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Cautionary Statement and Inferred Resources Notices

The August 2023 Life of Mine plan (LoM) completed for the Ross and Kendrick Production Areas within the Lance Projects includes Measured and Indicated resources, and based on historical experience at Lance, utilizes a resource conversion factor of 60% to convert Ross and Kendrick Area Inferred resources to Indicated or greater quality for use in this revised LoM.

The revised LoM itself is based on various material assumptions as noted in Appendix 1. This includes the homogeneity of the delineated ore body contained within the Lance Projects which is considered reasonable by the Company's technical consultants, competent persons and independent external consultants when preparing the August 2022 Definitive Feasibility Study (DFS). The Company believes that it has a reasonable basis upon which to prepare and release these revised LoM results, particularly given that the Ross Production Area was first placed into production in December 2015. Whilst the Company considers that all material assumptions underpinning the DFS and LoM are based on reasonable grounds, there is no certainty that they will prove to be correct or that the outcomes indicated by the revised LoM will be achieved.

The Company believes it has a reasonable basis for providing the forward-looking statements and production targets included in this announcement. Detailed assumptions regarding the included resources are outlined in the ASX announcement released 14 November 2018 and the Company confirms that there have been no material changes to the determination of the resources since this date. The production target in this announcement is underpinned by measured and indicated resources (comprising 70% of the production target) and inferred resources (comprising 30% of the production target).

Investors should also note that there is no certainty that the Company will be able to raise the amount of funding for the Lance Projects when it is required or on terms that are not overly dilutive or that are favorable to the value of the Company's existing shares.

This announcement has been prepared in accordance with the JORC Code (2012) and the ASX Listing Rules. There is a low level of geological confidence associated with Inferred mineral resources and there is no certainty that further exploration and delineation work will result in the determination of Indicated mineral resources or that the production target itself will be realized. Financial information contained in this announcement is preliminary in nature and is in-part based on low-level technical and economic assessments and is insufficient to support the estimation of reserves or to provide assurance of economic development.

Under the revised LoM plan, the first five (5) years production can be majority sourced from Measured and Indicated Resources. If the Inferred Resources are excluded from the revised LoM, the economic analysis still forecasts a positive financial performance. Therefore, the Company is satisfied that the use of Inferred Resources is not a determining factor in overall Project viability, and it is reasonable to include Inferred Resources in the revised LoM, particularly given that the Lance Projects have previously been an operating entity that produced uranium for almost seven years.

In accordance with the relevant regulations governing the disclosure of mineral projects, readers are cautioned that mineable resources based on Inferred Resource material are considered too speculative geologically to enable them to be classified as reserves.

Given the uncertainties involved, investors should not make any investment decision based solely on the results of the revised LoM.

Rounding

Totals in tables may not add due to rounding.

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31 August 2023

Companies Announcement Office
Via Electronic Lodgement

LANCE PRODUCTION TO RESTART IN LATE 2024 UNDER REVISED ROSS & KENDRICK LIFE OF MINE PLAN

KEY POINTS

- Revised strategy for Lance complete, with production scheduled to commence in late CY24, positioning Peninsula as a fully independent, end-to-end producer of dry yellowcake
- Revised production strategy delivers a robust and resilient project development plan for Lance, including an accelerated production ramp-up schedule
- New Ross & Kendrick Life of Mine ("LoM") model features a complete 5,000 GPM uranium In-Situ Recovery ("ISR") plant, to produce up to 2.0Mlbs p.a. of dry yellowcake (U_3O_8) product
- Competitive OPEX estimate maintained; C1 Direct Operating Costs of US$21.69/lb
- Remaining CAPEX spend to first production of US$53.4M and ramp-up period CAPEX (first production to achieving flowrate capacity) of US$17.4M
- Construction activities for expanded plant to commence in late 2023, following final engineering and procurement work
- Wellfield development and construction activities to continue in advance of production restart
- Project achieves positive cash flow during first full year of production (in 2025)
- Upfront capital, working capital and funding requirements fully assessed
- All customers have indicated willingness to cooperatively revise near-term delivery schedules
- Peninsula is holding a conference call today at 10am WST / Midday EST. Details to register are outlined in the announcement

Peninsula Energy Limited and its wholly owned subsidiary, Strata Energy Inc. (together "**Peninsula**" or the "**Company**") (**ASX:PEN, OTCQB:PENMF**) are pleased to announce the results for a revised production plan on the Ross & Kendrick production areas ("Ross & Kendrick") within its 100% owed flagship Lance Projects ("**Lance**" or "**The Project**"), located in Wyoming, USA. A newly revised Life of Mine ("**LoM**") model for Ross & Kendrick mitigates third party processing risks by bringing the complete process of uranium yellowcake production in-house, from the commencement of production.

The revised production strategy for Lance has established a robust and resilient project development plan for the Ross and Kendrick Production Areas, which will see production commence in late CY 2024.

The LoM model is based on a total resource base of 21.8Mlbs U_3O_8 estimated to be contained within the Ross and Kendrick production areas at Lance. The revised plan excludes the contiguous Barber Resource Area and sets the total cost of the plant against Ross & Kendrick production. The expanded

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plant functionality will be available to process future output from the 31.9Mlb U_3O_8 resource base at Barber, highlighting the opportunity for significant future growth for the Lance Projects.

Key Ross & Kendrick Operational Outcomes	
LoM Model Uranium ISR Plant Flowrate Capacity	5,000 GPM
Dry Yellowcake (U_3O_8) Production Capacity	Up to 2.0Mlbs p.a
CY2025 Projected Production Level	~1.1Mlbs
Estimated Production Life	10 years
Estimated U_3O_8 LoM Production	14.8Mlbs

Table 1: Key operational results from revised production plan

Key Ross & Kendrick Financial Outcomes	US$
LoM CAPEX	285.8M
Remaining CAPEX to First Production(1)	53.4M
Ramp-up stage CAPEX (first production to 5,000 GPM flow)	17.4M
LoM Wellfield Replacement & Sustaining CAPEX	215.0M
LoM Project Revenue from Sale of Lance Production (real)	988M
Weighted Average Sales Price used in the LoM	67.07/lb
Average Price Received for Uncontracted Production	72.62/lb
LoM Operating Cashflow (before tax)	258.2M
NPV_8	116.2M
IRR	26%
All in Sustaining Costs (AISC)	42.46/lb
All in Costs (AIC)	50.27/lb

1) Excludes sunk CAPEX spent between January and June 2023

Table 2: Key financial results from revised production and LoM plan

Peninsula's Managing Director and CEO, Mr Wayne Heili said,

"Peninsula remains committed to bringing Lance back into production as quickly as reasonably achievable. Our expert team has revised the Ross & Kendrick production area Life of Mine model to assess the impact of expanding the process plant with additional ion exchange, elution, precipitation, and product drying functionality installed from the commencement of production. The new model is underpinned by a quality resource and detailed technical evaluations. The results generated demonstrate the favourable economic potential of Lance and importantly, confirm that the Company is well positioned to move ahead with the plant expansion and production restart within the current dynamics of the uranium market.

I am proud of the entire team at Peninsula who have worked extremely hard over the past month to deliver this plan, which will see operational activities restart at Lance in a little over 12 months. We have a world-class project, strong economic and operational numbers, and the team in place to establish Peninsula as a fully independent end-to-end producer of dry yellowcake.

We have held productive discussions with all our customers and are appreciative of their flexibility and willingness to consider amending future delivery schedules resulting from our revised production schedule.

Peninsula has a unique competitive advantage in being the only ASX listed, US-based uranium company authorised to use the industry leading low pH ISR method. Based on the advanced development stage of the Project, Peninsula has a rapid pathway to complete the facility additions and to return Lance to production in late calendar year 2024."

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REVISED ROSS & KENDRICK LIFE OF MINE PLAN OUTCOMES

Uranium Production Profile

A LoM production profile that is based on detailed mining, metallurgical and scheduling factors has been developed for the Ross and Kendrick production areas.

The updated production profile reflects a faster ramp-up to substantial rates, through the availability of a complete 2.0Mlb p.a. production plant from commencement of production. Production (plant operations) is projected to start in December 2024 and a production output of ~1.1Mlbs is projected for CY2025.

Following a full ramp-up, annual production rates range from 1.6Mlbs to 1.8Mlbs p.a. Over the effective 10-year Ross & Kendrick production life, 14.8Mlbs U_3O_8 are produced.

The production profile is presented in **Figure 1**.

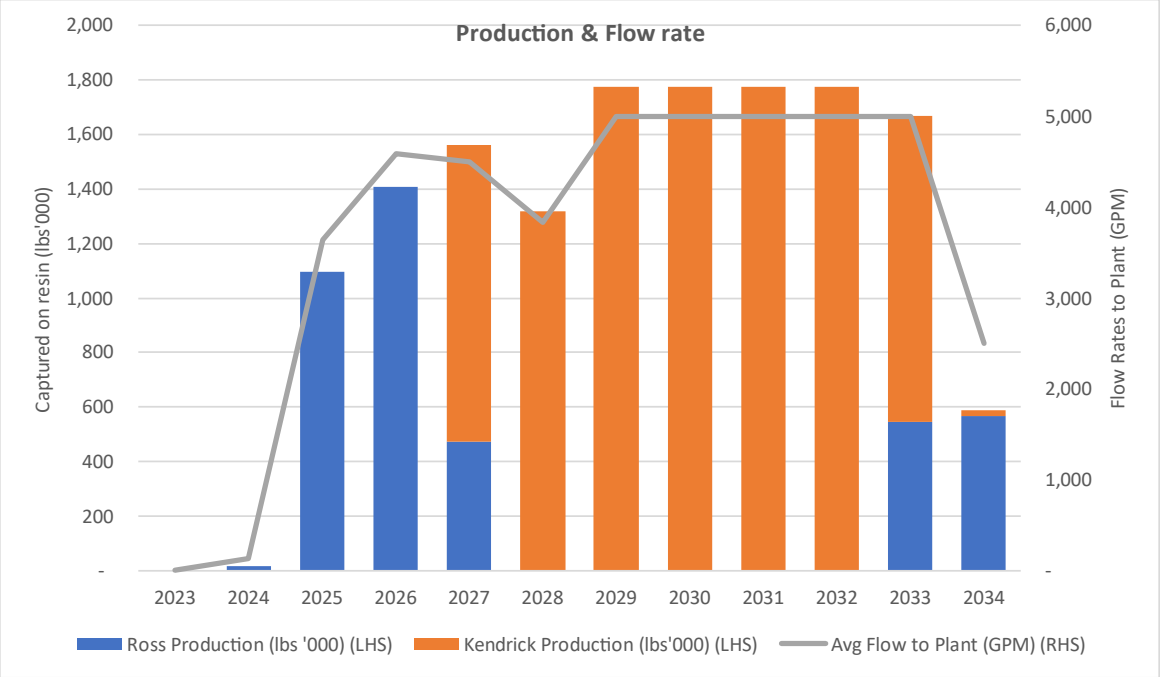


Figure 1: Life of Mine Production Profile

Production Metrics	
Estimated Ross & Kendrick Production Life	10 years
Estimated LoM Production (Mlb U_3O_8)	14.8
Steady State Production Rate (Mlb U_3O_8 p.a.)	1.80
Average Production Grade (mg/L U_3O_8)	77.2
LoM Global Resource Recovery (%)	67.7%

Table 3: Production Metrics

Production in the first two years is planned to be solely from the Ross production area, which has a much higher proportion of Measured and Indicated Resources than the Kendrick production area. Production from Kendrick is planned to commence in 2027. This means that most of the production during the first five years is from the higher confidence Measured and Indicated Resource categories. See **Figure 2** for the sequencing of production by mineral resource category.

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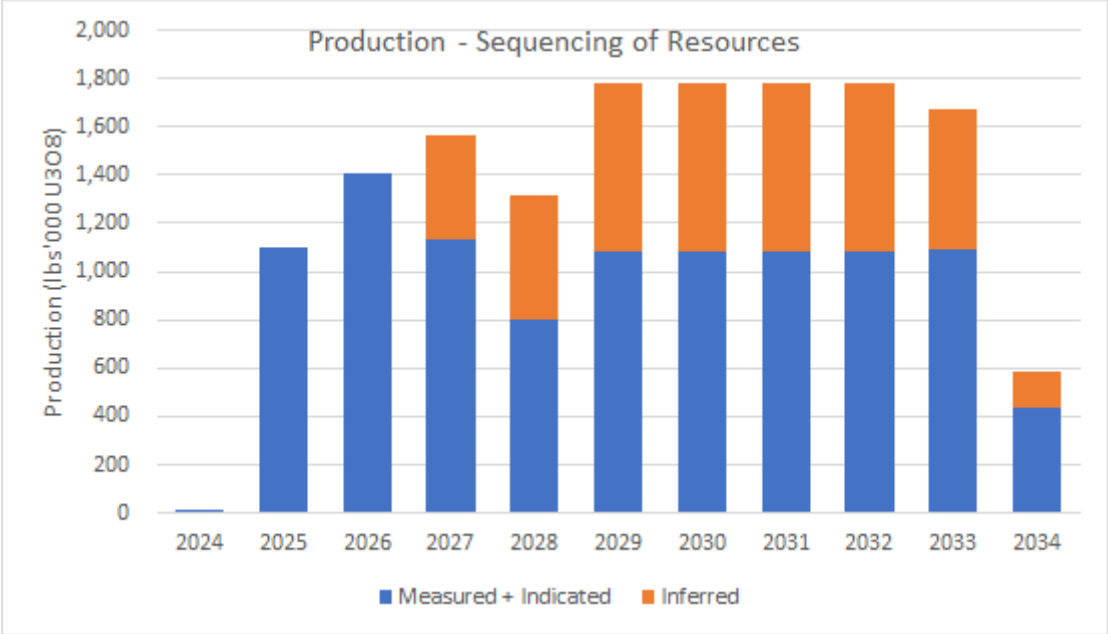


Figure 2: Life of Mine Production Profile by Resource Category

Capital Costs

Updated capital expenditures for the completion of the low pH transition and process plant expansion have been estimated by internal personnel utilizing information developed for the initial low pH transition activities. Predicted level of accuracy for the process plant costs is +/-5%, and a contingency of 10% has been allowed for all process plant capital expenditures.

Estimates for wellfield development costs have also been updated by internal personnel using wellfield planning information and current actual costs incurred by the Company. Wellfield development costs for Ross have a predicted level of accuracy of +/-5%. Since parts of the Kendrick wellfield designs are still conceptual, the level of accuracy for this area is +/-10%. A 5% contingency has been applied to all wellfield development costs with the exception of Kendrick trunklines and overhead power extensions, which all carry a 15% contingency. Overall, contingency applied to capital expenditure is 5.5%.

Capital expenditure by each major stage is presented in **Table 4**.

Ross & Kendrick Project Level CAPEX Requirements	**(US$M)**
LoM CAPEX	**285.8**
Remaining CAPEX to 1st Production	**53.4**
- Process Plant	19.3
- Wellfield	25.4
- General	5.1
- Contingency	3.6
Ramp-up Stage CAPEX (1st Production to flow capacity)	**17.4**
- Wellfield	15.9
- General	0.8
- Contingency	0.8
LoM Wellfield Replacement & Sustaining CAPEX (including contingency)	**215.0**

Table 4: Project Level CAPEX Summary

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Operating Costs

Operating costs were built from base principles, primarily using existing operating cost information and have an accuracy range of +/-5%. Operating costs include the estimated cost of restoration and rehabilitation of the above surface processing facilities, trunklines, field piping and below surface well reclamation.

Cost components used in the 2022 Definitive Feasibility Study ("**DFS**") have been updated to reflect changes in costs in the period between the preparation of the DFS and preparation of the revised LoM plan.

The most substantial operating cost over the LoM is sulfuric acid. Using industry forecast information and expected benefits to be realized when the Company can commit to long-term supply arrangements, a price of US$276/t in mid CY 2024, decreasing to US$224/t in mid CY 2025 and US$179/t from mid CY 2026 and beyond, has been used. An average cost contingency of 2.5% has been applied to all operating costs.

OPEX (US$M)	
C1 Direct Operating Cost (excluding Restoration)	320.2
Total OPEX (including Restoration)	346.8
OPEX Unit Cost (US$/lb) [(1)]	
C1 Direct Operating Cost (excluding Restoration)	21.69
Total OPEX (including Restoration)	23.49

1. *Excludes royalties and local taxes (severance, ad valorem and property taxes)*

Table 5: OPEX Summary

Project Level Economic Outcomes

The LoM plan reveals robust economic outcomes for production from Ross and Kendrick.

The Project reaches positive cashflow within the first year of production (estimated at September 2025).

A summary of the key economic outcomes and metrics from the LoM model is shown below in **Table 6**.

Key Ross & Kendrick Economic Outcomes	
LoM Project Revenue from Sale of Lance Production (real) (US$M)	988
Average Sales Price Received (US$/lb)	67.07
Average Price Received for Uncontracted Production (US$/lb)	72.62
LoM Operating Cashflow (before tax) (US$ M)	258.2
NPV_8 (US$M)	116.2
IRR (%)	26
AISC - All in Sustaining Cost (US$/lb)	42.46
AIC - All in Cost (US$/lb)	50.27

Table 6: Key Economic Outcomes

With an operating mine life of 10 years and an average production rate of 1.48Mlb U_3O_8 per year, Ross & Kendrick production areas yield an NPV_8 of US$116M (2023 real) and an IRR of 26%.

The determined average sales price of US$67.07/lb U_3O_8 generates a LoM revenue of US$988M. The all-in-sustaining cost (ASIC) for the project is US$42.46/lb and the fully loaded All in Cost (AIC) is US$50.27/lb.

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Customer and Forward Sales Considerations

The Company has up to 4.95Mlbs U_3O_8 currently under contract for delivery between now and the end of 2033, at a weighted average price in 2023$ (un-escalated) of approximately US$55/lb U_3O_8.

Sales under existing contracts comprise up to 34% of the LoM production planned from Ross & Kendrick. The remaining production is currently uncontracted and is assumed to be sold at a weighted average of US$72.62/lb U_3O_8 (2023$, un-escalated). **See Appendix 1 Material Assumptions** for further details on pricing assumptions.

The Company has held discussions with our valued customer base to address recent developments regarding production plans and the implications for scheduled deliveries in CY2023 and CY2024, prior to the expected restart of production. Our customers have been respectful of the evolving production plans and have each individually indicated a willingness to cooperatively revise the near-term delivery schedules. Peninsula greatly appreciates our customers' willingness to revise future delivery schedules and will update the market with any developments regarding adjustments to our forward sales portfolio.

OVERVIEW OF CHANGES FROM 2022 DFS

The information and production targets presented in this announcement are based on parameters materially consistent with the 2022 DFS and updated where required for the revised LoM plan.

The DFS is a comprehensive study on the technical viability of converting the Ross and Kendrick production areas of the Lance Projects from its existing alkaline mining method to a low pH mining method. The revised LoM plan represents the same conceptual basis, updated for changes in project schedule, changes in certain input and consumable costs, introduction of drill rig number capacity constraints, reduction in the number of new ion exchange columns to be included in the plant capacity expansion and removal of the previous 'Stage 1' toll milling period.

Existing mining facilities and infrastructure have largely been re-configured for low pH compatibility and used in the LoM plan. Cost estimates used in the revised LoM plan have been largely sourced from development experience, field scale demonstrations and operating experience from the existing mining operations.

While the modelling of capital and operating expenditures results in relatively consistent spending totals, differences in the assumptions of timelines to first production, production rates, sales schedules and revenue result in substantial changes to the resulting capital expenditure schedule, project level non-capital preproduction expenditures and production unit costs. All costing and revenue assumptions have been updated from a mid-2022 real dollar basis to a mid-2023 real dollar basis reflecting an interim period of substantial inflationary pressures.

SENSITIVITY ANALYSIS

A sensitivity analysis was prepared to better appreciate the impact of OPEX, CAPEX and uncontracted uranium price on the revised LoM plan.

The results indicate that the project is least sensitive to CAPEX and that a 5% reduction in CAPEX would yield an increase of US$10.1M in NPV_8. See **Figure 3** for a summary of the sensitivity to CAPEX.

Sensitivity to a change in OPEX is marginally greater than sensitivity to CAPEX. A 5% reduction in OPEX would yield an increase of US$12.4M in NPV_8. See **Figure 4** for a summary of sensitivity to OPEX.

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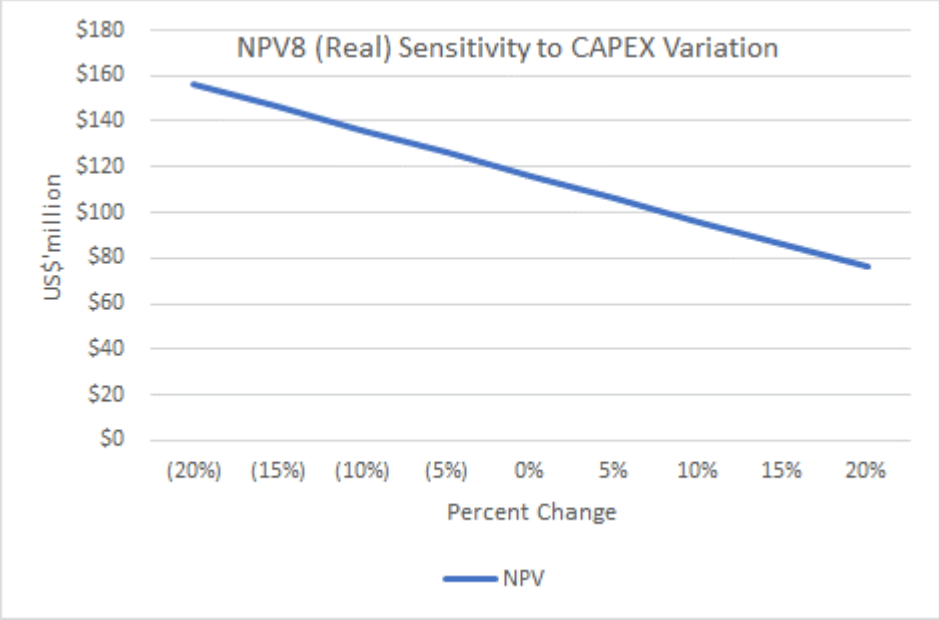


Figure 3: NPV Sensitivity to CAPEX

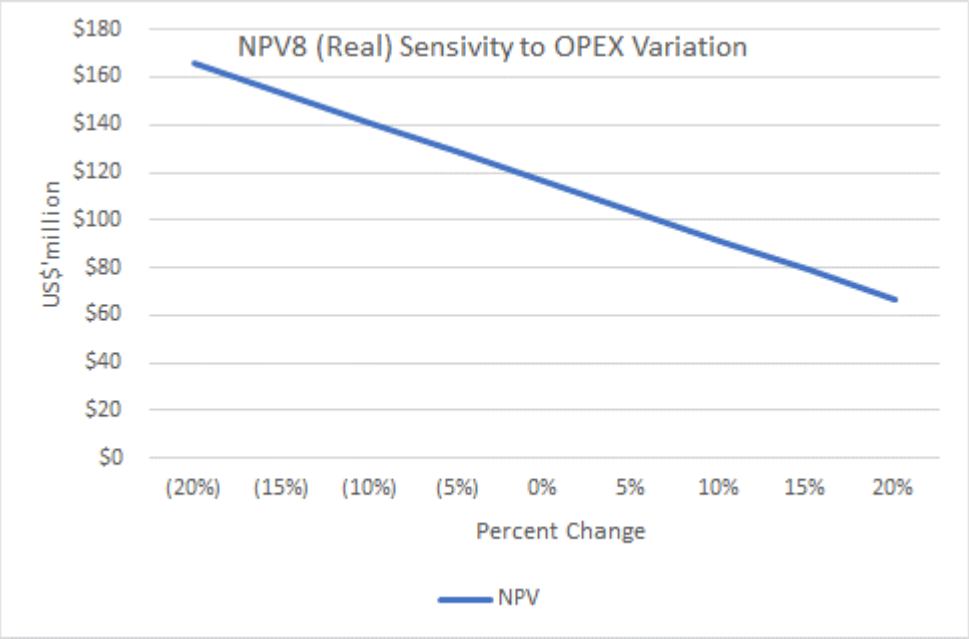


Figure 4: NPV Sensitivity to OPEX

The revised LoM plan used an average sales price for production sold outside of existing contracts of US$72.62/lb U_3O_8 (2023 real $ basis), resulting in a weighted average price of US$67.07/lb U_3O_8 over the LoM period when combined with existing contracts. Consistent with sensitivities run for the 2022 DFS, Ross & Kendrick is most sensitive to changes in the price received for uncontracted uranium. A range of sensitivities have been run on the sales price for uncontracted production (see **Figure 5** below). A US$5/lb U_3O_8 increase in the price received for non-committed production would yield an increase in the NPV_8 of US$26.5M.

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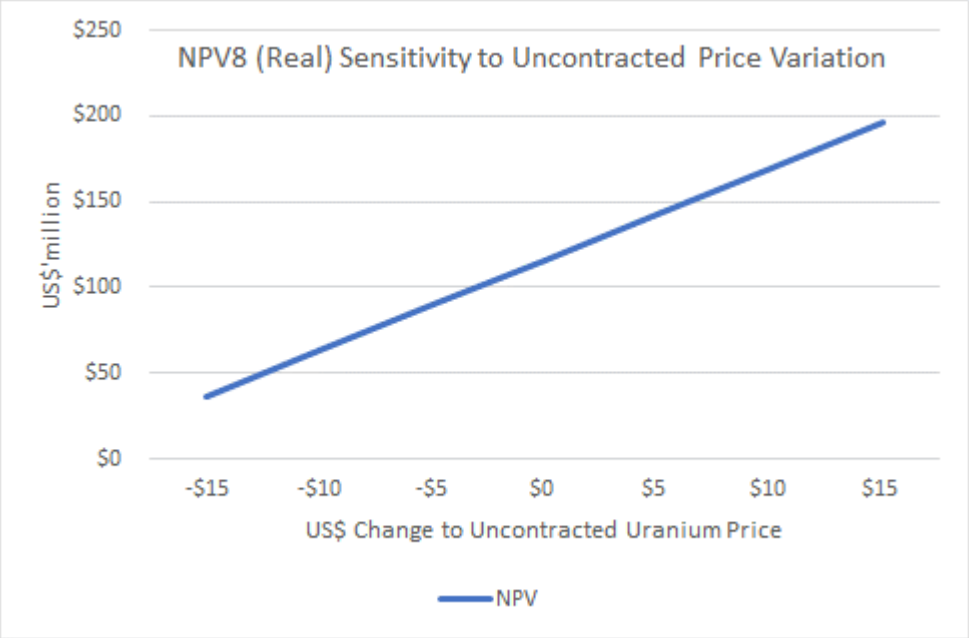


Figure 5: NPV Sensitivity to Uncontracted Uranium Price

CORPORATE FUNDING REQUIREMENTS

Under this revised Ross & Kendrick LoM plan, between July 2023 (commencement period of the revised LoM plan) and the point where the project is forecast to generate sustainable positive cash flows (estimated to be September 2025), an additional US$19.3M (excluding contingency) is required to be spent on the process plant. Up to this same point in time, an additional US$41.2M (excluding contingency) is planned to be spent on wellfield development CAPEX (Mine Unit 3, Mine Unit 4, and the commencement of development activities in the Kendrick Area).

The wellfield capital expenditure is required to enable the flow rate to the plant to ramp-up to approximately 5,000 GPM during H2 CY2025. In the same period, the Project is projected to require US$44.3M in OPEX and site overhead expenditures. The OPEX and CAPEX contingency along with an allowance for escalation totals US$9.4M. The total Project level expenditure projected between July 2023 and August 2025 is US$120.1M.

In the same period, the Company estimates it will require an additional US$22.3M, made up of corporate costs (US$8.9M), non-project area exploration and growth initiatives (US$0.9M) and a working capital buffer allowance (US$12.5M).

The Company enters this period with a cash balance of US$21.4M and anticipates uranium sales activities to net US$26M during the same period, including the assumed sale of strategic inventory. Considering all corporate level sources and uses, the Company projects a net additional funding need of US$95M to achieve sustainable positive cash flows. This result is summarized in **Table 7**.

Sources (US$M)	142.4
Cash Balance as of 30 June 2023	21.4
Revenue on Sales (net of purchases)	26.0
Net additional Funding Needed	95.0
Uses (US$M)	**142.4**
Plant CAPEX	25.2
Wellfield CAPEX	41.2
Site OPEX and Overheads	44.3
CAPEX and OPEX Contingency plus escalation	9.4
Corporate Costs, Non-site Exploration, Working Capital	22.3

Table 7: Corporate Funding Sources and Uses Analysis - (July 2023 through August 2025)

The additional funding described above is not required as one lump sum amount and may be obtained progressively by the Company over the two year time period. It is anticipated that additional finance will be sourced through a combination of the sale of strategic uranium inventory, equity and debt instruments. It is important to note that no additional funding arrangements have yet been put in place.

The Board of Peninsula believes that there is a reasonable basis to assume that the required funding will be available as and when required by the Company to meet the development and production schedules based on the following:

- Operational and support infrastructure is already in place;
- The Company, its Board and executive management team have a successful track record of raising financing for mining projects;
- Existing long-term contracts for the sale of uranium held by the Company at prices viewed favourably by potential financiers and investors, due to the stable and predictable revenue generated from these contracts;
- Outcomes from the revised LoM plan demonstrate the Lance Project's potential to deliver favourable economic outcomes; and
- Other operators of North American uranium ISR projects have recently been successful in raising similar amounts of capital.

CONFERENCE CALL DETAILS

Peninsula will host a conference call today at 10am (WST) / Midday (EST).

Participants are required to pre-register for the call at the link below. Once pre-registered you will receive a calendar invite and a unique code which is to be quoted when dialling into the call.

To ask a question, participants will need to dial "*1" (star, 1) on your telephone keypad.

Pre-Registration Link*:* https://s1.c-conf.com/diamondpass/10033384-vueyti.html

An archive of the conference call will be available on the Peninsula website following the event.

Yours Sincerely,



Wayne Heili
Managing Director / CEO

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This release has been approved by Peninsula's Board of Directors.

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ABOUT PENINSULA ENERGY LIMITED

Peninsula Energy Limited (PEN) is an ASX-listed uranium mining company which has made the decision to restart its 100% owned Lance Projects in Wyoming, USA. The existing process facilities at Lance will be expanded to include in-house resin processing and product drying circuits. This is the final step in a project transformation initiative at Lance to transition from an alkaline ISR operation to a low pH ISR operation. Lance is one of the largest uranium development projects in the United States and once in production, Peninsula will be in strong position to supply a growing market, as the importance of nuclear power continues to gain momentum and support, as a critical part of the green energy mix.

Uranium extraction for a green energy future

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APPENDIX 1

Material Assumptions

Material assumptions used in the estimation of the production targets and associated financial information relating to the updated Life of Mine plan for the Ross and Kendrick Areas at Lance discussed in this announcement are set out in the following table.

Criteria	Commentary
Study status	The information and production targets presented in this announcement are based on parameters materially consistent with the August 2022 Definitive Feasibility Study, updated where required for this revised Life of Mine plan. The Definitive Feasibility Study was a comprehensive study on the technical viability of converting the Ross and Kendrick portions of the Lance Projects from its existing alkaline mining method to a low pH mining method. The revised Life of Mine plan represents the same conceptual basis, updated for changes in project schedule, changes in certain input and consumable costs, introduction of drill rig number capacity constraints, reduction in the number of new ion exchange columns to be included in the plant capacity expansion and removal of the previous "Stage 1" toll milling period. Existing mining facilities and infrastructure have largely been re-configured for low pH compatibility and used in the Life of Mine plan. Cost estimates used in the revised Life of Mine plan have been largely sourced from development experience, field scale demonstrations and operating experience from the existing mining operations.
Mineral resource estimate supporting production targets	Information regarding resources are contained in the Company's announcement dated 14 November 2018.
Cut-off factors	Mineral resource cut-off of the lower of 200 ppm U_3O_8 or 0.2 GT (grade thickness) has been used.
Mining factors or assumptions	At the commencement of production operations, approximately 21.8 million lbs U_3O_8 is projected to be available for mining, with another 31.9 million lbs U_3O_8 in the adjacent Barber Resource Area. This Life of Mine plan update assumes that for all new mining areas, 90% of measured and 90% of indicated resources will be placed under wellfield pattern and be available for extraction. For all new mining areas, up to 60% of inferred resources are assumed to be converted to indicated or greater, and then placed under wellfield pattern and be available for extraction. When resources are placed under wellfield pattern, 90% of the available uranium is assumed to be recovered (refer "Metallurgical factors or assumptions" below). This results in 81% of measured, 81% of indicated resources, and up to 49% of inferred resources being recovered. Over the life of mine, 67.7% of the total mineral resources available at the commencement of low pH operations are forecast to be produced, resulting in uranium recovery of approximately 14.8 million lbs U_3O_8. The current process plant is licensed to process up to 7,500 GPM of flow from wellfields and produce up to 3.0million lbs U_3O_8 per annum. For the purpose of this revised Life of Mine plan, the plant flow rate processing

	capacity has been constrained at 5,000 GPM.
Classification	Production targets referred to in this announcement are based on mineral resources which are classified as 14% measured, 45% indicated, and 41% inferred. Production comprises 70% from measured and indicated resources and 30% from inferred resources. The Company has already mined in the Ross Production Area and will resume mining this area before commencing mining in the Kendrick Production Area. Measured and indicated resources remaining in Ross and Kendrick comprise 76% and 52% respectively for each area with Inferred resources comprising the balance. Measured and indicated resources form the majority of the mineral resource being mined during the first five (5) years of low pH operations.
Metallurgical factors or assumptions	The metallurgical process is to change from the injection of an alkaline based solution to the use of a low pH (mild sulfuric acid) solution. Laboratory testwork in the form of agitation leach tests and column leach tests have been performed on core samples taken from both Ross and Kendrick. Testing did not identify instances of gypsum precipitation that would impede the flow of lixiviant through the wellfields (a key risk for low pH ISR projects). A Field Leach Trial was conducted to determine the ability to control pH of areas previously mined with alkaline solutions, which was successful in reducing the pH to approximately 2.0 S.U, then brought back up to near neutral. A Field Demonstration was also conducted in an area that had no previous mining activity, yielding 90% pattern recovery in 20 pore volumes and a consumption of approximately 53.5 pounds of sulfuric acid per pound U_3O_8 recovered. The average recovery grade during the recovery portion of the Demonstration (pore volumes 4 through 20) was 76 parts per million (ppm). Since completion of the Definitive Feasibility Study, the Company has developed a detailed wellfield pattern design for Mine Unit 3 in Ross and a conceptual wellfield pattern design for Mine Unit 4 in Ross. Using pattern design information, grade and recovery curves have now been developed by the Company based on interpretation of lab and field test data, and the uranium ISR experience within the management team of the Company. Material assumptions that form the basis of the revised Life of Mine update are: • Recovery of 90% of the mineral resource placed under pattern in 14-16 pore volumes (approximately 18 months); • Average acid utilisation of 67.3 pounds per pound of U_3O_8 extracted to reflect the impact of wellfield flare during operations and planned operational injection rates; and • Average recovered grade of 77 ppm.

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Environmental	As part of the permitting and licensing activities prior to the commencement of mining operations, the Company completed a number of environmental studies including an environmental impact statement for the Ross Production Area. The Company will be required to undertake additional environmental studies to complete amendments to the existing Permit to Mine and Radiological Material License to allow production from the Kendrick Production Area. Since completion of the August 2022 Definitive Feasibility Study, the Company has progressed the environmental studies and amendment application request. Based on the success of the permit and licensing actions for the Ross Production Area, the Company has a reasonable expectation that outcomes of future environmental studies at Kendrick will be generally consistent with studies completed for the Ross Production Area.
Infrastructure and logistics	Existing plant and wellfield infrastructure at the Lance Projects is largely amenable to low pH operations. Minor modifications are required to convert the Mine Unit 1 and 2 wellfields and the existing process plant infrastructure to low pH compatibility has largely been completed. As the site has previously been in operation, all required services and infrastructure (power, water, roads, etc) necessary to support a resumption of operations are already in place.
Capital costs	Updated capital expenditure for the completion of the low pH transition and process plant expansion have been estimated by internal personnel utilizing information from the initial low pH transition activities. Predicted level of accuracy for the process plant costs is +/- 5%, and a contingency of 10% has been allowed for all process plant capital expenditure. Wellfield development costs have also been estimated by internal personnel using wellfield planning information and current actual wellfield costs incurred by the Company. Wellfield development costs in Ross have a predicted level of accuracy of +/-5%. Since parts of the Kendrick wellfield designs are conceptual at this point in time, the level of accuracy for this area is +/-10%. A 5% contingency has been applied to all wellfield development costs with the exception of Kendrick trunklines and overhead power extensions which all carry a 15% contingency. Overall contingency applied to capital expenditure is 5.5%. Expenditure by each major stage is: <u>Remaining CAPEX to 1st Production (US$53.4M)</u> • Process Plant – US$19.3 • General (incl solids handling) – US$5.1M • Wellfield – US$25.4M • Contingency – US$3.6M <u>CAPEX between 1st Production & Flow Rate to Plant of ~5,000 GPM (US$17.4M)</u> • General – US$0.8M • Wellfield – US$15.9M • Contingency – US$0.8M <u>Wellfield replacement and sustaining CAPEX over the remaining Life of Mine, including contingency – US$215.0M</u> Wellfield development costs over the remaining life of mine have been based on a spacing of 100 feet (~30 metres) between wells and approximately 400,000 lbs U_3O_8 being placed under wellfield pattern for

	each new header house in Ross Mine Units 3 & 4, and approximately 500,000 lbs U_3O_8 being placed under wellfield pattern for each new header house in all Kendrick Mine Units.
Operating costs	Operating costs were built-up from base principles, primarily using existing operating cost information and have an accuracy range of +/- 5%. Operating costs include the estimated cost of restoration and rehabilitation of the above surface processing facilities, trunklines, infield piping and below surface wellfield restoration. Cost components used in the 2022 Definitive Feasibility Study have been updated to reflect changes in costs in the period between the preparation of the Definitive Feasibility Study and the preparation of this revised Life of Mine plan. The most substantial operating cost over the life of mine is sulfuric acid. Using industry forecast information and expected benefits to be realized when the Company is able to commit to long-term supply arrangements, a price of US$276/t in mid CY 2024, decreasing to US$224/t in mid CY 2025 and US$179/t from mid CY 2026 and beyond, has been used. An average cost contingency of 2.5% has been applied to all operating costs. All-in sustaining cash costs for the life of mine is US$42.46 / lb U_3O_8
Revenue factors	The Company has up to 4.95 million lbs U_3O_8 currently under contract for delivery between now and the end of 2033 at a weighted average price in 2023$ (unescalated) of approximately US$55/lb U_3O_8. Sales under existing contracts comprise up to 34% of the low pH life of mine planned production. Remaining production is currently uncontracted and is assumed to be sold at a weighted average of US$72.62/lb U_3O_8 (2023$, unescalated). The uncontracted price has been determined by bringing the weighted average uncontracted price of US$65.49/lb (2022$) from the 2022 Definitive Feasibility Study current to 2023$. Uncontracted prices used in the 2022 Definitive Feasibility Study are from a uranium market report commissioned by the Company and prepared by TradeTech. Updating the previous uncontracted price in 2022$ to 2023$ has been achieved by applying the percentage price change in the uranium spot price (as reported by UxC, LLC) as at 30 June 2022 (US$50.50/lb) and as at 30 June 2023 (US$56.00/lb). The first sale of uncontracted U_3O_8 is scheduled to occur in CY 2025.
Schedule and timeframe	Regulatory approval of amendment requests to licenses and permits have been received which enable the commencement of low pH operations. Except for standard wellfield data package approvals prior to the commencement of wellfield operations for each new Mine Unit developed, no further approvals are required to construct and operate new wellfields in the Ross Permit Area and enable ramp-up of the flowrate to the plant of 5,000 GPM. The Company has estimated that the expanded process plant, with elution, precipitation and drying functionality installed, will be ready to accept and process flow from the wellfields in late CY2024. The schedule is subject to revision as contracts for key procurement and construction packages are entered into over the coming months. Sustaining the flowrate to the plant at or around 5,000 GPM will require the development of wellfields in the Kendrick Permit Area. The Company has substantially progressed activities to obtain regulatory approval of the

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	Kendrick Permit Area and holds reasonable expectations that such approvals will be granted during the second half of CY2024.
Market assessment	Sale of uranium is generally negotiated between buyer and seller using one of three price forms – i) spot transactions which are generally for one-off deliveries of uranium, ii) mid-term market for 1 or more deliveries over 1 to 5 years; and iii) term contract transactions that contain multiple deliveries often spread over a 5 to 10-year time period. As an existing producer of uranium, the Company is an active participant in the global uranium market. The average price of US$72.62/lb U_3O_8 has been used for uncontracted production (deliveries commencing in 2025) following a 2022 analysis by TradeTech (commissioned by Peninsula and brought up to 2023 equivalent prices) of the factors driving supply, demand and prices in the global uranium market, and taking into account the likely bifurcation of the market due to current geopolitical issues.
Funding	Under the revised Life of Mine plan developed by the Company, to achieve first production from the plant that has expanded ion exchange capacity and has elution, precipitation, drying and packaging functionality, an additional $20.5 million (including contingency) is required to be spent on the process plant. Up to this same point in time, an additional $32.9 million (including contingency) is planned to be spent on wellfield development (Mine Unit 3 and commencement of Mine Unit 4 development) and general capital expenditure (including solids handling solution and mobile plant and equipment to support wellfield construction and operations). Through to the point where the project is forecast to commence generating sustainable positive cash flows, an additional $17.4 million (including contingency) is planned to be spent on capitalised wellfield development costs, primarily Mine Unit 4 and the commencement of development activities in the Kendrick Permit Area. The wellfield capital expenditure is required to enable the flow rate to the plant to ramp-up to approximately 5,000 GPM during H2 CY2025. Between July 2023 (the commencement period of the revised Life of Mine Plan) and the scheduled commencement of production in December 2024, the project is forecast to incur $17.0 million in non-capital costs (including contingency). A further $28.3 million (including contingency) in operating costs is forecast to be incurred between the commencement of production and the point where the project is forecast to commence generating sustainable positive cash flows, which will be partially offset by net revenue of $15.0 million earned over the same time period. The funding described above is not required as one lump sum amount and may be obtained progressively by the Company over a two year time period. It is anticipated that additional finance will be sourced through a combination of the sale of strategic uranium inventory, equity and debt instruments from existing shareholders, new equity investment and debt providers. It is important to note that no additional funding arrangements have yet been put in place. The Board of Peninsula believes that there is a reasonable basis to assume that the required funding will be available as and when required by the Company to meet the development and production schedules based on the following:

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	• Operational and support infrastructure is already in place and in operation; • The Company, its Board and executive management team have a successful track record of raising financing for mining projects; • Existing long-term contracts for the sale of uranium held by the Company at prices viewed favourably by potential financiers and investors due to the stable and predictable revenue generated from these contracts; • That the outcomes of this revised Life of Mine plan demonstrate the Lance Project's potential to deliver favourable economic outcomes; and • Other operators of North American uranium ISR projects have recently been successful in raising similar amounts of capital.
Economic	All cash flows, revenues and costs have been determined using unescalated amounts expressed in 2023$. A discount rate of 8.0% (real) has been applied to unescalated pre-tax cash flows. Corporate income taxes or similar taxes on profit, financing costs and funding inflows are excluded from the economic analysis.
Exchange rate	All amounts are presented in United States dollars. As the Lance Projects are located in Wyoming, USA, all expenditure is denominated in United States dollars. Existing contracts for the sale of uranium held by the Company are also denominated in United States dollars and the Company expects that any further agreements for the sale of uranium will also be denominated in United States dollars.
Social	This revised Life of Mine plan contemplates using the existing process plant facilities and installed wellfield infrastructure, together with progressive expansion and development of each over time. There are no known community issues that the Company has identified as being a likely material impediment to the progressive development and expansion of process plant facilities and wellfield infrastructure.
Other	There are several material risks to the Lance Projects transition to low pH operations including i) additional conditions from regulators; ii) mild acid concentrations not extracting uranium from the mining zone at a rate generally consistent with that projected; iii) access to sufficient funding; iv) access to sufficient wellfield development resources including drill rigs, construction labor and geology staff; v) prices and demand for uranium remaining at levels that do not support increases in production in the timeframes forecast in this revised Life of Mine plan.
Classification	Mineral resources have been determined in accordance with JORC 2012 guidelines. As is common for in-situ recovery projects, no conversion of resources to reserves has been undertaken.
Audits or reviews	This revised Life of Mine plan was internally developed and reviewed by Peninsula. No material issues were identified by the reviewers. A comparison to the August 2022 Definitive Feasibility Study was also completed in order to verify the basis of changes to the development schedule and outcome financial metrics.

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APPENDIX 2

Lance JORC Resource Table

Lance Projects Classified JORC-Compliant Resource Estimate (U_3O_8) as at 31 December 2021

Resource Classification	Tonnes Ore (M)	U_3O_8 kg (M)	U_3O_8 lbs (M)	Grade (ppm U_3O_8)	Location
Measured	3.4	1.7	3.7	491	Wyoming, USA
Indicated	11.1	5.5	12.1	496	Wyoming, USA
Inferred	36.2	17.2	37.8	474	Wyoming, USA
Total	**50.7**	**24.3**	**53.7**	**480**	

JORC Table 1 included in an announcement to the ASX released on 14 November 2018: "Revised Lance Projects Resource Tables". Peninsula confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The mineral resource estimate underpinning the production target and financial forecast has been prepared by a competent person. The relevant proportions of mineral resources underpinning the production target are set out below:

- Measured – 81% of measured resources (or 2.4M lbs U3O8) are modelled to be mined which is equivalent to 16.4% of the aggregate Life of mine production target;
- Indicated – 81% of indicated resources (or 7.9M lbs U3O8) are modelled to be mined which is equivalent to 53.3% of the aggregate Life of Mine production target; and
- Inferred – 49% of inferred resources (or 4.5M lbs U3O8) are modelled to be mined which is equivalent to 30.3% of the aggregate Life of Mine production target.

Competent Persons Statement

Only the information in this report that specifically relates to Exploration Results, Mineral Resources or Ore Reserves at the Lance Projects is based on information compiled by Mr Benjamin Schiffer. Mr Schiffer is a Registered Professional Member of the Society of Mining, Metallurgy and Exploration (Member ID #04170811). Mr Schiffer is a professional geologist employed by independent consultant WWC Engineering. Mr Schiffer has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.