



ASX Release

20 July 2016

Offtake MOUs signed for second potash product: SOP-M

Highlights

- MOUs signed for **200kt per annum of sulphate of potash magnesia (SOP-M) offtake**
- Offtake discussions progressing towards binding agreements
- This is in addition to the recently announced MOU's signed for 800ktpa of the company's primary product stream, **sulphate of potash (SOP)**
- Current capacity for the first production module of the Colluli development is 425ktpa SOP
- SOP-M is the second in a **growing pipeline of premium products** that can be produced from the globally unique evaporative deposit at Colluli
- Colluli SOP-M is a **highly soluble, chloride free, multi-nutrient potash product with growing demand** as an excellent source of nutrients for use in greenhouses, liquid fertilisers and chloride intolerant crops
- SOP-M has the potential to add significant value to the Colluli project as a second revenue source, and **currently trades in excess of US\$450 per tonne**
- SOP-M demand is increasing but it has **limited production centres globally and is supply constrained**
- Clear demonstration of the unique product diversification potential offered by the Colluli resource





Danakali Limited (ASX:DNK) (“**Danakali**” or the “**Company**”) is pleased to announce that it has signed non-binding MOUs for the supply of 200,000 tonnes per annum of potassium magnesium sulphate (sulphate of potash or SOP-M). SOP-M represents the second premium, chloride free, multi-nutrient potash type from the Colluli resource, which is one of the closest potash deposits to a coastline globally, and is the shallowest known evaporite deposit in the world.

Danakali Managing Director, Paul Donaldson commented:

“We are pleased with the high level of interest for the suite of premium, chloride free, multi-nutrient fertiliser products we have generated from the potassium salt suite within the Colluli resource. The signed MoUs and negotiations underway with potential offtakers highlight that soluble, chloride free, multi-nutrient potash types are in high global demand. This is particularly relevant as the focus on fertiliser and water efficiency improvements continues. Being able to supply product samples generated using the process design and Colluli salts has been extremely advantageous in market engagement activities. SOP-M is quite simple to produce utilising the processing design developed for the Colluli DFS.”

Colluli Sulphate of Potash (SOP-M)

SOP-M represents a unique and exciting opportunity for Danakali and the Colluli Mining Share Company (**CMSC**). SOP-M achieves a significant price premium over the more common potash type, potassium chloride, and currently trades at over USD\$450 per tonne¹.

The price premium over potassium chloride (MOP) is due to its unique properties. It is chloride free, contains three key macro-nutrients; potassium, magnesium and sulphur, and is highly soluble. Such properties make SOP-M highly suitable for magnesium deficient soils, which are commonly found in regions proximate to Colluli such as India, the Middle East and South-East Asia.

SOP-M has limited production centres globally, and as such, is currently not readily available to a large portion of the global market. Danakali high grade product aims to directly feed into this growing, but supply constrained market.



Samples of SOP-M produced from Colluli salts

¹ Greenmarkets



Memorandums of Understanding (MoUs)

Danakali has signed non-binding memoranda of understanding (MoU) for the offtake of 200ktpa of Colluli SOP-M as part of its ongoing market engagement. Samples were provided to potential offtakers from pilot tests completed by the Saskatchewan Research Council (SRC) using potassium salts from the Colluli resource. The samples provided were produced in standard, granular and soluble forms.

Pleasingly, all forms of the Colluli SOP-M product have been positively received. The soluble form has generated the highest level of interest from potential offtakers due to its suitability for use in greenhouses and fertigation (the injection of fertilisers and other water soluble products into an irrigation system).



Global use of fertigation is growing rapidly due to its efficiency in water and nutrient delivery. The ability to minimise water use is one of the world's biggest challenges and is a strong driver of growth in demand for SOP-M going forward.

Fertigation: the injection of soluble fertilisers into irrigation improves yields and reduces overall water requirements

Progress at Colluli

Danakali and CMSC continue to make positive progress on the Colluli Potash project. The definitive feasibility study (DFS) was completed and released on 30 November 2015. The DFS highlights industry leading capital intensity, bottom quartile operating costs, low incremental growth capital and unrivalled product diversification potential. These outcomes are underpinned by a massive 1.1bt ore reserve which delivers an estimated mine life of over 200 years based on DFS production volumes. The project is currently awaiting Mining License approval.





Ministry representatives visit and inspect the Colluli site as part of the Mining License approval process

In June 2016, representatives from the relevant government ministries assigned to the license approvals process visited the Colluli site to commence evaluation of the social, environmental impact assessments and associated management plans for the project.

The site was also visited by the Minister of Energy and Mines and a team of senior officials.

Project funding discussions are underway and the Company has previously signed non-binding MoUs for 800ktpa of sulphate of potash (SOP), as announced in April 2016.

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About Danakali Limited

Danakali is an ASX listed company and 50% owner of the Colluli Potash Project in Eritrea, East Africa. The company is currently developing the Colluli Project in partnership with ENAMCO. Colluli is 100% owned by CMSC, which is a 50:50 joint venture between Danakali and ENAMCO.

The project is located in the Danakil Depression region of Eritrea, and is c. 75km from the Red Sea coast, making it one of the most accessible potash deposits globally. Mineralisation within the Colluli resource commences at just 16m, making it the world's shallowest potash deposit. The resource is amenable to open pit mining, which allows higher overall resource recovery to be achieved, is generally safer than underground mining and is highly advantageous for modular growth.

In November 2015, Danakali released a positive DFS for Colluli which demonstrates industry leading capital intensity and the lowest development costs relative to all SOP projects at DFS level in the world. Bottom quartile operating costs are predicted and mine life is estimated at over 200 years at the DFS production rate, providing the project with substantial growth potential.

SOP is a chloride free, specialty fertiliser which carries a substantial price premium relative to the more common potash type; potassium chloride. Economic resources for production of SOP are geologically scarce. The unique composition of the Colluli resource favours low energy input, high potassium yield conversion to SOP using commercially proven technology. One of the key advantages of the resource is that the salts are present in solid form (in contrast with production of SOP from brines) which reduces infrastructure costs and substantially reduces the time required to achieve full production capacity.

The potassium bearing resource of the Danakil Depression has the unique capability to produce three of the four potash types in the global potash market which comprises potassium chloride (muriate of potash or MOP), potassium sulphate (sulphate of potash or SOP), potassium magnesium sulphate (sulphate of potash magnesia or SOP-M) and potassium nitrate (nitrate of potash or NOP). While CMSC is concentrating on achieving SOP production in the near-term, the focus is on developing a multi agri-commodity and salt business in the medium term.

The resource is favourably positioned to supply the world's fastest growing markets.

Our vision is to bring the Colluli project into production using the principles of risk management, resource utilisation and modularity, using the starting module as a growth platform to develop the resource to its full potential.

Mineral Resource Statements

The 2015 Colluli Potash Mineral Resource is reported according to the JORC Code and estimated at 1,289Mt @11% K₂O Equiv. The Mineral Resource is classed as 303Mt @ 11% K₂O Equiv Measured, 951Mt @ 11% K₂O Equiv Indicated and 35Mt @ 10% K₂O Equiv Inferred. The Competent Person for this estimate is Mr. Stephen Halabura, M. Sc., P. Geo., Fellow of Engineers Canada (Hon), Fellow of Geoscientists Canada, and a geologist with over 25 years' experience in the potash mining industry. Mr. Halabura is a member of the Association of Professional Engineers and Geoscientists of Saskatchewan, a Recognised Professional Organisation (RPO) under the JORC Code and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code.

The 2015 Colluli Rock Salt Mineral Resource is reported according to the JORC Code and estimated at 347Mt @96.9% NaCl. The Mineral Resource is classed as 28Mt @ 97.2% NaCl Measured, 180Mt @ 96.6% NaCl Indicated and 139Mt @ 97.2% NaCl Inferred. The Competent Person for this estimate is Mr. John Tyrrell, a geologist with more than 25 years' experience in the field of Mineral Resource estimation. Mr Tyrrell is a member of the AusIMM, is a full time employee of AMC Consultants Pty Ltd and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code.

Mr. Tyrrell & Mr. Halabura consent to the inclusion of information relating to the Mineral Resource Statements in the form and context in which they appear.

Ore Reserve Statement

The November 2015 Colluli Ore Reserve is reported according to the JORC Code and estimated at 1,113Mt @10% K₂O Equiv. The Ore Reserve is classed as 286Mt @ 11% K₂O Equiv Proved and 827Mt @ 10% K₂O Equiv Probable. The Competent Person for the estimate is Mr Mark Chesher, a mining engineer with more than 30 years' experience in the mining industry. Mr. Chesher is a Fellow of the AusIMM, a Chartered Professional, a full-time employee of AMC Consultants Pty Ltd, and has sufficient open pit mining activity experience relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the JORC Code. Mr Chesher consents to the inclusion of information relating to the Ore Reserve in the form and context in which it appears.

In reporting the Mineral Resources and Ore Reserves referred to in this public release, AMC Consultants Pty Ltd acted as an independent party, has no interest in the outcome of the Colluli Project and has no business relationship with Danakali Ltd other than undertaking those individual technical consulting assignments as engaged, and being paid according to standard per diem rates with reimbursement for out-of-pocket expenses. Therefore, AMC Consultants Pty Ltd and the Competent Persons believe that there is no conflict of interest in undertaking the assignments which are the subject of the statements.