



ASX Release**10 November 2015**

COLLULI DFS UPDATE

- **DFS remains on track for completion in Q4 2015**
- **Project optimisation work identified in PFS expected to materially enhance project economics**
- **Colluli is a large, shallow resource comprising a variety of potassium bearing salts in close proximity to the coast and key potash markets of the future**

Danakali Limited (**Danakali, ASX:DNK**) is pleased to provide an update of the Definitive Feasibility Study (**DFS**) for the Colluli Potash Project (**Colluli**), located in Eritrea, East Africa. The project is 100% owned by the Colluli Mining Share Company (**CMSC**), a 50:50 joint venture between Danakali and the Eritrean National Mining Company (**ENAMCO**).

Excellent progress has been made on the DFS during 2015 following the release of highly favourable Prefeasibility Study (**PFS**) results earlier in the year (refer ASX announcement 4 March 2015). The DFS remains on track for completion in Q4 2015, as previously announced.

Throughout the PFS stage a number of optimisation opportunities were identified by the project study teams, and have been integrated into the DFS work program. It is expected that the economics of the project will be materially enhanced relative to the PFS, through simplification of infrastructure and logistics.

Key optimisation areas identified at the PFS stage and subsequently worked on in the DFS:

- 1. Substantial reductions in process water requirements;**
- 2. Identification of subsurface water at the Colluli site which negates the need for 75km seawater delivery pipeline from Anfile Bay for the project start-up phase;**
- 3. Revised process recovery pond layouts and construction schedule;**
- 4. Completion of metallurgical and size optimisation testwork;**
- 5. Simplification of product export logistics; and**
- 6. Optimisation of pit designs following completion of geotechnical work.**

Further details of each of these optimisation areas are included below and in the presentation attached to this announcement.

1. Substantial reductions in process water requirements

Danakali previously announced a 60% reduction in processing water requirements following processing optimisation test work (refer ASX announcement 22 July 2015). In addition to reducing the water supply infrastructure requirements and water delivery costs to site, the water reduction has positively impacted the size of the processing plant mixing tanks, pumps, and piping, thereby



reducing the overall process plant footprint size. The reduction in water consumption has also significantly reduced the size of the recovery ponds (the recovery ponds capture potassium rich brines exiting the processing plant to improve the overall process yield).

2. Identification of subsurface water at Colluli (negates the need for 75km seawater delivery pipeline from Anfile Bay for the project start-up phase)

Finalisation of hydrogeological work supporting the DFS has confirmed that there is sufficient subsurface water to satisfy the processing plant requirements for at least the first 5 years of production. This negates the need to install a 75km seawater pipeline delivery system for the project start-up phase. A second production module is currently planned for commissioning 5 years after the first, allowing the installation of a single water pipeline to supply both modules.

Further definition on what has been identified as a potentially large sub-surface aquifer may completely eliminate the need for the installation of any water delivery system from the coast to the Colluli mine-site. This definition work has been deferred to post release of the DFS.

3. Revised process pond layout and construction schedule

The optimisation of site layouts has allowed refinement to a more efficient recovery and tailings pond layout. This change should allow a staged construction and development schedule, which minimises development capital and progressively installs the recovery ponds as the plant recirculation load grows over time. Relocation of the tailings ponds closer to the processing plant is expected to reduce processing plant operating costs.

4. Completion of metallurgical and size optimisation testwork

The finalisation of the internal plant design, following an extensive and comprehensive metallurgical test program, has allowed the development of an optimised process design. It is planned to have a number of simpler, less energy intensive size separation units for solid-liquid separation processes.

5. Simplification of product logistics

The product export terminal (PET) has been removed from the site infrastructure following a full review of product logistics and extensive discussions with ENAMCO. Final product will be containerised at site and trucked to the port of Massawa, which is located approximately 180km from the Colluli site. The Port of Massawa has the capability to export both containerised and bulk materials and is Eritrea's key import and export facility. The use of Massawa eliminates the need to construct an 85km road to Anfile Bay. A 50km road will be constructed to link the site with the coastal road leading to Massawa. Product exporting options and infrastructure for Anfile Bay will be reviewed after project commissioning.



6. Optimisation of pit designs following completion of geotechnical work

DFS level geotechnical work on the clastics material on the periphery of the pit shells has been completed and confirmed the compaction characteristics of the material. The clastics are suitable for waste storage from the open cut mining operations, and pit scheduling has been modified for the DFS study to utilise the clastics for this purpose. Finalisation of the pit locations, pit designs and mine scheduling has also allowed in-pit filling of waste to be scheduled. Consequently, the waste haul distances are substantially lower relative to the PFS.

In addition to the project enhancements made following the PFS, a 347 million tonne, JORC-2012 compliant rock salt resource¹ has been estimated for Area A. Rock salt will be mined to access the potassium bearing salts and is currently treated as a waste material. The resource estimate is the first step in potential monetisation of this material.

Managing Director, Paul Donaldson said *“We are confident that the optimisation work completed over the past 8 months will materially enhance the project, and are looking forward to bringing the DFS to its conclusion, initiating the mining approvals process and working with ENAMCO to secure the funding requirement for project construction.”*

“The Colluli resource is world class in every way. The 1.3 billion tonne potassium bearing resource² is shallow, in close proximity to coast and to the key markets of the future, and comprises a variety of potassium bearing salts suitable for the production of potassium sulphate (SOP), potassium magnesium sulphate (SOP-M) and potassium chloride (MOP).”

About Danakali

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 the Eritrean National Mining Company (ENAMCO).

The project is located in the Danakil Depression region of Eritrea, and is ~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.

The company has completed a prefeasibility study for the production of potassium sulphate, otherwise known as SOP. 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) with which reduces infrastructure costs and substantially reduces the time required to achieve full production capacity.

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.



1. Competent Persons Statement (Rock Salt Resource)

Colluli has a JORC 2012 compliant Measured, Indicated and Inferred Mineral Resource estimate of 347Mt @96.9% NaCl. The resource contains 28Mt @ 97.2% NaCl of Measured Resources, 180Mt @ 96.6% NaCl of Indicated Resources and 139Mt @ 97.2% NaCl of Inferred Resources.

The information relating to the Colluli Rock Salt Mineral Resource estimate was compiled by Mr. John Tyrrell. Mr. Tyrrell is a member of the Australasian Institute of Mining and Metallurgy (AusIMM) and a full time employee of AMC. Mr. Tyrrell has more than 25 years' experience in the field of Mineral Resource estimation. He has sufficient experience relevant to the style of mineralisation and type of the deposit under consideration, and in resource model development, to qualify as a Competent Person as defined in the JORC Code.

Mr Tyrrell consents to the inclusion of this information in the form and context in which it appears. In undertaking the assignments referred to in this update, 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 Person believe that there is no conflict of interest in undertaking the assignments which are the subject of this update.

2. Competent Persons Statement (Sulphate of Potash Resource)

Colluli has a JORC 2012 compliant Measured, Indicated and Inferred Mineral Resource estimate of 1,289Mt @11% K₂O. The resource contains 303Mt @ 10.98% K₂O of Measured Resources, 951Mt @ 10.89% K₂O of Indicated Resources and 35Mt @ 10.28% K₂O of Inferred Resources.

The information relating to the Colluli Mineral Resource was compiled by Mr. John Tyrell, under the supervision of Mr. Stephen Halabura M. Sc. P. Geo. Fellow of Engineers Canada (Hon), Fellow of Geoscientists Canada, and as a geologist with over 25 years' experience in the potash mining industry. Mr. Tyrell is a member of the Australian Institute of Mining and Metallurgy and a full time employee of AMC. Mr. Tyrell has more than 25 years' experience in the field of Mineral Resource estimation.

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 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code).

Mr. Tyrell & Mr. Halabura consent to the inclusion of information relating to the Resource Statement in the form and context in which it appears.



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Colluli DFS update

ASX: DNK

November 2015

Helping grow a better future



- Colluli Definitive Feasibility Study (“DFS”) remains on track for completion in Q4 2015
- Excellent progress has been made on the DFS during 2015 following the release of the Prefeasibility Study (“PFS”) results earlier in the year
- Throughout the PFS stage a number of optimisation opportunities were identified by the project study teams, which have now been integrated into the DFS
- Optimisation and simplification of process, logistics and infrastructure is expected to materially enhance project economics
- In addition to the project enhancements made following the PFS, a 347Mt JORC 2012 compliant rock salt resource has been estimated for Area A

DEFINITIVE FEASIBILITY STUDY OPTIMISATION OUTCOMES ARE EXPECTED TO MATERIALLY ENHANCE PROJECT ECONOMICS

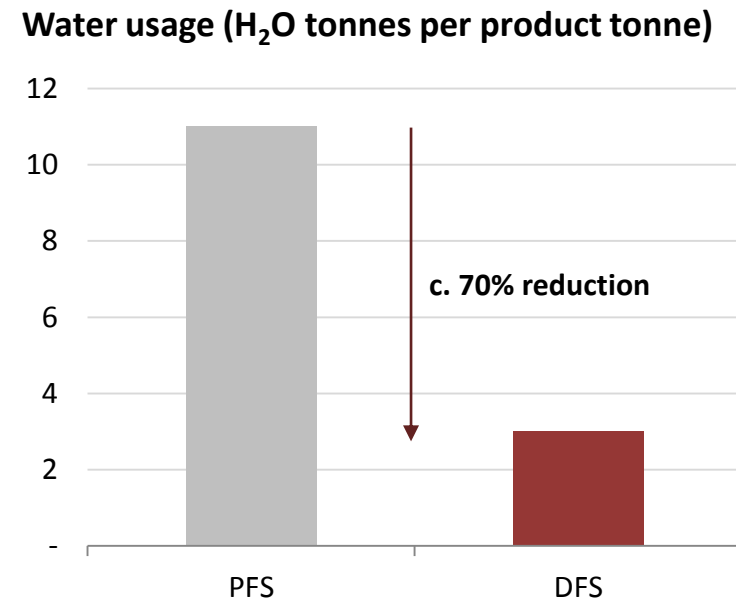
1. Substantial reduction in water requirements



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FURTHER REDUCTIONS IN THE PLANNED WATER USAGE ARE EXPECTED TO REDUCE OPERATING AND CAPITAL COSTS

- Post PFS process optimisation work on the processing plant has reduced expected water requirements by c. 70%
- Reduction in water requirements is expected to reduce capital and operating costs including the potential to reduce the following:
 - ✓ Water delivery infrastructure requirements
 - ✓ Water delivery costs
 - ✓ Mixing tank sizes
 - ✓ Piping and pumps requirements
 - ✓ Recovery pond footprint size



2. Identification of subsurface water at Colluli



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IDENTIFICATION OF SUBSURFACE WATER AT COLLULI SHOULD SATISFY INITIAL WATER REQUIREMENTS AND REDUCE UPFRONT COSTS

- Hydrogeological work has confirmed that sufficient water should be available at Colluli
 - High potassium surface brines exist at Colluli which can satisfy the water needs for the first five years of production
 - 75km seawater pipeline deferred
- Potassium rich brines from Colluli are expected to enhance process plant outputs
- Detection of a potentially large sub-surface aquifer at site could completely eliminate the need for the seawater delivery infrastructure
 - Further work on this aspect is planned post DFS release



Brine SOP grade comparisons

Location/project		SOP grade (g/l)
Colluli (Danakali)	Sample CB07	13.65
	Sample CB08	11.46
	Sample D05	9.68
	Average¹	4.14
Lake Disappointment (Reward)		12.37
Karinga (Rum Jungle)		10.55
GSL (Compass)		10.55
Sevier Lake (Crystal Peak)		6.6

Note:

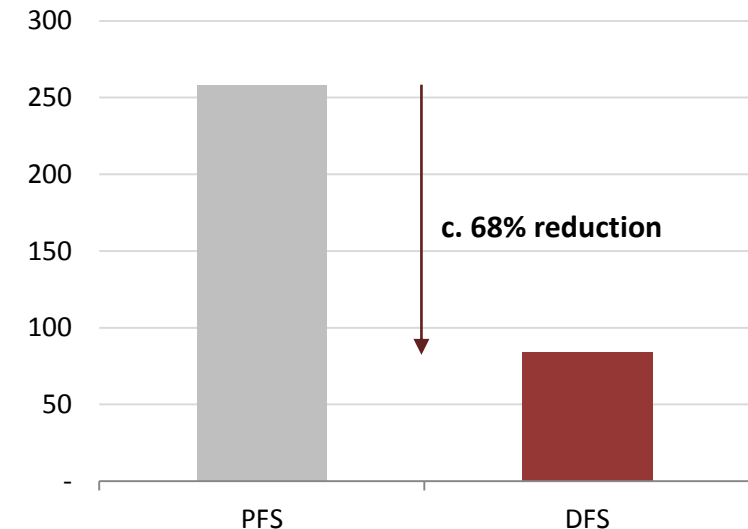
1. Arithmetic mean



OPTIMISATION OF SITE LAYOUTS HAS PRODUCED A MORE EFFICIENT RECOVERY AND TAILINGS POND LAYOUT

- The enhanced recovery pond design is significantly smaller relative to the PFS, resulting in:
 - ✓ Reduced pond earthworks
 - ✓ Higher concentration of potassium in process plant discharge brine
 - ✓ Reduced evaporation requirements
 - ✓ Reduced sizing of reclamation equipment
- Pond layouts and detailed construction schedule should defer capital and reduce operating costs
 - Relocation of the tailings ponds should reduce tailing disposal costs
 - Staged development of the recovery ponds should decrease the upfront capital requirement

Recovery pond area (ha)



4. Metallurgical circuit optimisation



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OPTIMISATION OF THE PLANT DESIGN HAS PRODUCED A CIRCUIT THAT IS **SIMPLER AND MORE ENERGY EFFICIENT**

- The finalisation of the internal plant design has allowed the development of an optimised process design
 - This follows an extensive and comprehensive metallurgical test program
- The optimised circuit has a number of simpler, less energy intensive size separation units for solid-liquid separation processes

5. Simplification of product logistics

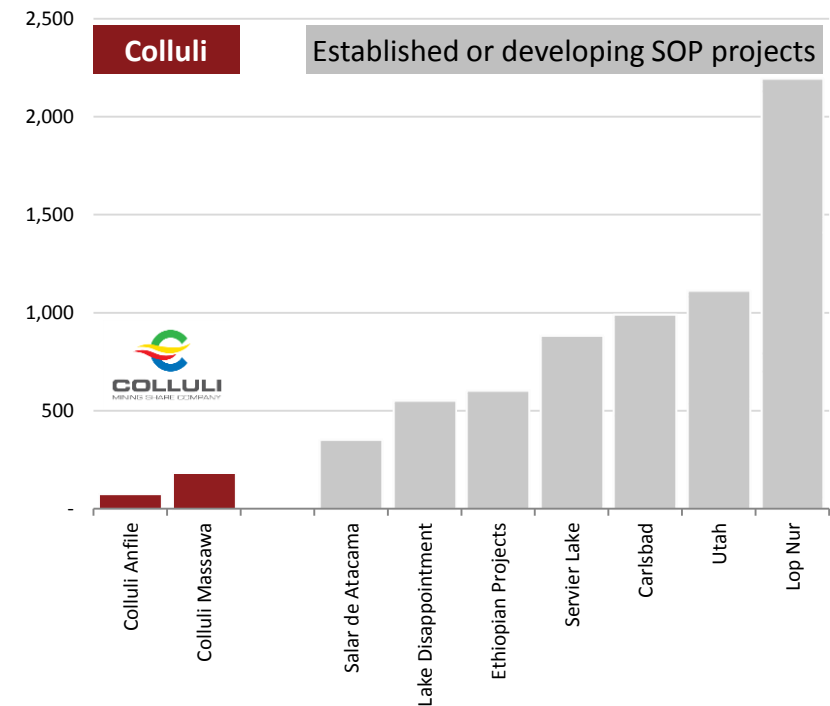


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COLLULI PRODUCT WILL INITIALLY BE CONTAINERISED AND EXPORTED THROUGH THE PORT OF MASSAWA

- The development of the Anfile Bay port has been deferred, with Colluli production to be initially shipped out of the Port of Massawa
- The change brings significant potential benefits to the project including:
 - ✓ Use of established infrastructure
 - ✓ Full bulk loading and container capability
 - ✓ Access to a trained and skilled labour force
 - ✓ Improved capital efficiency for Colluli
 - ✓ Massawa does not compromise Colluli's logistical advantage relative to SOP peers
- Export facility at Anfile Bay to be re-evaluated post project commissioning

Distance to coast for selected SOP projects (km)



Source: Company announcements; Allana Potash, Circum, Danakali analysis



OPTIMISATION OF COLLUM PIT DESIGNS IS EXPECTED TO **REDUCE MINING PRE-STRIPPING REQUIREMENTS**

- Optimisation of pit designs following completion of geotechnical work during the DFS
- Optimisation of pit designs have consolidated mining activities from a two pit start up to a single pit start up
 - Single pit start up is expected to reduce the pre-stripping required to access the potassium bearing salts
 - In pit filling and reduced waste haul routes should reduce overall mining costs

Forward looking statements and disclaimer



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The information in this presentation is published to inform you about Danakali Limited (the “Company” or “DNK”) and its activities. DNK has endeavoured to ensure that the information in this presentation is accurate at the time of release, and that it accurately reflects the Company’s intentions. All statements in this presentation, other than statements of historical facts, that address future production, project development, reserve or resource potential, exploration drilling, exploitation activities, corporate transactions and events or developments that the ‘Company expects to occur, are forward-looking statements. Although the Company believes the expectations expressed in such statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those in forward-looking statements.

Factors that could cause actual results to differ materially from those in forward-looking statements include market prices of potash and, exploitation and exploration successes, capital and operating costs, changes in project parameters as plans continue to be evaluated, continued availability of capital and financing and general economic, market or business conditions, as well as those factors disclosed in the Company’s filed documents.

There can be no assurance that the development of the Colluli Project will proceed as planned. Accordingly, readers should not place undue reliance on forward looking information. Mineral Resources and Ore Reserves have been estimated using the Australian JORC (2012) Code (‘JORC 2012’). To the extent permitted by law, the Company accepts no responsibility or liability for any losses or damages of any kind arising out of the use of any information contained in this presentation. Recipients should make their own enquiries in relation to any investment decisions.

Material resource and financial assumptions made in this presentation are consistent with assumptions detailed in the Company’s ASX announcements dated 25 February 2015, 4 March 2015 and 19 May 2015, which continue to apply and have not materially changed. The Company is not aware of any new information or data that materially affects assumptions made.

Competent persons statement



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Colluli Resource Statement

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Rock Salt Resource Statement

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