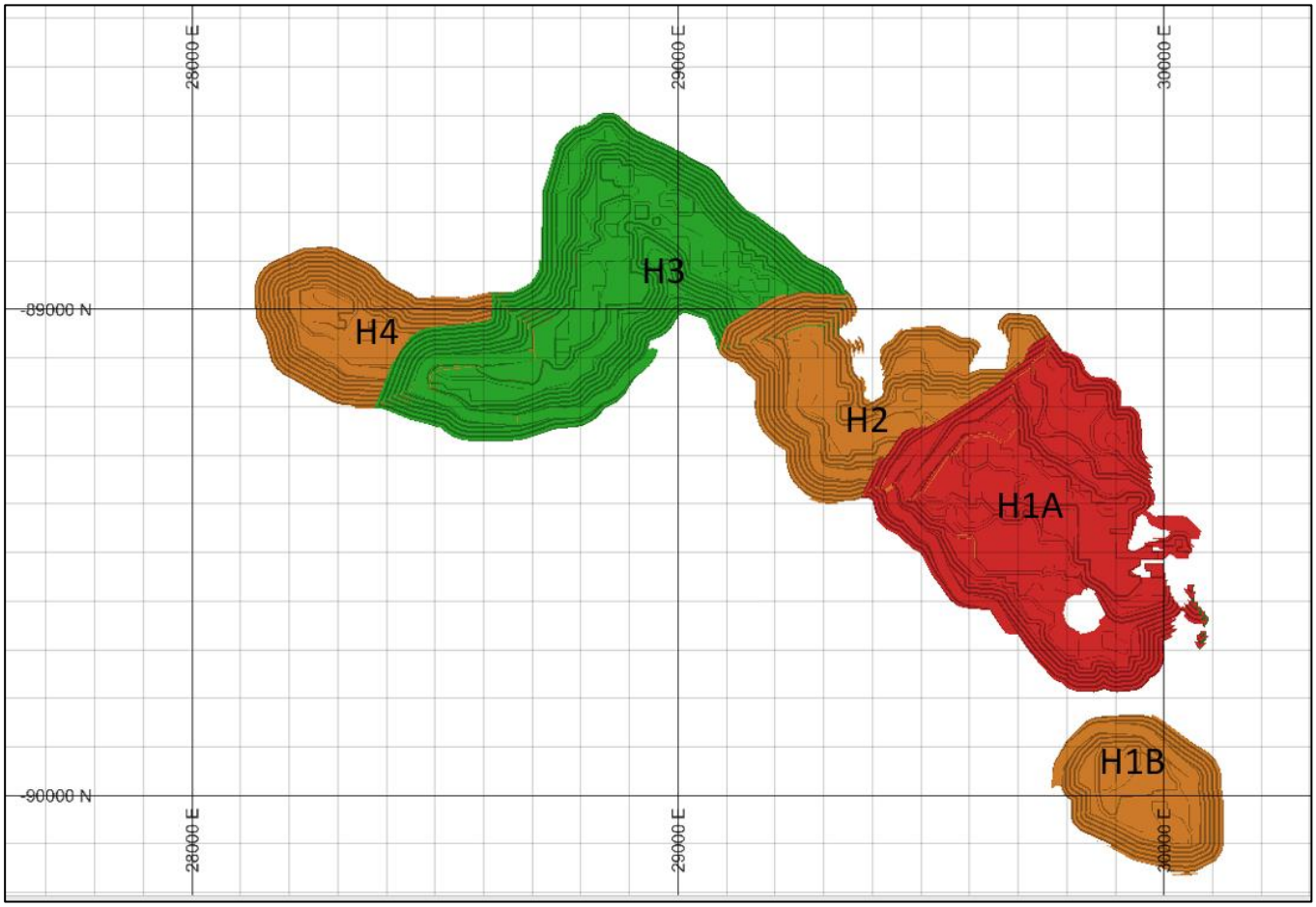
For the purposes of pit optimization, a cut-off grade of 250 ppm U_3O_8 was applied which is consistent with previous mining studies and is the lowest level supported by processing test work and processing history. A minor quantity of Mineral Resource is forecast to be processed in the last year of production. The effect of the Mineral Resource inclusion is not material to the overall project. The break-even economic cut-off grade is lower than 250ppm.

Pit designs were developed based on the selected optimisation shell (revenue factor 1 shell). Mining method is conventional open pit mining as was used successfully at the operation until mining ceased. Pit designs are practical and based on updated geotechnical assessments. Mineral Resources located in isolated locations, at significant depth or under infrastructure are omitted from the mine plan and Ore Reserves.

An overview of the H pits is shown in Figure 5.

The H pits consist of five mining areas, totaling 17.6 Mt of Ore Reserves at 484 ppm U_3O_8 and an average strip ratio of 4.1:1.

Figure 5
H pits layouts



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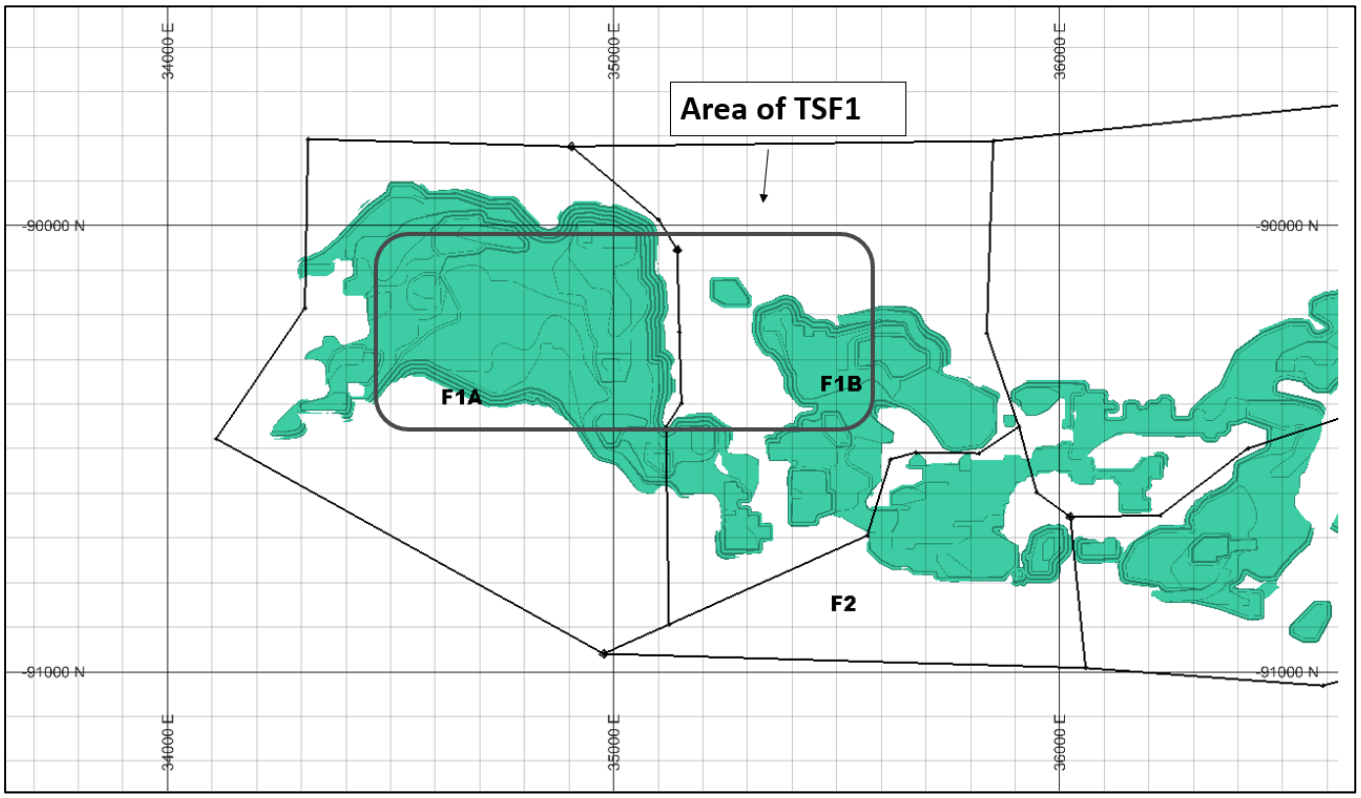
An overview of the F pits is shown in Figure 6. The F pits consist of two mining areas, totaling 10.6 Mt of Ore Reserves at 540 ppm U_3O_8 with an average strip ratio of 1.4:1.

The F1 pit lies beneath the decommissioned tailings storage facility (TSF1) and cannot be mined until TSF1 is fully relocated. A plan to relocated TSF1 has been developed.

Figure 6
F pits layouts



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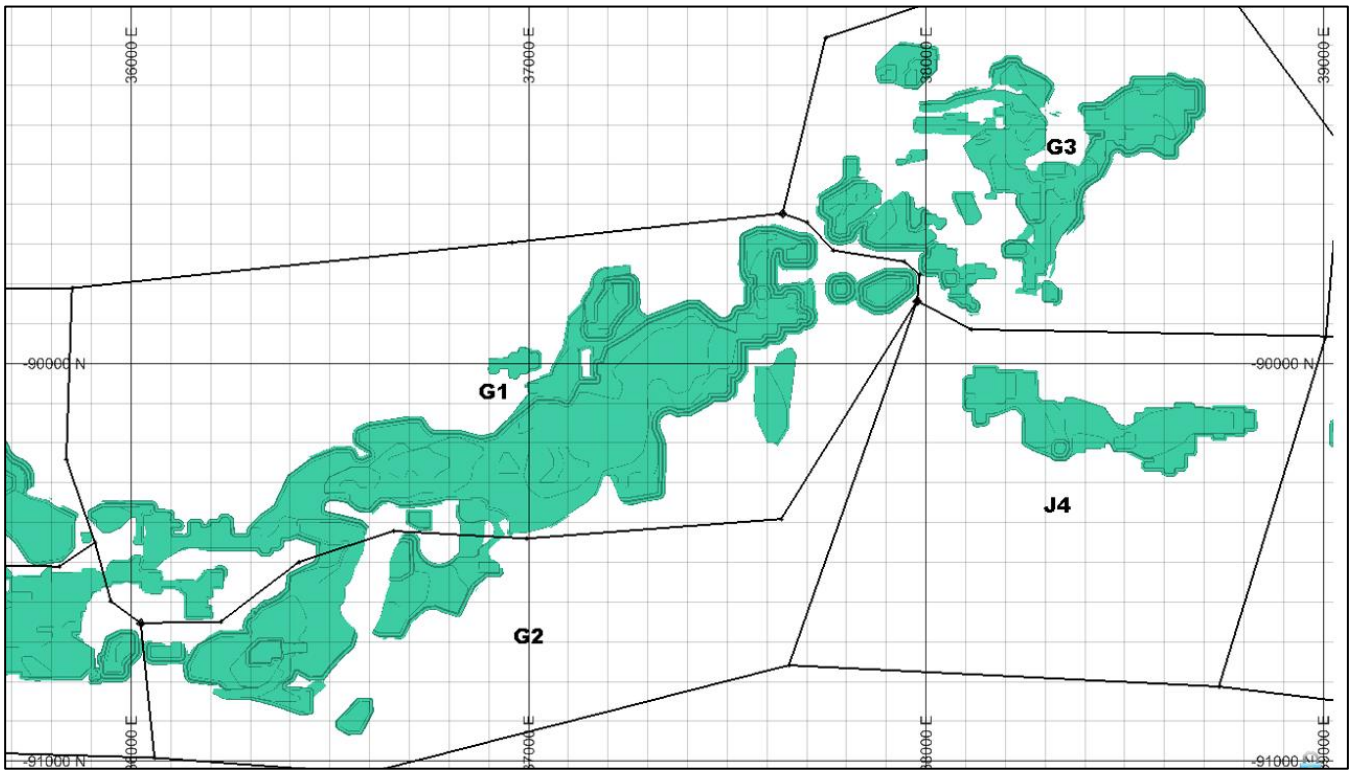
An overview of the G pits is shown in Figure 7.

The G pits consist of four mining areas, totaling 9.3 Mt of Ore Reserves at 436 ppm U3O8 with an average strip ratio of 1.9:1.

Figure 7
G pits layouts



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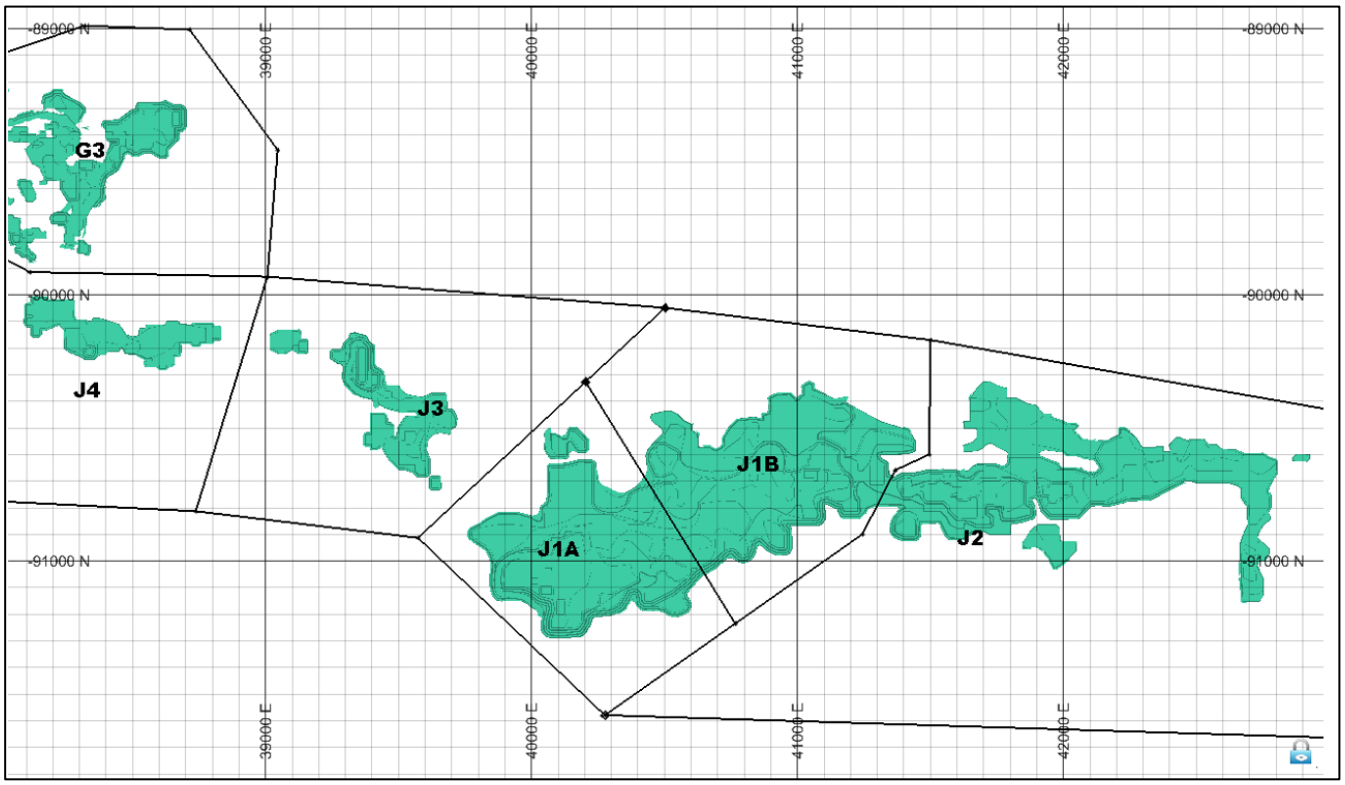
An overview of the J pits is shown in Figure 8.

The J pits consist of four mining areas, totaling 20.8 Mt of Ore Reserves at 478 ppm U_3O_8 with an average strip ratio of 1.8:1.

Figure 8
J pits layouts



Crusher feed material types and their associated lower grade limits used for reporting are:

- Marginal grade 180 ppm U_3O_8
- Low grade (LG) 250 ppm U_3O_8
- Medium grade (MG) 350 ppm U_3O_8
- High grade (HG) 650 ppm U_3O_8.

Strategic life-of-mine (LOM) mining and processing schedules were completed by AMC using Minemax Scheduler™ (Minemax), used to determine the optimum mining sequence and ex-pit material movement requirements to deliver consistent ore feed to the processing plant and achieving target production levels of product. The following constraints were applied:

- Maximum pit total material movement rate of 37 Mtpa (millions of tonnes per annum)
- Maximum total material moved rate of 39 Mtpa, including stockpile movement and barren sand relocation
- Maximum processing plant throughput rate of 5.5 Mtpa
- Target steady U_3O_8 production of 6.0 Mlb per year during the Mining Phase of the Project.

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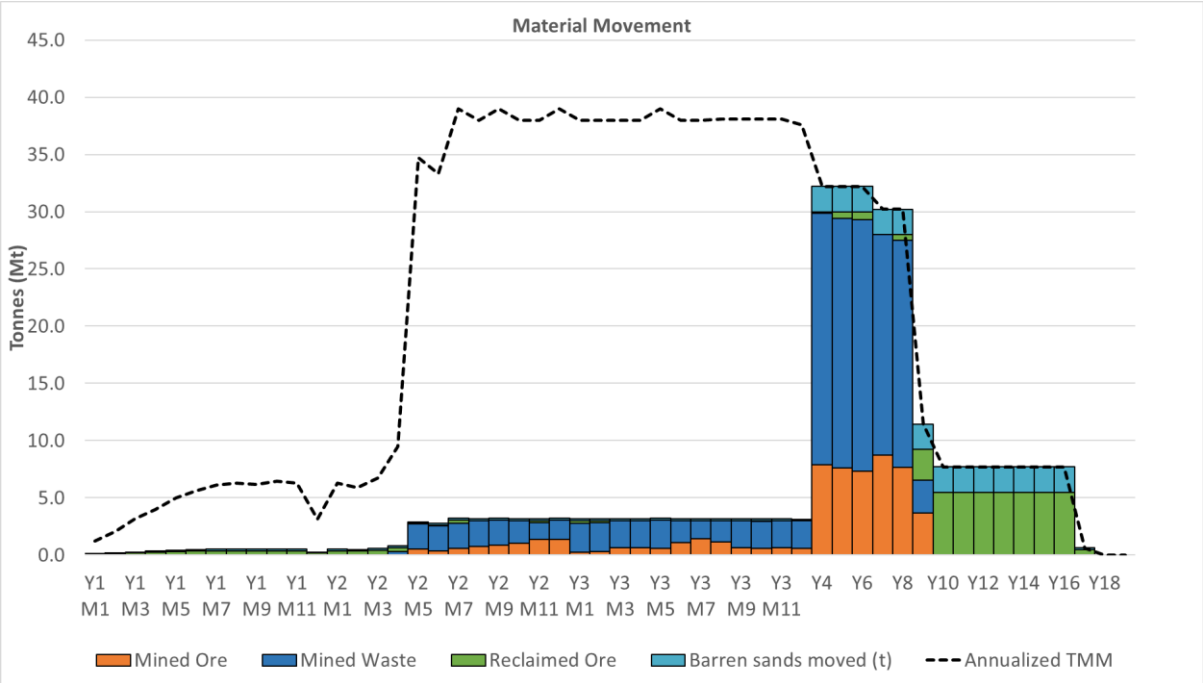
Figure 9 presents the Project mining total material movement.

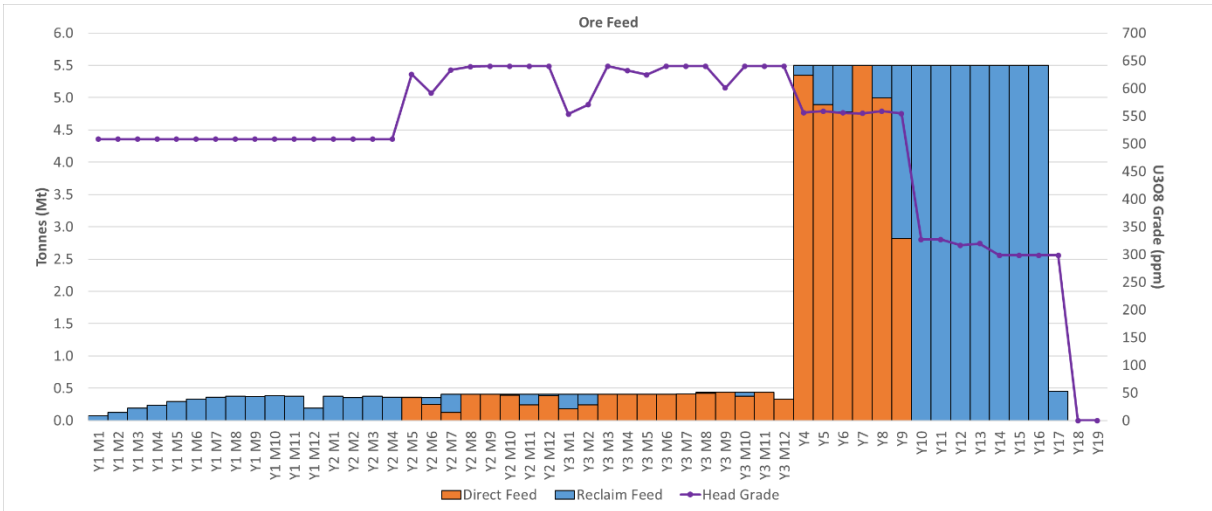
Figure 9
Total material movement – mining



Stockpiles are reclaimed for the first 15 months of operation. Pit development is focused primarily within H and J pits in Year 2 and Year 3. Relocation of TSF1 begins in the first quarter of Year 3 and is finalised in the following year.

The feed to the processing plant is shown in Figure 10. The average head grade is approximately 571 ppm U_3O_8 during the Mining Phase, fluctuating between 508 ppm U_3O_8 and 640 ppm U_3O_8 during periods of steady state mining.

Figure 10
Plant Ore Feed



Mining costs are derived from a request for quotation to six local mining contractors.

Contractor budget bids were received and analysed and an average of costs from three preferred contractors was developed. This average cost was used as the mining cost provided with the mining schedule. LOM costs inclusive of mobilisation and demobilisation, relocating TSF1, rehandling plant rejects and stockpile reclaim were developed for upload to financial models.

Based on the mine planning work and the positive Project economics detailed in the Restart Plan Update, the updated Ore Reserve for the Project is reported according to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition). The Ore Reserve was estimated from the Mineral Resource after consideration of the level of confidence in the Mineral Resource and after taking account of relevant modifying factors.

Proved and Probable Ore Reserves are estimated directly from the Measured and Indicated Mineral Resource respectively. No Inferred Mineral Resources have been included in the Ore Reserve. Table 5 shows a summary of the Ore Reserve on a 100% Project basis, of which Paladin has a 75% interest. The Ore Reserve is recovered by open pit mining and reclaim from existing stockpiles.

The updated Ore Reserve is estimated using a metal price assumption of US$50/lb U_3O_8. The Ore Reserve estimate has been adjusted to account for material mined to date and includes above cut-off grade mineralised material stored on stockpiles. Paladin has demonstrated LHM presents a positive net present value and considers the project restart is able to be funded. Refer also to the Disclaimers section below.

The updated Ore Reserve estimate for the Project is 84.8 Mt grading 448 ppm U_3O_8 containing 83.8 Mlb U_3O_8, as summarized in Table 4. This Ore Reserve estimate is calculated using a 250 ppm U_3O_8 cut-off grade.

Table 4
Langer Heinrich Updated Ore Reserve Estimate

Location	Classification	Millions of Tonnes (Mt)	Grade U_3O_8 (ppm)	Contained U_3O_8 (Mlb)
In situ -open pit	Proved	48.3	488	52.0
In situ -open pit	Probable	10.0	464	10.2
Stockpiles	Proved	26.5	369	21.6
Total	**All**	**84.8**	**448**	**83.8**

Notes: Ore Reserves are reported on a dry basis. Proved Ore Reserves are inclusive of ore stockpiles. Tonnage figures have been rounded and may not add up to the totals quoted. Ore Reserves reported on a 100% ownership basis, of which Paladin has a 75% interest. Vanadium is not considered as part of the Ore Reserves.

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APPENDIX C

COMPETENT PERSON'S STATEMENTS

Exploration and Mineral Resources

The information in this announcement that relates to exploration results and Mineral Resources is based on, and fairly represents, information and supporting documentation compiled by David Princep BSc, P.Geo FAusIMM (CP), a Competent Person who has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking 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 Code).

Mr Princep is a full- time employee of Gill Lane Consulting and consults to Paladin and is a current Fellow of the Australasian Institute of Mining and Metallurgy. Mr. Princep consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Ore Reserves

The information in this announcement that relates to the Ore Reserves estimation for the Langer Heinrich Uranium Project is based on, and fairly represents, information and supporting documentation compiled by Mr David Varcoe, Principal Mining Engineer, for AMC Consulting Pty Ltd. Mr Varcoe is an employee of AMC Consulting Pty Ltd and is a Competent Person who is a current Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM No: 105971).

Mr Varcoe has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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". Mr Varcoe consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

DISCLAIMERS

The production target in this announcement is 97% underpinned by the Ore Reserves (12% Probable Ore Reserve and 85% Proved Ore Reserve) estimated at the Langer Heinrich Project pursuant to the JORC Code (2012 edition). The remaining 3% of the production target is underpinned, in the last year of production in the mine plan (Year 17), by Mineral Resource estimates included in the mine schedule (such that 2% of the production target is underpinned by the Measured category of Mineral Resource and the remaining 1% is underpinned by the Indicated category of Mineral Resource). The Mineral Resource contribution to the overall Project is not material, it is not a determining factor in Project viability and it is scheduled for Year 17 of the Life of Mine forecast. The Inferred category Mineral Resources have not been included in the Ore Reserves or production target in this announcement and have not been included when determining the forecast financial information detailed in this announcement. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources (or Ore Reserves) in relation to that mineralisation.

The production target and the financial forecasts for the Langer Heinrich Project are based on the material assumptions outlined in this announcement and are subject to various risk factors, such as those (non-exhaustively) outlined, or referred to, in this announcement. These include assumptions and risk factors about the availability of funding. While Paladin considers all the material assumptions

to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the Mineral Resource and Ore Reserve estimates are accurate or that the production target or financial forecasts as indicated in this announcement will be achieved.

A key step towards Paladin's goal of seeking to restart the Langer Heinrich Mine is to raise additional funding for the capital costs detailed in the Restart Plan Update. Paladin considers it has reasonable grounds for expecting that the requisite additional funding can be raised based on the Ore Reserve in this announcement estimated at the Langer Heinrich Project, the various inputs to that Ore Reserve (disclosed throughout this announcement), and the funding considerations and feasibility indicated by the Restart Plan Update results and other factors disclosed above, all forming a reasonable basis for Paladin expecting that it will likely be able to raise the necessary funding to restart mining at the Langer Heinrich Project, which amount is estimated at US$81M (100% basis).

Investors should note that there is no certainty that Paladin will be able to raise funding when needed (nor any certainty as to the form such capital raising may take, such as equity, debt, hybrid or other capital raising). It is also possible that such funding may only be available on terms that dilute or otherwise affect the value of Paladin's shares.

This announcement contains "forward-looking statements" and "forward-looking information", including statements and forecasts which include (without limitation) forecast financial information, a production target, Mineral Resources, Ore Reserves, statements about the feasibility of the Langer Heinrich Project and its financial outcomes, future strategies, the results and outlook of Paladin and the opportunities available to Paladin. Often, but not always, forward-looking information can be identified by the use of words such as "plans", "expects", "is expected", "is expecting", "budget", "outlook", "scheduled", "target", "estimates", "forecasts", "intends", "anticipates", or "believes", or variations (including negative variations) of such words and phrases, or state that certain actions, events or results "may", "could", "would", "might", or "will" be taken, occur or be achieved. Such information is based on assumptions and judgments of Paladin or the Competent Persons above regarding future events and results. Readers are cautioned that forward-looking information involves known and unknown risks, uncertainties and other factors which may cause the actual forecasts, results, targets, performance or achievements of Paladin to be materially different from any future forecasts, results, targets, performance or achievements expressed or implied by the forward-looking information.

Forward-looking information and statements (including Paladin's belief that it has a reasonable basis to expect it will be able to fund the restart of mining at the Langer Heinrich Project) are (further to the above) based on the reasonable assumptions, estimates, analysis and opinions of Paladin made in light of its perception of trends, current conditions and expected developments, as well as other factors that Paladin believes to be relevant and reasonable in the circumstances at the date such statements are made, but which may prove to be incorrect. Although Paladin believes that the assumptions and expectations reflected in such forward-looking statements and information (including as described throughout this announcement) are reasonable, readers are cautioned that this is not exhaustive of all factors which may impact on the forward-looking information. No representation is made or will be made that any forward looking statements will be achieved or will prove to be accurate. Paladin does not undertake to update any forward-looking information or statements, except in accordance with applicable securities laws.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Restart Plan Update or the updated Mineral Resources and Ore Reserves Estimates.

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APPENDIX D

JORC CODE, 2012 EDITION – TABLE 1
LANGER HEINRICH MINE

Section 1 Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	• Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	• The vast majority of drilling used in the mineral resource estimate comprises RC drilling and downhole radiometric logging. A number of additional factors were determined and used to deconvolve an equivalent U_3O_8 grade, according to a well-defined and documented procedure. Sleeve calibrations on radiometric probes are completed prior to logging each drill hole. • RC chip samples were collected for all mineralised holes to validate down hole gamma results if required. The routine aim is for approximately 10% of all mineralised holes to be validated by assay. Samples were selected on a 'whole of hole' basis. • Pre-Paladin sampling protocols: Aimed at 1m samples for all drilling, some drill holes were composited within the historical dataset to longer intervals. • Sampling protocols after Paladin acquired interest: Drilling was sampled at the drill rig using a cyclone and rotary splitter and placed into calico bags, all un-split sample was retained on site for a limited period of time. Samples were also sieved into chip trays to ensure a permanent record was maintained. • Sample preparation, crush (where required) – split – pulverise, of the 1m sampled intervals at the laboratory in either Swakopmund or Walvis Bay. Bureau Veritas or Intertek. Samples were analysed by either XRF or ICP based on laboratory availability.

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Criteria	JORC Code Explanation	Commentary
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	• All holes were RC • As core was not drilled orientation was not recorded • Pre-Paladin, historical drilling included a combination of percussion, RC and diamond core, this drilling now only forms a minor portion of the mineral resource dataset. • All drilling since 2000 has been RC.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• RC sample recoveries have been periodically assessed, especially when samples have been taken to validate downhole radiometric logging. • Checks have been undertaken during the life of the project to confirm that fine grained mineralisation is not lost during the drilling process. • There is no relationship between RC recovery and grade. • The use of down-hole radiometric to derive an assay grade mitigates against any issues with drilling recoveries.
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	• All RC chips are logged by geologists. • RC drill chips are stored in chip trays on site. • The deposit is currently considered to have minimal metallurgical variability however the geological logging is conducted in detail and is considered appropriate for all future studies. • Drilling is continued until approximately 2-5m of basement material has been penetrated ensuring that the entire thickness of the potential mineralisation have been sampled and logged.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	• RC samples are split on the drill rig, should any duplicates be taken they are split from the bulk residue sample by riffle splitter. • Sample preparation was undertaken by either Bureau Veritas or Intertek Laboratories in Swakopmund or Walvis Bay, using industry standard methods (crush–split-pulverise) and is considered appropriate to the style of mineralisation present in the deposit. • When required, standard, blank and split duplicates were inserted into the sample stream with the aim being every 20 samples.

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Criteria	JORC Code Explanation	Commentary
	• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• The material sample is relatively fine grained and the sample size taken is deemed to be appropriate. Analysis of duplicates has indicated some potential for a bias to be introduced during the splitting process and, because of this, additional care is taken setting up the drill rig. • In order to confirm that the U:V ratio in carnotite was uniform throughout the deposit additional samples were sourced from historical (since 2006) drilling where small representative samples were retained (~250g). These samples were inserted into the routine multi element analysis stream and were specifically assayed for vanadium by partial leach.
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• Where required, U_3O_8 was analysed predominantly by pressed powder XRF methods. A scoping study was done prior to the re-commencement of drilling, to determine most appropriate assay method: matrix-matched standard material was analysed by various methods and the method returning the most appropriate results (XRF) was identified. • Down hole radiometric probes are calibrated at a primary calibration facility each year to confirm both the dead-time and K-factor's to be applied to calculate the equivalent U_3O_8 value. All probes are subject to routine sensitivity checks to identify instrument drift and confirm the reliability of readings. Where radiometric logging is conducted inside drill rods, appropriate casing factors are defined from both in-rod and open hole logs. It is company policy to use open hole logs wherever possible. • Standard, blank and split duplicate are submitted into the sample stream with the target being one set for every 20 samples. Analysis of the drilling programmes undertaken between 2010 and 2016 indicates that the standards and blanks performed very well however duplicate analysis showed some spread in results and investigation

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Criteria	JORC Code Explanation	Commentary
		suggested this was due to potential excess pressures used during the RC drilling process. • A partial leach analysis method was defined for laboratory use. The method matches as reasonably as possible the leach processes encountered during routine processing of mineralised material. This partial leach digest was used to confirm that the amount of vanadium reporting to solution was, at a minimum, equivalent to that expected from the molar equivalence between uranium and vanadium in carnotite. Evidence from >1,500 assays indicates that this ratio is maintained at a minimum and that there is the potential for minor additional vanadium to report to leach liquors. • The radiometric truck scanners were routinely calibrated using specific stockpiles of known grade Langer Heinrich Mine mined material. Sensitivity checks of the radiometric truck scanners were undertaken on a regular basis.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• As both assaying and down hole logging are performed, along with scintillometry of sample bags following geological logging, the identification of mineralised intersections has been confirmed by a number of methodologies and personnel. • Other than during the historical, original exploration work, limited twinning of holes has been undertaken however analyses of close spaced pre-mining grade control drilling and mining blast hole drilling (both using the same radiometric logging techniques and equipment) indicates that there is minimal grade variation when sample data is aggregated into mining block sizes. • Original work undertaken by Gencor using diamond drilling of the corners and centre of 2m x 1m test pits indicates that there is significant short scale local grade variability, however when all the sample data from the 5 drill holes was averaged for each vertical metre the results were equivalent to the test pit samples metre.

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Criteria	JORC Code Explanation	Commentary
		• As the RC drill holes are radiometrically logged it is expected that the local variability relative to diamond (in particular) and RC drill sampling will be considerably reduced. • Data is entered into an Access logging database during data capture at the mine. When all data has been collected for a hole, it is transferred to the Paladin main office where the database administrator imports it into the server based Geobank drilling database. Data is verified by geologists after it has been collected, prior to import into Geobank, and regularly by geologists during geological modelling as well as during and prior to resource estimates. The server based database has restricted access and is internally audited. • U converted to U_3O_8 in the database where required on export by multiplying the U values by 1.1798.
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• As all holes are drilled vertically, are relatively short (with the majority being in the 30-50m range) and the mineralisation is horizontal, only very limited down hole deviation surveys have been carried out. • All recent (post 2007) collars were surveyed by DGPS by the mine site surveyor. Historical collars have been re-surveyed when located using DGPS with most locations being accurate. Where discrepancies have occurred these have been traced to original data entry issues or miss locations of holes in previous surveys.
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• The original exploration drilling was targeted at a nominal 50m x 50m grid but is dependent on final drill rig location. Spacing currently increases to approximately 100m at the far western end of the deposit. • The current drill spacing is considered to be appropriate to the definition of both geological and grade continuity throughout the deposit to meet the requirements of Mineral Resource and Ore Reserve studies and the resultant classifications applied.

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Criteria	JORC Code Explanation	Commentary
		• Pre-mining grade control which currently covers over 50% of the deposit has been conducted at a nominal 12.5m x 12.5m spacing. • ROM stockpile material was derived from detailed drilling at a spacing of approximately 3.5m x 3.56m. • For down hole radiometrics, the information used for mineral resources are based on 1m composites of 5cm gamma data. For geochemical assays, samples were split to a 1m interval. All geochemical data has been composited to 1m.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• The majority of mineralisation boundaries are gradational (and the sampling process either includes material either side of the mineralisation or, in the case of radiometrics, the entire drill hole) so not relevant to this style of mineralisation. • Orientation of mineralisation is well known and drilling is, in most cases, near perpendicular to the mineralisation.
Sample security	• The measures taken to ensure sample security.	• Geochemical samples are dispatched with security tags on each container and each receiver signs off to confirm those samples have not been tampered with.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• An independent review of the mineral resource estimate was conducted as part of the LHM re-start PFS. No flaws were identified. No audits of the mineral resource have been completed since mining commenced.

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Section 2 Reporting of Exploration Results

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• The vast majority of the drilling used in this mineral resource estimate was carried out on tenement ML140 which was granted 26th July 2005 and has an expiry date of 25th July 2030 with a minor proportion on ML172 which was granted 24th June 2015 and has an expiry date of 23rd June 2040. ML140 has an area of 4,375Ha and ML172 has an area of 2,999Ha. The tenements are 100% owned by Langer Heinrich Uranium (Pty) Ltd which, in turn, is 75% indirectly owned by Paladin Energy Limited. • All tenements are in good standing and there are no current impediments to operating in the area.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The area has been explored on and off from the mid/late 1970's through to the present with the majority of historical drilling taking place in the 1980's by Gencor, 2000-2002 by Acclaim and most recently from 2003 by Paladin. All work undertaken by the proceeding companies was performed to a very high standard.
Geology	• Deposit type, geological setting and style of mineralisation.	• Langer Heinrich is a calcrete-hosted secondary uranium deposit associated with valley-fill sediments in an extensive Tertiary palaeodrainage system.

Drill hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:
	  ○ easting and northing of the drill hole collar
	  ○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar
	  ○ dip and azimuth of the hole
	  ○ down hole length and interception depth
	  ○ hole length.
	• If the exclusion of this information is justified on the basis that the
		• The extent of the drilling can be seen in the plan figures included in the body of this announcement in Figure 3. To date 38,850 drill holes have been completed on various spacings – 100m x 100m down to 12.5m x 12.5m throughout the deposit. In the majority of cases, at least for the post Gencor work, the drill holes have been to the full depth of the paleochannel plus a small allowance.
		• ROM stockpile material was derived from detailed drilling at a spacing approximately 3.5m x 3.56m. When mining ceased this amounted to more than 500,000 drill holes and more than 4,000,000 1m composites.

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Criteria	JORC Code Explanation	Commentary
	information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	• All drilling has been vertical as the mineralisation is effectively horizontal. • Intercept depths vary between 0m and approximately 70m depending upon location within the strike length of the deposit – in general intercepts are shallow to the east and at depth to the west due to topographic surface erosion. • Relevant information has previously been released to the market, and there have been no material changes to this information.
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• Not applicable as no new exploration results are being reported.
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	• Due to the use of vertical drilling and the horizontal, layered nature of the deposit all drill intercepts can be considered to represent the true width of the mineralisation.
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• No new exploration results are being reported • See attached plan and section.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades	• Not applicable as no new exploration results are being reported.

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Criteria	JORC Code Explanation	Commentary
	and/or widths should be practiced to avoid misleading reporting of Exploration Results.	
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• Not applicable as no new exploration results are being reported
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• It is expected that, as mining is undertaken, the program of 12.5m x 12.5m pre-mining grade control drilling will continue until the entirety of the deposit has been drilled out. • Currently the only area of the deposit not closed off is that to the west of ML140 within ML172. It is expected that, as the mineralisation within ML140 is mined out, additional wide spaced exploration drilling will be undertaken in ML172.

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Criteria	JORC Code Explanation	Commentary
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used.	• All data has been extensively validated back to the original paper and electronic logs and any issues have been resolved. The geological database contains extensive validation tools for automatic flagging of a significant number of potential validation issues. • Data validation procedures are visual (based on comparison of printed logs and sections) and electronic (on database upload of electronic information – assay results, gamma and down hole survey logs etc.)
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• The project has been repeatedly visited by the CP since 2003 with the most recent being for a period of 14 days during July 2016.
Geological interpretation	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. • The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• The geological setting of the deposit is well understood having been subject to extensive exploration over a number of years. A combination of RC chip logging as well as downhole radiometric logs has been used to refine and more accurately define the geological model. • Additional information has routinely been sourced from in-pit mapping of the mineralisation during mining. • The mineral resource was defined by a combination of the modelled geological sequence and mineral resource grade shells. • The local geology appears to be relatively simple in the main and it is not expected that any alternative interpretation would substantially alter either the gross geological model or the contained metal within the mineral resource estimate.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The current mineral resource is modelled to be approximately 16Km in strike, 0m to 100m in depth and varies in width from 300m to 900m depending on the position of the paleochannel walls.

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Criteria	JORC Code Explanation	Commentary
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. • The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• The mineral resource was estimated using Multi Indicator Kriging (MIK) techniques with a specific variance adjustment correction applied to allow for the level of selectivity expected during the mining process. Estimation search distances range from 55mE x 55mN x 3mRL to 100mE x 100mN x 5.2mRL in three passes. Searches were conducted on an octant basis with a minimum of 4 octants for Measured and Indicated material and two octants for Inferred material. In addition a minimum of 16 samples (and maximum of 48) were required for Measured and Indicated estimates, this was relaxed to a minimum of 8 samples for Inferred material. The full MIK model has been used to report the open pit portion of the mineral resource at a 250ppm U_3O_8 cut-off grade. • The mineral resource reported here has been compared to the previous mineral resource estimate and compared favourably in terms of total contained tonnes and metal. • The uranium grade estimate used to define the tonnes and grade for ROM stockpiles, when in-situ, is derived from a conditionally simulated model (based on 100 simulations) using a 4m x 4m x 3m block size and the estimation was completed using a multiple pass process with a search distance starting at 8m x 8m x 3m. Searches were conducted on an octant basis with a minimum of 4 octants required for the first pass. Additional economic parameters are applied to the model in order to define economically mineable ore blocks. • Once the material has been mined it is scanned using a radiometric discriminator in order to finally assign the material to a particular ROM stockpile. • Grade wireframes were used to define distinct geology and mineralisation domains and these were used to control the MIK estimation. • The only potential by-product is V_2O_5, a constituent part of Carnotite,

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Criteria	JORC Code Explanation	Commentary
		the only uranium mineral currently contained within the deposit. V_2O_5 has been estimated within the mineral resource based on the stoichiometric ratio between U and V within Carnotite. It is acknowledged that there may be additional vanadium within the ore processed however it is currently assumed that this material would be refractory relative to the existing flowsheet. • Test work undertaken to date suggests that there are no deleterious elements or other non-grade variables of economic significance. • The primary block sizes are 12.5m (E) x 12.5m (N) x 3m (RL) and are orientated in the direction of the strike of the mineralisation and are considered appropriate to both the average width of the mineralisation and the current drilling density. • The selective mining unit (SMU) size of 4m x 4m x 3m was determined on the basis of the likely size of equipment used to mine the deposit and likely bench height for mining open pit. As material is mined each haul truck is scanned using a radiometric discriminator to provide a final destination and grade and the SMU approximates the truck load size. • As the mineral resource estimation technique was MIK no grade capping or cutting was undertaken. • Swath plots of the mineral resource and underlying sample data (in North, East and RL directions) was used to assess the validity of the mineral resource estimate. In all cases it is believed that the mineral resource estimate is reasonable. • Basic reconciliation between the resource, mined and mill feed grades indicated a good to very good correlation between all grade sources.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages are estimated dry.

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Criteria	JORC Code Explanation	Commentary
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• Cut-off parameters are based on the likelihood of open pit mining of the mineral resource. Pit optimisation calculations were undertaken at a number of commodity prices to determine both the likely size and scale of the deposit. A uranium price of US$50/lb indicates a marginal cut-off grade of 200ppm U_3O_8 using budgeted processing costs and recoveries from the Restart Study Update. Values for V_2O_5 are reported using the uranium cut-off grade as vanadium is only sourced as a by-product of mining carnotite, the only uranium mineral present. • The cut-off grade for the ROM stockpiles has already been defined by the effective cut-off grade applied when the stockpiles were originally mined and the inclusion of these stockpiles within the Mineral Resource does not rely on selective reclamation of the stockpiles.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• It is assumed that the mineralisation is likely to be extracted by open pit mining techniques. As the mineral resource estimation technique is MIK no additional dilution or recovery adjustments have been made over those contained in the original estimation. • No mining dilution or ore loss is applied to ROM stockpile recovery as dimensions are well known. The ROM stockpile floors are surveyed prior to build and no blasting is required.
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• Existing metallurgical testwork and plant operating history supports that the mineralisation is amenable to conventional alkaline leach extraction at reasonable cost. • Testwork to determine the amenability of the process flowsheet to the production of a vanadium product was undertaken prior to the transition of the site to care and maintenance and is expected to be further refined after current studies are completed. Work completed to date indicates that a saleable vanadium product can be reasonably produced within the current flowsheet with only moderate

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Criteria	JORC Code Explanation	Commentary
		modification to the processing plant within the product recovery area. • As such, the inclusion of vanadium within the resource is deemed reasonable and meets the criteria of 'Reasonable prospects for eventual economic extraction'. As vanadium will represent purely by-product production no additional value has been placed upon it other than marginal revenue recovery in order to determine reasonable prospects for eventual economic extraction.
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• Environmental baseline work was undertaken prior to the commencement of mining operations and this has been continued by Paladin. A full environmental impact assessment on the project has been completed and the operation continues to meet all existing environmental requirements. • There are no other known legal, political or other risks that could materially affect the potential development of the mineral resources.
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• The bulk density value used in the mineral resource estimate was determined from analysis of diamond drill core, mining and processing samples using standardised techniques. A large number of bulk density determinations were used and these are distributed throughout the mineralisation. The main method employed was weighing in air and water following drying and sealing of the sample. This method is considered to appropriately deal with void, moisture and rock type differences. The valued applied to the mineral resource estimate is based on the predominant mineralised rock type. • The bulk density of material held on long term MG and LG stockpiles was assessed from the tonnages delivered during mining (from the MPR database) and regular surveyed stockpile volumes referenced

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		to the original, pre-mining, surface.
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	• The mineral resource has been classified on the basis of drilling density throughout the deposit as well as the validity of the underlying data. • All relevant factors have been taken into account when determining the mineral resource classification. • Run of Mine (ROM) stockpiles have consistently been published as a component part of the total Langer Heinrich Mine Mineral Resource since 2011. The basis of this Mineral Resource update is applying the Measured category classification to these previously separately tabulated ROM stockpiles. These ROM stockpiles were created during mining from 2006 to 2016 as part of the long term processing strategy for Langer Heinrich Mine. ROM stockpiles have always been considered by the Company to be equivalent to Measured category material, however, these ROM stockpiles were not previously explicitly reported in such a way. • In order to appropriately address this difference, and for clarity, this Mineral Resource update applies the Measured category classification to the ROM stockpiles and does not convert material from one Mineral Resource category to another. • The information stored in the MPR database, together with routine surveys of ROM stockpile volume, final stockpile build reconciliation, the results of reconciliation of the reclaimed ROM stockpile material used for processing between December 2016 and May 2018 and a reconciliation of the classification of material mined from the current un-depleted Mineral Resource Model is the basis of applying the Measured Mineral Resource category to ROM stockpiles. • The ROM stockpiles are comprised of mined material that, prior to being mined, was externally classified as Measured and Indicated category Mineral Resources. From 2008, the practice at the mine site was that prior to actual mining taking place, detailed infill drilling at a

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		12.5m x 12.5m spacing was routinely undertaken in order to provide for final definition of the pit limits and allow for short term mine planning. Prior to mining, blast hole drilling is completed at a routine spacing of 3.5m x 3.56. The blast hole data was subsequently used to create grade control models for individual blast areas using conditional simulation and, from these, derive mining mark-out shapes. • Mined material was transported by a weightometer equipped truck through a radiometric truck scanners which determines the final grade and destination ROM stockpile for each truck. Operations data describing the point of origin, measured trucked tonnes, final discriminated grade and destination ROM stockpile were recorded in the MPR database. • ROM stockpiles are currently broken into two different categories based on the grade range of the feed used to build the stockpile to allow efficient blending and grade profiling of plant feed. The grade range for material delivered to the low grade stockpile was 250ppm to 400ppm U_3O_8. The grade range for the material delivered to the medium grade stockpiles was 400ppm – 650ppm U_3O_8. Material with grades greater than 650ppm U_3O_8 was delivered to ROM stockpiles but were consumed during previous operations. • Reconciliation between ROM stockpiles fed to the plant between December 2016 and May 2018 showed that, in terms of tonnes, grade and metal the stockpile movements reported 4.32% higher tonnes, 2.32% lower grade and 1.90% more metal than was received by the processing plant. Appropriate stockpile adjustments have been completed. • Reconciliation of the classification of the material mined from the current un-depleted Mineral Resource model determined that 99.96% was classified as Measured category material and 0.04% was classified as Indicated category material (0.04%) at the time it was

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		mined. The proportion of the Indicated category material that was subject to mining is considered immaterial. • The current classification of the deposit reflects the opinion of the Competent Person.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• The Mineral Resource estimate has been reviewed by Company specialists and the current values reflect this review. The Mineral Resource estimate was also reviewed as part of the PFS Independent Peer Review and no material issues were found.
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• Based on the current understanding of the deposit it is believed that the mineral resource estimate reasonably reflects the accuracy and confidence levels within the deposit. Due to the nature and style of the mineralisation it is expected that additional, detailed, infill drilling will locally modify grades and thicknesses however the global tonnages and grades are expected to remain consistent.

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Mineral Resource estimate for conversion to Ore Reserves	• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. • Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	The Mineral Resource estimate was developed by Gill Lane Consulting Pty Ltd principal Dave Princep in 2021. A Mineral Resource report was completed at that date. Mr Princep is a former employee of Paladin and has a long experience with the Project. The updated estimate uses all drilling completed for the Project and is adjusted to reflect an updated mining reconciliation exercise completed at the same time. Mineral resources have been estimated at a number of cut-off grades using Multiple Indicator Kriging with block support correction. Primary model panel dimensions are 12.5mE x 12.5mN x 3mRL. The Mineral Resource is classified as Measured, Indicated, and Inferred. A JORC Table 1 sections 1, 2 and 3 was also prepared, as detailed above.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken, indicate why this is the case.	The Competent Person (AMC Principal Mining Engineer David Varcoe) has not had the opportunity to visit the site due to global travel restrictions arising from the COVID-19 pandemic. Mr Varcoe has a number of years' experience working on uranium projects. He was involved with the Rio Tinto Rossing Uranium mine also in Namibia. He visited that site on a number of occasions and is familiar with the country and local environment of the LHM. Mr Varcoe has been involved with the Project for approximately three years. Mr Varcoe has relied on the experience of others who have worked on the Project including current Paladin employees and the Competent Person Mineral Resources to provide additional information on the nature of the Project and to review the mine

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		planning work underpinning the Ore Reserves. The Project operated successfully for over 10 years, treating 30Mt of ore and producing 43Mlb of product, this mine plan is a continuation of the same mining strategy and approach, therefore de-risking the lack of a site visit.
Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. The Code requires that a study to at least pre-feasibility study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material modifying factors have been considered.	The Project was in operation for approximately 10 years. Mining costs are derived from contractor bids. Processing costs are based on historical data and updated by experienced process engineers. General and administration costs are developed by Paladin based on historical costs and functions. AMC, Paladin and other consultants have developed a detailed mining and processing plan (the Restart Plan Update, as detailed in this announcement) that is based on historical operating parameters and updated cost inputs. The study follows on from work completed at pre-feasibility level. The study level includes suitable application of modifying factors and is suitable to support a restart decision. Therefore the plan is considered to be equivalent to a feasibility level study.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	Due to the Project's long history the processing costs and metallurgical recoveries are well understood. The flowsheet will not change from the existing model. Cut-off grades were estimated using economic break-even factors to return a cut-off grade of 180ppm U_3O_8. For scheduling purposes, the cut-off grade was set higher at 250ppm as this is more suited to known processing plant performance.
Mining factors or assumptions	The method and assumptions used as reported in the pre-feasibility or feasibility study to convert the Mineral Resource to an Ore Reserve (i.e., either by application of appropriate factors by optimisation or by preliminary or detailed design).	The Mineral Resource models were used directly for mine planning. The 2021 Mineral Resource model was developed by adjusting the change of support correction in the MIK estimate. The adjustment was completed to simulate the mining dilution

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	The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. The assumptions made regarding geotechnical parameters (e.g., pit slopes, stope sizes, etc), grade control and pre-production drilling. The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). The mining dilution factors used. The mining recovery factors used. Any minimum mining widths used. The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. The infrastructure requirements of the selected mining methods.	that AMC suggested would better match the historical mining reconciliation performance. This updated Mineral Resource estimate model was used by AMC for mine planning without the need for any additional ore loss or dilution factoring as these were effectively built into the model. Metallurgical recovery factors were applied to the mining model in order to model product yields. Pit optimisations utilising the Lerchs-Grossmann algorithm with industry standard software were undertaken. This optimisation utilised the Mineral Resource model together with cost, revenue, and geotechnical inputs. The resultant pit shells were used to develop detailed pit designs with due consideration of geotechnical, geometric, and access constraints. These pit designs were used as the basis for production scheduling and economic evaluation. Conventional mining methods (truck and backhoe) successfully used historically at LHM and similar to large scale open pit mines. The geotechnical parameters have been applied based on geotechnical studies informed by existing operational performance. During the above process, Inferred Mineral Resources were excluded from pit optimisations utilised to estimate the Ore Reserves. The study considered the infrastructure requirements associated with the conventional contractor-based truck and shovel mining operation including crushing and beneficiation, ore transportation and ship loading. Existing infrastructure includes established open pits, waste dumps, ore pads, haul roads, workshops and offices, water and power supply, an

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		established processing facility and operational tailings storage facilities.
Metallurgical factors or assumptions	The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. Whether the metallurgical process is well-tested technology or novel in nature. The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. Any assumptions or allowances made for deleterious elements. The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	Due to the Project's long history the processing costs and recoveries are well understood. The flowsheet will not change materially from the existing model. Cut-off grades were set at 250ppm as this is more suited to known processing plant performance. Upgrades and improvement opportunities have been identified in static and dynamic modelling. This modelling and analysis considered the increase in plant throughput required to reach future production targets. 18 months is allowed to achieve plant start-up. Metallurgical recovery is based on historical data and updated analysis. Plant improvements include the following items that are costed and budgeted for in the Restart Plan Update: • ROM bin modifications • Primary cyclone upgrade • Hydrosort additional module • Leach feed surge modifications • Steam injectors • Upgrade thickener feed wells • Tailings dewatering • Product thickener • Final Product drying and packaging • Centralise control stations • Swakop river water supply upgrade
Environmental	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status	All major approvals are in place for execution of the Restart Plan Update, and restart of operations across the following major aspects of the Project;

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	of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	• Mining • Processing • Mine Waste Disposal • Contaminated Waste Disposal • Radiation Management • Export • Water • Power Paladin is the holder of following mining licenses (initially granted for 25 years) which has been validly and legally issued: • Mining licence no 140 (duration to 2030, renewable for additional 15 years). • Mining licences 172 (converted from EPL in 2015 to ML and duration to 2040 renewable for additional 15 years). Valid regulatory authorisations are maintained such as the environmental clearance certificate in respect of ML 140 and ML 172. The Langer Heinrich Mine operations continued up to 2018 under the approved ML 140 and approved environmental management and radiation management plans.
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	The Project is on care and maintenance and operations are being reviewed for re-establishment. Existing infrastructure includes established open pits, waste dumps, ore pads, haul roads, workshops and offices, water and power supply, an established processing facility and operational tailings storage facilities. The infrastructure in place is adequate to support the operation. Necessary repairs, improvements and upgrades have been identified and costed and are included in the Restart Plan Update economics.

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Costs	The derivation of, or assumptions made, regarding projected capital costs in the study. The methodology used to estimate operating costs. Allowances made for the content of deleterious elements. The source of exchange rates used in the study. Derivation of transportation charges. The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. The allowances made for royalties payable, both Government and private.	Only limited new capital is required to restart the Project, as detailed in this announcement in relation to the Restart Plan Update. Mining operating costs were provided by contractor quotes. Processing costs are based on a combination of historical real costs and updates based on dynamic modelling. Cost drivers and exchange rates were reviewed and applied to the operating costs. Product insurance and transport costs were revised based on discussions with appropriate agents and shippers. Product value is based on expected grade specification and is based on Paladin market analysis. Royalties are based on current known Namibian legislation and site agreements.
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	Product value is based on expected grade specification and is based on Paladin market analysis. LHM Product specification is well tested in the marketplace.
Market assessment	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. A customer and competitor analysis along with the identification of likely market windows for the product. Price and volume forecasts and the basis for these forecasts. For industrial minerals the customer specification, testing, and acceptance requirements prior to a supply contract.	Paladin's Marketing Manager and Principal Uranium Marketing Consultant Mr Gary Stoker, provided supporting information for long term price for US$50/lb from Canaccord Genuity Equity's Research report dated 18 May 2021, and from Shaw and Partners Sector Report dated 5 May 2021. Paladin regularly engages customers on their expected future supply requirements and likely timing. Customer specifications are well understood from the previous 10 years of operations.
Economic	The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these	Inputs to the economic analysis have been obtained from the study work undertaken on the Restart Plan Update. Financial

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	economic inputs including estimated inflation, discount rate, etc. NPV ranges and sensitivity to variations in the significant assumptions and inputs.	modelling completed by Paladin demonstrates the Project is economically viable with a positive NPV. Changes in economic inputs will impact the NPV, however the NPV remains positive under Paladin's sensitivity analysis and stress testing assumptions. The NPV is most sensitive to changes in the U_3O_8 price and operating expenditure assumptions.
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	All of Langer Heinrich Mine's major approvals as to social license to operate are maintained with key stakeholders as to the Mining Licenses (ML) and specifically ML 140 and 172. The Company has a full time Environmental, Social, Governance (ESG) manager that regularly engages with various stakeholders of both industry and community related work forums that relates to social license to operate. The Project has operated successfully during a 10 year period up until being placed on care and maintenance in August 2018, and Paladin continues to build on the work forums to enhance information sharing and to monitor statutory and or community concerns. In addition to mining, specific key agreements are maintained with those Governmental enterprises that provide water, pipeline infrastructure and power to the Project.
Other	To the extent relevant, the impact of the following on the Project and/or on the estimation and classification of the Ore Reserves: Any identified material naturally occurring risks. The status of material legal agreements and marketing arrangements. The status of governmental agreements and approvals critical to the viability of the Project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the pre-	All major approvals are in place for execution of the Restart Plan Update, and restart of operations across the following major aspects of the Project: • Mining • Processing • Mine Waste Disposal • Contaminated Waste Disposal • Radiation Management • Export • Water

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	feasibility or feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	• Power There are some small construction related approvals to be considered. The mining licences for the Project remain secure. Namibia is a mature mining jurisdiction with sound legal tenure. There is an available, skilled, and willing workforce available in Namibia. The Namibian Government and the Line ministry of mining provides strong support for mining operations. The Project operated with proper legal agreements and good social and community relations for 10 years. The Company employs a Manager Environmental, Social and Governance (ESG) who is responsible for environmental controls and social license to operate engagement and management. The General Manager of the LHM is tasked to maintain all the critical statutory approvals and to engage with the Line ministries or industry Regulators should any critical matter arose. All Regulatory required environmental and radiation protection plans have been submitted and approved by the Governmental Regulators and the environmental clearance certificate was recently issued and is valid for a further three years. Based on historic approvals granted and current valid permits and licenses, there are reasonable grounds to expect that all additional Government approvals will be received within the timeframes anticipated in the study for the ongoing approvals required for next pit developments.
Classification	The basis for the classification of the Ore Reserves into varying confidence categories. Whether the result appropriately reflects the Competent Person's view of the deposit. The proportion of Probable Ore Reserves that have been derived	The Ore Reserves consist of mostly Proved Ore Reserves (88%). The Proved Reserves are based on the Measured Mineral Resource developed with significant areas of close spaced drilling supported by a long history of operation.

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	from Measured Mineral Resources (if any).	Mining is from relatively shallow open pits with limited risk to production achieving the mine plan. Processing is well understood and will be enhanced on restart. The Competent Person is satisfied that the stated Ore Reserve classification reflects the outcome of technical and economic studies.
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	Ore Reserve estimates generated during the recent PFS were subject to external review. This Ore Reserve does not vary materially from that previous estimate. Work undertaken by AMC is subject to an internal peer review process. Mining costs were reviewed by an independent consultant with expertise in that field.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.	The confidence in the Ore Reserve is reflected by the classifications shown above. In general, the Project geology is not complex and is not difficult to interpret so confidence in the Mineral Resource is good. Through previous mining experience with the mineralisation high confidence is achieved in terms of tonnes and grade of mineralisation. The confidence in most modifying factors is high based on the knowledge from the existing operation and current updates.

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	It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	