



ASX Release

22 December 2014

Company Details

ASX Code:	STB
Share Price	\$0.185
Market Cap	\$26M
Shares on issue	139M
Company options	28M
Cash at Bank	\$9M

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Mining Methods Study Validates Surface Miners and Eliminates Need for Primary Crushing

Highlights

- Geotechnical and material characterisation work completed for trafficability and mining method for Colluli Potash Project
- Tests verify suitability of surface miners for extraction of Colluli salts
- Tests confirm surface miner capability to perform primary crushing
- Colluli haul fleet configuration finalised
- Average pit depths over first 30 years of mine life are 30m to 50m
- All inclusive mining costs forecast at \$3.29 per tonne of material mined
- Pit sequence optimisation process has commenced
- Pre-feasibility study on track to be completed in February 2015

South Boulder Mines (ASX:STB) ("South Boulder" or "the Company") is pleased to advise it has finalised the open cut mining method to be used for the Colluli Potash Project in Eritrea. This decision follows the completion of a mine method analysis conducted by AMC Consultants for the pre-feasibility study for the production of potassium sulphate. Mineralisation is encountered close to the surface, supporting open pit rather than underground methods. The average depth, over the first 30 years, is approximately between 30m and 50m.

The review took into consideration the physical characteristics and trafficability of the materials within the Colluli resource, as well as the geotechnical characteristics of the resource components. The Colluli resource contains a broad suite of salts suitable for the production of potash fertiliser. The resource also contains large amounts of gypsum, rocksalt and magnesium chloride. Mining methods assessed included conventional drill and blast, and surface miners with different haul truck classes.

The study has identified 110t diesel powered surface miners matched with 90t rigid body dump trucks as the most suitable method and configuration. Surface miners are proven for the application and are used for rocksalt mining throughout the world. The miners are expected to be applied with cut depths of up to 0.40 metres. The cutting horizon is able to follow the grade and lithological contacts of the ore, across the slope. The average down dip slope of Colluli is only 2% which is well within the working range of the surface miners.

Whilst the surface miners provide high selectivity in the mining process, one very important advantage is the milling capability of the machine which eliminates the need for primary crushing and use of explosives in the mining operation.

In October 2013, South Boulder announced the elimination of grinding infrastructure following favourable metallurgical testing. The decision to utilise surface miners further reduces the energy requirements of the processing plant, and further reduces the processing plant capital costs.

Approximate all inclusive mining costs are estimated to be \$3.29 per tonne of material mined. Optimisation of the mining schedule is now underway to minimise the overall mining costs per tonne of product (potassium sulphate) made.

Managing Director, Paul Donaldson said, "We are pleased to have been able to lock this method into the pre-feasibility study. It offers capital and operating cost advantages relative to conventional drill and blast operations, and also provides safety advantages by eliminating explosives from the operational requirements. We anticipate the ongoing focus of the project team to reduce capital and operating costs, in particular, energy costs, which will put the operation in good stead when we bring together all of the costings from the pre-feasibility work."

The pre-feasibility study is expected to be complete in February 2015.

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Paul Donaldson
MANAGING DIRECTOR

Amy Just
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

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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.

MrKnox, DrRauche 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-UmwelttechnikGmbH 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 AkkreditierungssystemPrüfwesen 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.

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