

25 July 2022

JUNE 2022 QUARTERLY ACTIVITIES REPORT

HIGHLIGHTS

LANCE PROJECTS –UPDATED FEASIBILITY STUDY REMAINS ON TRACK

- Update Study progressing as planned for completion in 3Q CY 2022
- Early preparatory work activities continued but subject to delays related to supplies and contractor labour, with catch up in work programmes expected in 3Q CY 2022 quarter
- Approval of a significant license amendment, with use of several different oxidants permitted in conjunction with low pH lixivants in the uranium extraction process
- Uranium Royalty Corp. acquired an existing 1% gross revenue royalty interest, which covers the entirety of the defined Lance Projects area, for US\$1.25 million in cash from a third-party holder, providing a strong endorsement for the project
- Project activities remain funded from existing cash resources

CORPORATE

- Peninsula strengthened its North American Board presence through the appointment of Mr Brian Booth as a Non-Executive Director
- No sales during the June 2022 quarter, but sales of 200,000 pounds of U₃O₈ scheduled in the September 2022 quarter
- 310,000 pounds of uranium in converter accounts at 30 June 2022, with a market value of US\$15.6 million (US\$50.50 per pound U₃O₈) providing financial flexibility to continue progressing the Lance Projects
- Available cash of US\$7.6 million at 30 June 2022

LANCE PROJECTS, WYOMING

Updated Lance Projects Feasibility Study

Peninsula successfully progressed key activities for the Lance Projects (“Lance”) Update Feasibility Study (Update Study”) which remains on track for completion in 3Q CY 2022.

The Update Study commenced in March 2022 and will build on the 2018 Lance Low-pH ISR Feasibility Study. Results from the successful MU1A Field Demonstration (Field Demonstration) will be incorporated in the Update Study, along with updated process designs, capital costs and materials and labour costs.

Inflationary pressures corresponding to current supply chain issues have been noted in the US markets since early 2022. Peninsula’s team and advisers will be assessing the likely longer-term impact of these developments in the Update Study.

The Update Study is expected to reflect the engineering design requirements and operational parameters observed in the outcomes of the Field Demonstration.

On the capital requirements side, the Company is completing updated engineering design and costing studies for reagent addition systems, solids management systems, and process plant modifications based on the conclusions from the Field Demonstration. On the operational side, the Company has developed updated grade and recovery curves, ISR pattern design parameters, reagent requirement models for both sulfuric acid and hydrogen peroxide, and reagent costing models based on the field demonstration outcomes.

QUARTERLY ACTIVITIES REPORT (ASX:PEN)

Importantly, the Update Study will play a key role in determining a Final Investment Decision to restart operations, which will be considered in 2H CY 2022.

Early Preparatory Works Continue at Lance

During the quarter the Company continued its early preparatory works programme at Lance with the aim to facilitate an accelerated re-start and ramp-up of Lance production operations, should a final investment decision be approved.

The work programme budget was to apply to expenditures slated to occur prior to the end of June 2022, however the Company has experienced delays related to both supplies and labour which has impacted completion which is now expected to occur in the September 2022 quarter.

The early works programme key workstreams include:

- **Mining Unit 3 Development**
 - Preparation for uranium production from a new mining area at Lance
 - The planned Mining Unit 3 area carries an estimated measured and indicated uranium resource of 1.59 million pounds of JORC compliant uranium resources plus an additional 0.35 million pounds of JORC compliant inferred resources. These resources are included within the Lance Project JORC Code 2012 compliant mineral resource estimate of 53.6¹ million pounds U₃O₈
 - The Mining Unit 3 resource estimate is based on the interpretation of over 540 historic drill holes
 - Planned activities include re-entry of the historical drill holes that require abandonment to updated standards for an ISR operational area, drilling of approximately 30 additional holes to test the outer limits of the Mining Unit 3 resource area, and the drilling and installation of interior and perimeter monitoring wells
 - Drilling activities commenced at Lance in February 2022 with two drill rigs operating at site, increasing to three drill rigs from March 2022 onwards. The progress of drilling has been hindered by contractor labour availability
- **Initiate Low pH Conversion of Current Facilities**
 - Preparation of final engineering designs and modifications for the low-pH ISR wellfield and recovery plant process facilities
 - Wellfield construction activities including well workovers and header house conversions in Mining Units 1 and 2 as necessary for the change in process chemistry
- **Limited Production Operations within Mining Units 1 and 2**
 - Operational readiness preparations continue for uranium production from the existing areas at Lance that were previously operated using the alkaline ISR chemistry and still contain recoverable resources that are included within the Lance Project JORC Code 2012 compliant mineral resource of 53.6¹ million pounds U₃O₈
 - Planned activities include limited duration operations of each Header House within the existing wellfields without addition of reagents
 - All selected areas within Mining Unit 1 and 2 have been restarted with six Header Houses operating at 30 June 2022 with a combined flow rate of just over 500 gallons per minute.
 - Produced streams bearing low concentrations of uranium are being directed to the Ross Recovery Plant for uranium recovery and during the quarter 2,191 pounds of U₃O₈ has been captured onto resin

Lance License Amendment Granted

The Company's wholly owned subsidiary Strata Energy Inc. (Strata) was granted approval by the Wyoming Department of Environmental Quality Uranium Recovery Program of a requested license amendment during the quarter.

QUARTERLY ACTIVITIES REPORT (ASX:PEN)

The amendment authorises the use of several different oxidants in conjunction with low pH lixiviants in the uranium extraction process. Laboratory and field studies demonstrated that higher uranium recovery rates can be achieved when oxidising agents are introduced to the lixiviant stream.

Importantly, Strata was granted approval to select from three different commercially available oxidants – gaseous oxygen, hydrogen peroxide, and sodium chlorate. The flexibility in selecting an oxidant will be useful during periods of supply shortages.

The amended license also adds flexibility in the design and location of reagent storage and distribution systems, which may result in additional cost efficiencies.

This regulatory approval is another key milestone in the advanced preparations for a potential re-start of production at Lance using the Low-pH ISR method.

Transfer of Existing Lance Projects Royalty

Uranium Royalty Corp. (“URC”) (NASDAQ: UROY, TSX-V: URC) acquired an existing 1% gross revenue royalty interest which covers the entirety of the defined Lance Projects area from a third-party holder for US\$1.25 million in cash.

The royalty purchase builds on another existing royalty held by URC which only covered a limited area of Lance. The royalty interests held by URC were pledged by Peninsula when the Lance Projects were first being developed, therefore there is no new royalty obligation being created by the transfer between outside parties.

Peninsula sees URC’s royalty acquisition as a strong endorsement of both the emerging Lance Project and broader positive uranium and nuclear market thematic.

URC is the world’s only uranium-focused royalty and streaming company and has deep industry knowledge and expertise to identify and evaluate investment opportunities in the uranium industry.

URC’s management team and Board include individuals with decades of combined experience in the uranium and nuclear energy sectors.

CORPORATE

North American Board Presence Strengthened

Peninsula appointed Mr Brian Booth as a Non-Executive Director, effective 14 May 2022.

Mr Booth is an experienced mining executive, who brings over 35 years of experience across the mineral exploration and mining sectors with major and junior mining companies.

During his career, Mr Booth has held various CEO roles where he was responsible for developing and executing high-level growth strategies across the mining lifecycle, implementing and progressing key ESG objectives and securing ongoing funding requirements through the capital markets.

Most recently, Mr Booth was President, CEO and director of Element 29 Resources Inc., a public Company on the TSX.V (ECU) focused on advancing the exploration and development of the Elida and Flor De Cobre Cu porphyry projects in Peru. Prior to this role, Mr Booth was Chair of Canadian gold producer Claude Resources acquired by Silver Standard Resources (Now SSR Mining Inc.) for C\$337 million in 2016 and President, CEO and a Director of Lake Shore Gold Corp. when the company progressed from resource drilling to the underground development of the Timmins West gold deposit and purchased the Bell Creek Mine and Mill. Lake Shore Gold Corp. was acquired by Tahoe Resources in 2016 for C\$751m.

Mr Booth is currently a director of SSR Mining Inc and GFG Resources Inc.

Uranium Sales and Marketing

Peninsula had no scheduled sales pursuant to long-term sales contracts during the quarter. The sales for the March 2022 quarter were completed using uranium taken from inventory, as the hedge purchase corresponding to these sales was settled in the June 2022 quarter. Uranium inventory balances have been replenished by 200,000 pounds of U₃O₈ during the quarter and the total inventory balance has returned to 310,000 pounds.

Peninsula received US\$10.4 million during the quarter related to the March quarter sale of 200,000 pounds of U₃O₈ noted above.

At 30 June 2022, the Company’s portfolio of uranium concentrate sale agreements is for up to 4.8 million pounds U₃O₈, with 3.45 million pounds of firmly committed sales (refer Table 1) and up to 1.35 million pounds of sales optional at the election of the customers (refer Table 2).

30 June 2022 Summary of Committed Sale and Purchase Agreements		
Calendar Year	Committed Sale Pounds U ₃ O ₈	Committed Purchase Pounds U ₃ O ₈
2022	250,000	250,000
2023	400,000	200,000
2024	400,000	-
2025	400,000	-
2026	400,000	-
2027	400,000	-
2028	400,000	-
2029	400,000	-
2030	400,000	-
TOTAL	3,450,000	450,000

Table 1: Committed Sale and Purchase Agreements

At 30 June 2022, pricing for the 3.45 million pounds of U₃O₈ firmly committed sales relates in the main to base escalated sales contracts, with the average cash sales price over the remaining term of the contracts estimated at between US\$58 to \$61 per pound using conservative US inflation assumptions.

Of the 3.45 million pounds of firmly committed sales, 0.45 million pounds can be satisfied with market sourced material (“**open origin**”) and have been fully hedged with a portfolio of fixed price uranium concentrate purchase commitments (refer Table 1). The balance of 3.0 million pounds of firmly committed sales from the second half of CY2023 are to be supplied from Company produced uranium.

Purchased uranium will be received in allotments during the coming quarters, and as noted above aligns closely with the timing of deliveries to customers. The agreed purchase pricing is fixed and payment terms for the purchased uranium are also aligned closely with the receipt of proceeds from the sales.

The combined portfolio of committed uranium concentrates sale and purchase agreements underpin a forecast net cash margin of US\$4 million to US\$5 million on secured uranium sales in H2 CY2022 and US\$1 million to US\$2 million on secured uranium sales in H1 CY2023. The Company’s available cash of US\$7.6 million at 30 June 2022 does not include the benefit of these future net cash margins which are based on the difference between the fixed purchase price and the likely sales price based on the customer agreements.

In the September 2022 quarter, the Company has scheduled sales of 200,000 pounds U₃O₈ pursuant to its sales contracts and corresponding purchase agreements of 200,000 pounds of U₃O₈ which will be used to maintain the uranium inventory balances unchanged at 310,000 pounds.

30 June 2022 Summary of Customer Option Agreements ⁽¹⁾ :	
Calendar Year	Maximum Pounds U ₃ O ₈
2024	450,000
2025	450,000
2026	450,000
TOTAL	1,350,000

Table 2: Customer Option Agreements

- (1) The option agreement pounds of U₃O₈ relate to the maximum pounds optional at the election of customers under contracts. All option pound options have an exercise date in Q1 CY2023.

At 30 June 2022, pricing for the 1.35 million pounds of U₃O₈ customer option agreements are subject to a mixture of base escalated prices and current uranium pricing metrics, including both a floor and a ceiling price, with an estimated cash sales price range of between US\$47 to \$58 per pound.

Of the customer option agreement U₃O₈ sales, a maximum of 0.90 million pounds can be satisfied with open origin material, with the balance to be supplied from Company produced uranium. The Company may satisfy the entire customer option contractual requirements with produced uranium if it wishes, should the customers elect to exercise these options.

The Company continues to engage with its existing and potential new customer base regarding possible new long-term uranium concentrate sale and purchase agreements targeting pricing mechanisms that would support the planned transition to low pH ISR operations at the Lance Projects.

Uranium Inventory

At 30 June 2022 Peninsula holds 310,000 pounds of U₃O₈ at converter accounts, which is 200,000 pounds higher than 31 March 2021 as the hedge for the March 2022 quarter sales of uranium purchased in the market settled in the quarter.

The total market value of the Company's 310,000 pounds of uranium inventory at 30 June 2022 is US\$15.6 million (US\$50.50 per pound U₃O₈). This inventory provides financial flexibility to continue the progress towards re-start and ramp-up of Lance Projects production, should a final investment decision be approved.

US Strategic Uranium Reserve

The transition to the Biden Administration in 2021 and consequential changes to the leadership at the US Department of Energy ("DOE"), has slowed implementation of the US\$75 million Uranium Reserve established by Congress in 2020.

Subsequent to the end of the quarter the DOE released a request for proposal for the purchase of uranium to satisfy the US\$75 million Uranium Reserve budget allocation. Peninsula is presently reviewing its ability to make a qualifying bid under the proposal.

Withdrawal from Karoo Projects in South Africa

The Company has commenced the processes to apply for closure of the Karoo Projects with the South African regulators which are expected to take some time to finalise.

During the quarter the National Nuclear Regulator and Department of Mineral Resources undertook separate sites visits to both Riet Kuil and Ryst Kuil. Some discrete areas at Riet Kuil were identified where uranium contamination levels exceeded the National Nuclear Regulator's public release limits and remedial work is planned to be completed during the September 2022 quarter.

QUARTERLY ACTIVITIES REPORT (ASX:PEN)

The Company continues to progress the sale of the remaining freehold farmland previously held in the Karoo Basin, with proceeds still expected to be sufficient to cover any remaining exit costs.

Security over Specific Lance Projects Assets

The rehabilitation obligations for the Lance Projects are required under US federal and state laws to be fully secured with surety bonds.

In the past the Company has supported the Lance Projects surety bonds with cash deposits that represent a percentage of the face value of the obligation. The surety bond provider has a first ranking charge over the cash deposit amounts.

During the quarter the Company granted security to the surety bond provider over some specific Lance Projects assets in lieu of providing additional cash deposits as part of the transition to low-pH ISR operations. Previous security over the Lance Projects assets was fully relinquished in 2020 when the Company became term debt free.

The Company believes that these bonds will expire without any claims or payments thereon, and accordingly we do not expect any material adverse effect on our financial condition, results of operations or cash flows therefrom.

Cash Position

The Company's available cash at the end of the quarter was **US\$7.6 million**.

The Company has disclosed US\$0.207 million in payments to related parties and their associates for the June 2022 quarter in Item 1.2(a) of the Appendix 5B. These amounts relate to payments made under the Managing Director/Chief Executive Officer employment agreement and Non-Executive Director fees as described within the audited Remuneration Report section of the Company's most recently published 2021 Annual Report.

The Company has disclosed US\$0.022 million in exploration and evaluation payments for the June 2022 quarter in Item 1.2(a) of the Appendix 5B. This expenditure relates to miscellaneous activities at the Karoo Project in South Africa that the Company is in the process of exiting.

FOR FURTHER INFORMATION, PLEASE CONTACT:

Wayne Heili
Managing Director/Chief Executive Officer
Telephone: +61 6263 4461

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 2020

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	489	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	24.4	53.6	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’.

SCHEDULE OF INTERESTS IN MINING TENEMENTS AT 30 JUNE 2022

Lance Projects, Wyoming, USA

Location / Project Name	Tenement	Percentage
Private Land (FEE) – Surface Access Agreement	Approx. 2,397 acres	100%
Private Land (FEE) – Mineral Rights	Approx. 10,361 acres	100%
Federal Mining Claims – Mineral Rights	Approx. 13,445 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%

QUARTERLY ACTIVITIES REPORT (ASX:PEN)

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	MR Application lapsed - Rehabilitation Completed - Environmental Closure Application being prepared	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	69	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
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 Submitted	5	23/03/2013	U, Mo	Expired
WC 127 PR	Tasman Lukisa JV	30/11/2006	MR Application lapsed - Environmental Closure Application Submitted	59	10/12/2017	U, Mo	Expired
WC 137 PR	Tasman Lukisa JV	30/11/2006	MR Application lapsed - Environmental Closure Application Submitted	73	04/07/2016	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

QUARTERLY ACTIVITIES REPORT (ASX:PEN)

WC 156 PR	Tasman Lukisa JV	30/11/2006	MR Application lapsed - Environmental Closure Application Submitted	69	04/07/2014	U, Mo	Expired
WC 158 PR	Tasman Lukisa JV	23/01/2007	MR Application lapsed - Environmental Closure Application Submitted	57	12/11/2014	U, Mo	Expired
WC 167 PR	Tasman Lukisa JV	30/11/2006	MR Application lapsed - Environmental Closure Application Submitted	21	12/11/2015	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