17 September 2018

Companies Announcement Office
Via Electronic Lodgement

FEASIBILITY STUDY CONFIRMS ROBUST ECONOMICS OF LOW PH OPERATION AT LANCE

Low pH Feasibility Study Highlights

- **Transformation to a low-pH ISR operation would position the Lance Projects as a globally competitive uranium producer**
  - **Direct OPEX over Life of Mine of US$15.59 per lb U_3O_8 produced**
  - **Life of Mine all-in sustaining cost average of US$31.77 per lb U_3O_8 produced**
  - **Break-even price of US$34 per lb U_3O_8**
- **NPV_8 (Real) US$156.5 million and IRR 30%; conservative long-term average sales price assumption of US$49/lb U_3O_8[1]**
- **Strong leverage to uranium price with downside protection**
  - **NPV_8 (Real) rises to US$254m at US$57/lb U_3O_8 average sales price[2]**
  - **Existing above-market sales contracts provide 100% of revenue until 2022;**
  - **Existing contracts provide 27% of revenue through to 2030**
- **Appreciably higher average head grade and recovery using low pH ISR approach**
  - **70 ppm U_3O_8 projected vs 38 ppm U_3O_8 in alkaline FS**
  - **90% recovery of pounds under pattern vs 80% in alkaline FS & 49% actual**
- **Life of Mine production increased to 33.4 million lbs U_3O_8 over a 17-year mine life**
  - **Stage 1 production rate up to 1.15m lbs U_3O_8 per annum**
  - **Stage 2 production rate up to 2.3m lbs U_3O_8 per annum**
  - **Stage 3 production rate up to 3.0m lbs U_3O_8 per annum**
- **Staged expansions provide CAPEX flexibility**
  - **CAPEX to complete low pH transition US$5.3 million**
  - **Stage 2 and 3 Expansion CAPEX total US$113.4 million**
- **On-going operations & development experience provides high level of confidence in cost estimates; +/- 5 to 10% level of accuracy**
- **Amendments to existing operating permits and licenses are being targeted for grant in mid-2019**

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1. Average sales price is weighted average price (2018$) of existing contracts (US$45/lb) and uncontracted production (US$50/lb)
2. Average sales price is weighted average price (2018$) of existing contracts (US$45/lb) and uncontracted production. (US$60/lb)

Cautionary and Inferred Resources Notices

The Feasibility Study completed for the Lance Projects includes measured and indicated resources and an assumed resource conversion of 60% (inferred to indicated or greater). The purpose of the Feasibility Study is to demonstrate the Lance Projects economic viability and the robustness of the planned low pH operations over an extended mine life beyond the existing Ross production area.

The Feasibility Study itself is based on various assumptions, including homogeneity of the delineated ore body contained within the Lance Projects. This is considered reasonable by the Company's technical consultants, competent persons and independent external consultants. The Company believes that it has a reasonable basis upon which to prepare and release these Feasibility Study results, particularly given that the Lance Projects have been in operation since December 2015. Whilst the Company considers that all the material assumptions underpinning the Feasibility Study are based on reasonable grounds, there is no certainty that they will prove to be correct or that the outcomes indicated by the Feasibility Study will be achieved.

The Company believes it has a reasonable basis for providing the forward-looking statements and production targets included in this announcement. The material assumptions are included in Appendix 1 of this announcement and in the JORC table disclosures appended. The detailed assumptions regarding the resources are outlined in the ASX announcement released on 17 September 2018.

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 favourable 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 realised. 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 Feasibility Study mine plan, the first 5 years production can be sourced almost entirely from Measured and Indicated Resources. If the Inferred Resources are excluded from the Feasibility Study, 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 that it is reasonable to include Inferred Resources in the Feasibility Study, particularly given that the Lance Projects is an operating project that has been producing uranium for over two 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.

Key Outcomes and Metrics Summary

A summary of the key outcomes and metrics is shown below. Additional information, including material assumptions, are included elsewhere in this announcement.

Table 1: Key Outcomes and Metrics Summary

Study Outcomes	
Estimated Life of Mine (LOM)	17 years
Estimated LOM Production (mlbs U_3O_8)	33.4
LOM Project Revenue (real) ($USm)	1,644
LOM Operating Cashflow (before tax) ($USm)	925
Base Case NPV_8 at US$49/lb Avg Price ($USm)	156.5
NPV_8 at US$57/lb Avg Price ($USm)	254.0
Base Case IRR at US$49/lb Avg Price (%)	30%
IRR at US$57/lb Avg Price (%)	39%
Average Annual Net Cash Flow per annum at US$49/lb Avg Price (US$m)	26.9
Average Annual Net Cash Flow per annum at US$57/lb Avg Price (US$m)	40.4
LOM Recovery (%)	62.3%

Key Metrics	Total
Peak Steady State Production Rate (mlbs U_3O_8 p.a)	
- LOM	3.0
- Stage 1	1.15
- Stage 2	2.3
- Stage 3	3.0
OPEX (incl Royalties) ($USm Total)	520.6
LOM Direct OPEX (incl Restoration) ($US/lb)	15.59
Low pH Transition CAPEX ($USm Total)	5.3
Stage 2 & 3 Expansion CAPEX ($USm Total)	113.4
Wellfield Replacement & Sustaining CAPEX ($USm Total)	342.4
LOM Wellfield Replacement & Sustaining CAPEX ($US/lb)	10.25
All in Sustaining Cash Cost ($US/lb)	
- LOM	31.77
- Stage 1	40.58
- Stage 2	31.52
- Stage 3	30.36

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 realised.

Commenting on the results of the Feasibility Study, Peninsula's Managing Director and CEO Wayne Heili said, "Over the past year, Peninsula management and staff have been working diligently to identify the technical and economic drivers that can enhance the productivity and financial outcomes of the Lance Projects. Our comprehensive efforts have culminated in a detailed Feasibility Study. We are pleased with the robust economic outcomes projected therein and will continue to remain focused on delivering positive results related to our innovative plans for the future of the project."

Introduction

Peninsula Energy Limited **(Peninsula or Company)** is pleased to announce the completion of its low pH Feasibility Study at the Lance Projects in Wyoming, USA (**Feasibility Study**). The Feasibility Study has been completed by the Wyoming office of engineering and construction company Woodard & Curran, Inc (**W&C**) (formerly TREC) on the planned transition to, and subsequent ramp-up of, low pH operations at the Lance Projects and incorporates updated 2012 JORC compliant resources of 53.9mlbs U_3O_8[2] at the Ross, Kendrick and Barber production units. This number assumes the conversion of 22.9mlbs of the 38.1mlbs inferred U_3O_8 resources to indicated category or better.

The Feasibility Study was commissioned by the Board of Peninsula to confirm the economic rationale for the planned transition of the Lance Projects from the existing alkaline in-situ recovery (**ISR**) operation to a low pH ISR operation, following compelling test work and analysis conducted by the Company during 2017 and the first half of 2018.

The results of the Feasibility Study indicate that the planned low pH ISR operation at the Lance Projects will result in a globally competitive uranium project. Transition to a low pH operation is projected to deliver low cash operating costs over a 17-year mine life with a substantially increased production profile that has the capacity to scale upwards as the uranium market improves.

The Lance Projects

Background

The Lance Projects are located on the North-East flank of the Powder River Basin in Wyoming, USA. The original NuBeth Joint Venture between Nuclear Dynamics Inc, Bethlehem Steel Corporation and later Pacific Power and Hydro (**NuBeth JV**), discovered thirteen substantial zones of uranium mineralisation associated with an extensive system of roll fronts confirmed by drilling between 1970 and 1979. As part of this exploration program, the NuBeth JV drilled more than 4,500 exploration and development holes, totalling in excess of 912,000 metres. A proprietary database of the historic drilling and pilot plant data was acquired by Peninsula in 2007, defining a then relatively unknown uranium district of which Peninsula is now the dominant mineral rights holder. Peninsula, through its wholly owned subsidiary Strata Energy Inc (**Strata**) continued with exploration and development drilling at the project from 2008 through to 2015 when operations commenced, in the process delineating a large JORC Code (2012) compliant resource.

Current Alkaline Operations and Low pH Testing

In December 2015 Peninsula commenced uranium recovery operations at the Lance Projects. Operations have thus far used an alkaline based mining solution and to date the ore deposit at the project has proven only moderately amenable to these alkaline solutions.

Operational performance during the past 12 months is shown in Table 2 below.

Table 2: Lance Projects Recent Quarterly Operating Performance

	Units	Sept 2017	Dec 2017	Mar 2018	June 2018	Total
U_3O_8 Captured	*Lbs*	34,568	38,828	43,638	38,001	**155,035**
U_3O_8 Dried and Drummed	*Lbs*	42,665	23,270	73,864	43,553	**183,352**

While flow rates from the individual recovery wells have been consistent with what was initially predicted, overall uranium recovery has been lower than anticipated due to lower than anticipated head grades from the well field. Operating results to date have shown that the current alkaline based production method does not provide for a viable operation under current and projected uranium market prices. Significant efforts to increase production solution uranium concentrations have been only moderately successful.

In response to these challenges, the Company conducted a series of research initiatives aimed at improving the operating performance at the project. The Company initially conducted a series of bench-scale tests in 2017, which showed a significantly improved grade and recovery rate using low concentrations of sulfuric acid (1.5% or less). Laboratory tests using lower pH solutions (mild acids) returned increased peak uranium solution grades averaging nearly 1.0 g/L (~ 1,000 ppm) with uranium recoveries typically over 90%. These initial laboratory test results were subsequently confirmed with additional targeted laboratory tests.

Column leach tests which included groundwater restoration simulations were also conducted. The test results indicated that the quality of the affected groundwater can be returned to existing approved target restoration values following the uranium recovery with the use of lower pH solutions. Although the leach testing and geochemical modelling needed to support the regulatory amendment applications have been completed, additional column leach tests are being conducted during the second half of the 2018 calendar year to optimise operational planning activities in preparation for the planned transition to low pH operations.

Laboratory restoration test results demonstrate consistency with the Lance Project's existing regulatory requirements. The results suggest that the currently approved target restoration values would not need to be modified when considering the potential use of low pH ISR solutions. The research to date indicates that low pH solution environments can be restored to equal or potentially better quality than typical alkaline solution environments.

In November 2017, a White Paper was issued for public review summarising those test results while examining the effectiveness of in-situ recovery of uranium using low-pH systems globally. The White Paper also examined the application of low-pH ISR within the context of Wyoming's regulatory programme. This information, together with additional data from laboratory testing and geochemical modelling conducted in early 2018, was incorporated into the amendment request submitted to the Wyoming Department of Environmental Quality (**WDEQ**).

Submission of low pH Permit to Mine Amendment Request

To change from an alkaline based mining solution to a low pH solution requires the approval of amendment requests for the existing permits and licenses, which currently authorise the use of alkaline and oxidant solutions only in the ISR process. Preparation of the permit and license amendment submissions commenced during the December 2017 quarter and on 6 April 2018 Strata formally submitted a request to the WDEQ to amend its existing Permit to Mine (**PTM**) to allow for the use of a low-pH recovery solution in the Ross Permit Area of the Lance Projects (**PTM Amendment**).

Following the submission of the amendment request, the WDEQ prepared a request for additional information, and responses were submitted by the Company during August 2018. Requests for additional information and ongoing engagement by the Company with the WDEQ is consistent with normal practices and prescribed guidelines for the review of such permit amendment requests.

Feasibility Study - Summary

As the Lance Projects have been in production since 2015, the Feasibility Study builds upon existing infrastructure at Ross with revisions made to materials and processes required to accommodate the low pH solutions. The major changes include immediate replacement of the small quantity of incompatible materials used in the existing alkaline process, adjustments to reagent processes, and revision to the life of mine plan and resources.

The Feasibility Study is based on surface facilities and/or wellfields at three production areas:

1. Ross Production Area (**Ross**);
2. Kendrick Production Area (**Kendrick**); and
3. Barber Production Area (**Barber**).

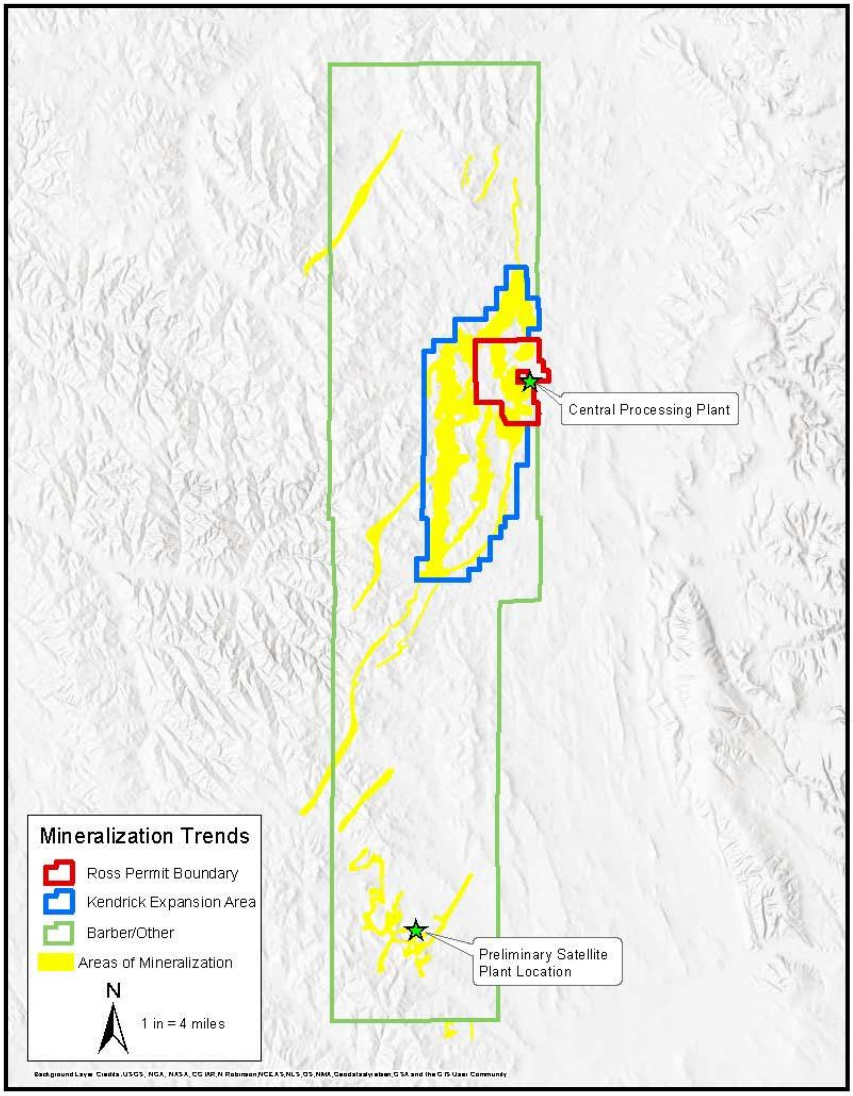

Figure 1: Lance Projects, Wyoming USA

Current alkaline ISR operations at the Lance Projects are authorised for mining at Ross only. The Feasibility Study includes a staged expansion of the current operational facility into a full central processing plant including elution, precipitation and drying equipment (**CPP**) at Ross followed by the construction of a satellite plant at Barber. Kendrick will operate as an extension of Ross with mining solutions pipelined to and from the Ross CPP. This staged expansion strategy is similar to previous studies.

The Feasibility Study assumes the expanded project including Ross, Kendrick and Barber will build to a peak steady state average production of up to 3.0mlbs U_3O_8 per annum.

The Feasibility Study estimates that the Lance Projects will generate net earnings over the life of the Lance Projects, before financing costs and income tax, of US$469.3 million. The economic evaluation of these production areas, conducted as part of the Feasibility Study, yield an estimated **NPV_8 of US$156.5 million (real), at US$49 per pound U_3O_8 average sales price** (includes $US50 per pound U_3O_8 sales price for uncontracted production with deliveries starting in 2022) **and US$254 million (real) at US$57 per pound U_3O_8 average sales price** (includes US$60 per pound U_3O_8 sales price for uncontracted production with deliveries starting in 2022).

The CAPEX including contingency to complete the transition to low pH operations is US$5.3 million. LOM CAPEX including CAPEX for the transition to low pH operations, ongoing wellfield development, Stage 2 expansion, Stage 3 expansion and contingency amounts is US$461.2 million or US$13.81 per pound U_3O_8 produced.

Stage 2 expansion CAPEX is estimated to be US$43.1 million (including contingency) and includes costs to expand the process plant and increase wellfield flow rate capacity from 3,750 gpm to 7,500 gpm. Stage 3 expansion CAPEX is estimated to be US$70.3 million (including contingency) and includes costs to construct a satellite plant and the initial development of wellfields in Barber with a flow rate capacity of 7,500 gpm.

Direct LOM OPEX including Strata general and administrative costs, restoration and rehabilitation costs and contingency is estimated at US$15.59 per pound U_3O_8 produced.

The estimated total cost of uranium produced over LOM is US$35.33 per pound U_3O_8 including CAPEX, OPEX, project site and Strata general and administrative costs, royalties and indirect taxes, ongoing wellfield development, closure costs and cost contingencies. The LOM all-in sustaining cash cost, excluding CAPEX for the low pH transition and Stage 2 and 3 expansions, is US$31.77 per pound U_3O_8 produced.

The Feasibility Study has used a discount rate of 8% and has included contingencies relative to the respective production areas due to differing levels of confidence in accordance with the amount of design and geological information that is available for each production area. No escalation is applied to revenue or costs. Cost estimates for Ross have been prepared with an estimated range of +/- 5% accuracy based on the relatively higher level of confidence in the design, the quantity of data, and the use of actual operating and wellfield development parameters achieved to date from existing operations. Cost estimates for Kendrick and Barber have been prepared with an estimated range of +/- 10% accuracy based on a relatively lower level of confidence in the design data and quantities for these production areas, although these estimates are based on actual operating cost information and wellfield development cost information from Ross.

The CAPEX and OPEX estimates in the Feasibility Study were developed primarily from actual costs incurred at the Lance Projects to date, combined with W&C data, construction experience

on recent uranium ISR projects, historical information and vendor quotes. The CAPEX and OPEX estimates were based on estimated total production of 33.4mlbs U_3O_8 over a 17-year mine life.

Mineral recovery and performance used in the Feasibility Study is derived from data from agitation and column leach testing conducted by independent consultants contracted by Strata. Uranium recovery from the mineral resource was determined using an estimated wellfield recovery factor from 54% (Inferred resources) to 81% (Measured and Indicated resources). The production schedule assumes an average solution uranium grade (head grade) for each new mining unit of approximately 70ppm when flowing to the process plant.

The Feasibility Study has applied two streams of revenue. The first stream reflects the revenue from the contracts already in place. The second stream assumes that uncontracted production is sold at a price of US$50/lb U_3O_8 with deliveries commencing in 2022. All amounts are un-escalated and expressed in 2018 dollars with the weighted average price for the base case at $US49/lb.

The Feasibility Study assumes that low pH operations commence in mid-2019.

All-in Sustaining Cash Costs

Using the outcomes of the life of mine plan, operating cost estimates and capital cost estimates, all-in sustaining cash costs have been determined for each stage of the project. The methodology applied ensures that the all-in sustaining cash costs presented herein are a true reflection of all expenditure required to operate the project and replace wellfield infrastructure as mining areas across the project deplete over time. All-in sustaining cash costs also reflect the regulatory and environmental activities of the Company in the United States. Costs are included for a range of activities that the Company undertakes to not only fulfil its regulatory obligations, but also actions that the Company takes as a responsible corporate citizen in Wyoming, USA. Peninsula notes that ISR mines operating outside of the United States are not subject to the same requirements for items such as groundwater restoration and site rehabilitation that the Lance Projects are.

All-in sustaining cash costs exclude capital expenditure for the low pH transition, Stage 2 expansion and Stage 3 expansion. Royalties and local Wyoming taxes (ad valorem, severance tax and property tax) are included, capital and operating cost contingencies are included, as are restoration and rehabilitation costs, and all overhead costs associated with the Lance projects site and United States operations. The components of the all-in sustaining costs (expressed in 2018$ terms and unescalated) are shown in the following graph:

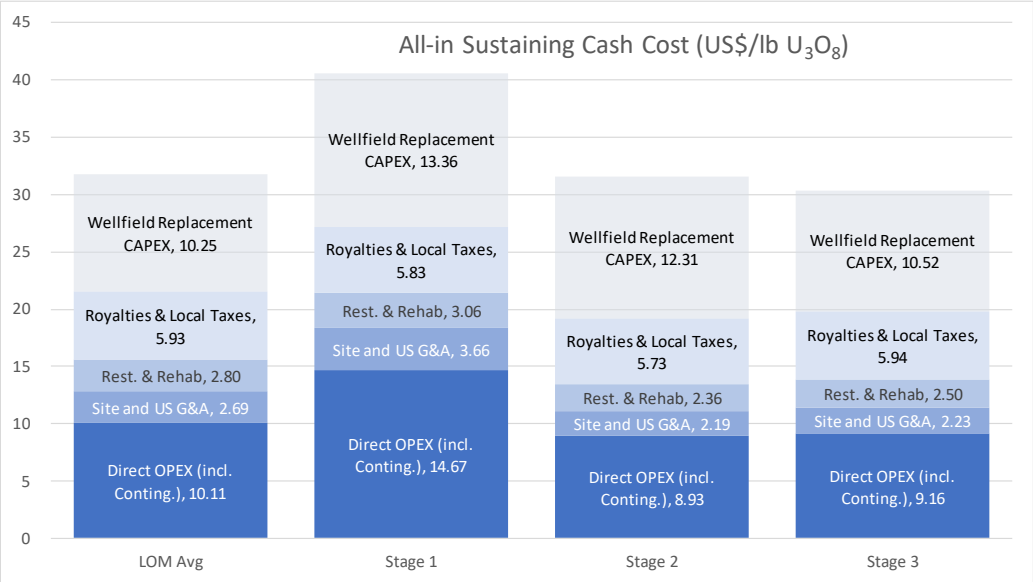

Figure 2: All-in Sustaining Cash Costs

Resource Estimate

The Feasibility Study has been developed to provide a JORC compliant evaluation of the technical and economic viability of the Lance Projects under a low pH ISR operation based on an updated JORC Code (2012) compliant estimate of Measured, Indicated and Inferred Mineral Resources, reflecting mining depletion to 31 December 2017.

Table 3: Lance Projects Resource Estimate

Resource Classification	Tonnes Ore (M)	U_3O_8 kg (M)	U_3O_8 lbs (M)	Grade (ppm U_3O_8)
Measured	3.7	1.8	3.9	489
Indicated	9.1	5.4	11.9	466
Inferred	36.1	17.3	38.1	470
Total	**48.9**	**24.5**	**53.9**	**473**

Table 4: Lance Projects Resource Estimate by Production Area

Ross Permit Area	Grade (ppm U_3O_8)	U_3O_8 lbs	Average Thickness (ft)	Average GT
Measured	480	1,739,676	10	0.48
Indicated	490	2,634,601	9.8	0.48
Inferred	424	1,692,765	9.9	0.42
Total		**6,067,042**		
Kendrick Expansion Area	**Grade (ppm U_3O_8)**	**U_3O_8 lbs**	**Average Thickness (ft)**	**Average GT**
Measured	506	1,410,769	9.3	0.47
Indicated	496	6,860,498	9.4	0.47
Inferred	472	7,659,018	10.0	0.47
Total		**15,930,285**		
Barber Expansion Area	**Grade (ppm U_3O_8)**	**U_3O_8 lbs**	**Average Thickness (ft)**	**Average GT**
Measured	461	710,294	9.5	0.44
Indicated	400	2,415,045	9.8	0.39
Inferred	452	28,734,096	9.7	0.44
Total		**31,859,435**		

Total	Grade (ppm U_3O_8)	U_3O_8 lbs	Average Thickness (ft)	Average GT
Measured	489	3,860,739	9.9	0.46
Indicated	466	11,910,144	9.9	0.47
Inferred	463	38,085,879	9.5	0.42
Total		**53,856,762**		

The resource has been calculated by applying a combined constraint of a grade thickness product (GT) of 0.2 contour and 200ppm U_3O_8. These cut offs are considered to be appropriate for both calculating and reporting of ISR resources at the Lance Projects.

The measured, indicated and inferred resources are located in confined aquifers, (a requirement for ISR mine permitting) which have demonstrated positive uranium recovery from test-work. Geological modelling of the extensive downhole geophysical data has accurately defined the impermeable shales and mudstones that form the confining seals to the mineralised aquifers.

The resource estimate is based on a database containing over 4,500 historic drill holes together with over 3,000 drill holes completed by Peninsula between 2008 and 31 December 2017.

Further information on the updated mineral resource estimate is included in the ASX announcement released on 17 September 2018.

Metallurgical Testing

Between August 2009 and April 2012, the Company completed 24 representative agitation leach tests on Lance Projects core samples using alkaline based lixiviants such as bicarbonate, with and without the addition of oxidants. The test durations varied between 30 and 75 pore volumes. These tests were used to support the grade and recovery assumptions of the 2012 Feasibility Study. Due to the inability to measure uranium grades over time in standard agitation leach test procedures, grade and recovery curves were not modelled. Instead, the 2012 Feasibility Study used a flat 25 mg/L U_3O_8 grade assumption along with recovery assumptions of 72.5 % for Ross Production Area (as more data was available for Ross) and 76% for Barber and Kendrick.

An additional 9 representative agitation leach tests were completed in 2013. These tests were aimed at optimising lixiviant concentrations of bicarbonate and oxidants and yielded higher average head grade concentrations than the tests conducted between 2009 and 2012. Based on a combination of the outcomes from these tests, previous tests and results from other alkaline ISR uranium operations, in its 2014 Scalable Plant Development Plan, the Company applied a peak alkaline head grade of 45 ppm U_3O_8, decreasing down to 35 ppm U_3O_8 over time, resulting in a life of mine average of 38 ppm U_3O_8. Each mining area was planned to be commercially depleted (to 80% recovery) in a 24-month time period, approximating 30 pore volumes of wellfield flow.

Since the commencement of alkaline based operations in December 2015, the head grade and recovery outcomes have underperformed the feasibility study projections. Based on up to 2.5 years of operating data from header houses 1 to 9, approximately 49% of the uranium in the mining zone is being recovered in 43 pore volumes, as shown in the following graph.

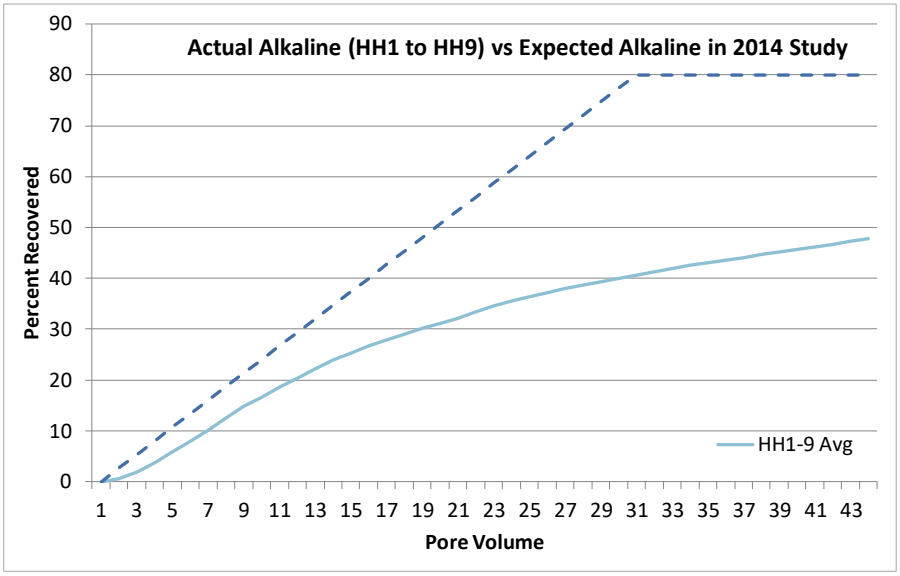

Figure 3: Recovery Curve – Actual Alkaline (HH1 to HH9)

In response to these outcomes, during the first half of 2017, the Company initiated an alternate lixiviant study program. The program comprised six (6) tests with the use of mild sulfuric acid concentration lixiviants (2.0g/L or less) on core from the Lance Projects using agitated leach (or bottle roll) test methods. These agitation leach tests resulted in the recovery of greater than 90% of available uranium in less than 30 pore volumes at average head grades of 228 ppm U_3O_8. These results were superior in all respects to the equivalent phase of test results for the alkaline agitation leach tests.

A 7th agitation leach test was also conducted as part of this program using citric acid which produced results consistent with the use of sulfuric acid. Even though the results of the citric acid test were encouraging, further testing of a citric acid lixiviant was stopped due to the lack of availability of sufficient quantities of citric acid required to support a commercially viable ISR mining operation.

In early 2018, the Company initiated two column leach tests. Column leach tests more closely simulate the ISR mining environment as the test sample is loaded into a fixed position vessel and not agitated during the test. The test lixiviate is passed through the sample in a plug – flow manner simulating how the flow would occur in actual ISR mining. These two column leach tests were the first column leach tests to be conducted by the Company for the use of either an alkaline based or acid based lixiviant. Column leach tests allow for uranium head grades to be analysed with the passage of time as lixiviate flows through the core sample in the column. This in turn allows for recovery and head grades to be calculated for each pore volume of lixiviate that has contacted the uranium ore sample.

The first column leach test was carried out on core taken from an existing mining area in Mine Unit 1 that had been subject to alkaline mining operations for approximately 14 months before the core was obtained in February 2017. Some key objectives of this test were to confirm the leach efficiencies observed from the agitation leach tests, observe whether calcium sulfate (gypsum) precipitation occurs and to demonstrate that mineral resource zone groundwater restoration is achievable using conventional techniques in a packed column – plug flow environment. Accordingly, the test was not intended to seek an optimised mining outcome. The test was successful in confirming the leach efficiencies (peak head grade of 298 ppm U_3O_8, average head grade of 80 ppm U_3O_8 and recovery of 65% during 10 mining phase pore

volumes). An average head grade lower than the agitation leach test was expected given that the core sample was taken from an area that had been subject to alkaline mining.

Similarly, the recovery of 65% was also as expected as the test was not intended to maximise recoveries due to the intention to move expeditiously into testing groundwater restoration methods. Acid consumption was higher than that which is used in the Feasibility Study as this core had higher than average carbonate content. Acid preferentially consumes carbonates before it oxidises uranium into solution and the importance of the low carbonate content in the Lance Projects ore body is discussed below.

Other key objectives of the test, namely confirmation that no gypsum precipitation occurs and the demonstration that groundwater restoration is achievable using conventional methods, were successfully achieved. Results of this test, combined with the agitation leach tests and geochemical modelling, formed the basis of the information included in the April 2018 amendment request submission.

The second column leach test commenced in March 2018 with the overriding objective to obtain low pH column leach data on mineral resource that is representative of typical Lance Projects uranium resources not yet impacted by alkaline mining. Core for this test was taken from within the area that is planned to be Mine Unit 4 in the Ross Permit Area of the Lance Projects.

Results from the second column leach test were very encouraging. After only 13.5 pore volumes, 80% of uranium was recovered, with total recovery of 90% during the extended leaching phase of the test. The average head grade was 105 ppm U_3O_8 and the peak head grade was 694 ppm U_3O_8. Acid consumption during the test equated to 56.9 pounds per pound of U_3O_8 which was also close to the acid requirement theoretically determined from mass balance calculations for consuming 100% of carbonates contained within the core sample.
During mining operations, the Company intends to target a pH level of approximately 2.0 Standard Units (S.U.) as this is the pH level during the column leach tests that yielded successful uranium extraction rates.

The low pH Feasibility Study considers the results of the agitation and the first two column leach tests in the developed uranium recovery curves and expected acid consumption rates. It cannot be expected that test results from a controlled laboratory environment will be replicated in full during in-situ operations, therefore, the Company has used the judgement and experience of its management team to develop conservative grade and recovery curves, albeit based on the low pH leach test outcomes to date. Outcomes from the low pH agitation leach tests and the first two column leach tests are appended to this announcement as Appendix 3.

Separate curves have been prepared for the completion of uranium extraction in the two mine units partly mined using the alkaline method (Mine Units 1 and 2) and for new mine units to be developed in the future (Mine Unit 3 and beyond – refer Figure 4):

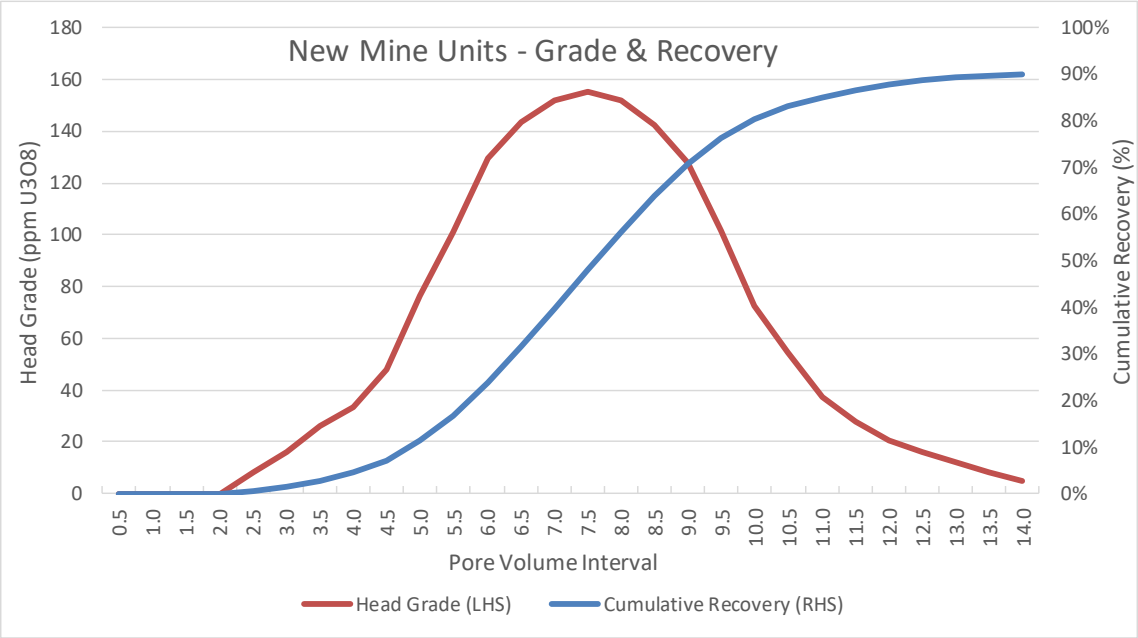

Figure 4: New Mine Unit Grade and Recovery Curve

For new mine units, the average head grade flowing to the plant is projected to be 70 ppm U_3O_8 and have an average acid consumption rate of 58 pounds per pound of uranium extracted. Given that Mine Units 1 and 2 have been partly depleted by alkaline mining, a lower average head grade of 50ppm U_3O_8 is projected which will also result in an estimated higher average acid consumption rate of 84 pounds per pound of uranium.

Consistent with existing alkaline operations, before any new header house starts flowing to the process plant, it will be operated for a period of time re-circulating on itself as the mining zone is conditioned for mining. Under low pH operations, new header houses will be re-circulated until free acid is detected from recovery well samples. During column leach tests, free acid was detected after 2 pore volumes and the Company has based its production planning in the low pH Feasibility Study on new header houses recirculating for 2 pore volumes (approximately 3 calendar months) before they start flowing to the process recovery plant.

Use of a mild acid lixiviant is expected to be significantly more effective than the current alkaline lixiviant. Comparison of alkaline agitation leach tests conducted on Lance Projects ore to the recent mild acid agitation leach tests shows that mild acid leach rates are at least twice those obtained using the alkaline method, with higher ultimate recoveries of at least 90% (compared to 60% to 70% using alkaline) after fewer pore volumes of lixiviant flow.

Supporting the use of a mild acid lixiviant at the Lance Projects is the relatively low carbonate content across the ore body. Based on data sourced from 17 core samples taken from across the project area, the average carbonate content of Lance Projects uranium resource is 1.64%. Host rocks with a carbonate content of less than 2.0% are generally considered to be economically amenable to the use of an acid based lixiviant.

To assist in refining technical assumptions and operating cost factors, two additional column leach tests were recently commenced. These tests are ongoing and the data from these tests will assist in further refining mining parameters including uranium recovery grade curves, acid consumption, optimising the pre-conditioning phase and will also help to refine rehabilitation cost assumptions.

Peninsula currently uses a series of fixed bed downflow ion exchange (**IX**) columns to effect uranium extraction from the solutions recovered by alkaline ISR operations. The current IX resin in use at the process plant has proven effective in loading over 5 lbs U_3O_8 per cubic foot in repetitive loading and elution cycles. Use of low pH lixiviant solutions can affect the IX resin's ability to efficiently load uranium complexes. Resin manufacturers have developed resins which preferentially load uranium from complex, low-pH solutions and those resins are in use around the world in commercial uranium ISR applications.

To evaluate resin performance under the low pH lixiviant conditions, Peninsula has conducted a series of IX loading/elution laboratory tests on the currently used IX resin along with various manufacturers' resin products. The test results indicate that the currently used resin is capable of selectively loading uranium from simulated low pH test solutions but to levels somewhat lower than realised under the originally intended alkaline conditions. Resins designed for low pH applications performed slightly better in the loading and elution tests. Based on these test results, Peninsula intends to continue utilising the current IX resins as it transitions to low pH ISR operations. No capital expenditures for replacement resins have been planned. Operational results and further laboratory testing will guide the Company's future decisions on replacing the IX resins with resins designed specifically for low pH applications. The fixed bed downflow IX columns will be modified internally to accommodate a low pH solution, the costs for which have been included in the capital expenditure estimates.

Production Profile

The Feasibility Study is based on a three-stage production ramp-up with an initial maximum flow rate capacity of up to 3,750 gpm through the existing process plant IX circuit, once the existing infrastructure is converted to be compatible with the low pH solutions (**Stage 1**), the subsequent expansion of capacity to 7,500 gpm and processing functionality of the CPP (**Stage 2**) and the construction of a Satellite Plant within Barber with a flow rate capacity of 7,500 gpm (**Stage 3**).

The Feasibility Study assumes three stages of uranium production capacity as follows:

- Stage 1 will include the changeover of the current facility and wellfields to utilise low pH solutions at the existing flow capacity of 3,750 gpm through the IX circuit, which will result in a production capacity of approximately 1,150,000 pounds U_3O_8 per year at an average head grade of 70 ppm. The Company will continue to use toll milling services for elution, precipitation and drying. The existing toll milling agreement remains in place until 31 December 2018 and the Company is in advanced negotiations to finalise a new toll milling agreement. The gradual ramp up of operations in this stage is discussed below.

- Stage 2 will include expansion of the current facility allowing production flow up to 7,500 gpm from both Ross and Kendrick, addition of elution systems for elution of uranium from the IX resins, addition of precipitation and drying capacity, as well as reserved space for additional equipment in the next stage. Stage 2 changes will result in a production capacity of approximately 2,300,000 pounds U_3O_8 per year at an average head grade of 70 ppm. Stage 2 changes include the capability to produce dried yellowcake on site, eliminating the need for toll milling agreements. Although Ross and the CPP are currently fully permitted, Stage 2 will require permit approval for operation of wellfields within Kendrick.

- Stage 3 will include construction of a 7,500 gpm satellite plant at Barber and the installation of expanded production capacity at the CPP, allowing for a production rate at the Barber satellite plant of 2,300,000 pounds U_3O_8 per year at an average head grade

of 70 ppm and the processing of the Barber satellite plant resin at the CPP. Stage 3 operations will require permit approval for operation of the wellfields and the satellite plant at Barber.

- Steady state production following the commissioning and ramp up of Stage 3 is limited by the existing uranium production permit to 3.0 mlbs U_3O_8 per year.

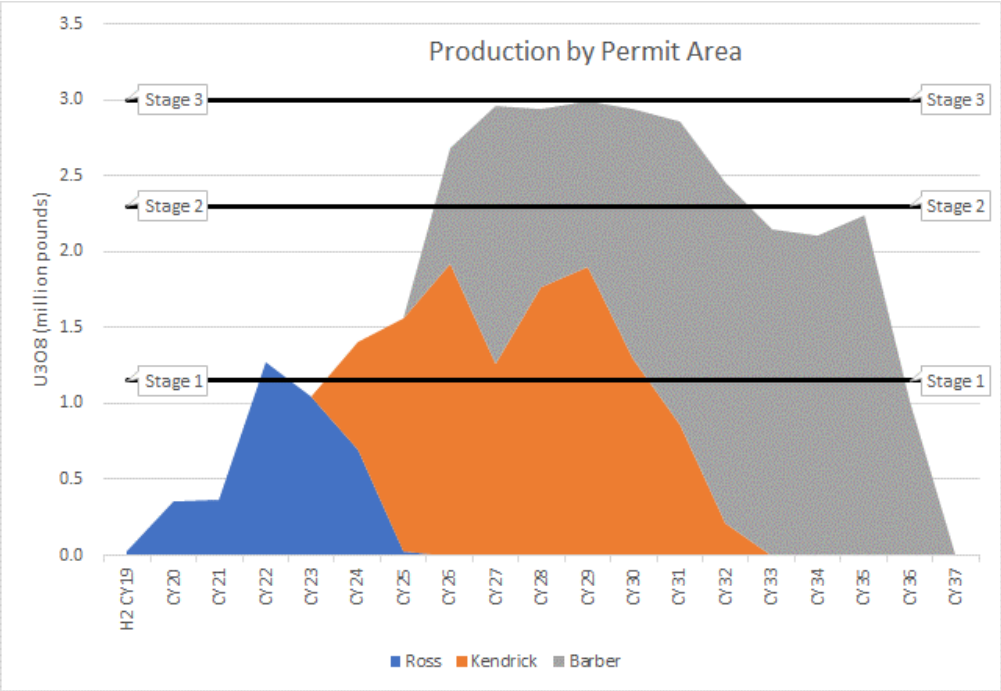

Figure 5: Lance Projects Production Profile

The initial ramp-up of low pH mining has been based on the implementation plan (refer Figure 6) put forward by Strata in the April 2018 submission requesting an amendment to the existing PTM, which is currently under review by the regulators.

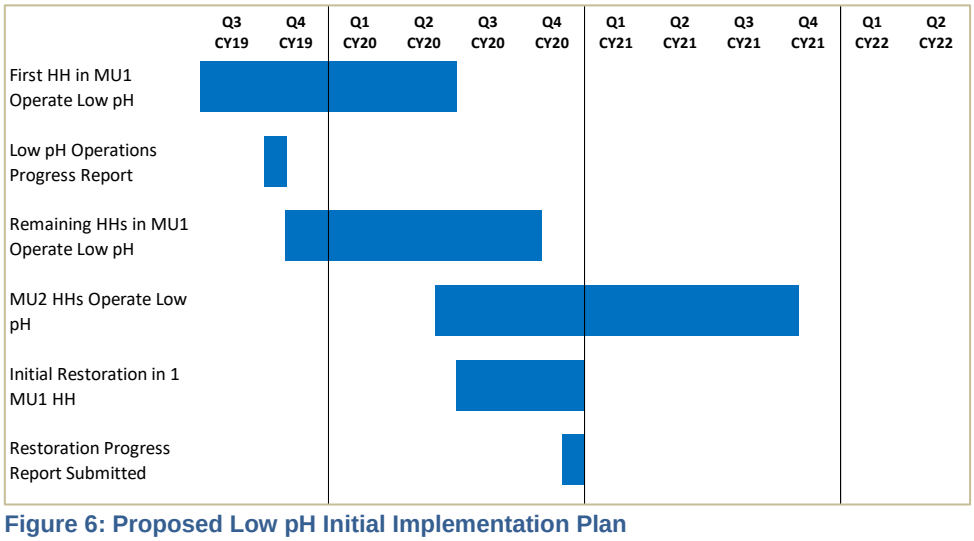

Figure 6: Proposed Low pH Initial Implementation Plan

At the time of completion of the Feasibility Study, the implementation plan submitted by Strata was still under review by the regulatory agencies. Depending on the final outcome of the review,

the permit may provide for Strata to adjust its initial low pH ramp-up plan to meet regulatory requirements.

Capital Expenditure (CAPEX)

Changing from an alkaline based ISR solution to a low pH ISR solution will not require substantial changes to the current processing plant and/or other infrastructure. The existing CPP at the Lance Projects has already been constructed to process 3,750 gpm of groundwater extracted from the mineralised zone in line with the Stage 1 production rate. **Initial capital costs to transition the existing alkaline operations to low pH operations are estimated to be only US$5.3 million.**

The costs provided below also include the progressive development of the remaining wellfields in Ross and all wellfields in Kendrick and Barber. The CAPEX costs presented in this Feasibility Study are based on typical uranium ISR wellfield designs using hexagonal pattern with 100-foot spacings and the designs used in the current operation at the Lance Projects. Pre-production costs associated with permitting, delineation drilling and development of Kendrick and Barber are included in the total CAPEX.

Table 5: Transition and Expansion CAPEX

Capital Costs	$USM	US$ Per lb U_3O_8
Geology Personnel	12.1	
Construction Labour	18.6	
Low pH – Transition	5.1	
CPP Expansion & Satellite Plant	42.7	
Delineation Drilling	21.2	
Wellfield Development	269.6	
Trunklines and OHP	23.8	
Sustaining CAPEX	5.2	
Deep Disposal Wells	33.0	
Kendrick and Barber Permitting	4.5	
Contingencies	25.4	
Total	**461.2**	**13.81**

The predicted level of accuracy of CAPEX estimates for Ross is +/- 5%. Since the Kendrick and Barber wellfield areas and wellfield component designs are conceptual at this time, the level of accuracy of the estimates for these development costs is estimated to an accuracy of +/- 10%. Pricing estimates are largely based on the actual construction costs of the current facility and wellfields at the Lance Projects.

Wellfields

There are currently 10 header houses operating at Ross. The costs for converting these systems to low pH leaching have been included as initial CAPEX. Construction of additional wellfields will be performed by staff currently employed at the Lance Projects. Estimated additional wellfield development expenditure in Years 2, 3 and 4 total US$29.7 million and consist of delineation drilling and installation of monitor wells, production wells, header houses, trunkline extensions and wellfield data packages for mine units 3 and 4.

Central Processing Plant

Most of the process equipment required is already housed in the existing CPP. The CPP is permitted to process 7,500 gpm of lixiviant and produce 3.0 mlbs pa of U_3O_8. However, the CPP

currently has an existing flow rate capacity of 3,750 gpm through the IX circuit and will retain this capacity after changeover in Stage 1. The CPP IX circuit will be expanded to 7,500 gpm in Stage 2. Before Barber is commissioned, the CPP will be expanded (equipment only) to allow a maximum permitted capacity of 3.0 mlbs per year U_3O_8 to be processed annually. Estimated CAPEX for the CPP Expansion for Stage 2 is US$19.3 million (including contingency).

Satellite Plant

A Satellite Plant will be constructed in Barber and will be capable of handling 7,500 gpm of lixiviant and 2,500 gpm of aquifer restoration water. Estimated CAPEX for the Satellite for Stage 3 is US$27.6 million (including contingency)

Deep Disposal Wells

One Deep Disposal Well (**DDW**) has been constructed at the currently operating facility. The Feasibility Study estimates that twelve DDW's will be required for steady state production of the combined Ross, Kendrick and Barber production areas. Therefore, an additional 11 DDW's must be constructed at an estimated total cost of US$34.6 million (including contingency).

Operating Expenditure (OPEX)

The OPEX estimates in the Feasibility Study are based on operating experience at the Lance Projects to date, design wellfield flows and head grade, process flow-sheets, preliminary process design, materials balance and existing and manpower estimates. The predicted level of accuracy of OPEX estimates is +/- 5%.

Table 6: LOM Direct OPEX

Operating Costs (+/-5%)	US$ Per lb U_3O_8
Wellfield	6.08
Process Plant & Toll Milling	3.04
Indirect Site OPEX	3.32
Restoration and Rehabilitation	2.80
Contingencies	0.36
Total	**15.59**

Revenues and Uranium Sales Contracts

The Feasibility Study has applied two streams of revenue. The first stream assumes various sales prices per pound for U_3O_8 over the life of the Lance Projects, based on existing long-term contracts that the Company has in place. In 2018$ terms, these term contracts have base prices of between US$37/lb U_3O_8 and US$47/lb U_3O_8 (weighted average nominal price is between US$51/lb and US$53/lb U_3O_8).

The second stream assumes that production not already committed to existing contracts is sold at a price of US$50/lb U_3O_8 (2018$), with the first delivery commencing in 2022.

Based on these assumptions, the Feasibility Study assumes a variable sales price per pound for U_3O_8 over the life of the Lance Projects of US$37 to US$50, derived from the existing sale contracts and analysis performed by the Company. The weighted average sales price used in the Feasibility Study is US$49/lb U_3O_8 (2018$, unescalated).

An additional financial analysis has been completed assuming that production not already committed to existing contracts is sold at a price of US$60/lb U_3O_8 (2018$). The weighted average sales price of committed and uncontracted production for this additional analysis is US$57/lb U_3O_8 (2018$, unescalated).

Existing Uranium Sales Contracts

The Company has five (5) long-term uranium concentrate sale and purchase agreements. The agreements are with operators of nuclear power plants located in North America and in Western Europe.

The contracts have committed deliveries over the remainder of 2018 and until the end of 2030 of 4,572,000 pounds U_3O_8. Optional deliveries, at the election of the respective customer, between 2021 and 2026 total 1,950,000 pounds U_3O_8. The weighted average delivery price of these contracts, in nominal terms, is US$51-53/lb U_3O_8. The delivery price for the options does not deviate significantly from the delivery price of the committed pounds and therefore the price model is not sensitive to the election of the customers in this regard.

Uncontracted Production

Following the Fukushima nuclear power plant incident in 2011, the uranium market has experienced a sustained reduction in prices for natural uranium, as well as in the conversion and enrichment sectors within the nuclear fuel cycle. The reduction is due to reduced demand following the slow restart of Japanese reactors, changes in government policy in certain countries, cost competition leading to early closure of some nuclear power plants, increased utility inventory levels and slow supply side reaction to the sustained price reduction as legacy higher priced long-term contracts continued to offer some protection to uranium producers.

Since 2013, the supply side started to react as higher priced contracts ran off, with the rate of supply reductions increasing in 2016 and 2017. While future demand growth expectations have been pared back in recent years, growth in nuclear power generation is projected through until 2035, driven primarily by developing nations seeking to use nuclear power as source of carbon free baseload power generation.

Given that current uranium prices (spot and long-term) are at levels that are below the price required for a significant portion of existing production to remain economically viable, it is not unreasonable to expect uranium prices to increase over the near to medium term. Based on projected all-in uranium production costs for global uranium mining projects over the next 7 years (sourced from UxC), the Company believes that the use of a base sales price of at least US$50/lb U_3O_8 (2018$ basis) in 2022 and beyond is reasonable for all uncontracted production.

Like most mineral commodity projects, the Lance Projects is sensitive to variability in commodity prices. A range of sensitivities have been run on the price for uncontracted production (refer Figure 7 below). A US$10/lb U_3O_8 increase in the uranium price to US$60/lb U_3O_8 increases the NPV_8 (Real) by almost US$100 million to US$254 million.

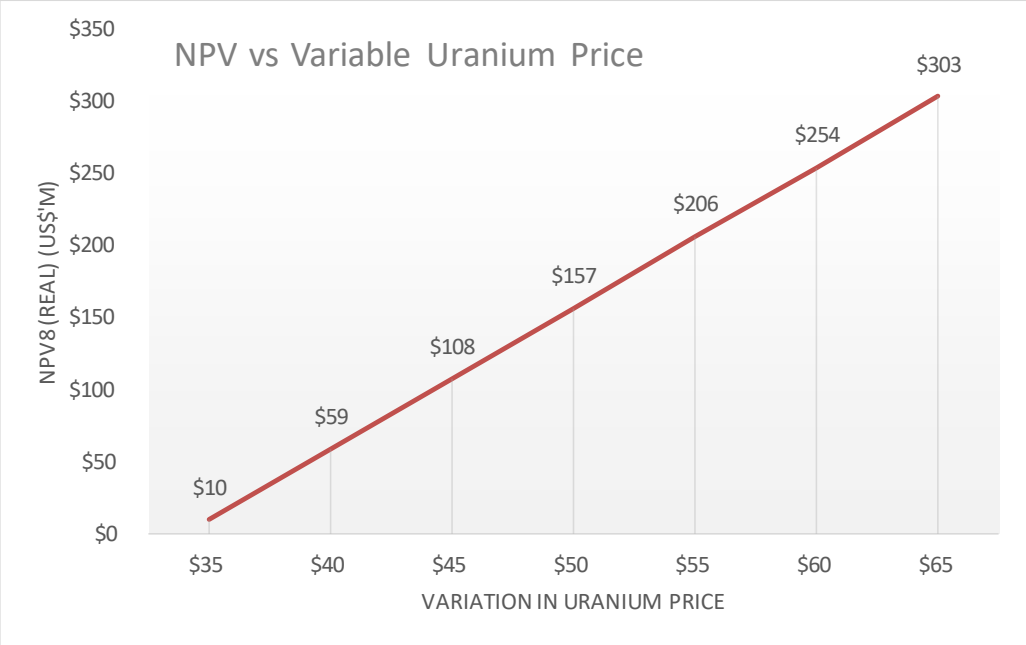

Figure 7: NPV Sensitivity to Uranium Price Variation

Transition to the use of a low pH lixiviant will make the Lance Projects a much more cost competitive uranium mine than that which is possible using the existing alkaline lixiviant. The break-even price for uncontracted production required over the remaining life of mine is a very competitive US$34/lb U_3O_8.

Low pH Permitting Timeline

The two most significant amendments to the existing licenses are the PTM issued by the WDEQ and the Source and By-product Materials License (**SML**), required and issued by the NRC for mineral processing of natural uranium.

Following the submission of the PTM Amendment in April 2018, the first review and clarification meeting was held with representatives from the WDEQ in June. Additional meetings are expected to be conducted over the remainder of the 2018 calendar year in accordance with prescribed guidelines for the review of such permit amendment requests. The WDEQ has now completed its technical review of the PTM and continues with its overall review.

As Wyoming is scheduled to become an Agreement State on 1 October 2018, which would grant WDEQ primacy over the regulation of source material licenses in the state, it is expected that the existing SML with the NRC will be transferred to the WDEQ prior to low pH operations commencing at the Lance Projects.

Based on its assessment and understanding of the amendment approval processes, the Company is targeting that amendments to existing operating permits and licenses be granted around the middle of the 2019 calendar year.

Low pH Transition and Ramp-up Funding

The Feasibility Study is designed to allow flexibility in funding, as the ability to use the existing plant, and to conduct initial low pH mining from the existing Mine Units 1 and 2, provides the

Company with an opportunity to complete a low-cost transition to low pH operations. The transition costs can be largely met by existing cash reserves and revenue that will be earned from the delivery of uranium into existing long-term contracts. Uranium deliveries to customers until the end of 2020 can be made by supplying either uranium sourced from the Lance Projects or from uranium that the Company purchases on the open market. Deliveries to customers from 2021 and beyond also contain some flexibility regarding Lance or open origin, but not to the same extent.

Mine Units 1 and 2 are expected to be depleted of economically mineable uranium before the end of 2021. The Company plans to commence mining from Mine Unit 3 during 2021 which will require development activities on Mine Unit 3 to commence in early 2020. The Company will be required to secure additional funding for the development of Mine Unit 3.

Peninsula believes that it is well placed to secure the necessary funding for the low pH ramp-up and Mine Unit 3 development as the committed revenue from its existing long-term contracts provides a predictable stream of cash flow generation that is typically attractive to financiers and investors. Options that the Company will be pursuing include:

- Project finance;
- Working capital finance;
- Equity from existing and/or new shareholders;
- Royalty streams; and
- Other asset and contract monetisation opportunities.

Stage 2 and Stage 3 production rate expansions are planned to be implemented as the Company secures additional contracts for the sale of uranium at prices that justify the economic development of each of these production expansion stages. Funding for these expansions is expected to be sourced from a combination of operating cashflows from existing operations and project finance.

Alternate Development Plan

As an existing producer of uranium with wellfield and process plant facilities already developed and operating, Peninsula is one of the few uranium mining or development companies that can apply optionality and flexibility to its development plans. As part of the Feasibility Study, an alternate development scenario was developed that enables the Company to significantly reduce the amount of future process plant capital expenditure and concentrate mining activities only on the Ross and Kendrick areas of the Lance Projects.

This alternate development plan, if implemented, shows that the Lance Projects are forecast to quickly move to a sustainable cash positive position shortly after the ramp-up of low pH mining activities. Wellfield flow rates and uranium production rates under this alternate development scenario are as described above for Stage 1 (i.e., flow rate of 3,750 gpm and annual production rate of up to 1.15mlbs U_3O_8 p.a. at an average head grade of 70ppm U_3O_8). Two pricing levels have been used for this development plan – i) US$50/lb U_3O_8 for all uncontracted production (per the Feasibility Study base case), and ii) US$60/lb U_3O_8.

A summary of the key metrics of this alternate plan is shown in the table below:

Table 7: Alternate Development Plan

Key Metrics	
Estimated Life of Mine (LOM)	17 years
LOM Production (mlbs U_3O_8)	15.3
LOM Project Revenue (real) ($USm)	735
LOM Operating Cashflow (before tax) ($USm)	304
Base Case NPV_8 at US$49/lb Avg Price ($USm)	33.9
NPV_8 at US$57/lb Price ($USm)	66.6
Base Case IRR at US$49/lb Avg Price (%)	26%
IRR at US$57/lb Avg Price (%)	34%
Average Annual Net Cash Flow per annum at US$49/lb Avg Price (US$m)	9.5
Average Annual Net Cash Flow per annum at US$57/lb Avg Price (US$m)	15.2

Optionality provided by an alternate development plan will enable the Company to be selective as to when it enters new agreements to sell uranium and to increase the rate of production through the Stage 2 and Stage 3 expansions when the market for uranium in the United States and the rest of the world prices uranium at levels that sufficiently reward the Company and its shareholders for investment in these expansions.

Most importantly, the alternative development demonstrates the ability of the Lance Projects to generate sustainable positive cashflows at conservative future price forecasts by using the processing facilities already installed and operating at the project.

Yours Sincerely,

Wayne Heili
Managing Director/CEO

For further information, please contact our office on +61 8 9380 9920
during normal business hours.

APPENDIX 1

Material Assumptions

Material assumptions used in the estimation of the production targets and associated financial information relating to the low pH Feasibility Study 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 a Feasibility Study. The Feasibility Study is a comprehensive study on the technical viability of converting the Lance Projects from its existing alkaline mining method to a low pH mining method. Existing mining facilities and infrastructure will be re-configured for low pH compatibility and used in the life of mine plan. Cost estimates used in the study have been largely sourced from development 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 17 September 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 low pH operations, approximately 53.6 million lbs U_3O_8 is projected to be available for low pH mining. This Feasibility Study assumes that for all new mining areas, 90% of measured and indicated resources will be placed under wellfield pattern and be available for extraction. For all new mining areas, 60% of inferred resources are assumed to be 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 and indicated resources being recovered and 54% of inferred resources. Over the life of mine, 62.3% of mineral resources available at the commencement of low pH operations are assumed to be recovered, resulting in uranium recovery of approximately 33.4 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 3.0m lbs U_3O_8 per annum.
Classification	Production targets referred to in this announcement are based on mineral resources which are classified as 29.3% measured and indicated and 70.7% inferred. Production comprises 38.3% from measured and indicated resources and 61.7% from inferred resources. The Company is already mining in Ross and will continue to mine this area before commencing mining in Kendrick. Measured and indicated resources remaining in Ross and Kendrick comprise 72.1% and 51.9% respectively for each area. Measured and indicated resources form the

Criteria	Commentary
	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 the Lance Projects. 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). Grade and recovery curves have been developed by the Company based on interpretation of test data and the uranium ISR experience within the management team of the Company. Material assumptions that form the basis of the low pH Feasibility Study are: • Mine Units 1 & 2 – Recovery of 90% of the remaining mineral resource in 12 pore volumes (approximately 12 months); average acid utilisation of 84 pounds per pound of U_3O_8 extracted; and • All new Mine Units to be Developed - Recovery of 90% of the mineral resource placed under wellfield pattern in 14 pore volumes (approximately 21 months); average acid utilisation of 58 pounds per pound of U_3O_8 extracted.
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 the Kendrick Amendment permitting action (suspended in December 2016) and a future satellite plant and wellfield for the Barber Production Area. 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 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 wellfield and process plant infrastructure to low pH compatibility. As the site is currently in operations, all required services (power, water, roads, etc) required to support Stage 1 operations are already in place.
Capital costs	Capital expenditure for the low pH transition, process plant expansion and satellite plant have been estimated by Woodard & Curran. 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 been estimated by Woodard & Curran using wellfield planning information and recent actual wellfield costs provided by the Company. Wellfield development costs in Ross have a predicted level of accuracy of +/-5%. Since parts of the Kendrick

Criteria	Commentary
	and Barber wellfield component designs are conceptual at this point in time, the level of accuracy for these two areas is +/-10%. A 5% contingency has been applied to all wellfield development costs with the exception of trunklines and overhead power in Kendrick and Barber where a 15% contingency has been applied. Overall contingency applied to capital expenditure is 5.8%. Expenditure by each major stage, including contingency, is: • Stage 1 Low pH Transition – US$5.3m; • Stage 2 Expansion – US$43.1m; and • Stage 3 Expansion – US$70.3m. Wellfield development costs over the remaining life of mine have been based on a spacing of 100 feet (~30 metres) between wells and 270,000 to 300,000 lbs U_3O_8 being placed under wellfield pattern for each new header house.
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. The most substantial operating cost over the life of mine is sulfuric acid. Using industry forecast information, a price of US$162/t, delivered to site, has been used. An average cost contingency of 2.4% has been applied to all operating costs. All-in sustaining cash costs for each stage are: • Stage 1 – US$40.58/lb U_3O_8 • Stage 2 – US$31.52/lb U_3O_8 • Stage 3 – US$30.36/lb U_3O_8
Revenue factors	The Company has up to 6.6 million lbs U_3O_8 currently under contract for delivery between now and the end of 2030 at a weighted average price in 2018$ (unescalated) of approximately US$45/lb U_3O_8 (weighted average price in escalated terms US$51-$53 per lb U_3O_8). Sales under existing contracts comprise approximately 20% of the low pH life of mine planned production. Remaining production is currently all uncontracted and is assumed to be sold at US$50/lb U_3O_8 (2018$, unescalated). The first sale of uncontracted U_3O_8 is not scheduled to occur until CY 2022 (Year 4).
Schedule and timeframe	The production plan is based on receiving regulatory approval of amendment requests to licenses and permits by 1 July 2019 which will enable the commencement of low pH operations for Stage 1. Subject to uranium market conditions, license and permit amendments (where required) and access to appropriate funding, the low pH Feasibility Study assumes that Stage 2 will be commissioned in January 2024 (Year 6) and Stage 3 will be commissioned in January 2026 (Year 8).
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.

Criteria	Commentary
	As an existing producer of uranium, the Company is an active participant in the global uranium market. The price of US$50/lb U_3O_8 has been used for uncontracted production (deliveries commencing in 2022) following an analysis by the Company of the factors driving supply, demand and prices in the global uranium market, and taking into account potential government intervention in the United States through the current Section 232 investigation by the Department of Commerce.
Funding	To achieve the initial transition to low pH operations and develop Mine Unit 3 to ramp-up production in Years 2 and 3 will likely require approximately US$25-$30 million in staged additional funding. This amount is net of revenue earned from the sale of uranium during this time period. Required additional funding is not required as one lump sum amount and may be obtained progressively by the Company over a 3-year time period. It is anticipated that additional finance will be sourced through a combination of equity and debt instruments from existing shareholders, new equity investment and debt providers from overseas. It is important to note that no additional funding arrangements have yet been put in place. The Board of Peninsula believes that there is a reasonable basis to assume that the required funding will be available as and when required by the Company to meet the development and production schedules based on the following: • Operational and support infrastructure is already in place and in operation; • The Company, its Board and executive management team have a successful track record of raising financing for mining projects; • Existing long-term contracts for the sale of uranium held by the Company at prices well above current prices are viewed favourably by potential financiers and investors due to the stable and predictable revenue generated from these contracts; • That the outcomes of this Feasibility Study demonstrate the Lance Project's potential to deliver favourable economic outcomes; and • Other operators of North American uranium ISR projects have recently been successful in raising similar amounts of capital. Stage 2 and Stage 3 expansions are expected to be funded via a combination of project finance debt and cash from operations.
Economic	All cash flows, revenues and costs have been determined using unescalated amounts expressed in 2018$. 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

Criteria	Commentary
	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 Feasibility Study 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 on the low pH implementation and ramp-up; ii) mild acid concentrations not extracting uranium from the mining zone at a rate generally consistent with that projected; iii) access to sufficient funding and uranium prices; and iv) demand remaining at levels that do not support increases in production in the timeframes forecast in this Feasibility Study. As a condition to the approvals of the requests by the Company to amend existing permits and licenses regulators may require the Company to implement the transition to low pH operations in a manner and timeframe different from that described in this announcement.
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 study was internally reviewed by Peninsula. No material issues were identified by the reviewers.

APPENDIX 2

Lance Projects Mineral Resource Estimate & Competent Person Statement

Mineral Resource Estimate[2]

Resource Classification	Tonnes Ore (M)	U_3O_8 kg (M)	U_3O_8 lbs (M)	Grade (ppm U_3O_8)
Measured	3.7	1.8	3.9	489
Indicated	9.1	5.4	11.9	466
Inferred	36.1	17.3	38.1	470
Total	**48.9**	**24.5**	**53.9**	**473**

Competent Person Statement

The information in this announcement that relates to Exploration Results, Mineral Resources or Ore Reserves and Metallurgical Results at Peninsula's Lance Projects is based on information compiled by Mr. Jim Guilinger. Mr. Guilinger is a Member of a Recognised Overseas Professional Organisation included in a list promulgated by the ASX (Member of Mining and Metallurgy Society of America and SME Registered Member of the Society of Mining, Metallurgy and Exploration Inc). Mr. Guilinger is Principal of independent consultants World Industrial Minerals. Mr. Guilinger has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are 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'. Mr. Guilinger consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

[2] JORC Table 1 included in an announcement to the ASX released on 17 September 2018:"Updated Lance Projects Mineral Resources". 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.

APPENDIX 3

Lance Projects Low pH Laboratory Test Summaries

Table 3-1: Low pH 30 PV Agitated Leach Tests

Core Hole ID	Date	Grade U_3O_8 (ppm)	Solution Avg. Grade (ppm U3O8)	Recovery by Grab U_3O_8 (%)
RMRD 42	March 2017	1350	481	97.4
RMRD 42	March 2017	1350	527	97.7
RMRD 41	April 2017	268	101	93.2
RMRD 34	Sept 2017	690	242	99.5
RMRD 34	Sept 2017	814	221	92.2
RMRD 34	Sept 2017	607	161	90.4
RMRD 34*	Sept 2017	814	220	90.6
Average		842	279	94.4

Table 3-2: Low pH Column Leach Test #1

Strata Energy Inc.: Lance Projects Column Leach Test # 1 Conditions and Results	
Sample Source	OZ 342: 474.5’ - 478.5’
Pore Volume	~2000 ml
Mass of Charge (dry)	8.28 kg
Feed Solution Flow Rate	~5 Pore Volumes/Day
Sample Preconditioning Phase Lixiviate [H_2SO_4 g/L] Duration	~25 g/L PV 0-7
Mining Phase I Lixiviate [H2SO4 g/L] Duration	~10 g/L PV 7-12
Mining Phase II Lixiviate [H_2SO4 g/L] Duration	~5 g/L PV 12-16
Feed Lixiviate ORP [mv])	+460-525 mv
Sample Grade mg/kg U_3O_8	532 mg/kg
Tails Grade Assayed mg/kg U_3O_8	169 mg/kg
% U_3O_8 Recovered by Leach Flow	64.63 %
% U_3O_8 Recovered in Post Leach Flow	3.67 %

Strata Energy Inc.: Lance Projects Column Leach Test # 1 Conditions and Results	
% Uranium Recovery	68.30 %
U_3O_8 Recovered per Pore Volume [Leach]	4.04%
Peak U_3O_8 Solution Grade mg/L	298 mg/L
Average U_3O_8 Solution Grade mg/L	80.0 mg/L
H_2SO_4 Consumption: lb Acid/lb U3O8	200 lb/lb

Table 3-3: Low pH Column Leach Test #2

Strata Energy Inc.: Lance Projects Column Leach Test #2 Conditions and Results	
Sample Source	RMRD 34: 511'-518'
Pore Volume	~1000 ml
Mass of Charge (dry)	4.66 kg
Feed Solution Flow Rate	~2 Pore Volumes/Day
Sample Preconditioning Phase Lixiviate [H_2SO_4 g/L] Duration	~25 g/L PV 0-7
Mining Phase I Lixiviate [H2SO4 g/L] Duration	~10 g/L PV 7-15
Mining Phase II & III Lixiviate [H2SO4 g/L] Duration	~5 g/L PV 15-33
Feed Lixiviate ORP [mv])	+400-515 mv
Sample Grade mg/kg U_3O_8	890 mg/kg
Tails Grade Assayed mg/kg U_3O_8	90.8 mg/kg
% U_3O_8 Recovered by Leach Flow	89.3 %
% U_3O_8 Recovered in Post Leach Flow	0.4 %
% Uranium Recovery	89.7 %
U_3O_8 Recovered per Pore Volume [Leach]	2.71 %
80% Recovery @ Pore Volume	13.5 PV
80% Recovery per Pore Volume	5.93 %

Strata Energy Inc.: Lance Projects Column Leach Test #2 Conditions and Results	
Peak U_3O_8 Solution Grade mg/L	694 mg/L
Average U_3O_8 Solution Grade mg/L	105 mg/L
H_2SO_4 Consumption: lb Acid/lb U_3O_8	56.9 lb/lb

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[3] JORC Table 1 included in an announcement to the ASX released on 17 September 2018: "Updated Lance Projects Mineral Resources". 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.