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Companies Announcement Office
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OPTIMISATION STUDY ENHANCES LANCE ECONOMICS

Highlights

- **NPV(8%) increased by 15% to $305 million**
- **Steady state free cash flow increased by 18% to $86 million p.a.**
- **Initial Capital costs reduced by 11.5% to $69 million**
- **Steady state C1 cash cost reduced by 10% to $11.70 per lb U3O8**
- **Total steady state operating cost reduced by 5% to $34.80 per lb U3O8**

Summary

Peninsula Energy Limited (Company) is pleased to announce the completion of an extensive optimisation study **(OS)** of the May 2012 TREC Feasibility Study (**FS**). The OS has delivered a substantial reduction in capital and operating costs which significantly enhance the economics of the project.

The Optimisation Study **(OS)** was conducted over a period of six months by the senior development and production team at Strata Energy Inc. **(Strata)** in conjunction with TREC Inc. **(TREC)**. The OS includes adjustments for the January 2013 JORC compliant resource upgrade to 53.7mlbs U_3O_8 at the Ross, Kendrick and Barber Production Units.

The operating parameters modelled in the OS are the same as those applied to the FS being the Ross, Kendrick and Barber Production Units feeding a Central Processing Plant (**CPP**) with a permitted capacity of up to 3.0mlbs per annum. The first production unit will be at Ross with a capacity of 750klbs per annum with the sequential inclusion of the Kendrick and Barber Production Units ramping up over several years to 2.2mlbs per annum steady-state production.

The OS supplements the TREC May 2012 FS and together will form the basis for the ongoing evaluation of the Lance Projects.

Optimisation Study

The Lance Projects have 312 line kilometres of identified roll fronts and an exploration target of 104-163mlbs U_3O_8, which is in addition to the JORC-compliant resource. These roll fronts stretch over 50 kilometres north-south and are open to the north, south and west. The

Company has explored only part of this area in the last five years and has successfully delineated over 53.7mlbs U_3O_8 JORC compliant resource[1].

The Optimisation Study **(OS)** was conducted over a period of 6 months by senior development and production staff at Peninsula's wholly owned subsidiary Strata Energy Inc. **(Strata)**. This production team includes geologists and engineers with extensive ISL process-well field design, plant construction and production experience. Ongoing oversight and technical input was provided by Wyoming based ISL engineering group TREC.

Over the past twelve months Strata has assembled a highly experienced team which includes former Cameco and Uranium One professionals with specific production-well field design, construction expertise and operational experience acquired building and operating ISL plants in USA, Kazakhstan and Australia.

As with the FS, the OS assumes further production units are to be permitted at Kendrick and Barber and will follow Ross into production at consecutive intervals. This assumption includes the conversion of 21.9mlbs of the 36.5mlbs of the inferred U_3O_8 resources to indicated category or better.

The OS involved a rigorous review of the engineering and operational aspects of FS whilst maintaining the key parameters applied to the Ross DFS and FS (updated to include the January 2013 JORC compliant resource statement). The OS has utilised a discount rate at eight percent (8%) and has included contingencies relevant to the respective production units.

The results of the OS included:

Steady State Production - Financial Metrics		US$ pa	US$/lb
Gross revenue		**178m**	**62.33***
Royalties and indirect taxes		17m	7.83
Operating costs		18m	8.29
Restoration and closure costs		7m	3.41
Ongoing wellfield development costs		33m	15.27
Total operating costs		75m	**34.80**
EBITDA		103m	
Pre-tax NPV 8%	**US$305m**		
Pre-tax cashflow	**US$852m**	**86m**	
Positive cashflow	**Year 3**		
Payback	**6.1 years**		
IRR	**28%**		

* 2013 Long term contract price escalated

Cautionary Statements

The OS has adopted a metallurgical recovery of 64% and for the Ross, Kendrick and Barber Production Units. It should be noted that prior determination of mineral recoveries for in-situ mining operations is complicated by the need to approximate in-ground conditions during the laboratory testing process.

The Company is also continuing the drilling program at Kendrick and Barber with the aim of upgrading a minimum 65% of the inferred resources into a measured or indicated category to provide the feedstock for the expanded project.

It should be noted that the FS and OS contain assumptions relating to quantities of Inferred resources being converted to Indicated within the Lance Projects and has had the operational, production and financial parameters from the Ross DFS applied to them.

Permitting and Project Development Timeline

In November 2012 the Wyoming Department of Environmental Quality **(WDEQ)** granted a Permit to Mine **(PTM)** to Strata for the Ross Project.

The PTM is the second of three licenses required for ISL mineral recovery to occur at the Ross ISR project. The first license was the Deep Disposal Well (DDW) license granted in April 2011. The final license required before commencement of production is the Combined Source and 11e. (2) Byproduct Material License **(SML)** issued by the US Nuclear Regulatory Commission **(NRC)**.

Strata received the draft SML for the Ross ISR project in early November 2012. The NRC's issuance of the draft SML demonstrates that the project is technically sound and that the approaches to public and environmental safety outlined in the application were robust. Having concluded the PTM licensing process, Strata is now focusing on the grant of the final SML.

Peninsula has completed engineering design to allow certain pre-license construction such as the installation and testing of a deep disposal well, installation of production monitoring wells, the ordering of certain components of the CPP and civil works in preparation for the CPP and its footings. These construction activities are now permissible, subsequent to changes to the NRC guidelines and will shorten the overall project development timeline.

In February 2013 the NRC issued the Safety Evaluation Report **(SER)** for the Lance Projects Central Processing Plant and Ross Permit Area. The SER document acknowledges compliance of the Ross license application technical report with US regulations surrounding the receipt, possession and use of uranium byproduct and source materials.

The SER represents the conclusion of NRC technical review of the safety aspects of the application including:

- Site characterization
- Facility and process design
- Effluent controls and waste management
- Radiation safety plans and programs
- Groundwater protection
- Facility decommissioning and reclamation
- Accident analysis

The SER includes NRC license conditions and Strata's agreement thereto and reflects the NRC's completion of the draft SML. The SML is now in the final format to be issued upon

completion of the environmental review, which is the final step in the licensing process. The environmental review format is scheduled to be published later this month in the Draft Supplemental Environmental Impact Statement **(DSEIS)**. The final SEIS is anticipated in Q4 2013 with SML grant to follow.

All new project area permitting is designed so they are contiguous with the Ross permit area and are deemed amendments to the Ross SML (once issued) rather than standalone applications. This strategy will significantly reduce the permitting process and timing.

Table 5: Permitting Status – Major Permits

Permit	Submitted	Status
Source Material License (NRC)Safety Evaluation Report Supplemental Environmental Impact Statement Final SML	December 2010	Received DRAFT SML Nov 2012. **Granted** SER March 2013. Draft expected March 2013 Q4 2013
Permit to Mine (WDEQ)	January 2011	**Granted** November 2012
Plan of Operations (BLM)	January 2011	BLM Cooperating Agency with the NRC – reduces duplication. Review ongoing.
Deep Disposal Well Permit (WDEQ)	June 2010	**Granted** April 2011
Air Quality Permit (WDEQ)	July 2011	**Granted** September 2011

Project Development Funding

In December 2012 Peninsula executed agreements with funds managed by BlackRock Financial Management, Inc. **(BlackRock)** providing for the issuance of up to US$22 million in senior secured notes **(Notes)** and raising a further $11.72 million through a placement of shares and attaching options. In addition Peninsula raised a further $2.87 million through a placement of shares and attaching options to its major shareholder Pala Investments Holdings Limited.

The drawdown of the Notes is conditional upon the grant of the Permit to Mine and Peninsula entering into a U_3O_8 sales agreement on terms satisfactory to BlackRock including a net present value equal to the principal amount of the Notes.

BlackRock also has a first right of refusal on a second debt financing planned around the grant of the SML for an amount up to US$80 million.

The proceeds from the issue of the Notes and shares will be used to complete pre-SML construction, including deep disposal wells, monitoring wells, CPP site works, civil works, ancillary roads, plant long lead items and working capital.

In conjunction with and complementary to the debt facility above, Peninsula has also commenced the application process with the Wyoming Business Council for up to US$70 million in Industrial Development Bonds **(IDB)**. Crook County, the issuer of the IDB's, has voted to unanimously support the application.

The successful grant of a combination of these notes and bonds would be used for the completion of the CPP, CPP expansion, satellite ion exchange plant and initial well-field development.

Path Forward

The Lance Projects are ready to be progressed to the construction stage subject to current permitting and project funding status. Total construction time is estimated at twelve months (6 months pre-SML and 6 months post SML) with first commercial U_3O_8 production estimated to commence in 2014 subject to final permitting.

The Company has assembled a highly experienced team with specific production experience in ISL operations. Detailed design and engineering is completed and the Company expects to finalise the award of an EPC contract in the coming weeks. Monitoring well installation has commenced and site preparation and civil works are planned to commence after this appointment.

The Company's Executive Chairman Gus Simpson commented: "*We are extremely pleased with the optimisation and progress achieved since the appointment of the production team; it has delivered substantial cost savings and added significant value to the Lance Projects.*"

Yours sincerely

John Andrew Simpson (Gus)
Executive Chairman
Peninsula Energy Limited

For further information, please contact our office on +61 (0)8 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 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 he is undertaking as Competent Persons 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.

Certain disclosures in this release, including estimates of resources, constitute forward-looking statements that are subject to numerous risks, uncertainties and other factors, which may cause future results to differ materially from those expressed or implied in such forward-looking statements. Such risks include, but are not limited to, fluctuations in uranium prices and currency exchange rates, uncertainties of estimates of capital and operating costs, recovery rates, production estimates and estimated economic return, continuity and grade of mineral deposits, as well as political and operational risks and governmental and judicial outcomes and general market conditions.

Please note that in accordance with Clause 18 of the JORC (2004) Code, the potential quantity and grade of the "Mineralised Potential" in this announcement must be considered conceptual in nature as there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.

Disequilibrium Explanatory Statement: eU_3O_8 refers to the equivalent U_3O_8 grade. This is estimated from gross gamma down hole measurements corrected for water and drilling mud in each hole. Geochemical analysis may show higher or lower amounts of actual U_3O_8, the difference being referred to as disequilibrium.

Disequilibrium factors were calculated using the Peninsula PFN database and categorized by area and lithological horizon. Specific disequilibrium factors have been applied to the relevant parts of the resource based on comparative studies between PFN and gamma data. There is an average positive 11% factor applied. All eU_3O_8 results above are affected by issues pertaining to possible disequilibrium and uranium mobility.

[1] Current JORC Compliant Resource Estimate

Resource Classification	Tonnes Ore (M)	eU3O8 kg (M)	eU3O8lbs (M)	Grade (ppm eU3O8)
Measured	4.1	2.1	4.5	495
Indicated	11.6	5.7	12.7	497
Inferred	35.5	16.6	36.5	467
Total	51.2	24.4	53.7	476

(The JORC resource is reported above a lower grade cut-off of 200ppm and a GT of 0.2)