SOUTH BOULDER MINES LTD

# ASX Release

22 April 2014

## Company Details

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| ASX Code: | STB |
| Share Price | $0.21 |
| Market Cap | $27M |
| Shares on issue | 129M |
| Company options | 21M |
| Cash at Bank | $10M |

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# Key metallurgical test work starts for Colluli potash project

*Program aimed at reducing costs and optimising economics by processing all the different salt types which make up the Colluli resource*

- Metallurgical test program underway as part of South Boulder's revised strategy for developing the Colluli Potash Project.
- Tests aimed at confirming that each of the three salt types which make up the +1Bt Colluli resource can be processed - previous strategy was based on processing just one of the salt types.
- Recent work shows operating costs can be cut significantly by mining all salts simultaneously .
- Ability to produce high-value potassium sulphate (SOP) expected to further improve economics.
- Prefeasibility Study due for completion by end of this calendar year; Definitive Feasibility Study due for completion by mid-2015.
- Eritrean Joint Venture partners ENAMCO supportive of the new strategy and the improved outcomes for all stakeholders.

South Boulder Mines (ASX: STB) is pleased to advise that it has taken a key step in its strategy to develop the Colluli Potash Project in Eritrea with metallurgical test work underway to confirm that each of the three salt types which make up the 1 billion tone-plus resource can be processed.

The test work is central to South Boulder's revised development strategy for Colluli. Under the previous strategy, only the salt type known as sylvinite, which accounts for just 16 per cent of the resource, was to be processed.

The test work is aimed at confirming that all the salt types can be processed to make potash. This strategy has the potential cut costs significantly, increase returns and extend mine life.

The work will by done by engineering and processing consultant Lycopodium Minerals (Perth and Toronto Offices) in conjunction with Global Potash Solutions Principal, Don Larmour. It will take place in the Saskatchewan Research Council's Minerals Processing Facility.

Mr Larmour has extensive experience in potash processing and specialises in crystallisation and brine chemistry, both of which are key aspects of the Colluli test work. He has also developed base-case plant designs capable of processing all Colluli's potassium-bearing salts in a single processing circuit.

As part of this contract, and using the results of the metallurgical test work, Lycopodium will estimate the capital and operating costs for the project. These calculations will be conducted to pre-feasibility study levels, giving South Boulder clear technical and financial forecasts in preparation for the start of a full definitive feasibility study, which is now expected to be completed by mid-2015.

By processing the carnallitite and kainitite mineralisation in addition to the sylvinite, the project has the potential to significantly reduce operating costs. This is because the carnallitite and the kainitite material would be considered as ore rather than waste, meaning the stripping ratio will be cut substantially.

This approach would also significantly extend the mine life due to the expanded resource base.

South Boulder is in the process of sending samples to the test facility. The first round of test work will focus on ore characterisation, liberation, dissolution rates and flotation tests on the three types of mineralization. This is aimed at demonstrating that all mineralisation types can be used to produce potash and can be processed at the same time.

South Boulder Chief Executive Paul Donaldson said the test work could have a substantial impact on the economics of the Colluli project.

“The ability to utilise each of the three types of mineralisation will unlock the immense value of Colluli,” Mr Donaldson said.

“This approach will cut our costs, increase our product suite, increase our revenue per tonne of product generated and extend our mine life significantly.

“The end result will be a project that is significantly more attractive from both a funding and shareholder return perspective.

“We are delighted to have an experienced and reputable engineering company working on this phase of the project. Lycopodium not only has a vast amount of experience in African projects, they also have Eritrean experience, having completed the definitive feasibility study for Chalice gold in 2010. I am confident that having a potash consultant of Don Larmour’s experience and calibre working with the team will give us a successful outcome.”

Berhane Habtemariam, General Manager of ENAMCO said: “ENAMCO welcomes this new approach and is very much looking forward to the results of the test program. The Colluli Mining Share Company has revised and endorsed the path forward and we are all focussed on working together to get the best outcome for the project.”

- ENDS -

## More information:

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Paul Donaldson
**CHIEF EXECUTIVE OFFICER**

Flavio Garofalo
**COMPANY SECRETARY**

## About South Boulder Mines Ltd

South Boulder is an ASX-listed (ASX: STB) resources company currently developing the emerging, world-class Colluli Potash Project located in Eritrea, Africa. The Colluli Potash Project is located in the Danakil Depression region of Eritrea ~65km from the coast comprising approximately 500km². South Boulder Mines Limited has been actively exploring for potash at the Colluli Potash Project in Eritrea since 2009. Colluli is the world's shallowest potash deposit (starting at 16m), facilitating the low capex open pit mining and favourably positioned to supply the world's fastest growing markets.

The JORC/NI43-101 Compliant Mineral Resource Estimate for the flagship Colluli Potash Project now stands at 1.08 billion tonnes @ 18% KCl for 194Mt of contained potash. Substantial project upside exists in higher production capacity and market development for other contained products. Engineering Scoping Study (ESS) results were favourable, proving that an economic 2Mt p.a. potash mine can be built at a materially lower cost than typical potash development. The start-up capital cost for Colluli is one of the lowest in the industry; couple this with cheap expansion capability via open pit mining methods, excellent infrastructure and location, and it becomes even more attractive, ensuring South Boulder gains a high level of investment interest for the long term. South Boulder Mines Ltd is working steadily towards developing the world's first, modern, open pit potash mine.

## Competent Persons and Responsibility Statement

The Colluli Potash Project has a current JORC/NI43-101 Compliant Measured, Indicated and Inferred Mineral Resource Estimate of 1,079.00Mt @ 17.97% KCl or 11.35% K2O (total contained potash of 194.09Mt KCl or 122.61Mt K2O). The resource contains 261.81Mt @ 17.94% KCl or 11.33% K2O of Measured Resources, 674.48Mt @ 17.98% KCl or 11.36% K2O of Indicated Resources and 143.50Mt @ 18.00% KCl or 11.37% K2O of Inferred Resources.

This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported by independent consultants ERCOSPLAN and announced by South Boulder on 16 April 2012.

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Greg Knox using estimates supplied by South Boulder Mines Ltd under supervision by Ercosplan. Dr Henry Rauche and Dr Sebastiaan Van Der Klauw are co-authors of the JORC and NI43-101 compliant resource report. Greg Knox is a member in good standing of the Australian Institute of Mining and Metallurgy and Dr.s' Rauche and Van Der Klauw are members in good standing of the European Federation of Geologists (EurGeol) which is a "Recognised Overseas Professional Organisation" (ROPO). A ROPO is an accredited organisation to which Competent Persons must belong for the purpose of preparing reports on Exploration Results, Mineral Resources and Ore Reserves for submission to the ASX.

Mr Knox,Dr Rauche and Dr Van Der Klauw are geologists and they have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they have undertaken to qualify as a Competent Person as defined in the 2004 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Knox, Dr Rauche and Dr Van Der Klauw consent to the inclusion in the report of the matters based on information in the form and context in which it appears.

## Quality Control and Quality Assurance

South Boulder Exploration programs follow standard operating and quality assurance procedures to ensure that all sampling techniques and sample results meet international reporting standards. Drill holes are located using GPS coordinates using WGS84 Datum, all mineralisation intervals are downhole and are true width intervals. Assay values are shown above a cut-off of 6% K2O. The samples are derived from HQ diamond drill core, which in the case of carnallite ores, are sealed in heat sealed plastic tubing immediately as it is drilled to preserve the sample. Significant sample intervals are dry quarter cut using a diamond saw and then resealed and double bagged for transport to the laboratory. Halite blanks and duplicate samples are submitted with each hole. Chemical analyses were conducted by Kali-Umwelttechnik GmBH Sondershausen, Germany utilising flame emission spectrometry, atomic absorption spectroscopy and ionchromatography. Kali- Umwelttechnik (KUTEC) Sondershausen1 have extensive experience in analysis of salt rock and brine samples and is certified according by DIN EN ISO/IEC 17025 by the Deutsche Akkreditierungssystem Prüfwesen GmbH (DAR). The laboratory follow standard procedures for the analysis of potash salt rocks chemical analysis (K+, Na+, Mg2+, Ca2+, Cl-, SO42-, H2O) and X-ray diffraction (XRD) analysis of the same samples as for chemical analysis to determine a qualitative mineral composition, which combined with the chemical analysis gives a quantitative mineral composition.