Colluli Potash – Defining a new path forward

Broker Presentation

Paul Donaldson: Chief Executive Officer

February 2014
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To generate strong financial returns for South Boulder shareholders and our joint venture partners through development of the Colluli resource.

**Our Company**

**South Boulder Mines Limited (ASX:STB)**

is a Perth-based company focused on developing the Colluli resource in Eritrea to its full potential with a particular emphasis on keeping costs low.

**Commodity**

**Primary Commodity : Potash**

**Unclassified resource constituents:** Rocksalt, magnesium chloride, gypsum, anhydrite

**Current Mineral Resources**

1Bt of potassium-bearing salts suitable for producing potash in the form of potassium sulphate (SOP) and potassium chloride (MOP)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Sylvinitite</td>
<td>110 million tonnes @ 28.4% KCl</td>
</tr>
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<td>Carnallitite</td>
<td>309 million tonnes @ 12.3 %KCl</td>
</tr>
<tr>
<td>Kainitite</td>
<td>596 million tonnes @ 19.8 %KCl</td>
</tr>
</tbody>
</table>

**Our Objective**

**To bring the Colluli resource into production**

Using a scalable, modular approach, initially focusing on potash production then broadening the product suite to exploit the full potential of the resource.
## Capital Structure 11\textsuperscript{th} Feb. 2014

<table>
<thead>
<tr>
<th>Capital Structure 11\textsuperscript{th} Feb. 2014</th>
<th>ASX:STB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary Shares on Issue</td>
<td>128.0M</td>
</tr>
<tr>
<td>Unlisted Options ($0.20 - $2.00)</td>
<td>16.1M</td>
</tr>
<tr>
<td>Performance Shares (unvested)</td>
<td>1.1M</td>
</tr>
<tr>
<td>Market Cap (A$0.23 / Share)</td>
<td>$29.4M</td>
</tr>
<tr>
<td>Cash (A$)</td>
<td>$10.5M</td>
</tr>
<tr>
<td>Top 40 Shareholders</td>
<td>68%</td>
</tr>
</tbody>
</table>

## Major Shareholders

<table>
<thead>
<tr>
<th>Name</th>
<th>Shares (m)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Boulder Management</td>
<td></td>
<td>14.0%</td>
</tr>
<tr>
<td>Sprott Asset Management</td>
<td></td>
<td>12.8%</td>
</tr>
<tr>
<td>Meridian Capital International Fund</td>
<td></td>
<td>9.0%</td>
</tr>
</tbody>
</table>
**Non Executive Chairman:** Seamus Cornelius

Mr Cornelius has 21 years of corporate experience in both legal and commercial negotiations. He has been based in Shanghai and Beijing since 1993, where he has been living and working as a corporate lawyer. From 2000 to 2011 Mr Cornelius was an international partner with one of Australia's leading law firms, specialising in cross border investments in the energy and resource sectors.

**Non Executive Director:** Liam Cornelius

Mr Cornelius graduated from Curtin University of Technology with a BAppSc in Geology. He has been involved in the exploration industry within Australia and Africa for 18 years. As a founding member of South Boulder Mines, Mr Cornelius has played a key role in outlining areas of interest for the company.

**Non Executive Director:** Chris Gilchrist

Mr Gilchrist is a consultant to the mining industry with a background in major projects, mining and mineral processing research, new product development and the operation of large mines. He has served on the boards of several mining companies and his areas of speciality include potash, diamonds, mineral sands and gold.

**Non Executive Director:** Tony Kiernan

Mr Kiernan was previously a commercial lawyer and is currently Chairman of the Australian iron ore producer BC Iron Ltd (ASX:BCI) and a non-executive director of several listed mining companies including Chalice Gold Mines Ltd (ASX: CHN), which has been operating in Eritrea since 2009.

**Chief Executive Officer:** Paul Donaldson

Mr Donaldson was appointed to the role of Chief Executive Officer in February 2013. He joins South Boulder Mines from a series of senior management roles with BHP Billiton. Mr Donaldson has experience in large scale open cut mine management, supply chain logistics, mineral processing, business improvement and marketing.

**Chief Financial Officer:** Flavio Garofalo

Mr Garofalo is a CPA with more than 20 years experience in the mineral exploration and mining industry. He has broad experience in project finance, capital raisings, corporate management and investor relations for listed resource companies.
Colluli Snapshot

- **Large resource**: over 1Bt of potassium-bearing salts. – enough to produce more than 190Mt of potassium fertiliser products.

- **Shallow mineralisation**: best suited to open-cut mining - no need for an expensive underground shaft.

- **Potential for diverse product range**: presence of potassium chlorides, potassium sulphates and magnesium sulphates provides a platform for product diversity – specifically production of potassium chloride and/or potassium sulphate.

- **Close proximity to the coast**: 70km from Red Sea coastline, providing shipping options for export.

- **Economic upside**: possible additional products using Colluli’s unclassified high-quality rock salt, gypsum, anhydrite and magnesium chloride.
Colluli Mining Share Company (CMSC): a 50:50 joint venture between South Boulder and the Eritrean National Mining Company (ENAMCO).

- **Debt:** under the agreement, the JV company can borrow up to 70% debt.

- **Equity:** South Boulder is responsible for putting in 30% equity (and any debt-funding shortfall)

- **Cashflows:** After joint venture third party debt is serviced, STB receives 75% of total cashflow until 50% of its equity contribution has been paid (annual basis). The balance of the cash will be split according to the joint venture ownership structure.
Located in a developing potash basin of comparable scale to established regions

The Danakil Potash belt compares favourably with the world’s leading potash belts in terms of size, resource depth and environmental issues

Key Global Potash Belts

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Saskatchewan, Canada</th>
<th>Manaus – Santarem Basin, Amazonas, Brazil</th>
<th>Danakil, Eritrea / Ethiopia, Africa</th>
<th>Urals, Russia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>600km across</td>
<td>400km across</td>
<td>350km across</td>
<td>150km across</td>
</tr>
<tr>
<td>Operator(s) Profile</td>
<td>Established, large cap companies i.e. Canpotex</td>
<td>Emerging mining companies i.e. Brazil Potash</td>
<td>Emerging junior mining companies South Boulder, Allana, EPC</td>
<td>Established, large cap companies K&amp;S Group, Uralkali (Bela-Russian)</td>
</tr>
<tr>
<td>Resource Depth</td>
<td>Canadian deposits typically range from 1,500–2,000m</td>
<td>Similar depth as Saskatchewan Typically “500-2,000m²”</td>
<td>Mineralised zones occur much closer to the surface Typically only 20-100m</td>
<td>Russian depths are typically 1,800 to 2,000m</td>
</tr>
<tr>
<td>Climate</td>
<td>Cold climate</td>
<td>Evaporative solar ponds less effective</td>
<td>One of the hottest areas on Earth Conducive to the use of evaporation and geothermal power</td>
<td>Cold climate Evaporative solar ponds less effective</td>
</tr>
<tr>
<td>Environment / Social</td>
<td>Heavily populated area Significant community/social concerns</td>
<td>Tropical climate, dense vegetation Considerable environmental issues</td>
<td>Flat, arid desert with sparse population Minimal environmental / social issues</td>
<td>Mountainous terrain Low environmental concerns</td>
</tr>
</tbody>
</table>

Notes:
1. Based on Brazil Potash presentation (February 2013).
Colluli contains three potassium-bearing salts:

- **Sylvinitite** – the most commonly used potassium-bearing salt for the production of potassium chloride.

- **Carnallitite** – lower-grade potassium and magnesium-bearing salt. Major raw material for the production of potassium chloride in the Middle East (Israel and Jordan).

- **Kainitite** – historically used for the production of potassium sulphate. Used as a direct application fertiliser in Germany and the Ukraine. Common in brine operations.

Large Resource – 1Bt of potassium bearing salts
Revised strategy based on utilising Colluli’s total resource

Project Resources by NI43-101 Classification

<table>
<thead>
<tr>
<th>Occurrence</th>
<th>Tonnes (Mt)</th>
<th>Equiv. KCl (%)</th>
<th>Total KCl (Mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>262</td>
<td>17.9%</td>
<td>47</td>
</tr>
<tr>
<td>Indicated</td>
<td>675</td>
<td>18.0%</td>
<td>121</td>
</tr>
<tr>
<td>Inferred</td>
<td>143</td>
<td>18.0%</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td><strong>1,080</strong></td>
<td><strong>18.0%</strong></td>
<td><strong>194</strong></td>
</tr>
</tbody>
</table>

Project Resources by Mineralisation

<table>
<thead>
<tr>
<th>Mineralisation</th>
<th>Tonnes (Mt)</th>
<th>Equiv. KCl (%)</th>
<th>Contained KCl (Mt)</th>
<th>% of Total Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sylvinitie</td>
<td>110</td>
<td>28.4%</td>
<td>31</td>
<td>16%</td>
</tr>
<tr>
<td>Polysulphate</td>
<td>65</td>
<td>10.8%</td>
<td>7</td>
<td>4%</td>
</tr>
<tr>
<td>Carnallite</td>
<td>309</td>
<td>12.3%</td>
<td>38</td>
<td>19%</td>
</tr>
<tr>
<td>Kainite</td>
<td>597</td>
<td>19.8%</td>
<td>118</td>
<td>61%</td>
</tr>
<tr>
<td>Total</td>
<td><strong>1,080</strong></td>
<td><strong>18.0%</strong></td>
<td><strong>194</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Kainite dominance.** Kainite has potential to produce two products suitable to the market:

- **Potassium Sulphate** – produced by the separation of salt, then thermal treatment of kainite to produce potassium sulphate

- **Schoenite** – an intermediate potassium-magnesium sulphate fertiliser. Similar products on the market in the US.
Mineralisation commences at approximately 18m

- Resource is stratified with potassium bearing salts sitting on top of each other within the resource
- Mining all salts simultaneously will reduce strip ratio
Utilising all salts minimises strip ratio and mining costs

- The ability to process multiple ore types (sylvite, carnallitite and kainitite) rather than being restricted to one or two, means strip ratios can be significantly reduced.

- Positive impact on mining costs.

- Substantial increase in the size of the resource and ultimate production capability.
Colluli capable of generating a diversified suite of fertiliser products

- Muriate of Potash (MOP)
  - Kieserite
  - Potassium Sulphate
  - Potassium Magnesium Sulphate
- Potassium Chloride
- Magnesium Sulphate
- Sylvinite and Carnallitite
  - Kainitite
    - Schoenite
    - Kainite
    - Potassium Sulphate
    - Potassium Magnesium Sulphate
  - Potassium Chloride
  - Magnesium Sulphate
Colluli has the most favourable coastal access from the entire Danakil depression.

Key Infrastructure Locations

Colluli to Anfile Port (65km)
- Colluli is located ~65km from the proposed port and storage facilities at Anfile Bay
- Logistics costs are expected to be highly competitive compared with other potash Greenfield projects
- The logistics and port costs are estimated at a relatively competitive US$10/t
- Port facilities to accommodate Panamax size vessels

Ethiopian Projects to Dijbouti (~600km)
- Potash projects located in Ethiopia need to transport product 500 – 600km to Dijbouti
- For example:
  - Allana Potash to Tadjourah is 554km
  - Circum Minerals to Tadjourah is 580km
Short distance to coast means low trucking costs

• The installation of a 70km haul road between the site and the proposed port facility will result in low delivery costs to the port with the use of multi trailer road trains.

• This gives the project a distinct advantage relative to the other major potash producing basins with regard to the potential of low margin products (eg salt).
Favourably positioned to supply the world’s fastest growing markets.

Distances to Various KCl Consuming Markets (In Nautical Miles)

<table>
<thead>
<tr>
<th>Distance To:</th>
<th>Nanjing, China</th>
<th>Kandla, India</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Colluli</td>
<td>6,450</td>
<td>1,960</td>
</tr>
<tr>
<td>From SK, Canada</td>
<td>5,300</td>
<td>9,880</td>
</tr>
<tr>
<td>From Urals, Russia</td>
<td>11,960</td>
<td>7,470</td>
</tr>
</tbody>
</table>
Low capital costs by global standards

Note: Capital Intensity = $\text{capex/tonne per annum}$

Source: STB Potash Market Research
Economic Upside exists in unclassified minerals

Markets for these products are well established.

<table>
<thead>
<tr>
<th>Mineral Present at Colluli</th>
<th>Colluli Resource</th>
<th>Global Market Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>rock salt (NaCl)</td>
<td>+ 650Mt</td>
<td>300Mtpa global salt market</td>
</tr>
<tr>
<td>halite (NaCl)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bischofite (MgCl₂)</td>
<td>+200Mt</td>
<td>6 – 7Mtpa global market</td>
</tr>
<tr>
<td>anhydrite</td>
<td>Avg 4% (~40Mt)</td>
<td>187Mtpa Gypsum market</td>
</tr>
<tr>
<td>kieserite (MgSO₄)</td>
<td>40Mt</td>
<td>Established fertiliser segment</td>
</tr>
<tr>
<td>sylvinite (KCl)</td>
<td>111Mt</td>
<td></td>
</tr>
<tr>
<td>carnallite (KCl·MgCl₂·6H₂O)</td>
<td>309Mt</td>
<td>60Mtpa market</td>
</tr>
<tr>
<td>kainite (KCl·MgSO₄·3H₂O)</td>
<td>597Mt</td>
<td></td>
</tr>
</tbody>
</table>
Revised strategy underpinned by processing review

South Boulder has recently completed a processing review to maximise the use of the entire Colluli resource.

Key outcomes:

1. Three alternate processing options identified
2. All options utilise all potassium-bearing salts
3. The options have different capital and operating cost structures
4. The options have different product mix compositions- all options produce potassium sulphate
5. A hierarchy of preferences has been determined to prove processing routes and assumptions
6. Mine planning work taken to PFS level

Work has continued in “no regret” DFS activities throughout the processing review
Immediate Priorities

• Source a suitable service provider to conduct the required testwork to determine the processing path and re-assess project economics and determine start up module
  ➢ Focus is on a modular expansion path and scaled-back capital spend relative to original development path
  ➢ This approach will mitigate safety, commercial, capital and operating jurisdiction issues as well as provide a platform for growth at a lower relative capital investment in contrast with other global potash projects
• Complete baseline social and environmental studies
• Resume DFS work – completion dependent on testwork timeline
Conclusions

1. The Colluli resource is a large deposit with over 1Bt of potassium bearing salts – the underlying source of potash products
2. The range of salts in the resource provides options for the final product mix
3. The resource is close to the coast, reducing transport costs and providing access to key growth markets.
4. Recent studies show that all the Colluli salt types can be used to make potash products. This materially reduces strip ratio and mining costs, expands the usable resource and allows a larger-scale, long-life development. Mine operating cost reductions of $50 per tonne have been achieved at a scoping level relative to the staged development model economics released March 2013.
5. The immediate priority is to validate the most favourable processing option by conducting testwork.
6. Upon completion of the testwork, the project economics will be revised based on an appropriate start up module and the DFS resumed.