

28 April 2023

MARCH 2023 QUARTERLY ACTIVITIES REPORT

HIGHLIGHTS

LANCE COMMERCIAL RESTART OF OPERATIONS TARGETING MID-YEAR 2023

- Low pH transition construction activities continued ahead of the restart of commercial scale uranium production operations at Lance
- Commencement of commercial production expected in mid-year 2023, following modest delays in certain long lead item deliveries
- Restart progressing positively:
 - Capital expenditures in line with August 2022 Definitive Feasibility Study (DFS) projections
 - Mine Unit One (MU-1) prepared for operational restart
 - Initial scale wellfield operations commenced
- First sales of new production scheduled for 4Q CY2023
- Once in operation, Lance will be one of the largest uranium in-situ recovery (ISR) operations in the United States, with exciting exploration and development upside

CORPORATE

- Available cash of US\$26 million at 31 March 2023
- Strong 1Q 2023 sales of 500,000 lbs including 300,000 lbs to US Department of Energy
- Sales Portfolio enhanced through agreement signed with existing utility customer to restructure and exercise purchase options and add new future delivery quantities,
- Balance of 210,000 lbs U₃O₈ uncommitted strategic Inventory held (31-March 2023)
- Rachel Rees appointed Executive Director Finance & Corporate Affairs

LANCE PROJECTS, WYOMING

Peninsula to Restart Operations at the Lance Uranium Project

Low-pH Transition Construction Update

Construction activities at the Company's Flagship Lance Project ("Lance") located in Wyoming, USA, continued to progress well ahead of a targeted restart of commercial operations by mid-year 2023.

The project team has been focused on completing capital construction activities and has been preparing the existing production plant and wellfield facilities for the commencement of low pH ISR operations.

MU-1 is ready for operational restart and has a flow capacity that exceeds the early requirements for commercial production operations. Wellfield transformation activities advanced to Mine Unit Two (MU-2) during the quarter, and three contract drilling rigs are actively preparing the new Mine Unit Three (MU-3). Construction activities within MU-3 are planned for commencement during the North American summer.

A construction firm is contracted and currently working at site to install large capacity sulfuric acid and hydrogen peroxide storage and delivery systems. The first of two large volume acid storage tanks have been delivered and will be available for installation immediately after the concrete foundations are ready. Delivery of the second acid tank was delayed due to inclement weather at the fabrication facility. The tank

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has subsequently been shipped and received at a facility in Gillette, Wyoming. The delay is not expected to impact projected operational activities.

Portions of the existing uranium recovery plant also require conversion to accommodate the new process chemistry. The plant pumping, piping and ion exchange systems are being rebuilt to be compatible with the low-pH solutions. The Company has been preparing the plant for the installations while it awaits the delivery of key pump systems and new ion-exchange resins. A contractor was selected to complete the required plant piping system modifications and work has commenced.

Capital expenditures related to the low-pH facility transition have been tightly controlled and closely monitored. Overall capital expenditures for the project transformation are closely tracking with the August 2022 DFS projection, and no material deviation is anticipated. The DFS projected CAPEX of US\$8.4 million for the low pH transition and Stage-1 Upfront costs.



Figure 1: Lance Project, Wyoming USA (concrete foundation pour)

Operational Update and Guidance

A discreet portion of MU-1 is currently being operated and preconditioned using the chemical delivery systems previously installed for field demonstration activities. The limited pre-production activities in MU-1 have been successful and are meeting operational expectations. Well patterns are being pre-acidified and readied for production operations. When the new chemical storage and delivery systems are available for use, MU-1 will be fully activated.

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Peninsula expects the large volume acid storage and distribution systems to be available for use by mid-May. At that time, the limited scale pre-production flows will be expanded to commercial scale wellfield pre-conditioning operations. Uranium concentrations are expected to build throughout the pre-conditioning operations, and it is presently projected that the process plant will be activated for commercial uranium production activities around mid-year 2023.

The Company's sales portfolio includes a commitment for the delivery of Lance production in 4Q CY 2023. The initial production derived from Lance operations will be sold into existing contracts with supportive pricing structures.

Importantly, Peninsula is restarting Lance at a time when the global recognition and importance of uranium is gaining momentum, namely due to the need to meet ambitious decarbonisation targets globally. Peninsula is well-positioned to supply into a growing and supply constrained market at the commencement of operations.

Project Licensing

The Ross Project Area within the Lance Projects is fully approved for commercial low-pH ISR operations. Mine Units 1, 2 and 3 are all located within the Ross Project Area. Additional mine units may also be located at Ross. Ross contains an estimated JORC compliant resource of 5.88 million lbs U₃O₈ of which 4.1 million lbs are estimated to be produced in the future (see 2022 DFS Investor Presentation dated 15-August 2022).

In late December 2022, the Company submitted applications to the State of Wyoming regulatory authorities to expand the licensed area of the Lance Projects to include the Kendrick Area. The State regulators have completed an acceptance review and deemed the applications to be administratively complete. The next action by the regulators is to complete the first-round technical review.

CORPORATE

Board and Management Change

On 30 January 2023, Rachel Rees commenced in the position of Executive Director Finance and Corporate Affairs, including the roles of Chief Financial Officer and Joint Company Secretary.

Ms Rees B.Bus (Acc), Grad Dip ACG, MAICD, FGIA, FCG, FCA, is an experienced Chief Financial Officer and Company Secretary and has held senior executive roles in multinational listed (ASX,TSX,NYSE,LSE) and unlisted companies for over 25 years in highly regulated environments across diverse industries including mining & energy and industrial conglomerates.

Ms Rees has been a Non-Executive Director of Peninsula since February 2022 and the Board recognised her capabilities, experience and understanding, of both the uranium industry and capital markets, as those required to deliver successfully on the key objectives of this Executive role.

Uranium Sales

Peninsula completed a purchase option exercise and restructure with one of its long-standing utility customers. The annual delivery volume of the option pounds was significantly reduced, allowing the total volume to be delivered over a longer period. This is a welcome and favourable outcome as the option pricing is structured below current spot price levels, as previously reported. In conjunction with the option exercise and restructure, the utility agreed to a new contract consistent with current market pricing involving delivery of additional uranium starting in 2028. The Lance Projects hold one of the largest uranium resources in the United States and Peninsula anticipates a long and successful run of uranium production from the site. The utility actions are highly supportive and a welcome addition to Peninsula's sales contract portfolio.

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With the completion of recent sales, the option exercise and new commitments, the Company's sales portfolio consists of firmly committed future sales of 5.25 Mlbs U3O8 and extends through calendar year 2033. There are no remaining customer options in the portfolio. The portfolio pricing model is best characterised as a blend of base-escalated and market-based structures with protective floor and ceiling mechanisms.

US Strategic Uranium Reserve & Uranium Inventory

Peninsula completed delivery of 300,000 pounds of yellowcake to the US Strategic Uranium Reserve (see ASX Release dated 16-December-2022) and received payment for the delivered product in 1Q CY2023.

The Company also delivered 200,000 pounds of yellowcake to an existing utility customer under the terms of our sales agreement, bringing the total sales and deliveries for the current quarter to 500,000 pounds.

Peninsula received \$11 million in April 2023 related to the sale of 200,000 pounds noted above.

The Company also received 200,000 pounds from a vendor under a purchase agreement during the quarter to maintain an inventory balance. This brings the Company's inventory balance to approximately 210,000 pounds at March 2023 quarter end.

ASX Listing Rule 5.4.5 Disclosure

Payments to related parties during the quarter as outlined in Sections 6.1 and 6.2 of the Appendix 5B consisted of US\$243k in directors' fees and payments to executive directors under respective service agreements.

Cash Position

The Company's available cash at the end of the quarter was **US\$26 million**.

FOR FURTHER INFORMATION, PLEASE CONTACT:

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This release has been approved by the Board.

ABOUT PENINSULA ENERGY LIMITED

Peninsula Energy Limited (PEN) is an ASX listed uranium mining company which commenced in-situ recovery operations in 2015 at its 100% owned Lance Projects in Wyoming, USA. Peninsula is embarking on a project transformation initiative at the Lance Projects to change from an alkaline ISR operation to a low-pH ISR operation with the aim of aligning the operating performance and cost profile of the project with industry leading global uranium production projects.

¹ Lance Projects Classified JORC-Compliant Resource Estimate (U₃O₈) as at 31 December 2021

Resource Classification	Tonnes Ore (M)	U ₃ O ₈ kg (M)	U ₃ O ₈ lbs (M)	Grade (ppm U ₃ O 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.

Competent Persons Statement

The information in this report that 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’.

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SCHEDULE OF INTERESTS IN MINING TENEMENTS AS AT 31 MARCH 2023

LANCE PROJECT TENEMENT DISCLOSURE

Lance Projects, Wyoming, USA

Location / Project Name	Tenement	Percentage
Private Land (FEE) – Surface Access Agreement	Approx. 4,241 acres	100%
Private Land (FEE) – Mineral Rights	Approx. 10,361 acres	100%
Federal Mining Claims – Mineral Rights	Approx. 18,789 acres	100%
Federal Surface – Grazing Lease	Approx. 40 acres	100%
State Leases – Mineral Rights	Approx. 11,544 acres	100%
State Leases – Surface Access	Approx. 314 acres	100%
Strata Owned – Surface Access	Approx. 315 acres	100%

Karoo Projects, South Africa

Permit Number/ Name	Holding Entity	Initial Rights Date	Renewed/ Signed/ Validity (e.g. Valid, Under PR Application, Under Mining Right Application, Closure Submitted/Issued)	Area (km ²)	Current Expiry	Commodity Group	Original PR Status
EC 07 PR	Tasman Lukisa JV	14/11/2006	MR Application rejected – Environmental Closure Application Submitted	48	10/06/2015	U, Mo	Expired
EC 08 PR	Tasman Lukisa JV	14/11/2006	MR Application rejected - Environmental Closure Application Submitted	47	10/06/2015	U, Mo	Expired
EC 12 PR	Tasman Lukisa JV	14/11/2006	MR Application rejected - Environmental Closure Application Submitted	36	10/06/2015	U, Mo	Expired
EC 13 PR	Tasman Lukisa JV	14/11/2006	MR Application rejected - Environmental Closure Application Submitted	69	10/06/2015	U, Mo	Expired
WC 25 PR	Tasman Lukisa JV	17/10/2007	Closure Certificate for Environmental Closure issued by Department of Mineral Resources and Energy	7	12/11/2014	U, Mo	Expired
WC 33 PR	Tasman Lukisa JV	01/12/2006	MR Application lapsed – Environmental Closure Application Submitted	68	04/07/2016	U, Mo	Expired
WC 34 PR	Tasman Lukisa JV	01/12/2006	MR Application lapsed - Environmental Closure Application Submitted	34	01/08/2015	U, Mo	Expired
WC 35 PR	Tasman Lukisa JV	01/12/2006	MR Application lapsed - Environmental Closure Application Submitted	34	01/08/2015	U, Mo	Expired
WC 47 PR	Tasman Lukisa JV	04/09/2008	MR Application lapsed - Environmental Closure Application Submitted	36	04/07/2015	U, Mo	Expired
WC 59 PR	Tasman Lukisa JV	01/12/2006	MR Application lapsed - Environmental Closure Application Submitted	40	01/08/2015	U, Mo	Expired
WC 60 PR	Tasman Lukisa JV	01/12/2006	MR Application lapsed - Environmental Closure Application Submitted	56	01/08/2015	U, Mo	Expired

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WC 61 PR	Tasman Lukisa JV	01/12/2006	MR Application lapsed - Environmental Closure Application Submitted	69	01/08/2015	U, Mo	Expired
WC 95 PR	Tasman-Lukisa JV	17/04/2007	Closure Certificate for Environmental Closure issued by Department of Mineral Resources and Energy	5	23/03/2013	U, Mo	Expired
WC 152 PR	Tasman-Lukisa JV	01/12/2006	MR Application lapsed - Rehabilitation Completed - Environmental Closure Application being prepared	189	04/07/2016	U, Mo	Expired
WC 156 PR	Tasman Lukisa JV	30/11/2006	Closure Certificate for Environmental Closure issued by Department of Mineral Resources and Energy	69	04/07/2014	U, Mo	Expired
WC 187 PR	Tasman Lukisa JV	01/12/2006	Closure Submitted	24	01/08/2014	U, Mo	Expired
WC 168 PR	Tasman Pacific Minerals	13/12/2006	Closure Submitted	332	05/05/2014	U, Mo	Expired
WC 170 PR	Tasman Pacific Minerals	13/12/2006	Closure Submitted	108	05/05/2014	U, Mo	Expired
EC 28 PR	Tasman Pacific Minerals	15/11/2006	Closure Submitted	225	26/03/2015	U, Mo	Expired
NC 330 PR	Tasman Pacific Minerals	08/06/2007	Closure Submitted	481	19/04/2019	U, Mo	Relinquished
NC 331 PR	Tasman Pacific Minerals	08/06/2007	Closure Submitted	205	17/11/2018	U, Mo	Relinquished
NC 347 PR	Tasman Pacific Minerals	08/06/2007	Closure Submitted	634	17/11/2018	U, Mo	Relinquished