



ASX Release

16<sup>th</sup> January 2017

## Global Potash Solutions joins front end engineering design and optimisation team for Colluli project

Danakali Limited (**ASX:DNK**) is pleased to advise that Global Potash Solutions (“**GPS**”) has been appointed to join the front end engineering design (FEED) and optimisation team for the Colluli Potash Project.

GPS has extensive technical and operational experience in the global potash industry, supporting projects in the United States, Canada, South America, Middle East, North Africa and Australia. GPS has provided expertise and technical support to Arab Potash Corporation, Potash Corp., BHP Billiton, and Karnalyte Resources, as well as completing third party due diligence on potash projects for a number of engineering firms. GPS provides services in potash process plant design, independent technical due diligence, hazard and operability studies, piping and instrumentation diagram reviews, auditing of construction, and commissioning and start-up.

GPS oversaw the metallurgical test program, process flowsheet development and initial optimisation work for the Colluli potash project throughout the prefeasibility and definitive feasibility study phases of the project. The initial process optimisation work resulted in a reduction in process water requirements of over 70% between the PFS and DFS phases. GPS will work closely with the Fluor process engineering team on process optimisation, equipment selection and commissioning procedures.

Danakali Managing Director, Paul Donaldson said *“We are delighted to continue our working relationship with Global Potash Solutions, and look forward to their continued contribution to the technical and operational elements of the project. Their extensive technical knowledge and operational experience has been of immense value to the project to date, and we look forward building on this as we advance to construction.”*

Global Potash Solutions CEO, Don Larmour said *“We have worked on numerous projects throughout the world and bring considerable expertise in potash processing design, operations management, commissioning and maintenance. Our involvement in the project throughout the prefeasibility and definitive feasibility study phases, has given us an excellent understanding of the Colluli project, and we believe we can make a considerable contribution to the optimisation of the process design. We are very pleased to be able to continue our long-term contribution to the Colluli Potash Project, as we believe this project has very high potential, given its simplicity, ideal combination of potassium salts and the capability of the teams we have worked with throughout the study phases on this project. Colluli is the most*



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*advanced greenfield potassium sulphate development we've had the pleasure to be involved with and the Colluli Potash Project has excellent potential for development and long term sustainability."*

Colluli is one of the most advanced greenfield sulphate of potash (SOP) developments in the world, and demonstrates outstanding economics including industry leading capital intensity, bottom quartile operating costs, close proximity to coast and key markets and unrivalled product diversification potential.

Approval of the social and environmental impact assessment (SEIA) for the project was given by the Ministry of Land, Water and Environment in December 2016. The award of the Mining Agreement and Mining License for the project is well progressed.

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### **About Danakali Ltd**

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 Corporation (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 definitive feasibility 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.

### **Competent Persons Statement (Rock Salt Resource)**

Colluli has a JORC 2012 compliant Measured, Indicated and Inferred Mineral Resource estimate of 347Mt @97% NaCl. The resource contains 28Mt @ 97% NaCl of Measured Resources, 180Mt @ 97% NaCl of Indicated Resources and 139Mt @ 97% 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 the information relating to the rock salt Mineral Resource in the form and context in which it appears

### **Competent Persons Statement (Sulphate of Potash Resource)**

Colluli has a JORC 2012 compliant Measured, Indicated and Inferred Mineral Resource estimate of 1,289Mt @11% K<sub>2</sub>O. The resource contains 303Mt @ 11% K<sub>2</sub>O of Measured Resources, 951Mt @ 11% K<sub>2</sub>O of Indicated Resources and 35Mt @ 10% K<sub>2</sub>O of Inferred Resources.

The information relating to the 2015 Colluli Mineral Resource estimate was compiled by Mr. John Tyrrell, 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. Tyrrell is a member of the Australian Institute of Mining and Metallurgy and a full-time employee of AMC. Mr. Tyrrell 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. Tyrrell & Mr. Halabura consent to the inclusion of information relating to the 2015 Resource Statement in the form and context in which it appears.

### **Competent Persons Statement (Sulphate of Potash Reserve)**

The November 2015 Colluli Ore Reserve is reported according to the JORC Code and estimated at 1,113Mt @10% K<sub>2</sub>O Equiv. The Ore Reserve is classed as 286Mt @ 11% K<sub>2</sub>O Equiv Proved and 827Mt @ 10% K<sub>2</sub>O 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.



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### Quality Control and Quality Assurance

Danakali 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.

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-Umwelttechnik GmbH Sondershausen, Germany utilising flame emission spectrometry, atomic absorption spectroscopy and ion chromatography. Kali- Umwelttechnik (KUTEC) Sondershausen have extensive experience in analysis of salt rock and brine samples and is certified according to DIN EN ISO/IEC 17025 by the Deutsche Akkreditierungs system Prüfwesen GmbH (DAR). The laboratory follows standard procedures for the analysis of potash salt rocks chemical analysis ( $K^+$ ,  $Na^+$ ,  $Mg^{2+}$ ,  $Ca^{2+}$ ,  $Cl^-$ ,  $SO_4^{2-}$ ,  $H_2O$ ) 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.

### Forward Looking Statements and Disclaimer

The information in this document is published to inform you about Danakali Limited (the "Company" or "DNK") and its activities. DNK has endeavoured to ensure that the information enclosed is accurate at the time of release, and that it accurately reflects the Company's intentions. All statements in this document, 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 reported according to the JORC Code, 2012 Edition. 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 document. Recipients should make their own enquiries in relation to any investment decisions.

Mineral Resource, Ore Reserve and financial assumptions made in this document are consistent with assumptions detailed in the Company's ASX announcements dated 25 February 2015, 4 March 2015, 19 May 2015, 23 September 2015, 30 November 2015 and 15 August 2016 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.