

Peninsula Minerals of

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Companies Announcement Office
Via Electronic Lodgement

FEASIBILITY PROCESS UNDERWAY AT LANCE PROJECTS

Highlights

- **Pre-Feasibility Study Underway**
- **Commencement of Plant Design**
- **Mine Monitor Well drilling commenced**
- **Peninsula on track to meet 2010 JORC Targets**
- **Positive feedback on Mine and Plant permitting**

Summary

Peninsula Minerals Limited (**Peninsula**) is pleased to announce that it has made significant progress in the mine planning and development process at the Lance Projects in Wyoming, USA (**Lance**) and is now at a stage where detailed plant design can commence.

Global mining engineers and uranium specialists Lyntek Inc (**Lyntek**) have been appointed by Peninsula to design an In-Situ Recovery (**ISR**) uranium processing plant that is capable of processing up to 3 million pounds of U₃O₈ per annum. It is anticipated that the plant design will be completed by the end of February 2010.

Petrotek Engineering Corporation (**Petrotek**), a company specialising in technical evaluation, permitting and field operations related to injection projects, has been selected by Peninsula to provide the feasibility study for disposal wells in the Lance Project area. The feasibility study will evaluate subsurface zones for the disposal of fluids from ISR mining and restoration.

The PFS, when combined with optimization studies, metallurgical studies, hydrological studies and mine permitting studies, being conducted in parallel, will form the basis for the **full feasibility study which is now scheduled to be completed by early 2011**.

In addition, Peninsula is pleased to report that the Monitor Well Installation Program at Lance has commenced. Well design and positioning for the base line and production monitoring of the aquifer has been completed and the first monitor well cluster was drilled on 17 November 2009.

Peninsula can also report that the ongoing interpretation of the results from the current drill program coupled with the inclusion of previously unreported mineralised holes has increased its confidence in achieving its June 2010 JORC targets.

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Finally, the Company has been further buoyed by positive feedback received during October and November from the Nuclear Regulatory Commission (**NRC**) regarding the potential to reduce the timing of the mine permitting approval process.

Executive Chairman Gus Simpson said “Over the last three years Peninsula has assembled a first class uranium team who has worked tirelessly to advance these projects on all fronts and the board is very pleased with the progress”.

Plant Design and Pre-Feasibility Study commences

Lyntek has been appointed to design an ISR uranium processing plant that is capable of processing up to 3 million pounds of U₃O₈ per annum. The design process involves a detailed review of the uranium deposit characteristics at Lance, the layout of the production well fields, the metallurgy of the uranium, reports on pilot tests, disequilibrium conclusions, plant siting issues and all other concerns that will affect the design of the plant and permitting process. Lyntek expect that the plant design should be completed by the end of February 2010.

Peninsula is particularly pleased to secure the services of Lyntek who will also provide various engineering and design services to the Company during the feasibility process. Based in Colorado, Lyntek provide services globally ranging from process engineering and feasibility studies through to detailed engineering, procurement, construction management, plant start-up and pilot plants. Lyntek is highly experienced in the uranium industry having been involved in the sector since 1983, and has vast knowledge of mining operations in Western USA. Current and past clients include Ur-Energy Inc, Cogema, Heathgate Minerals Inc, Power Resources Inc (a division of Cameco), Sumitomo Uranium and also Wyoming based High Plains Uranium Inc.

Petrotek will complete the injection well feasibility study by February 2010. The feasibility study will assess injection zones in the Lance Project area below the Cretaceous Pierre Shale, Cody Shale, Bearpaw Formation, and the Deadwood/Flathead equivalent. Petrotek has completed numerous disposal well and related groundwater projects for ISR operators over the past 15 years, including such clients as Crow Butte Resources Inc, Energy Metals/Uranium One, Power Resources Inc, Cogema, URI/HRI and Ur-Energy. Petrotek will also provide permitting services and assist with public relations and NRC/WDEQ coordination.

Monitor Well Installation Program

Well design and positioning for the base line and production monitoring of the aquifer was completed in October and the first monitor well cluster was drilled on 17 November 2009.

The monitor well program consists of the installation of wells in six locations spread over the Ross Project area (**Ross**) at Lance to provide maximum characterisation. At each of the six locations, wells will develop water quality and quantity characteristics below the ore zone, at the ore zone, and at two locations above the ore zone for a total of 24 wells. The average cased depth using the first rig will be approximately 350 feet, whilst the average completed well installation and development using the second rig will be 50 feet.

The monitor well program is extremely important as it provides the baseline data components that the NRC/WDEQ require as part of the mine permitting and feasibility process at Lance. The wells will be used to develop potentiometric surface maps to define affected aquifers and determine regional groundwater quality. Aquifer pumping tests will be conducted to define aquifer properties within the affected area, hydrologic boundary conditions, directional permeabilities and vertical confinement. This new information will be meshed with the existing data base that Peninsula holds from the previous mining operation at Ross.

2010 JORC Targets

Processing of the data contained within the recently acquired Nubeth database has added further mineralised holes (previously unreported) to the uranium mineral inventory at both Ross and Barber. Both the current drill results and the inclusion of these "new" holes are providing additional **confidence that Peninsula's initial JORC targets will be met by June 2010.**

In addition, the quality and quantity of the Nubeth database information indicate that the extent of drilling required to meet these JORC targets will be significantly reduced, with expected timing and cost saving implications for Peninsula.

Positive Feedback from NRC on permitting process

During October Peninsula met with the Wyoming Congressional Delegation and also the NRC in Washington DC to discuss and present the Lance Projects. The meetings were very positive and discussions with the NRC suggested that Peninsula's unique process of continuous submission should auger well for the turnaround time of its mine and plant permitting process. While contingent on a number of factors, the feedback received from the NRC has given Peninsula confidence that **permits can be granted on or even ahead of the current schedule.**

Yours Sincerely



John (Gus) Simpson
Chairman

For further information, please contact our office on (08)9380 9920 during normal business hours.

Competent Person

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Jim Guilinger, Principal of independent consultants World Industrial Minerals who 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 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Guilinger consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Please note that the potential quantity and grade of the Exploration Targets in this announcement are conceptual in nature, that there has been insufficient exploration to define a Mineral Resource and that it is uncertain if further exploration will result in the determination of a Mineral Resource.