

29 April 2022

MARCH 2022 QUARTERLY ACTIVITIES REPORT

HIGHLIGHTS

LANCE PROJECTS – EARLY WORKS PROGRAMME COMMENCES AND UPDATE OF FEASIBILITY STUDY UNDERWAY

- US\$3.4 million preparatory work programme commenced
 - Programme developed to progress key activities ahead of a potential final investment decision for the start of low pH ISR operations:
 - Mine Unit 3 Development Drilling
 - Preparation of Mine Units 1 and 2 for low pH operations
 - Re-establishment of flow capacity and fluid circulation within Mine Units 1 and 2
 - Project staffing planned to be expanded to 37 employees by end of 2Q2022, up 28%
- Commencement of updated Feasibility Study, which will build on the 2018 Lance Low-pH ISR Feasibility Study
 - Updated study will incorporate results and conclusions from the Company's technical de-risking activities, including recently completed MU1A Field Demonstration
 - Updated study expected to be completed in 3Q CY2022
- Project activities remain funded from existing cash resources

CORPORATE

- Ms Rachel Rees appointed as Non-Executive Director
- Sales of 200,000 pounds of U₃O₈ at US\$51.98 per pound pursuant to long-term sales contracts initially through use of inventory that is scheduled to be replenished when a purchase hedge is settled in the June 2022 quarter
- 110,000 pounds of uranium in converter accounts at 31 March 2022, with a market value of US\$6.4 million (US\$58.20 per pound U₃O₈)
- Inventory level to return to 310,000 pounds in the June 2022 quarter
- Available cash of US\$7.0 million at 31 March 2022
- Trade receivable of US\$10.4 million at quarter end with receipt banked in early April 2022

LANCE PROJECTS, WYOMING

Early Preparatory Works Commence at Lance

During the quarter the Company announced commencement of a US\$3.4 million early preparatory works programme at Lance which has been designed to facilitate an accelerated re-start and ramp-up of Lance production operations, should a final investment decision be approved.

The work programme budget applies to expenditures slated to occur prior to the current fiscal year end of June 2022.

The early works programme budget provides funding to increase the Lance Project staffing levels by eight employees to support the key workstreams which include:

- **Mine Unit 3 Development**
 - Preparation for uranium production from a new mine area at Lance
 - The planned Mine 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 Mine 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 Mine Unit 3 resource area, and the drilling and installation of interior and perimeter monitoring wells
- Drilling activities commenced at Lance in February 2022 and presently there are three drill rigs operating on site
- **Initiate Low pH Conversion of Current Facilities**
 - Preparation of final engineering designs and modifications for the wellfield and recovery plant low-pH ISR process facilities
 - Wellfield construction activities including well workovers and header house conversions in Mine Units 1 and 2 as necessary for the change in process chemistry
- **Limited Production Operations within Mine Units 1 and 2**
 - Operational readiness preparations 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
 - Sections of Mine Unit 1 and 2 have been restarted with five Header Houses presently operating with a combined flow rate of just under 1,000 gallons per minute. Of the five remaining Header Houses, one has been operated and re-idled, while four have yet to be operated
 - Produced streams bearing low concentrations of uranium are being directed to the Ross Recovery Plant for uranium recovery and during the quarter 1,890 pounds of U₃O₈ has been captured onto resin

Updated Lance Feasibility Study Underway Following Analysis of Field Demonstration Results

Following completion of the MU1A Field Demonstration, where all key objectives were successfully achieved, Peninsula commenced work on an updated Feasibility Study, which will build on the 2018 Lance Low-pH Uranium In-Situ Recovery ("ISR") Feasibility Study.

Western Water Consultants, Inc. d/b/a WWC Engineering, a leading US-based consulting and engineering firm with significant Uranium ISR expertise, will author the Study. The Study is expected to be completed in 3Q CY2022.

During the quarter Peninsula's experienced ISR team completed its evaluation of the data obtained from the MU1A Field Demonstration, which concluded in December 2021. The updated Feasibility Study is expected to reflect the engineering design requirements and operational parameters observed in the outcomes of the field demonstration.

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 more recent developments on the updated study.

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 based on the field demonstration outcomes, and reagent costing

QUARTERLY ACTIVITIES REPORT (ASX:PEN)

models. In the field demonstration, the reagent requirements and grade responses were shown to be related to well spacing, with closer spacing driving better results. The updated cost model will reflect the optimised balance between the capital cost of well installation and the direct operating costs.

Both the early preparatory work programmes and the updated Feasibility Study and will be funded from existing cash resources and the net cash margin generated from uranium concentrate sales and purchases.

A final decision on resuming commercial production operations using the low-pH ISR method will be based upon the conclusions of the updated Feasibility Study and the prevailing uranium market conditions.

CORPORATE

Uranium Sales and Marketing

The Company has an existing portfolio of uranium concentrate sale agreements with major utilities which were largely put in place during 2014 to 2016, the period when the Lance Projects alkaline in-situ recovery operation was constructed and commissioned. Subsequent restructuring of this portfolio has occurred, especially during 2018 to 2019 as part of the planned cessation of operations in July 2019, with only minor changes occurring during this current reporting period. This portfolio has provided the Company with the benefit of regular cash inflows since 2016.

Peninsula sold a total of 200,000 pounds of U_3O_8 pursuant to long-term sales contracts during the quarter, at an average realised cash price of US\$51.98 per pound. The deliveries were completed using uranium taken from inventory, as the hedge purchase corresponding to these sales is due for settlement in the June 2022 quarter. Uranium inventory balances will be replenished by 200,000 pounds of U_3O_8 in June when the uranium purchase hedge is settled. The total inventory balance will then return to 310,000 pounds.

Peninsula received US\$10.4 million in early April 2022 related to sale of the 200,000 pounds of U_3O_8 noted above. No sales receipts occurred during the March 2022 quarter.

At 31 March 2022, the Company's portfolio of uranium concentrate sale agreements is for up to 4.8 million pounds U_3O_8 , 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).

31 March 2022 Summary of Committed Sale and Purchase Agreements		
Calendar Year	Committed Sale Pounds U_3O_8	Committed Purchase Pounds U_3O_8 ⁽¹⁾
2022	250,000	450,000
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	650,000

Table 1: Committed Sale and Purchase Agreements

- (1) The committed hedged purchase pounds include 200,000 pounds of U_3O_8 due for settlement in the June 2022 quarter that relate to the March 2022 quarter sales noted above.

QUARTERLY ACTIVITIES REPORT (ASX:PEN)

At 31 March 2022, pricing for the 3.45 million pounds of U_3O_8 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 historical 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**") over the next fifteen months 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.

The CY2022 purchase commitments in Table 1 are higher than the committed open origin sales deliveries as uranium inventory balances are scheduled to be replenished by 200,000 pounds of U_3O_8 in the June 2022 quarter when the next uranium purchase hedge is settled.

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 the forecast net cash margin of US\$8 million to US\$9 million on secured uranium sales in CY2022, and a forecast net cash margin of US\$1 million to US\$2 million on secured uranium sales for the first half of CY2023. The Company's available cash of US\$7.0 million at 31 March 2022 does not include the benefit of the CY2022 net cash margin which is scheduled to be received in the remaining three quarters of CY2022.

The CY2022 net cash margin includes the sales receipt of US\$10.4 million in early April 2022 and the scheduled settlement of the next uranium purchase hedge in the June 2022 quarter. These forecast net cash margins are based on the difference between the fixed purchase price and the likely sales price based on the customer agreements.

In the June 2022 quarter, the Company has no scheduled sales of U_3O_8 pursuant to its sales contracts, but purchase agreements are scheduled totalling 200,000 pounds of U_3O_8 which will be used to replenish uranium inventory balances to 310,000 pounds once settled.

31 March 2022 Summary of Customer Option Agreements ⁽¹⁾ :	
Calendar Year	Maximum Pounds U_3O_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 U_3O_8 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 31 March 2022, pricing for the 1.35 million pounds of U_3O_8 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\$48 to \$57 per pound.

Of the customer option agreements U_3O_8 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.

QUARTERLY ACTIVITIES REPORT (ASX:PEN)

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 31 March 2022 Peninsula holds 110,000 pounds of U_3O_8 at converter accounts, which is 200,000 pounds lower than 31 December 2021 as inventory was used to satisfy sales commitments during the quarter. The hedge for these sales of uranium purchased in the market is due for settlement in the June 2022 quarter at which time uranium inventory balances will be replenished by 200,000 pounds and subsequently stand at 310,000 pounds.

The total market value of the Company's 110,000 pounds of uranium inventory at 31 March 2022 is US\$6.4 million (US\$58.20 per pound U_3O_8).

Withdrawal from Karoo Projects in South Africa

During the quarter independent radiological surveys identified minor surface areas at both Ryst Kuil and Riet Kuil where uranium contamination levels had exceeded the National Nuclear Regulator's public release limits. Remedial work on these areas was completed during April 2022 and the Company believes that the contamination levels are now below the regulatory limits required for release.

The completion of this work at Riet Kuil and Ryst Kuil concludes the surface rehabilitation work programmes for the Karoo Project and the Company has commenced the processes to apply for closure from the South African regulators which are expected to take some time to finalise.

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.

Rachel Rees Appointed as Non-Executive Director

Ms Rachel Rees joined the Board as a Non-Executive Director on 5 February 2022.

Ms Rees is an experienced Non-Executive Director, Risk, Audit & Finance Committee Chair and Chief Financial Officer with over 25 years' experience in senior executive roles in multinational listed and unlisted companies across diverse industries including uranium, mining and energy, transport and logistics, industrial conglomerates, agriculture and member-based associations.

Ms Rees is Non-Executive Director and Chair Audit Committee for MACA Ltd, a Non-Executive Director and Chair Risk, Audit and Finance Committee for Governance Institute Australia and is the Managing Director of Rees Corporate and Governance Advisory Pty Ltd.

Ms Rees has had previous executive experience across key roles including the uranium industry as Vice President for TSX-listed Uranium One and Executive Director and Chief Financial Officer of its Australian subsidiary between 2004-11, and outside uranium as Group Chief Financial Officer and Company Secretary at both Lionel Samson Sadleir Group and Empire Oil & Gas and Chief Financial Officer at Rex Minerals Ltd.

Cash Position

The Company's available cash at the end of the quarter was **US\$7.0 million**. A further US\$10.7 million, being a trade receivable at quarter end, was banked in early April 2022.

The Company has disclosed US\$0.174 million in payments to related parties and their associates for the March 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

QUARTERLY ACTIVITIES REPORT (ASX:PEN)

as described within the audited Remuneration Report section of the Company's most recently published 2021 Annual Report.

The Company has disclosed US\$0.053 million in exploration and evaluation payments for the March 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:

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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 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 31 MARCH 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 Access – 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	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

QUARTERLY ACTIVITIES REPORT (ASX:PEN)

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
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