ASX Release

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Company Details

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Company options	28M
Cash at Bank	$6.1M

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Colluli Pilot Tests Consistently Produce Ultra High Purity SOP

Highlights

- Colluli process consistently produces ultra-high purity potassium sulphate (SOP)
- 98% K_2SO_4 achieved in final Colluli product vs typical industry product of 94% K_2SO_4
- In conventional potash K_2O reporting terms
    - 52.9% K_2O avg. grade SOP product from Colluli vs typical industry product 50.8%K_2O
    - Maximum Colluli K_2O 53.2%
    - Minimum Colluli K_2O 52.4%
- Ultra-low Chlorine at < 0.1%
- Results repeatable over range of feed material and feed grade
- Optimised DFS process flow diagrams locked in

South Boulder Mines ("STB" or "the Company") is pleased to advise that the results of pilot tests conducted for the Colluli SOP project definitive feasibility study (DFS) have produced ultra-high purity potassium sulphate (SOP) grades. These results were consistently achieved from a series of pilot plant runs conducted throughout March 2015. The grades achieved were consistently higher than industry standard grades.

STB's Managing Director, Paul Donaldson said "The Colluli project simply gets better and better. We have a process and a unique resource which combine to produce a premium fertiliser with a premium grade. The repeatability of the results with a diverse range of feed material demonstrates the robustness of the process. Global Potash Solutions and the Saskatchewan Research Council have done an excellent job on the Colluli process design, which is a commercially proven high yield, low energy input conversion to potassium sulphate achieved by combining KCl and kainite."

Process optimisation tests commenced in January 2015, immediately after completion of the prefeasibility process design. In February 2015, a technical review committee reviewed and endorsed the process design, and proposed a number of process improvements. Pilot testing commenced in March 2015 under the supervision of Global Potash Solutions at the Saskatchewan Research Council (SRC) in Saskatoon, Canada.

Colluli: Ultra-Pure SOP

Potassium sulphate is a premium potash fertiliser used for chloride intolerant crops and arid climatic conditions. A variety of grades and physical forms of SOP are available on the market. Grades and forms for the key global SOP producers are shown in Table 1.

Table 1: SOP Forms and Grades

Product No.	Company	Product Category	Application type	Product Form	K2O (Typical %)	Cl (Typical or Max %)
1	**Compass Minerals Inc.**	Ag products	Spreaders / direct	Ag Granular	51.3%	0.2%
2		(also Turf and Organic K+)	Spreaders / direct	Mid Granular	50.9%	0.3%
3			Spreaders / direct	Choice Granular	50.9%	0.3%
4			Fertigation	Soluble Fines	51.8%	0.2%
5			Compound/Fertigation	Standard / Industrial Fines	52.3%	0.2%
6	**K+S KALI GmbH**	KALISOP® low chlorine max. 0.5 % Cl	Fertigation	Soluble	51.0%	< 0.5%
7		KALISOP fine max. 1.0 % Cl	Spreaders / direct	Fine granular	50.0%	< 1.0%
8		KALISOP® gran.	Spreaders	Granular	50.0%	< 1.0%
9		KALISOP® crystalline max. 0.5% Cl	Compound / soluable	Standard	52.0%	< 0.5%
10	**SQM**	Qrop SOP	Spreaders / direct	Granular / Standard	51.0%	< 1.0%
11		Ultrasol SOP 52	Fertigation	Soluble	52.0%	< 1.0%
12		Ultrasol SOP	Spreaders /soluble	Standard	51.0%	< 1.0%
13	**Tessenderlo Group**	GranuPotasse	Spreader / direct	Granular / bulk blending	50.2%	2.3%
14		K-Leaf	Fertigation	Soluble	52.0%	0.2%
15		Potassium Sulphate Standard	Compound / direct	Standard	50.4%	2.1%
16		SoluPotasse	Fertigation/ foliar	Soluble	51.5%	0.6%
17	**Yara**	Krista SOP	Fertigation	Soluble	51.8%	< 0.7%
18		SOP-G	Spreaders / direct	Granular	51.0%	< 1.0%

Source: Company and industry websites, STB estimates

The grade results are also plotted in Figure 1.

The Colluli ultra-pure SOP also has exceptionally low chlorine levels at less than 0.1%. Chloride intolerant crops include fruits, vegetables, nuts, and coffee.

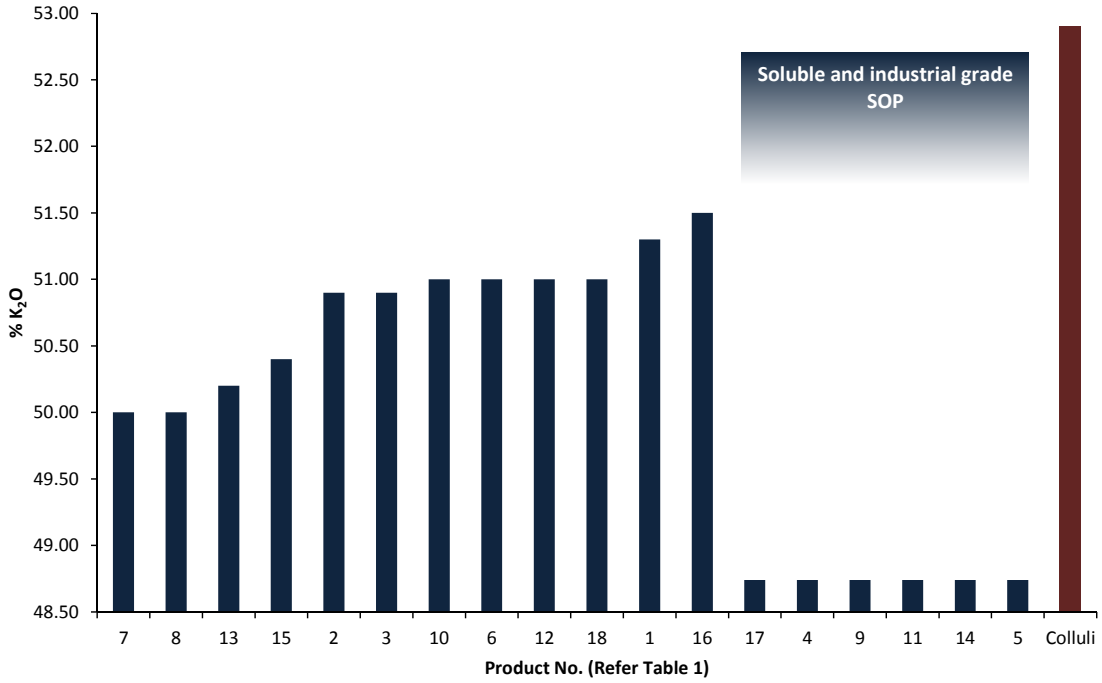


Figure 1: SOP grades (%K2O) versus product No. (refer to table 1) [*Source: Company and industry websites*]

Consistent Pilot Test Results

The pilot test results for Colluli process design are shown in Table 2. The process consistently delivered K_2O results greater than 52% (96% K_2SO_4 purity level), and gave an overall average of 52.9%, putting the Colluli SOP at the top of the quality spectrum. Importantly, the minor constituents of Calcium and Magnesium are also key plant micro-nutrients.

Table 2: Pilot Test Results

Trial	wt % K_2O	wt % K_2SO_4	wt % Mg	wt % Ca
SOP2S-1	53.0	98.06	0.09	0.57
SOP2S-2	52.5	97.13	0.10	0.47
SOP2S-3	52.9	97.87	0.11	0.50
SOP2S-4	53.2	98.43	0.12	0.49
SOP2S-5	53.0	98.06	0.12	0.50
SOP2S-6	53.0	98.06	0.13	0.51
SOP2S-7	52.4	96.95	0.14	0.51
SOP2S-8	53.1	98.24	0.13	0.47
SOP2S-9	53.0	98.06	0.13	0.46
Average	**52.9**	**97.87**	**0.12**	**0.50**

Robust Process Design

SOP has been produced from different feed compositions and sources. Pilot tests were run over a 20 hour period using combinations of kainite from the Colluli resource, with sylvite from both the Canadian potash province of Saskatchewan and sylvite produced from the Colluli resource. Results were consistent, repeatable, and reliable, demonstrating a robust process design.

SOP production from the combination of KCl and kainite is a commercially proven process and application of this process, in combination with process enhancements proposed by the Colluli Technical Review Committee, to the Colluli salts gives a superior SOP product.

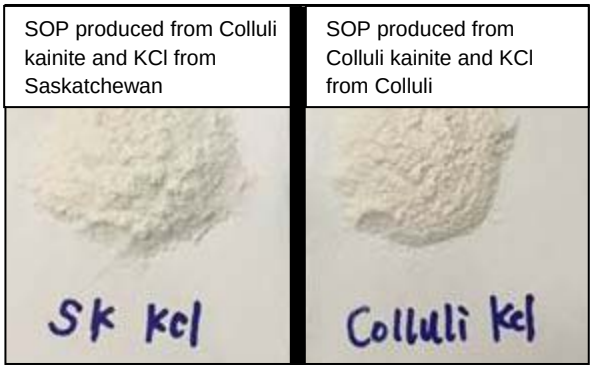


Figure 2: Samples of SOP produced from Colluli salts

SOP Form

SOP is typically sold in three forms; standard, granular and soluble.

Standard SOP typically has a size range of 0.21mm to 1.68mm, and is used for direct application on hardy crops as well as in the manufacture of compound fertilisers. It typically contains 50% potassium oxide (K_2O), and a maximum of 1% chloride.

Granular SOP is used in bulk blends and mechanised spreading. It is produced by mechanically compressing SOP fines, and then breaking and screening it to achieve the desired particle size range of 0.84mm to 3.36mm. It typically contains 50% potassium oxide (K_2O), and a maximum of 1% chloride. The price premium for granular SOP is typically US$20 to US$30 per tonne relative to Standard forms.

Soluble SOP is used in open field fertigation, foliar feeding, greenhouse and hydroponic systems. It contains 52% K2O, and a maximum of 0.5% chloride. It appears as fine powder which dissolves rapidly in water, with a typical particle size range of 0.106mm to 0.30mm. This form of SOP sells for a substantial premium relative to the Standard and Granular forms of SOP.

Fertigation and Growth

Fertigation is the injection of fertilisers, soil amendments, and other water soluble products into an irrigation system. It is practiced extensively in commercial agriculture and horticulture. Use of fertigation systems is growing rapidly due to its ability to provide water to crops in an economical and resource conserving fashion, and deliver nutrients directly to plants at specific stages of their lifecycle. It is usually practiced on high-value crops such as vegetables, turf, fruit trees and ornamentals. Premium fertilisers like potassium sulphate and potassium nitrate are employed in fertigation using micro-irrigation techniques. Key requirements are solubility characteristics and chemistry.

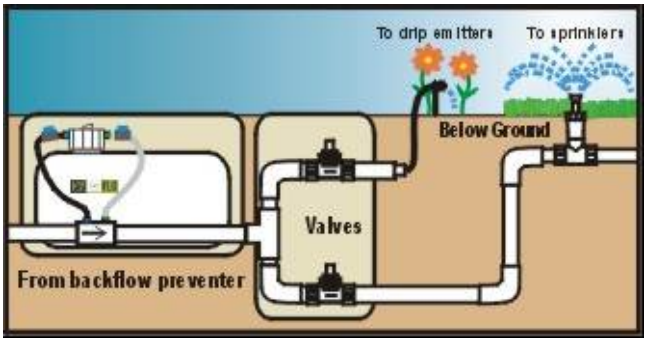


Figure 3: Illustration of fertigation system

Figure 4: Fertigation system in operation

Marketing Samples Ready for Distribution

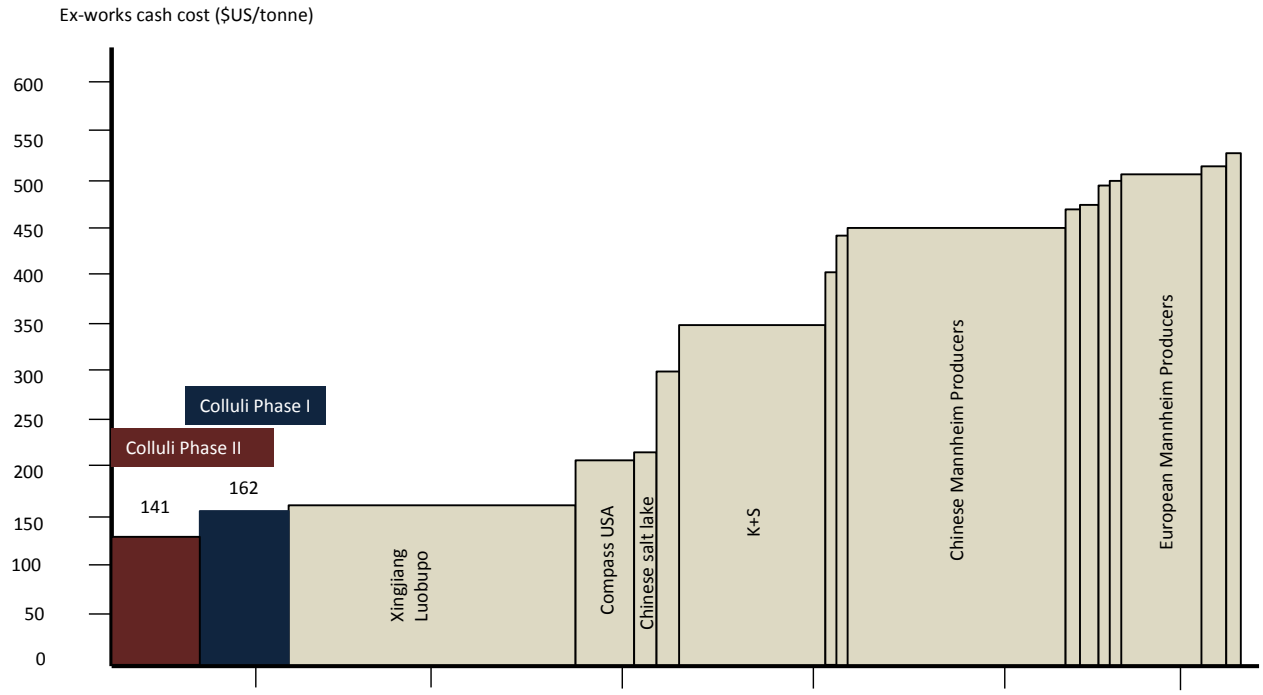
The pilot tests have provided SOP samples that can be introduced to potential commercial partners. Samples are still being generated as the pilot plant trials progress from 20 hours trial runs to 40 hour trial runs.

Two more repeatability tests are planned to round off the DFS metallurgical program. However, given the results to date, it is unlikely that there will be any material differences in the results.

Colluli – Positively Unique

The prefeasibility study completed in February 2015 indicates that the Colluli SOP Project will be in the bottom quartile of production costs. Colluli also has the lowest capital intensity of all advanced SOP projects globally.

The resource has unrivalled proximity to the coast, robust project economics, is underpinned by a large resource, and will produce a premium fertiliser (SOP) with superior product quality.



Source: CRU Research, EPM Mining presentation 2014, Company websites, Integer Research
Note: Where costs were not known, estimates were applied

Figure 5: SOP Cost Curve

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