



ASX Release

24 October 2014

**BLACK RANGE MINERALS  
LIMITED**

Suite 9  
5 Centro Ave  
Subiaco WA 6008  
Australia  
Tel: +61 8 9481 4920  
Fax: +61 8 9226 2027

**Australian Stock Exchange  
Symbol: BLR**

**Contact:**

Mike Haynes  
Managing Director

**E-mail:**

info@blackrangeminerals.com

**Directors / Officers:**

Alan Scott (Non-Exec. Chairman)  
Mike Haynes (Managing  
Director/CEO)  
Ben Vallerine (Non-Exec.  
Director)  
Joseph Havlin (Non-Exec.  
Director)  
Ian Cunningham (Company  
Secretary)  
Bev Nichols (CFO)

**Issued Capital (pre- Placement  
and SPP):**

2,793 million shares  
92.5 million unlisted options

**Last closing price of BLR shares  
on the ASX:**

\$0.004

## **FURTHER POSITIVE RESULTS FROM ABLATION TESTWORK**

- Extensive Ablation testwork continues to be undertaken
- Very encouraging results continue to be returned from the 5tph Unit, with uranium recoveries of up to 93% into the finest size fractions achieved
- Recent testwork has been validated by independent engineer oversight; as well as by undertaking chemical analysis at an independent laboratory
- Optimal operating parameters being established in advance of field trials
- Considerable progress made in discussions with multiple parties interested in deploying the 5tph Unit for field trials

Black Range Minerals Limited (ASX:BLR) ("**Black Range**" or "**the Company**") is pleased to provide an update on the development of the rapidly emerging Ablation technology. Black Range holds a 50% interest in the application of Ablation at mineral deposits, globally, through a 50:50 joint venture with Ablation Technologies, LLC ("**Mineral Ablation**").

It is anticipated that Ablation will have a very positive effect on the economics of developing not only the Company's 100% controlled Hansen/Taylor Ranch Uranium Project in the USA, that hosts mineral resources of 90.4 million pounds of U<sub>3</sub>O<sub>8</sub>, but also many other sandstone-hosted uranium deposits around the world (see below).

### **Recent Ablation Testwork**

During the past months Mineral Ablation has undertaken further extensive testwork with the semi-commercial scale Ablation unit that it designed and constructed during 2013 ("the **5tph Unit**"). Tests have predominantly been undertaken with ore from the "October stockpile" – ore that is typical of many deposits in the Colorado Plateau Province. This province encompasses the four corners region of Colorado, New Mexico, Utah and Arizona, and hosts a large proportion of the uranium resources in the USA. Multiple operational parameters have been varied during several iterative series of tests, to help establish the optimal operating parameters for different ore types.

To validate the veracity of the testwork and indeed the performance of the Ablation system as a whole, independent engineers have been overseeing recent tests. In line with this, multiple samples have been analysed by an independent laboratory, rather than undertaking such analysis in-house.

As observed during previous testwork, uranium recoveries of up to 93% into the finest size fractions have been consistently achieved. These results reaffirm that it is highly likely that recoveries of >90% can be achieved at commercial scales.

In addition to the extensive testwork undertaken in the 5tph Unit, tests have been undertaken for several new potential clients utilising Mineral Ablation's smaller pilot plant. Extremely encouraging results have been returned from such tests, and discussions with these third parties regarding undertaking more advanced testwork continue. This continues to provide the Company confidence that Ablation can be commercialised in the near term.

### **Potential Deployment of the 5tph Unit for Field Trials**

The Company is also very pleased to advise that it has advanced discussions with several third parties whom own uranium resources around the world and whom have expressed keen interest in deploying the 5tph Unit to their projects

for advanced field trials. It is significant that new parties have recently been expressing interest in Ablation as uranium prices improve.

While agreements to undertake such work are yet to be formalised, the Company remains extremely confident that there is a substantial market for Ablation on a commercial basis, and that a unit will be deployed to the field in the near term.

### **Background on Ablation**

Ablation was patented by Ablation Technologies LLC (“**ABT**”), a company based in Wyoming, USA. It is a low cost method of separating uranium mineralisation by applying a physical, grain-size separation process, to ore slurries. No chemicals are added in the process, yet very high mineral recoveries can be achieved with considerable mass reduction, using grain-size classification to separate a high-value, high-grade ore product from a coarse-grained barren “clean sand” product. Application of Ablation is expected to have a very positive effect on the development of many uranium deposits, globally, because it is expected to significantly reduce both the capital and operating costs for many projects; while timelines to obtain mine permits may also be reduced.

Extensive testwork has shown that, from amenable sandstone-hosted uranium ore types, typically more than 90% of the uranium mineralisation can be separated into 10-20% of the initial sample mass. Development work on a secondary upgrade circuit has seen recoveries in test work exceed 99%.

In April 2012 Black Range released the results of a scoping study that indicated the best way to develop its Hansen/Taylor Ranch Uranium Project (“**the Project**”) is to utilise underground borehole mining and Ablation. The scoping study demonstrated the robust nature of the chosen development scenario, with estimated operating costs of approximately US\$30/lb U<sub>3</sub>O<sub>8</sub> and capital costs, based on off-site uranium milling, estimated to be less than US\$80 million.

Shortly thereafter, in light of the substantial benefits of utilising Ablation at the Project, while also recognising the potential to apply this process elsewhere, the Company reached agreement with ABT to jointly commercialise the Ablation process. Black Range and ABT agreed to establish the Mineral Ablation, with Black Range agreeing to fund commercialisation. Mineral Ablation holds the rights to utilise Ablation at all mineral deposits (not just for uranium), globally. Applications of Ablation other than for uranium are yet to be assessed, but it is anticipated that additional opportunities could arise.

Abundant testwork, on samples from numerous sandstone-hosted uranium deposits around the world, has confirmed that Ablation will have widespread applications. Mineral Ablation is advancing negotiations with numerous parties that have successfully commissioned test work on samples from their deposits, whom are now interested in undertaking more extensive field trials. These opportunities provide Mineral Ablation potential near-term revenue streams.

**For further information please contact:**

**Mike Haynes**

**Managing Director**

**Phone: +61 8 9481 4920 (Australia) or +1 303-279-4946 (US)**

**Email: [mhaynes@blackrangeminerals.com](mailto:mhaynes@blackrangeminerals.com)**

**or**

**Ian Cunningham**

**Company Secretary**

**Phone: +61 8 9481 4920**

**Email: [icunningham@blackrangeminerals.com](mailto:icunningham@blackrangeminerals.com)**

### **Competent Person’s Statement**

*The information in this announcement that relates to Mineral Resources at the Project is based on information compiled by Dr Rex C. Bryan who is a member of the American Institute of Professional Geologists. Dr Rex C. Bryan compiled this information in his capacity as a Principal Geologist of Tetra Tech. Dr Rex C. Bryan has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Dr Rex C. Bryan consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.*

*For further details in relation to the mineral resource estimate, please refer to the ASX announcement of 23 April 2014 ("**Resource Announcement**"). The Company confirms that:*

- i) it is not aware of any new information or data that materially affects the information included in the Resource Announcement; and*
- ii) all material assumptions and technical parameters underpinning the mineral resource estimate in the Resource Announcement continue to apply and have not materially changed.*

### **Caution Regarding Forward Looking Statements**

*This announcement contains forward looking statements which involve a number of risks and uncertainties. These forward looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. The forward looking statements are made as at the date of this announcement and the Company disclaims any intent or obligation to update publicly such forward looking statements, whether as the result of new information, future events or results or otherwise.*

**Further information on Black Range can be sourced from [www.blackrangeminerals.com](http://www.blackrangeminerals.com)**