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Companies Announcement Office  
*Via Electronic Lodgement*

## **ADDITIONAL TESTS CONFIRM EFFECTIVENESS OF LOW pH CHEMISTRY FOR LANCE PROJECTS**

Peninsula Energy Limited (**Peninsula or Company**) is pleased to announce that its wholly owned subsidiary, Strata Energy, Inc (**Strata**) has confirmed the effectiveness of the proposed low pH chemistry through additional laboratory testing of samples obtained from the Lance Projects in Wyoming, USA.

Following numerous low pH agitation leach tests in 2017, Strata conducted the first two column leach tests in early 2018. Based on the positive results of the initial testing, two additional column leach tests have now been completed on core from the Kendrick Permit Area, a planned future ISR operating area (**Test 3**) and from core taken from the operating Mine Unit 1 (**Test 4**). The Company has now completed column leach tests on core samples obtained from several diverse areas of the Lance Projects.

Highlights of Test 3 and Test 4 include:

- Uranium recoveries above 90% were obtained within 10 test pore volumes in Test 3 and within 16 test pore volumes in Test 4 (an area already subject to mining under alkaline solutions), confirming the efficiency of the low pH chemistry;
- Both tests ultimately achieved uranium recoveries above 95%, demonstrating the effectiveness of the low pH chemistry;
- Peak uranium concentrations obtained during testing were 474 mg/L U<sub>3</sub>O<sub>8</sub> (Test 3) and 253 mg/L U<sub>3</sub>O<sub>8</sub> (Test 4);
- Average uranium concentrations over the duration of the tests were 105 mg/L U<sub>3</sub>O<sub>8</sub> (Test 3) and 80 mg/L U<sub>3</sub>O<sub>8</sub> (Test 4), validating prior grade assumptions; and
- Acid consumption rates were substantially below levels used in the low pH Feasibility Study, but consistent with the Company's overall acid requirements model.

The latest test results provide further validation of the accuracy of the grade, recovery and acid consumption assumptions used in the low pH Feasibility Study (**FS**). The FS used an assumption of 90% recovery in 14 pore volumes and an average solution grade of 70 mg/L U<sub>3</sub>O<sub>8</sub> for new mine units. Both recently completed tests are consistent with or exceeded FS assumptions. The acid consumption model used in the FS was also confirmed. While the FS assumptions included an average host rock carbonate content of 1.64% and acid consumption of 58 pounds of acid per recovered pound of U<sub>3</sub>O<sub>8</sub>, the test samples had a lower carbonate

concentration (0.95% average) and a proportionately lower acid requirement of 34 pounds per pound  $U_3O_8$ .

The Company intends to continue with both laboratory and field scale research and development efforts at the Lance Projects. A fifth column test has been initiated in the laboratory with the intention of testing the quantity and timing of chemical addition assumptions during mining. Strata is also preparing to initiate field scale demonstration testing of the proposed low pH chemistry in early December.

Wayne Heili, Peninsula's Managing Director/CEO, commented; "The completion of these additional laboratory tests adds credence to our conviction that the planned transition to low pH operations will significantly enhance the productivity and cost performance of the Lance Projects. I'm proud of the robust efforts of the project team as they continue to deliver timely and positive results for our shareholders."

Refer to Appendix 1 for summarised results from Test 3 and Test 4.

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

## Lance Projects Column Leach Test 3 and 4 Summaries

Table 1-1 Low pH Column Leach Test 3

<b>Strata Energy Inc.: Lance Projects Column Leach Test # 3 Conditions and Results</b>	
Sample Source	RMRD 35: 748'-752' + 761'-764'
Pore Volume	~1000 ml
Mass of Charge (dry)	4.76 kg
Feed Solution Flow Rate	~1 Pore Volumes/Day
Sample Preconditioning Phase Lixivate [H <sub>2</sub> SO <sub>4</sub> g/L] Duration	~26 g/L PV 0-9
Mining Phase I Lixivate [H <sub>2</sub> SO <sub>4</sub> g/L] Duration	~5 g/L PV 10-17
Mining Phase II Lixivate [H <sub>2</sub> SO <sub>4</sub> g/L] Duration	~7.6 g/L PV 18-23
Feed Lixivate ORP [mv]	+343-408 mv
Sample Grade mg/kg U <sub>3</sub> O <sub>8</sub>	680 mg/kg
Tails Grade Assayed mg/kg U <sub>3</sub> O <sub>8</sub>	33.1 mg/kg
% Uranium Recovery	95.1 %
U <sub>3</sub> O <sub>8</sub> Recovered per Pore Volume [Leach]	4.2%
>90% Recovery @ Pore Volume	91.4% @ PV-10
Peak U <sub>3</sub> O <sub>8</sub> Solution Grade mg/L	474 mg/L
Average U <sub>3</sub> O <sub>8</sub> Solution Grade mg/L	104.5 mg/L
H <sub>2</sub> SO <sub>4</sub> Consumption: lb Acid/lb U <sub>3</sub> O <sub>8</sub>	24.5 lb/lb

**Table 1-2 Low pH Column Leach Test 4**

<b>Strata Energy Inc.: Lance Projects Column Leach Test # 4 Conditions and Results</b>	
Sample Source	MU1-OZ 341: 377'-378' + 380'-381.9'
Pore Volume	~1000 ml
Mass of Charge (dry)	4.80 kg
Feed Solution Flow Rate	~1 Pore Volumes/Day
Sample Preconditioning Phase Lixivate [H <sub>2</sub> SO <sub>4</sub> g/L] Duration	~26 g/L PV 0-9
Mining Phase I Lixivate [H <sub>2</sub> SO <sub>4</sub> g/L] Duration	~5 g/L PV 10-17
Mining Phase II Lixivate [H <sub>2</sub> SO <sub>4</sub> g/L] Duration	~7.6 g/L PV 18-23
Feed Lixivate ORP [mv]	+343-408 mv
Sample Grade mg/kg U <sub>3</sub> O <sub>8</sub>	503 mg/kg
Tails Grade Assayed mg/kg U <sub>3</sub> O <sub>8</sub>	18.2 mg/kg
% Uranium Recovery	96.5 %
U <sub>3</sub> O <sub>8</sub> Recovered per Pore Volume [Leach]	4.33%
>90% Recovery @ Pore Volume	90.9% @ PV-16
Peak U <sub>3</sub> O <sub>8</sub> Solution Grade mg/L	253 mg/L
Average U <sub>3</sub> O <sub>8</sub> Solution Grade mg/L	79.8 mg/L
H <sub>2</sub> SO <sub>4</sub> Consumption: lb Acid/lb U <sub>3</sub> O <sub>8</sub>	43.3 lb/lb