



COLLULI DEFINITIVE FEASIBILITY STUDY RESULTS

- Colluli Definitive Feasibility Study (DFS) results exceed expectations and PFS results
- DFS confirms **low capex, high margin, long life** project
- Phase I **development capital reduced by over 30%** to US\$298m
- Capital **payback period of 3.5 years**
- Project post tax **NPV of US\$860m** and **IRR of 29%**
- Colluli in the **bottom quartile of the mine gate cost curve**
- 1.1 billion tonnes ore reserve, with **expected 200+ year mine life**
- **Preliminary funding discussions underway** with offtakers, strategic partners and financiers
- **Mining license application process** to be initiated in **Q1 2016**
- **Commissioning** targeted for **Q4 2018**
- DFS demonstrates Colluli is one of the most attractive potash projects in the world

Key DFS Project outcomes:

Metric	Unit	DFS outcomes	
		Phase I	Phase I and II ¹
Annualised SOP production	kt	425	850
Strip ratio	Waste:Ore	1.91	1.93
Phase I development capital ²	US\$m	298	
Incremental Phase II development capital ²	US\$m		175
Average forecast SOP price (FOB Massawa) ^{3, 4}	US\$/t SOP	572	572
Average mine gate cash costs ³	US\$/t SOP	168	141
Average total cash costs ^{3,5}	US\$/t SOP	255	227
Cumulative undiscounted after tax cash flows ⁶	US\$m	4,539	9,637
Annual average free cash flows ³	US\$m	81	166
Post tax NPV (10% real) – 100% of Project ⁷	US\$m	439	860
Post tax IRR – 100% of Project ⁷	%	25.4	29.0
Phase I payback period – 100% of Project ⁷	Years	3.50	

Notes:

¹ Additional 425ktpa Phase II commencing production in year 6

² Including contingency, excluding working capital

³ Average for first 60 years of production

⁴ Composite price for Standard and Granular SOP

⁵ Includes mine gate costs, product logistics and royalties

⁶ Over first 60 years of production

⁷ 100% Project level basis (DNK holds a 50% interest)



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Danakali Limited (**Danakali, ASX: DNK**) is pleased to announce the results of the Definitive Feasibility Study (**DFS**) for the Colluli Potash Project (**Colluli**, or the **Project**), 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 Corporation (**ENAMCO**).

Key outcomes of the DFS include a reduction in Phase I development capital by over 30% to US\$298m resulting in a market leading capital intensity of US\$702/t sulphate of potash (**SOP**) and an accelerated Phase I payback period of 3.5 years.

The Colluli operation will apply open pit mining methods to take full advantage of its shallow mineralisation, which commences at just 16m. This depth of mineralisation makes Colluli the shallowest known evaporite deposit globally.

The DFS utilises a modular development approach which mitigates risk while enhancing fundability and economic return. Phase I is expected to produce approximately 425ktpa of premium SOP product with commissioning currently targeted for Q4 2018. Phase II, commencing production in year 6, will increase total SOP production to 850ktpa at an additional capital cost of US\$175m. Phases I and II are designed to create a platform for growth and generate cash flows to fund subsequent expansions which have not been included in the DFS.

Colluli is located proximate to the key potash markets of the future. Demand for fertiliser is driven by population growth which directly translates to food demand. Almost 95% of the population growth over the next three decades will occur in Africa, India and South East Asia.

Danakali's Managing Director, Paul Donaldson said: *"We are very happy with the DFS outcomes for Colluli. It confirms a robust, low capital intensity, low operating cost project with attractive economic returns and a high level of expandability."*

"The DFS also confirms that Colluli is one of the most attractive potash projects in the world. The 1.1 billion tonne ore reserve that underpins the project, in combination with the suite of potassium salts and proximity to coast and future markets, makes Colluli positively unique. We believe that over the decades to come, Colluli has the potential to grow to an ultimate capacity of 4 to 5 million tonnes per annum of potash products. Rock salt, magnesium chloride and magnesium sulphate within the resource also represent significant project upside."

"We are looking forward to working with our Joint Venture partners over the upcoming months to advance the approvals process and secure the funding for the project development."

ENAMCO Director, Berhane Habtemariam said: *"We are very pleased that the DFS has been successfully completed and confirms a very attractive project. Colluli has all the makings of a world class project which will play an important role in developing future skills for our maturing mining industry. We look forward to continuing our collaboration with Danakali as we move towards funding, mining licence application and project development."*



DFS HIGHLIGHTS

DFS demonstrates markedly improved economics from PFS

The Colluli DFS incorporates a number of optimisation opportunities identified as part of the Preliminary Feasibility Study (PFS, refer to the ASX announcement released on 4 March 2015), which have significantly enhanced Colluli's economics and technical feasibility. Refer to Table 1 for a selection of the key metrics and how they have moved between the PFS and DFS.

Table 1: Key metrics and variance between PFS and DFS

Metric	Unit	PFS outcomes		DFS outcomes		Change from PFS	
		Phase I	Phase I + II ¹	Phase I	Phase I + II ¹		
Annualised SOP production	kt	425	850	425	850	-	-
Strip ratio	Waste:Ore	2.36	2.19	1.91	1.93	↓ 19%	↓ 12%
Phase I development capital ²	US\$m	428 ³		298		↓ 30%	
Incremental Phase II development capital ²	US\$m		282		175		↓ 38%
Average forecast SOP price (FOB Massawa) ^{4,5}	US\$/t SOP	588	588	572	572	↓ 3%	↓ 3%
Average mine gate cash costs ⁴	US\$/t SOP	162	141	168	141	↑ 4%	0%
Average total cash costs ^{4,6}	US\$/t SOP	210	189	255	227	↑ 21%	↑ 20%
100% of Project							
Post tax NPV (10% real) ⁷	US\$m	462	846	439	860	↓ 5%	↑ 2%
Post tax IRR ⁷	%	22.3	24.7	25.4	29.0	↑ 14%	↑ 17%
Phase I payback period ⁷	Years	4.25		3.50		↓ 18%	
Danakali share of Project							
Post finance NPV (10% real) ^{8,9}	US\$m	206	397	206	415	0%	↑ 4%
Post finance IRR ^{8,9}	%	22.3	25.9	25.2	29.3	↑ 13%	↑ 13%

Notes:

¹ Additional 425ktpa Phase II commencing production in year 6

² Including contingency, excluding working capital

³ Previously US\$442m (working capital removed to ensure comparability)

⁴ Average for first 60 years of production

⁵ Composite price for Standard and Granular SOP

⁶ Includes mine gate costs, product logistics and royalties

⁷ 100% Project level basis (Danakali holds a 50% interest)

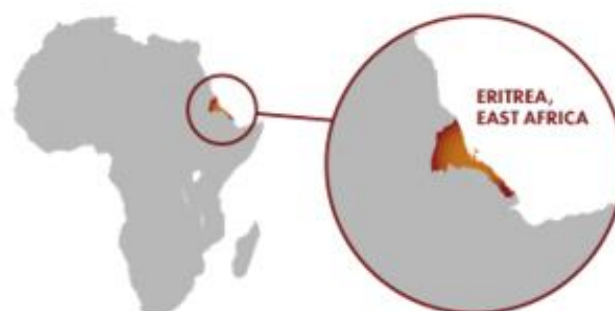
⁸ In accordance with the CMSC Shareholders' Agreement

⁹ Third party debt estimated at 60% of Project funding (PFS estimated 70%)

The decrease in Phase I development capital is largely attributed to a reduction in water requirements, a change in product logistics methodology and a simplified mine development.

Phase II development capital has decreased by 38% to US\$175m with the majority expected to be funded by operating cash flows. Third party debt is expected to fund the balance.

Figure 1: Location of Eritrea





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Figure 2: Potential layout of Colluli development



Production is targeted to commence in 2018 through the initial 425ktpa module (Phase I). The subsequent 425ktpa module (Phase II) is planned to be commissioned in production year 6, expanding the SOP output to 850ktpa.

The mine life of Colluli currently exceeds 200 years, facilitated by the substantial 1.1 billion tonne ore reserve. The DFS economic modelling incorporates the first 60 years of production, and the highly favourable economics of the Project indicate an initial Phase I payback period of only 3.5 years.

Mine development has also been optimised in the DFS resulting in a more consistent strip ratio (Waste:Ore). The strip ratio changes have lowered both pre-production capital costs and the operating costs in the earlier years of operation. Although average mine gate cash costs have remained in line with the PFS, the mining production related operating cash flows have been reduced by 22% during the first 4 years of production. This enhancement has optimised the NPV and increased funding flexibility particularly in the early stages of the production.

The enhanced mining schedule also provides earlier access to higher quality ore with the development and progression of a single pit and backfilling throughout the first 60 years of production.

Conventional truck and shovel techniques, along with continuous miners, will be employed to develop a single pit at Colluli. No blasting activities are planned for the construction or operation of the Project. SOP production applies proven technologies, which have been validated through the pilot and bench testing program, and also verified by an independent technical review committee.

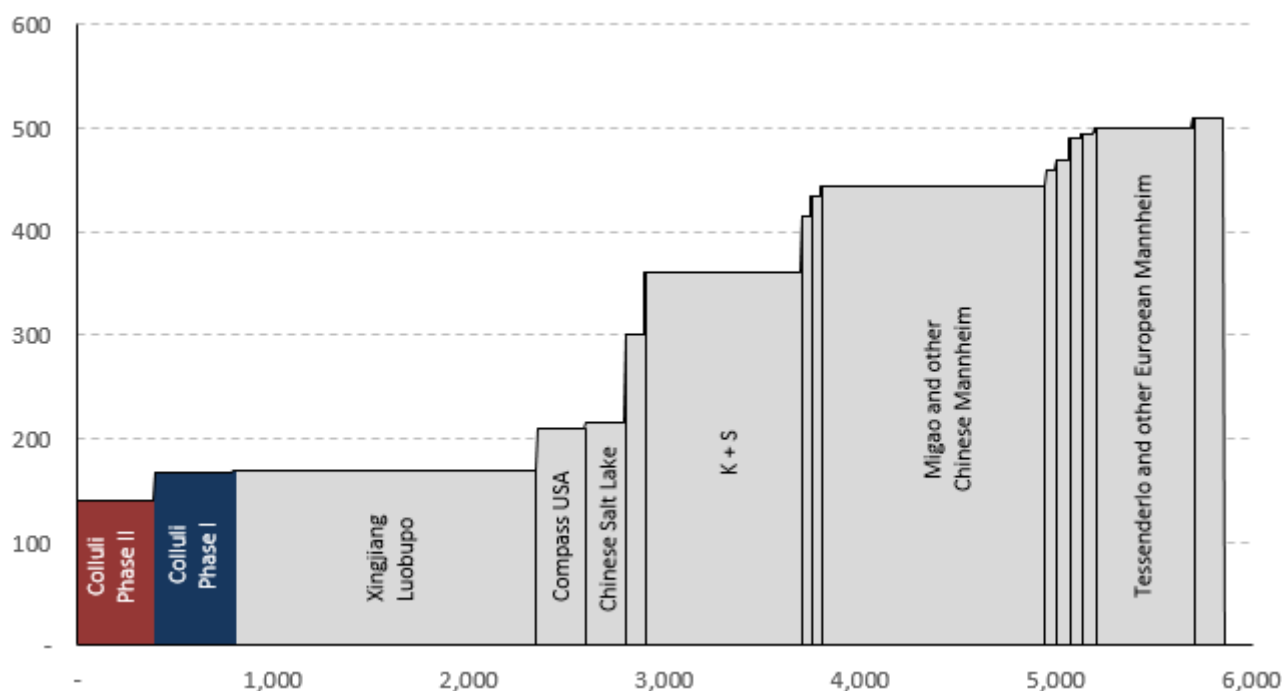
The production methodology applied to process the Colluli potassium bearing salts is expected to produce high grade product (52.0% K₂O) making Colluli one of the highest grade SOP producers globally.



Robust economics

Colluli will deliver post tax average annual free cash flows of US\$166m over the first 60 years of production (Phases I and II). Mine gate cash costs of US\$168/t SOP in Phase I and US\$141/t SOP in Phase II positions Colluli in the bottom quartile of the cost curve.

Figure 3: Mine gate operating costs for SOP production (US\$/t)



Source: CRU Research, EPM Mining presentation 2014, Company websites, Integer Research, DNK Analysis

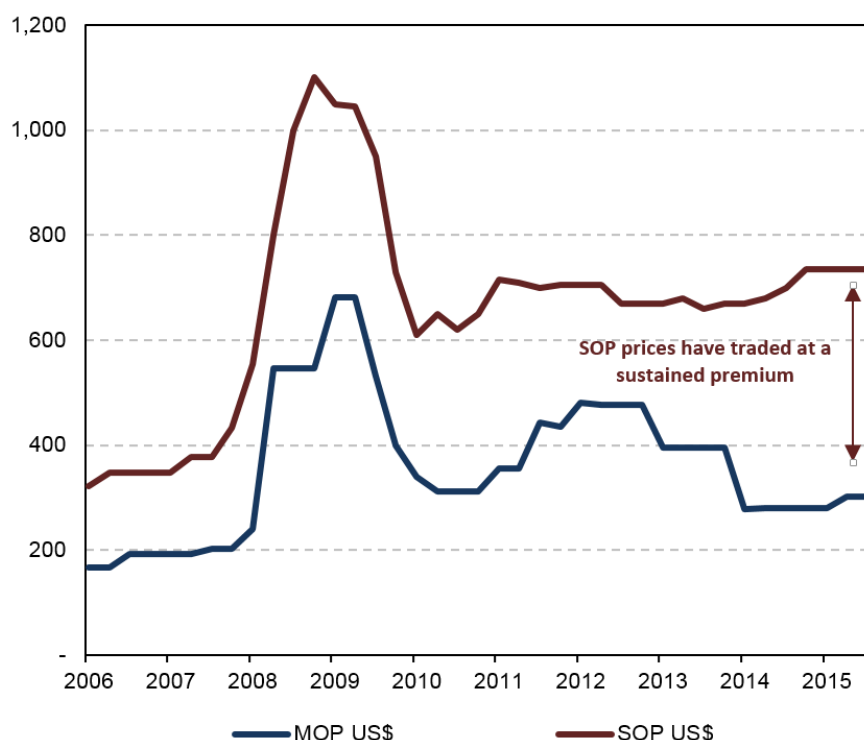
The low Phase I and Phase II development costs have driven down capital intensity significantly to US\$702/t SOP and US\$412/t SOP for Phase I and Phase II respectively. The average capital intensity over Phase I and Phase II is US\$557/t SOP.

Premium product

Colluli is focusing on the production of sulphate of potash (also known as SOP or potassium sulphate). SOP is a low chloride, premium fertiliser applied primarily on high value crops, usually leafy plants, which include some fruits and vegetables. It is the second most common potash type and sells at a significant premium to the more common muriate of potash (MOP or potassium chloride).



Figure 4: Historical SOP vs MOP Pricing Chart (Prices stated based on FOB Vancouver)



Source: Greenmarkets, DNK Analysis, Compass Minerals 2015 quarterly report

Colluli drill cores have been processed at the Saskatchewan Research Council in Canada for specific bench testing and pilot plant trials to produce SOP. The product was produced in soluble, standard and granular forms. Over 100kg of Colluli product has been tested at Ludman Industries in the USA for product compaction behaviour. Materials handling trials have also been completed to determine the anti-caking requirements for the final SOP product.

The highly successful pilot trials resulted in over 300kg of high purity Colluli product at over 98% SOP (greater than 52% K_2O equivalent). Discussions are currently in progress to support future offtake agreements and the product is being showcased as part of this process.

**Development timeline**

Approval has been received from both the Danakali and CMSC Boards to progress the mining license application process. Supporting documentation is well advanced and the approval process is expected to be initiated in Q1 2016.

Mine construction is currently scheduled to commence in 2017, followed by commissioning and first production in 2018. Refer to the Colluli development plan provided in Table 2.

Table 2: Colluli development timeline

	2016				2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Licence application	■															
Review period	■	■	■													
Licence approval			■													
Construction				■	■	■	■	■	■	■	■	■				
First ore/production												★				
Plant operations												■	■	■	■	■

Moving forward

Along with initiating of the mining license application, Danakali will pursue a select number of key optimisation activities to further enhance Project economics, the construction timeline and/or reduce the potential risks of the Project.

Danakali is holding ongoing discussions with potential offtakers and strategic partners to help fund the Phase I development capital requirement. Commercial negotiations will also commence with respect to the construction and development of Colluli.



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DETAILED EVALUATION

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1. Project overview

Colluli is located in the Danakil region of Eritrea, East Africa. Colluli is approximately 177km south-east of the capital (350km by road), Asmara and 180km from the port of Massawa (230km by road), which is Eritrea's key import/export facility.

The project is a joint venture between ENAMCO and Danakali with each having 50% ownership of the joint venture company, the Colluli Mining Share Company (CMSC). CMSC is responsible for the development of the Project.

The Danakil region is an emerging potash province and one of the largest unexploited potash basins globally. To date, over 6Bt of potassium bearing salts suitable for the production of potash fertilisers have been identified in the region and the potash potential has attracted a number of major international potash producers, including both Yara International and ICL as represented in Figure 5.

Figure 5: Colluli location and logistics relative to other projects in the Danakil region



The Colluli resource is located approximately 75km from the Red Sea coast, and mineralisation commences at just 16m below surface, making it one of the most accessible potash deposits globally.

Shallow mineralisation makes the resource amenable to open cut mining: a proven, high productivity mining method. Open cut mining provides higher resource recoveries relative to underground and solution mining methods, is generally safer, and can be more easily expanded.



The Colluli resource comprises three potassium bearing salts in solid form: sylvinite, carnallite and kainite. These salts are suitable for high yield, low energy production of SOP, which is a high quality potash fertiliser carrying a price premium over the more common MOP.

The salt composition in the Danakil region also provides the ability to produce a suite of potash products that not only includes potassium sulphate, but also potassium magnesium sulphate and potassium chloride. Such potash product diversification cannot be achieved by any other region in the world.

The JORC-2012 compliant mineral resource estimate for Colluli stands at 1.289Bt @ 11% K₂O for 260Mt of contained SOP. The JORC-2012 compliant ore reserve estimate for Colluli stands at 1.113Bt @ 10% K₂O for 216Mt of contained SOP. The resource remains open to the south east of Area A and the north east of Area B. Refer to Table 3 for a summary of the resource estimate and Table 4 for the ore reserve estimate. The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Ore Reserves.

Table 3: JORC-2012 Colluli mineral resource estimate and interpretation at 25 February 2015

Area	Rock unit	Measured		Indicated		Inferred		Total	
		Mt	K ₂ O Equiv %	Mt	K ₂ O Equiv %	Mt	K ₂ O Equiv %	Mt	K ₂ O Equiv %
Area A	Sylvinite	66	12	38	11	10	8	115	11
	Carnallite	55	7	190	9	6	16	251	9
	Kainite	86	12	199	11	1	10	285	11
Area B	Sylvinite	24	15	12	13	5	12	150	13
	Carnallite	25	6	114	7	8	7	147	7
	Kainite	48	13	289	13	4	13	341	13
Total	Sylvinite	90	13	160	13	15	9	265	12
	Carnallite	80	7	303	8	15	11	398	8
	Kainite	133	12	488	12	5	11	626	12
Overall		303	11	951	11	35	10	1,289	11

Table 4: JORC-2012 Colluli ore reserve at 30 November 2015

Occurrence ²	Proved		Probable		Total			
	Mt	K ₂ O Equiv %	Mt	K ₂ O Equiv %	Mt	K ₂ O Equiv %	K ₂ SO ₄ Equiv %	K ₂ SO ₄ Equiv Mt ¹
Sylvinite (KCl.NaCl)	78	15	175	12	253	13		
Carnallite (KCl.MgCl ₂ .H ₂ O)	79	7	284	8	363	8		
Kainite (KCl.MgSO ₄ .H ₂ O)	129	12	368	11	497	11		
Total	286	11	827	10	1,113	10	19	216

Note:

¹ Equivalent K₂SO₄ (SOP) calculated by multiplying % K₂O by 1.85

² The Ore Reserve estimate contains dilutant material. Only sylvite, carnallite and kainite mineral species from Sylvinite, Carnallite and Kainite rock types contribute to recovered product.



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Key optimisation areas were identified at the PFS stage and have subsequently been incorporated into the DFS (refer to the ASX announcement released 10 November 2015). These include:

1. Substantial reductions in process water requirements;
2. Identification of subsurface water at the Colluli site which negates the need for a 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 material handling test work;
5. Simplification of product export logistics; and
6. Optimisation of pit designs following completion of geotechnical work.

2. Project team

Many of the consultants engaged in the completion the DFS for Colluli were involved in the PFS. These highly experienced consultants have worked closely with Danakali personnel in Australia and Eritrea to deliver a robust DFS. The primary DFS team is shown below.

Table 5: DFS team

Consultant	Key area of expertise
Lycopodium	Lead consultant; process design
Knight Piésold	Pond and tailings specialists
AMC Consultants	Geotechnical and mine design
Global Potash Solutions	Plant technical support
Saskatchewan Resource Council	Product test work and piloting
Ausenco	Water abstraction and logistics
MBS Environmental	Social and environment

3. Development approach

Colluli will be developed to its full potential using the principles of risk management, resource utilisation and modularity, using the starting module (Phase I) as a platform for growth. The key objective of the PFS was to ensure that the risks, fundability and economic returns of the starting module of the Project were appropriately balanced. The DFS continued this approach as well as pursuing optimisation opportunities identified during the PFS with improved accuracy and therefore confidence of the estimates underpinning the economic outcomes.

The phases of the Colluli development demonstrated in the DFS are:

- Phase I – 425ktpa SOP
- Phase II – additional 425ktpa SOP commencing production 5 years after Phase I

The magnitude of the Colluli ore reserve can accommodate further expansions of SOP (and MOP and potassium magnesium sulphate) production beyond Phase I and II.



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In addition to SOP, Colluli has the potential to diversify into other potash and salt products. Danakali recently announced a +300Mt JORC 2012 compliant rock salt mineral resource at Colluli which provides further production upside beyond the DFS (refer to the ASX announcement released 23 September 2015).

The proposed Project will consist of the following components:

- An open pit potash mine located within the Danakil Depression
- Ore processing facilities located at the mine site
- Evaporation ponds located at the mine site
- An upgraded 50km product haulage road connecting the mine site to the main road to the Port of Massawa
- A 85km desalinated water pipeline from the coast to the mine site
- An accommodation camp and administration facility at the mine site

Figure 6 illustrates the potential mine layout and main Project components.

Figure 6: Potential site layout



4. Geology

The geology is dominated by an evaporite sequence where the potash bearing mineralisation is overlain by, typically, 10-70m of clastic sediments and, typically, 10-20m of Upper Rock Salt. Under this rock salt lies the potassium bearing minerals, capped by Marker Beds below the Upper Rock Salt.

These potash bearing minerals begin with the Sylvinite Member hosting the sylvite (KCl) mineral, which is up to 10m thick. Below the Sylvinite lies the Intermediate Member comprising of carnallitites and

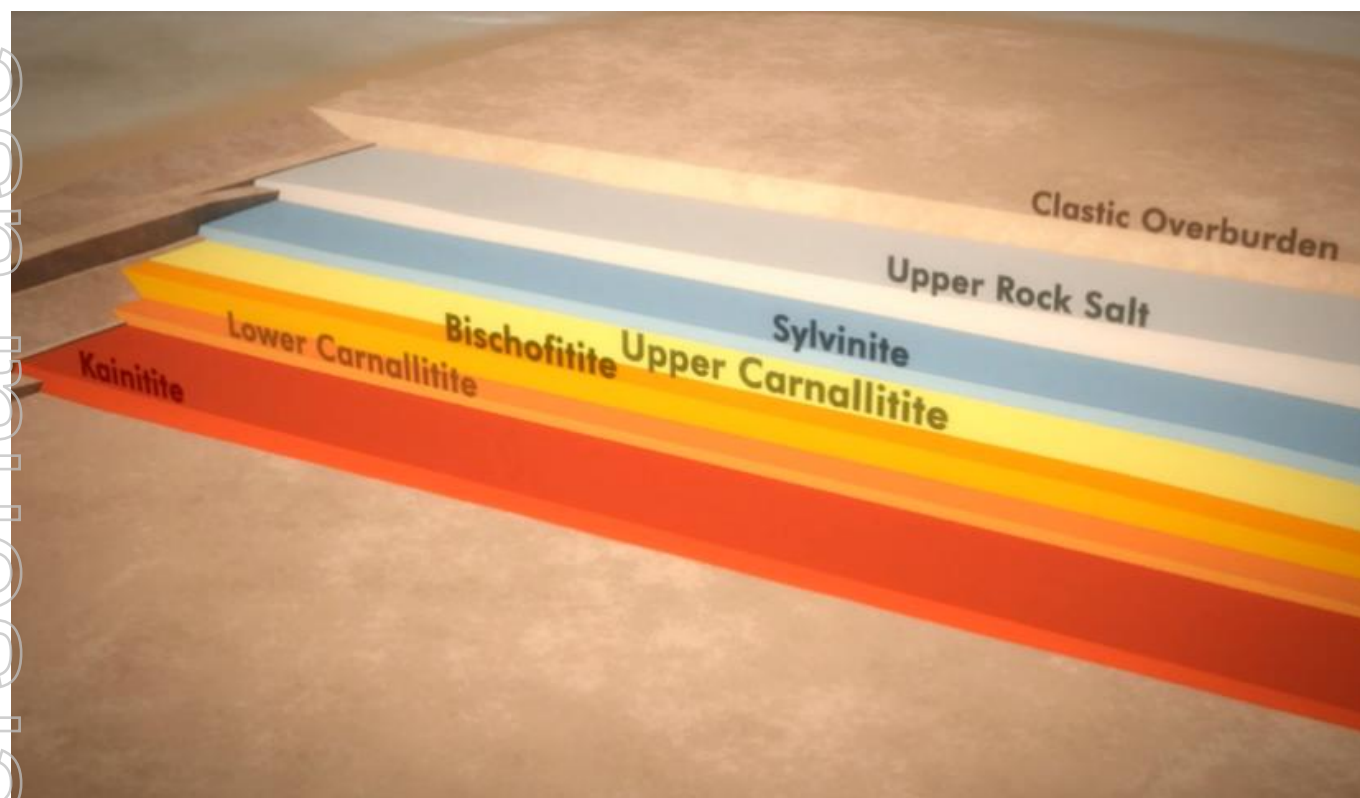


bischofite which vary from 3 to 25m thick with the Bischofite mineralisation horizons constrained above and below by Upper and Lower Carnallitite Members.

Below the Intermediate Member in the sequence is the Kainitite Member composed of kainite approximately 5-15m thick and overlying the Lower Rock Salt which marks the lower extent of the mineralisation.

Refer to Figure 7 for the stratification of the Colluli resource.

Figure 7: Upper rock salt caps the potash salts



5. Mining

Method

The exploitation of the resource will begin within Area A (Table 3) and will be carried out by open pit mining using conventional truck and shovel techniques along with surface miners. A single pit will be developed which improves on the PFS pit design.

There are no blasting activities planned for the construction or operation of the Project. Mined ore will be transported by truck to a ROM pad adjacent to the processing plant.

Mining will be undertaken to allow 425ktpa of SOP to be produced during Phase I in the first 5 years of production and then 850ktpa during Phase II. The DFS indicates that approximately 9Mtpa of combined ore and waste movement is required during the first 5 years of operation and then approximately 16Mtpa for the subsequent 55 years of operation.



Overburden and other waste materials (i.e. clastics, rock salt and bischofite) will be removed and stockpiled on site. Clean rock salt will be stockpiled separately in anticipation of future sales. Other mine waste materials will be used as backfill in the progressing pit void. Material that cannot be used as backfill will be transported from the pit and placed to form waste rock landforms. Some mine waste material will also be used during construction to form embankments and foundations.

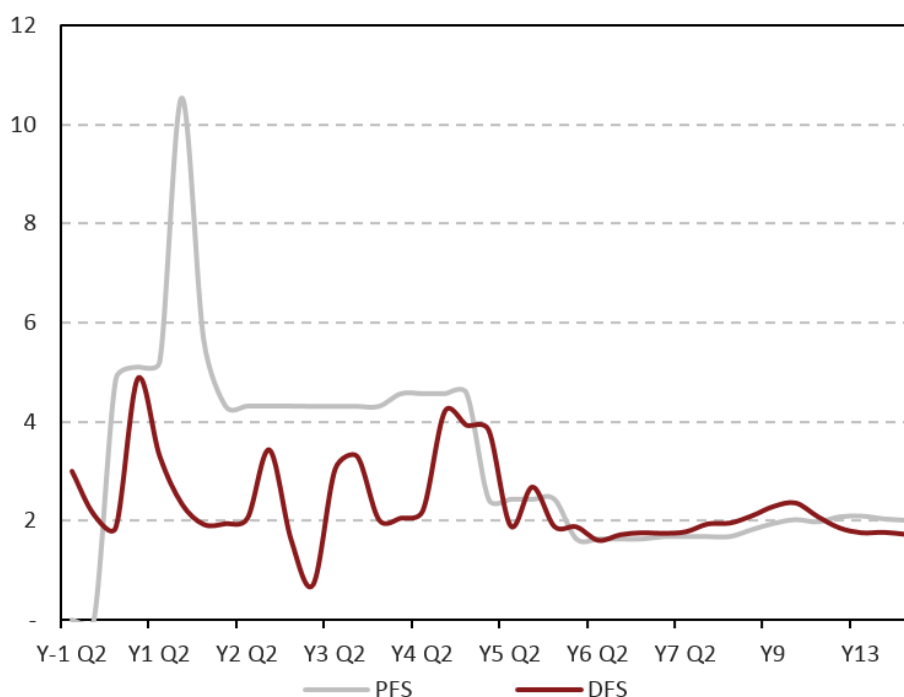
Optimisation

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.

Groundwater is present in the unconsolidated clastic layer from surface to the upper rock salt unit. Water will be collected in the pit and extracted for use in the processing plant.

The average strip ratio over the life of mine is 1.93 (Phase II). Figure 8 provides a representation of the consistency of the mine strip ratio after the first 15 years of development relative to the PFS.

Figure 8: Strip ratio versus time – Phase I and Phase II combined scenario (first 15 years of production)



Further upside potential

Substantial upside exists for Colluli due to the exploitation of other contained products within the resource and license area such as high purity rock salt, kieserite (magnesium sulphate), gypsum (calcium sulphate) and magnesium chloride.



Industrial rock salt (refer to ASX announcement released 23 September 2015 for maiden rock salt resource) is extracted in the overburden at a rate in excess of 1.8Mtpa. Commercialisation of this rock salt will offset a portion of the mining costs. The offset in mining costs has not been included in the DFS. Negotiations are underway with potential offtakers for this product.

6. Water logistics

Method

Processing plant and site water requirements will initially be supplied via mine dewatering and ground water for the saline requirements and via a single pipeline from Anfile Bay for desalinated supply.

Phase I requires a total of approximately 200m³ per hour of water at the site.

Phase II requires a total of approximately 400m³ per hour of water at the site requiring the installation of additional water pipelines.

Optimisation

Finalisation of hydrogeological work supporting the DFS, in conjunction with brine trials for salt decomposition, has confirmed that subsurface water at Colluli is of sufficient quantity and composition to satisfy the processing plant requirements for at least the first 5 years of production. This negates the need to install a seawater pipeline delivery system for the Project's start-up phase which was included in the PFS.

Further upside potential

A potentially large sub-surface aquifer has been identified at Colluli based on the chemistry, temperatures and flow rates of water identified in the fault system. Further definition on this 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.

7. Processing

Method

The processing method is the most commonly used, low cost process for the production of SOP via the addition of potassium chloride (sylvite) with kainite (from the salt kainitite). Kainitite represents approximately 50% of the Colluli resource with the remaining salts comprising sylvinite and carnallitite, which are commonly used for the production of potassium chloride. Using well understood and proven processing principles, the ore containing sylvite and carnallite can be decomposed, and then recombined with decomposed kainite. The reaction occurs spontaneously under ambient conditions and provides a high potassium yield relative to alternate potassium sulphate production processes.

Potassium yields are further improved using a series of ponds to collect excess brines exiting the processing plant. With the Project being located in an area with highly favourable ambient conditions for solar evaporation, additional potassium salts will precipitate from the collection ponds. These will be collected and recirculated back through the processing plant.

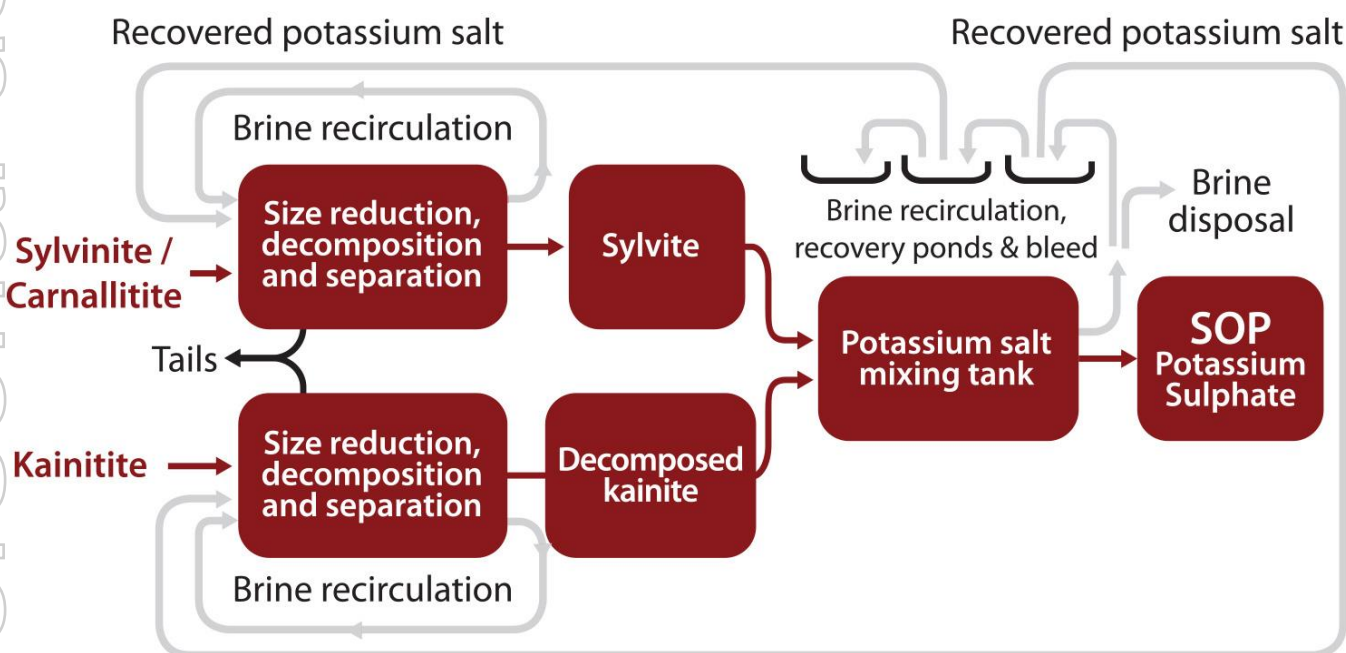


Optimisation

The optimisation of site layouts and reduction in water recirculating in the plant has allowed refinement to a more efficient recovery and tailings pond layout. This change allows for 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 has reduced expected processing plant operating costs.

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 separation units for solid-liquid separation processes relative to the PFS.

Figure 9: Process circuit design



8. Product logistics

Method

Dried SOP product from the processing plant will be stored in shipping containers at the processing plant before being loaded onto road haulage vehicles for transport to Eritrea's primary import/export facility, the Port of Massawa. Loading of product onto road haulage vehicles will take place continuously. The majority of the product storage is proposed to be at the Port of Massawa.

The Port of Massawa, which is located approximately 230km from the Colluli site has the capability to export both containerised and bulk materials. Product exporting options and infrastructure at Anfile Bay will be reviewed after Phase I commissioning.

Massawa has been exporting product from the Bisha mine, which has been operating since 2010.



Optimisation

Product logistics have been simplified in the DFS. The product export terminal (included in the PFS) has been removed following a full review of product logistics.

The use of the Port of Massawa eliminates the need to construct an 85km road to Anfile Bay. A 57km existing road will be upgraded to link the site with the coastal road leading to the Port of Massawa.

9. Environmental and permitting

A comprehensive Social and Environmental Impact Assessment (SEIA), completed to Equator Principles, is being conducted by a group of specialist consultants working with in-country experts and regulators.

The Department of Environment of the Ministry of Land, Water and Environment of the State of Eritrea have provided feedback on all the baseline assessments submitted. CMSC's Eritrean team have continued with the Project stakeholder engagement plan, resulting in continued support for the Project and allowing the development of an effective and consultative social and environment management plan. Modelling of the ocean currents and mixing capabilities of the coastal waters of Anfile Bay have been completed and compared to ocean floor fauna and flora mapping from dive expeditions. This has shown sufficient mixing of the desalination plant discharge water (higher salinity seawater) and, coupled with an absence of sensitive species, has demonstrated the insignificant impact of the seawater abstraction and water treatment facility proposed at Anfile Bay - currently required to support the site's water requirements.

MBS Environmental (environmental impact consultants) and Sustainability (social impact consultants) have been preparing the impact assessments (Social and Environmental Impact Assessment) and management plans (Social and Environmental Management Plan) for submission along with the DFS in Q1 2016 as a prerequisite for initiating the mining licence application.

10. Cost estimates

Capital and operating costs are presented in real US dollars (*September quarter 2015*) to an accuracy of $\pm 15\%$. Estimates have been compiled for the economic period of review (first 60 years of production).

Capital estimates

Development capital

Development capital estimates are summarised in Table 6. Further to this, Figure 10 represents where the major benefits have been realised through the optimisation work undertaken during the DFS.

Colluli development capital optimisation has resulted in industry leading capital intensity which enhances both the Project's returns and fundability.

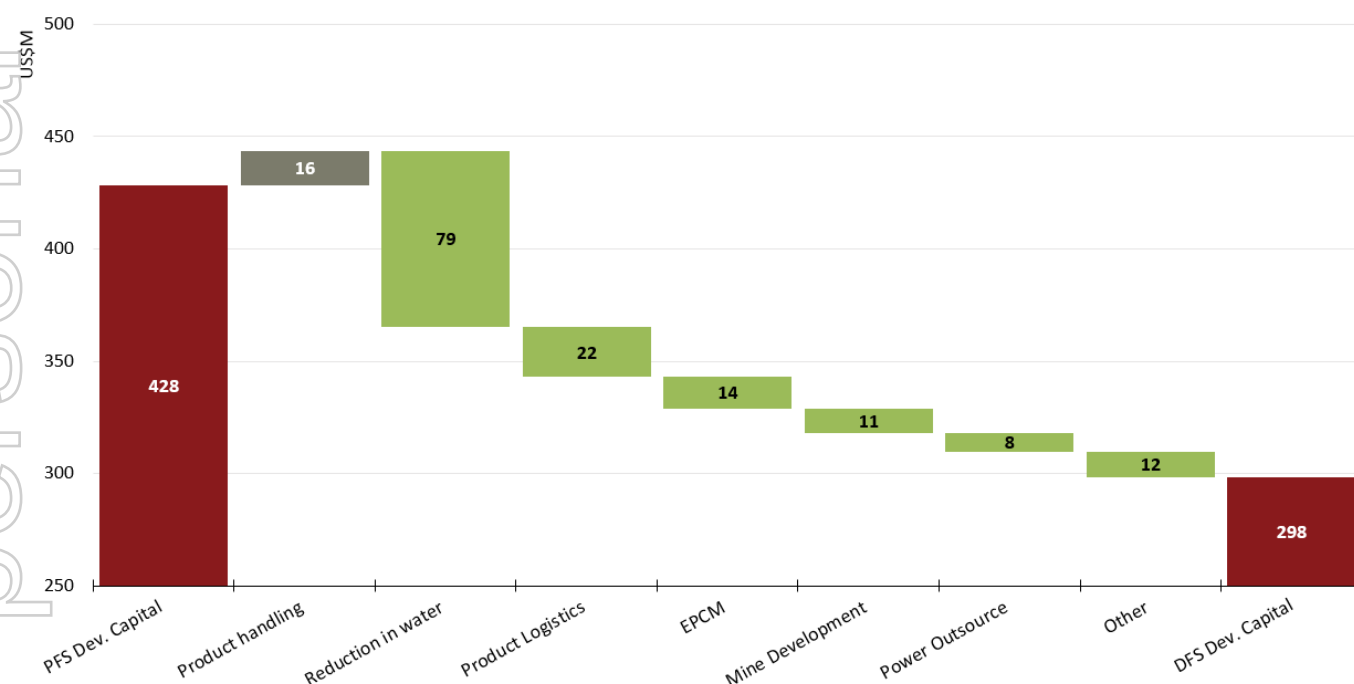


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Table 6: Development capital estimates

Estimated development capital expenditure by type	Unit	DFS outcomes	
		Phase I	Phase II
Plant and ponds	US\$m	79.2	75.9
Mine development	US\$m	54.2	-
Earthworks	US\$m	17.0	12.7
Water services	US\$m	17.0	14.7
Site infrastructure and camp	US\$m	21.6	7.2
Power	US\$m	8.2	18.3
Product logistics	US\$m	12.5	-
Owners costs	US\$m	26.7	9.9
EPCM	US\$m	24.4	16.2
Contingency	US\$m	37.4	20.2
Total development capital	US\$m	298.2	175.1
Development capital intensity	US\$/t SOP	702	412

Figure 10: Material changes in Phase I development capital from PFS to DFS



Sustaining capital

Sustaining capital has been allocated for further pond and tailings construction, minor mobile equipment, infrastructure upgrades and closure provisioning. Table 7 summarises the relevant sustaining capital over the economic period.

Detailed sustaining capital profiling has reduced related spend in the earlier years of production creating value.



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Table 7: Sustaining capital estimates

Estimated sustaining capital expenditure by period	Unit	DFS outcomes	
		Phase I	Phase II ¹
Years 1-5	US\$m	36	36
Years 5-30	US\$m	201	322
Years 31-60	US\$m	244	385
Total sustaining capital	US\$m	481	743
Sustaining cost unit rate	US\$/t SOP	18.91	15.24

Note:

¹ Phase I and II combined**Working capital**

Working capital, provided in reference to the delay from first production to cash receipt from product sales, is summarised in Table 8.

Table 8: Working capital estimates

Estimated working capital expenditure	Unit	DFS outcomes	
		Phase I	Phase II ¹
Total working capital	US\$m	38	-

Note:

¹ Phase II only**Operating costs**

Operating costs have been compiled for the economic period of review. These costs have been prepared by activity and cost element and further between fixed and variable categories.

All costs have been prepared on an owner operated basis except for mining production (first 60 years), product logistics (first 60 years) and power (first 5 years).

The mine gate cash costs position Colluli in the bottom quartile of the SOP cost curve. Based on the estimated average composite sale price of US\$572/t SOP, Colluli is expected to deliver a robust Phase I operating margin of US\$317/t SOP, or 55%. Table 9 provides operating unit rates (US\$/t SOP) across the period of economic assessment. These costs represent the costs necessary to deliver product to the point of sale (FOB at Massawa).

**DANAKALI****Table 9: Operating unit rate estimates**

Estimated operating expenditure by activity	Unit	DFS outcomes	
		Phase I	Phase II ¹
Mining	US\$/t SOP	85.50	70.29
Processing	US\$/t SOP	58.40	53.23
Water logistics	US\$/t SOP	3.09	2.93
G&A	US\$/t SOP	21.12	14.51
Mine gate costs	US\$/t SOP	168.11	140.96
Product logistics	US\$/t SOP	66.94	66.29
Operating costs	US\$/t SOP	235.05	207.25
Royalties	US\$/t SOP	20.03	20.03
Total cash cost	US\$/t SOP	255.08	227.28

Note:

¹ Phase I and II combined

11. Financing assumptions

Financing of the initial development capital is expected to be a combination of third party debt (up to 70%) raised by CMSC and a shareholder contribution from Danakali (30%).

Shareholder contributions relating to expansions after Phase I follow Joint Venture holding, however, these expansions are expected to be funded through the combination of operating cash flows and third party debt. No contribution from Danakali has been assumed after the initial development capital (Phase I).

Danakali's 30% shareholder contribution for Phase I comprises two components:

1. 50% via an interest free loan to CMSC, repayable from Project cash flows
2. 50% via equity contribution to the Project

If 70% third party debt funding is not achieved by CMSC, Danakali is required to fund the shortfall through an interest bearing loan where the terms of this loan align to the third party debt raised by CMSC. The DFS assumes this shortfall to be 10%, taking the estimated sole contribution by Danakali to 40% for Phase I. It should be noted that 25% of this 40% contribution will be repaid via the loans to CMSC leaving a net shareholder contribution by Danakali of 15%.

The above funding assumptions have been included in the economic evaluation below.

12. Economic evaluation

The economic evaluation of Colluli has been completed using a discounted cash flow model. An external review of the model has been undertaken to ensure logistical and arithmetic integrity and in reference to the applicable fiscal regime.

All real figures provided in this DFS release are real as of September 2015.



Further key assumptions for the model are:

- A real average composite SOP price of US\$572/t FOB at Massawa was determined through a study undertaken by a leading Commodity Industry Market and Pricing Analyst
- The fiscal regime assumptions align to the relevant current Eritrean tax proclamations; the key assumptions are as follows:
 - Income tax (Proclamation 69/1995) is calculated at a rate of 38% of taxable profit
 - A mining royalty of 3.5% on gross revenue
 - Straight line tax depreciation over four consecutive years
 - Tax losses can be carried forward for ten years for all plant and equipment
- A real discount rate of 10% was used for the economic evaluation

Table 10 summarises the economic outcomes for both Colluli and Danakali's equity interest. Further to this, Figure 11 represents the major movements in the Colluli net present value between the PFS and the DFS on a combined Phase I and II approach. The increase in the calculated IRR's is primarily due to the reduction in the Phase I development capital requirement.

Project cash flows over the first 60 years of production are shown in Figure 12.

Table 10: Economic outcomes

Metric	Unit	DFS outcomes	
		Phase I	Phase I + II ¹
Annualised SOP production	kt	425	850
Strip ratio		1.91	1.93
Phase I development capital ²	US\$m	298	
Incremental Phase II development capital ²	US\$m		175
Average forecast SOP price (FOB Massawa) ^{3,4}	US\$/t SOP	572	572
Average mine gate cash costs ³	US\$/t SOP	168	141
Average total cash costs ^{3,5}	US\$/t SOP	255	227
Cumulative undiscounted after tax cash flow ⁶	US\$m	4,539	9,637
100% of Project			
Post tax NPV (10% real) ⁷	US\$m	439	860
Post tax IRR ⁷	%	25.4	29.0
Phase I payback period ⁷	Years	3.50	
Danakali share of Project			
Post finance NPV (10% real) ^{8,9}	US\$m	206	415
Post finance IRR ^{8,9}	%	25.4	29.3

Notes:

¹ Additional 425ktpa Phase II commencing production in year 6

² Including contingency, excludes working capital

³ Average for first 60 years of production

⁴ Composite price for Standard and Granular SOP

⁵ Includes mine gate costs, product logistics and royalties

⁶ Over first 60 years of production

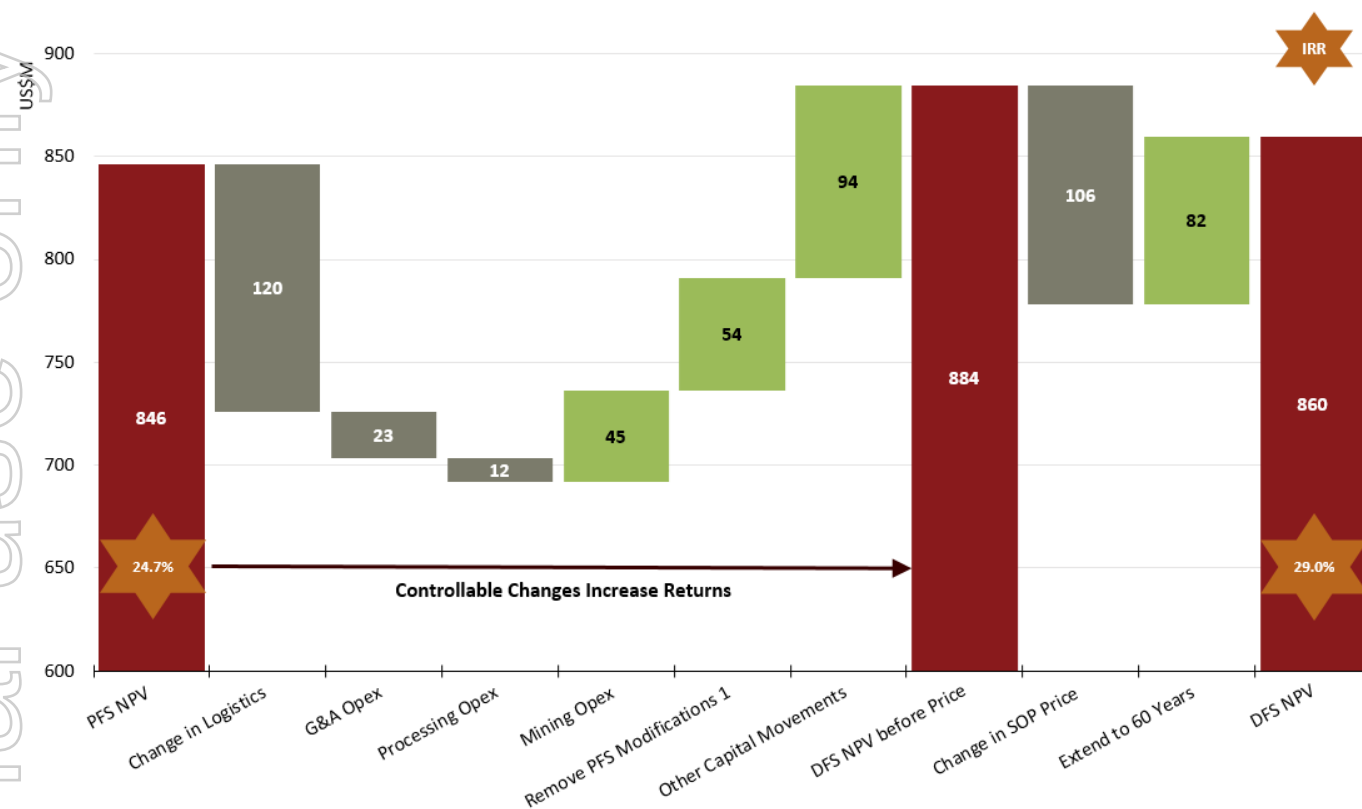
⁷ 100% Project level basis (Danakali holds a 50% interest)

⁸ In accordance with the CMSC Shareholders' Agreement

⁹ Third party debt estimated at 60% of Project funding



Figure 11: Material changes to Colluli NPV and IRR on a two phased development approach – PFS to DFS

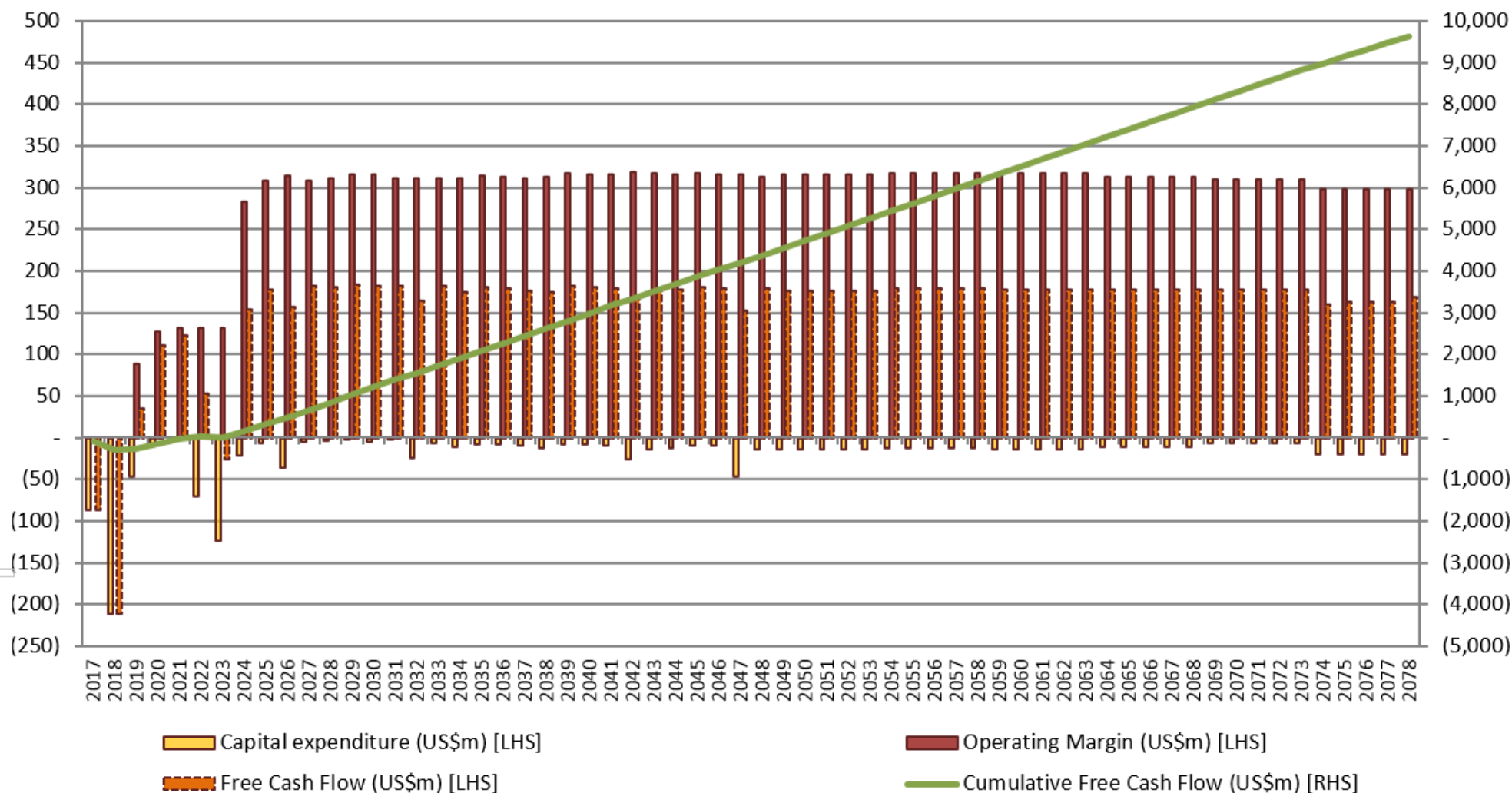


Notes:

¹ Relates to PFS plant modifications for processing lower carnallite material which have been removed through improved understanding of chemistry



Figure 12: Colluli Phase I and II undiscounted cash flows (US\$m)





13. SOP price sensitivity

The Project's economics are sensitive to SOP pricing. Refer to Table 11 for the calculated economic sensitivities to changes in the assumed SOP price.

Table 11: Phase II economic sensitivity to changes in the long term SOP price

Outcome	Basis Price (US\$/t) ¹	DFS 572	-10% 515	+10% 629	Current ² 588
100% of Project					
Post tax NPV (10% real)	US\$m	860	660	1,058	915
Post tax IRR	%	29.0	24.6	33.0	30.1
Danakali share of Project					
Post finance NPV (10% real)	US\$m	415	316	513	442
Post finance IRR	%	29.3	25.3	33.0	30.4

Notes:

¹ Composite price for Standard and Granular SOP

² Source: Green Markets; DNK Analysis; Dated 31 October 2015

FOB prices published from other projects in the Danakil region are shown in Table 12.

Table 12: Published prices in the region where Colluli will operate

Company	Country	Stage	Unit	Price	Date
Allana Potash (Israel Chemicals Limited)	Ethiopia	DFS	US\$/t SOP	552	March 2015
Circum Minerals Limited	Ethiopia	DFS	US\$/t SOP	580	August 2015

Source: Company Websites

14. Potash market overview

Potash is the common term for fertiliser forms of the element potassium (K). Potassium is one of three key fertiliser 'macro-nutrients' essential for healthy soil and plant growth. It is generally used in combination with the other two macro-nutrients, nitrogen and phosphorus, to produce a range of fertilisers, the type used being dependent on the soil to which it will be applied.

Potash growth is underpinned by strong demand drivers including growing population, reduction in arable land and changing dietary preferences. The overall equation for ongoing potash demand growth is simple:





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Potash is available in various forms, and is differentiated by chemistry. The most common type is MOP or KCl. SOP is the second most common type and has historically sold at a premium to MOP.

SOP is produced in three types: Standard, Granular and Soluble. Granular trades at a premium to Standard and Soluble trades at a premium to Granular.

SOP is generally sold in three key markets; China, Europe and North America. Pricing is determined individually for these regions. Demand for SOP, however, is global and presents itself where there are high value crops, an accumulation of chlorine in the soils occurs or where the addition of sulphur is valued.

Colluli is located proximate to the key potash markets of the future. Demand for fertiliser is driven by population growth which directly translates to food demand. Almost 95% of the population growth over the next three decades will occur in Africa, India and South East Asia. The relative location of the Colluli resource to these key markets gives it a significant logistics advantage and unrivalled access to the potash markets of the future.

15. Conclusion

The DFS has further demonstrated the economic robustness of Colluli as a Tier 1, globally significant, potash development. By applying a modular approach to development, Colluli can be brought into production with low upfront development costs and a high degree of expandability.

Furthermore, the market leading capital intensity makes Colluli highly attractive and competitive relative to many potash operations and to the other undeveloped deposits. Colluli will apply a simple, safe, open pit mining technique and have a proven process design.

Consequently the Danakali and the CMSC boards have agreed to continue to progress the development of Colluli with initiation of the mining license application targeted in Q1 2016.

For more information, please contact:

Paul Donaldson
Managing Director
+61 8 6315 1444

For Media and Broker Enquiries:

Warrick Hazeldine / Andrew Rowell
Cannings Purple
+61 417 944 616 / +61 400 466 226



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About Danakali Limited

Danakali is an ASX listed company and 50% owner of the Colluli Potash Project (Colluli) in Eritrea, East Africa. The company is currently developing Colluli 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 (DFS) 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 Colluli 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.



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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.

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, and 23 September 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.



APPENDIX 1

JORC Code 2012 - Table 1, Section 4

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section)

Criteria	Explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	- Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. - Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	- Ore Reserve estimate based on the Mineral Resource reported by AMC in the report "Colluli Mineral Resource Estimate", 16 March 2015. Refer to South Boulder Mines Ltd (now Danakali Ltd) ASX release 25 February 2015 for the updated Colluli Mineral Resource estimate, "Colluli Review Delivers Mineral Resource Estimate of 1.289Bt" (website: http://www.asx.com.au/asxpdf/20150225/pdf/42wv88cwpjmtkh.pdf) - Colluli open pit Ore Reserve based on Measured and Indicated Mineral Resources of 1,255 Mt @ 11% K₂O, comprising: - Sylvinite rock unit: 250 Mt @ 13% K₂O - Carnallite rock unit: 383 Mt @ 8% K₂O - Kainitite rock unit: 621 Mt @ 12% K₂O - Ore Reserve based on 3D resource block models "mdclock_a2.dm" for Area A and "mdclock_b2.dm" for Area B, developed in January 2015 from geostatistical assessment of predominantly diamond drillhole sample results. - Mineral Resource converted to Ore Reserve by developing diluted resource model and applying pit optimization and mine scheduling to determine economically viable blocks to recover and process. - The Mineral Resources are inclusive of Mineral Resources modified to produce Ore Reserves that can be economically mined.
Site visits	- Comment on any site visits undertaken by the Competent Person and the outcome of those visits. - If no site visits have been undertaken indicate why this is the case.	- The Competent Person for Ore Reserves completed a site inspection of the Colluli project in February 2015 and viewed the proposed mine, process and camp infrastructure, and also: - Assessed data collection methods and techniques - Inspected the proposed port site at Massawa and the product haulage route - Visited communities nearest the project site.
Study status	- The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. - The Code requires that a study to at least pre-feasibility study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	- Colluli studied to Feasibility Study (FS) standard. FS sometimes referred to as a Definitive Feasibility Study (DFS). - Construction at Colluli is yet to commence. - The mine plan is technically achievable given the assumptions used as the basis for the project. - The project is economically viable when considering the expected revenues and costs to achieve those revenues, assuming a project commissioning date in Quarter 4, 2018. - Material Modifying Factors were considered.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	- Breakeven processing cut-off grade used for Ore Reserve estimation. - Cut-off grade calculated using: - Adopted long-term SOP price of US\$586/t product was used in mine planning. Financial modelling was subsequently completed using an SOP price of US\$572/t product. Cut-off parameters were not adjusted because the difference in total ore tonnes at each price is negligible (less than 0.05%). - Processing, administration, overhead and associated sustaining capital cost of US\$19.49/t processed. - Product haulage, port and associated sustaining capital cost of US\$23.84/t product. - Royalty costs of 3.5% of revenue. - Process recovery of 85% for K⁺ and SO₄²⁻ from sylvite, carnallite and kainite mineral species hosted within Sylvinite, Carnallite and Kainitite rock units. - Costs for processing plant production rate of 850 ktpa of SOP.
Mining	The method and assumptions used as	Open pit mining method:



factors or assumptions	reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimization or by preliminary or detailed design). • The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. • The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling. • The major assumptions made and Mineral Resource model used for pit and stope optimization (if appropriate). • The mining dilution factors used. • The mining recovery factors used. • Any minimum mining widths used. • The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. • The infrastructure requirements of the selected mining methods.	– For potash and rock salt – 110 t class surface miners direct loading 90 t class rear dump trucks. Method commonly used in potash and phosphate open pit operations and is well understood. Similar continuous miner technology is used in underground potash and phosphate mines. – Clastic overburden and bischofitite – 110 t class excavators and 90 t class rear dump trucks. Clastic overburden pushed down to excavators by 50 t track bulldozers. Method commonly used in open pit operations and well understood. • Choice of mining method to enable the selective extraction of the potash ore units, minimising mining dilution and ore loss, and eliminating the requirement for drill and blast. Excavators utilised for bulk waste movement. Staggered benches in the pit development to level stripping ratio over the mine-life, enhance project economics and provide consistent plant feed. • Optimum pit limits determined using Gemcom Whittle 4X computer software given the project assumptions. Optimization outcomes are insensitive to changes in input parameters until the price is reduced by approximately 30%. • Process plant feed targets maintained in the mine schedule using Minemax Scheduler strategic mine scheduling software and XPAC mine production scheduling software. • Pit designs developed using Datamine computer software. • Geotechnical design parameters applied in pit design supported by analyses of laboratory testing of drill samples: – Clastic overburden: Batter angle of 23° to 15° for slope heights ranging in height up to 10m to 50m. Berm width of 40m at the toe of the clastic overburden, located in rock salt. – Carnallite and Bischofitite: Batter angle of 20°, berm width of 8m, and maximum batter height of 25m. – All other potash units and rock salt: Batter angle of 70°, berm width of 8m, and maximum batter height of 20m. • Pit designs developed for two scenarios: – Detailed pit design to provide inventory for the period of economic assessment. – Life of mine pit designs for Ore Reserve estimation purposes, based on the final pit limits from pit optimisation. Detailed design for Area B not completed as it is not expected to be mined for approximately 100 years. Instead an average overall pit slope angle of 19° was applied in Area B, based on the overall slope angle resulting from the Area A detailed design. • Mineral Resource model assumptions detailed in Section 3, Table 1. Refer to South Boulder Mines Ltd (later Danakali Ltd) ASX release 25 February 2015 for the updated Colluli Mineral Resource estimate, “Colluli Review Delivers Mineral Resource Estimate of 1.289Bt” (website: http://www.asx.com.au/asxpdf/20150225/pdf/42wv88cwjmtkh.pdf). • Production schedule based on 850 ktpa SOP production, to give a mine life in excess of 200 years. Life of mine average plant throughput rate is 5.4 Mtpa and the life of mine average mining rate is 27.4 Mtpa. • Colluli area topography is characterized by a flat salt plain in the area of mineralisation, bordered by an anhydrite ridge approximately 20m above the salt plain. All pits, dumps and roads designed to FS standard to ensure designs practically achievable. • 0.3 m “skin” of dilution included at each ore to waste contact. Dilutant acquires the grade of the underlying resource model block. Result is inclusion of approximately 7.5% dilutant at a grade of 3.7% K₂O, and ore loss of 0.6% at a grade of 4.1% K₂O, for a net increase of 6.9% in ore tonnes and an increase of 2.3% in contained K₂O. • Minimum mining width of 50m was applied in production scheduling. • Inferred Mineral Resources were considered as waste for optimization and financial evaluations. • Mine waste stored in both in-pit and ex-pit waste storage landforms. • Infrastructure included in the mine plan includes dewatering facilities, heavy vehicle workshop, administration facilities and supporting communication and computing facilities.
Metallurgical factors or	• The metallurgical process proposed and the appropriateness of that process to the style of	• The Colluli process plant flowsheet combines steps that are individually well established for potash ores, but the detail of the process flowsheet is



assumptions	mineralization. • Whether the metallurgical process is well-tested technology or novel in nature. • The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. • For minerals that are defined by a specification, has the Ore Reserve estimation been based on the appropriate mineralogy to meet the specifications?	commercially sensitive. Details are contained in the DFS documents and have been reviewed by an expert to the satisfaction of the Competent Person. • The process uses the combination of salts in the orebody to produce potassium sulphate (SOP). • Process brine will be treated in evaporation ponds to precipitate potassium bearing salts which will be recycled to the plant for recovery. • The SOP product will be dried and sized to produce granular, standard, and potentially soluble, SOP products which will be shipped for export through the port of Massawa. • The overall process flow sheet includes eight main areas: – Ore receipt, secondary crushing, ore storage and reclaim. – Ore pulping and deslime. – Sylvinite and Carnallite processing. – Kainite processing. – Process and waste storage ponds with recycle of selected streams. – SOP production. – SOP drying, sizing and compaction for SOP products. – Product load-out and haulage. • The proposed metallurgical process is well understood and appropriate for the deposit. The processing method is the most commonly used, low cost process for the production of potassium sulphate via the addition of potassium chloride (sylvite) with kainite from the kainitite. Kainitite represents approximately 50% of the Colluli resource with the remaining salts comprising sylvinitite and carnallitite which are commonly used for the production of potassium chloride. Using these well understood processing principles, the ore containing sylvite and carnallite can be decomposed, and then recombined with decomposed kainite to convert the potassium chlorides to potassium sulphate. • Bench scale metallurgical test work was completed to determine: – Chemical and mineral analysis of the samples – Sylvinitite characteristics (clay content, liberation, flotation ability). – Kainite characteristics (clay content, liberation, flotation ability). – Decomposition rates and retention times. – Feed to brine ratios. – Decomposition ratios. – Precipitate sizing. – Pond evaporation tests. – Alternate flotation methods. – Sensitivity to kainite grade fluctuations – Sensitivity to decomposition water quality – Caking potential and anti-caking agents – Compaction of raw SOP into product size fractions • Geological domaining considered in metallurgical testwork, which was carried out separately for sylvinitite, carnallitite, kainitite rock types where appropriate. Mineralogy also considered. • The metallurgical test work samples are representative of mining schedules and the DFS level of economic assessment. • Overall metallurgical recovery factor of 85% is estimated for K^+ and SO_4^{2-} from sylvite, carnallite and kainite mineral species hosted within Sylvinitite, Carnallitite and Kainitite rock units. • Process flowsheet and metallurgical assumptions based on testwork of diamond drilling samples and confirmed by pilot plant testwork which successfully demonstrated production of SOP from Colluli ore. • Pilot plant tests produced over 100 kg of SOP at over 96% purity compared to typical industry product purity of 94%. Chloride levels were less than 0.1%, lower than existing producers which show chloride levels at approximately 0.5%. Results repeatable with a diverse range of feed material.
Environmental	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterization and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	• Social and Environment Impact Assessment (SEIA) documentation is being prepared by the consulting company MBS Environmental (MBS) and DNK. • The status of the SEIA is: – Project classified under the (Eritrean) National Environmental Assessment Procedures and Guidelines as a “Category A’ development meaning it requires a full SEIA. – Scoping and Terms of Reference documents have been updated and submitted to the Department of Environment (DOE) and reflect the DFS



		scope. Development of the SEIA and Environmental Management Plan (SEMP) is progressing towards completion. The majority of environmental and socioeconomic baseline studies have been completed and have been reviewed and accepted by the DOE. Remaining studies focussing on the site access road are expected to be submitted in Q4 2015. MBS and DNK believe there to be no environmental related issues that do not have a reasonable likelihood of being resolved. – Once completed, the SEIA and draft SEMP will be submitted and assessed by the DOE prior to a decision on project approval being made. Monitoring and evaluation of the project will be undertaken for operations. • Eritrea is signatory to a number of international agreements and treaties which have been taken into consideration in the planning and development of the project. • Mine waste material characterisation is complete. All mine waste demonstrated low potential for acid mine drainage. Water leachate analysis showed very low levels of environmentally significant metals and metalloids. • Physical and chemical characterisation of process waste is complete. Process wastes are not anticipated to have any acid mine drainage potential or to generate environmentally significant levels of leachable trace metals and metalloids. • None of the infrastructure for the project will be located on agricultural or residential land.
Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	• Colluli Project is located in the Danakil region of Eritrea approximately 350 km by road south-east of the capital city, Asmara, and 230 km by road from the port of Massawa. • Colluli is a greenfields project comprising the mine and process facilities at the Colluli site, and a seawater abstraction and desalination plant at Anfile Bay providing seawater and desalinated water for processing and site use via buried pipelines along a corridor approximately 85km in length. • Existing access, infrastructure and services include: – Air travel to Eritrea via an international airport in Asmara. – Shipping via the Red Sea port at Massawa. – Exploration camp at Colluli. • Colluli is characterised by a very dry and hot climate, however rain fall intensity during storms can be high. • All infrastructure and equipment will be designed for climatic conditions. • Colluli is not connected to the national power grid. Power at the mine site will be from a heavy fuel oil onsite power plant providing an 11 kV supply which will be stepped down to lower voltages as required. Distribution will be via both underground and overhead power lines. • Product export will be facilitated through the existing port of Massawa with product bulk loaded into twenty foot equivalent (TEU) containers. • The Colluli accommodation camp will be located at the mine site and will provide accommodation for all personnel. The camp will contain mess facilities, laundry, recreation facilities, and camp administration and maintenance buildings. • Existing Colluli access road between Marsa Fatuma and the Colluli site will be upgraded. • Water for all areas of operations will be sourced from saline water sources at site and from the sea at Anfile Bay and pumped via dedicated pipelines to Colluli. • The desalination process at Anfile Bay will employ reverse osmosis. • Sewage from the accommodation camp and plant ablutions will be treated in a package sewage treatment plant. Waste oils will be used as fuel in the product dryer. Wherever possible, solid wastes will be recycled. • The process requires evaporation ponds and tailings storage facilities located on the saltpan. • Surface water and drainage: the mine area is located between the Sariga and Galli-Colluli rivers. Seasonal discharges from these river systems to the saltpan will be mitigated using diversion bunds designed to divert surface water away from critical mine areas whilst minimising downstream impacts. • Site buildings will be fit-for-purpose and will include a main administration building, a clinic and emergency response building, workshops, warehouse,



		reagent store, ablution blocks and crib rooms, laboratory and gatehouse. A helipad is available if required. - Fuel for mining equipment and power generation will be stored in banded steel tanks providing ten day's supply. - Communications will comprise a site radio system, process controls, and a VSAT satellite link for voice and data connection. It is anticipated that the local phone provider will supply a link to the national mobile network. - Local staff will be employed wherever possible, in conjunction with African and international expatriates. Camp facilities will be provided for all staff.
Costs	- The derivation of, or assumptions made, regarding projected capital costs in the study. - The methodology used to estimate operating costs. - Allowances made for the content of deleterious elements. - The source of exchange rates used in the study. - Derivation of transportation charges. - The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. - The allowances made for royalties payable, both Government and private.	- Capital costs estimated from first principles by specialist consultants (Lycopodium, Ausenco, AMC). The estimates assumed: - New equipment prices for all equipment. - Budget pricing from local and international contractors - Factored estimates using known costs from previous projects. - Individual assessment of the work content. - Development capital is estimated at US\$298M for Phase I and includes mine development capital and excludes working capital. An additional US\$175M will be spent in Years 4 and 5 for the Phase II expansion. - Capital and operating costs presented in US dollars as at the third quarter of 2015 to an accuracy of +/- 15%. - Process operating costs developed from first principles analysis of fixed costs (labour, G&A, infrastructure) and variable costs associated with power and consumables. - Mine operating costs developed from first principles, on a contractor mining basis, to consider the equipment productivity expected for each bench in the design and the unit costs to be applied to the equipment. - Average unit operating costs (Includes mine gate costs, product logistics and royalties) for the period of economic assessment are US\$227 per tonne of SOP produced. - Exchange-rate assumptions provided by DNK and based on recent DNK analysis and available market consensus data from the financial sector where available. Exchange rate assumptions: - AUD1.35 to USD1.00 - ERN15.00 to USD1.00 - EUR0.89 to USD1.00 - CNY6.44 to USD1.00 - ZAR13.33 to USD1.00 - CAN1.30 to USD1.00 - Transport costs were quoted by an Eritrean logistics company. Massawa port handling fees were applied. SOP is assumed to be sold free on board (FOB) with no allowance for post-shiploading costs. - Processing costs estimated from first principles. Final product requires no further treatment or refining. - Royalty of 3.5% of revenue, payable to the Eritrean government, included in the financial evaluation.
Revenue factors	- The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. - The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	- Head grade estimated using geostatistical techniques in 3D modelling of diamond drilling results. - Product will be in standard (-2mm) and granular (-4mm +2mm) form - Long term SOP price estimate of US\$572/t SOP, FOB at Massawa, used in Ore Reserve estimation. Price in the range of SOP prices observed in the past several years, adjusted for the port of export. Refer to "Cut-off parameters" section for additional comment. - Financial modelling of a shorter period of 60 years was considered when determining project NPV. A long term price estimate was applied across the 60 years which equates to the long run marginal cost methodology. The resulting average price was US\$572/t SOP, FOB Massawa. - Contract product haulage from Colluli to the Port of Massawa has been estimated at US\$66/t SOP sold for product haulage including diesel.
Market assessment	- The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. - A customer and competitor analysis along with the identification of likely market	- SOP is a regularly traded commodity and is sold predominantly by way of supply contracts in a closed market. - The status of any supply contracts involving DNK is commercially sensitive and is therefore not disclosed. - DNK completed customer and competitive analysis, which is commercially sensitive and is therefore not disclosed.



	windows for the product. • Price and volume forecasts and the basis for these forecasts. • For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	• Colluli is geographically well located to supply Asia, India and the Middle East, and can also supply Europe and America. • Price forecasts were based on marketing analysis, specific to the Colluli potash project, by CRU Consulting, who have assessed supply-demand for both potassium chloride and potassium sulphate. Raw material input costs, export taxes and logistics costs have all been considered as part of the analysis and the relative position of the Colluli project on the global cost curve considered. • For secondary potassium sulphate production, by-product credits for hydrochloric acid produced were applied to give a secondary production mine gate production cost. A logistics cost was then added (based on European operations) to give a FOB price. Long term pricing has been derived using incentive pricing methodology which considers the cost of capital and economic returns on typical similar projects. • The forecasts provided to DNK were based on detailed market intelligence, and a team of industry experts. • An ongoing demand for SOP globally is expected and attributed to increasing world population, declining arable land, disposable income and dietary changes, and under-application of potassium fertilisers in developing countries. • SOP supply has been contracting due to operational issues within existing suppliers and failed capacity expansions, which has resulted in an SOP price increase over that period. There is a limited number of projects and resources of significance that are likely to be developed. • Analysis of the China market demonstrates that when SOP and MOP prices converge, switching takes place with a preference for SOP over MOP. Colluli's cost structures suggest growth well beyond the current SOP market size is possible.
Economic	• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. • NPV ranges and sensitivity to variations in the significant assumptions and inputs.	• It is not practical to assess the total project economic analysis due to the long timelines involved. • The economic assessment therefore is based on an economic period of review of 60 years, with production assumed to commence in Quarter 4, 2018. • Discount rate of 10% "real" used for long term financial analysis. • Pit shell optimizations generated using undiscounted cash flows. • All evaluations conducted in "real" currency with a reference date of 30 September 2015. • Provision was made for corporate tax at 38% of operating profit. • No Value Added Tax (VAT) or Goods and Services Tax (GST) payable. • The 60 year economic assessment estimates are NPV of US\$860M; IRR of 29.0%. • NPV is mainly sensitive to SOP price. Reducing SOP price by 10% reduces NPV from US\$860M to US\$660M (-23%), whilst reducing the price by 20% reduces the project NPV to US\$458M (-47%). Increasing the SOP price by 10% increases NPV by 23% to US\$1,058M. • NPV is less sensitive to changes in operating costs. A 20% increase in operating costs reduces the project NPV to US\$699M (-19%). • NPV reduces by 7% to US\$802M when development capital is increased by 20%. • To determine sensitivity, analysis of a case that considers Phase II not being built, shows the Phase I only economic assessment estimates are NPV of US\$439M; IRR of 25.4%; Payback period of 3.5 years.
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	• Colluli is a joint venture between the Eritrean National Mining Company and DNK, via the equally owned Colluli Mining Share Company (CMSC). • Socio-economic and cultural heritage baseline reports have been undertaken and reviewed by the DOE. • Socio-economic and cultural heritage impacts have been assessed and will be documented as part of the SEIA process. A number of social impact management plans are being developed as part of the SEMP process. • DNK has implemented a Stakeholder Engagement Program and is actively engaging with a wide range of project stakeholders. • No resettlement programs will be required. • There are believed to be no social related issues that do not have a reasonable likelihood of being resolved.
Other	• To the extent relevant, the impact of the following on the project and/or on the	• Seasonal discharges from the Sariga and Galli-Colluli river systems to the saltpan will need to be mitigated. Appropriate measures are designed to



	estimation and classification of the Ore Reserves: - Any identified material naturally occurring risks. - The status of material legal agreements and marketing arrangements. - The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	protect infrastructure at Colluli and along the product haulage route. - Further site investigation is planned in the lead-up to operations to assess the potential for liquefaction in the clastic overburden. This will enable management strategies to be developed if required. - Weather conditions at site are hot and dry, with low rainfall and a high salt environment. Equipment and infrastructure was specified that is fit-for-purpose, and appropriate operating procedures will be developed and implemented for construction and operations. - No forward sales contracts or off-take agreements are currently in place for the sale of Colluli SOP. - CMSC holds exploration rights to the Colluli concession until 19th July 2016. The concession encompasses the proposed sites for the open pits, waste dumps, process plant, and associated infrastructure. - A mining license application will be made on completion of the DFS and SEIA. The mining licence will be valid for a maximum period of 20 years or the life of the deposit, whichever is shorter. The license may be renewed for a maximum period of ten years on each renewal; subject to the licensee demonstrating the continued economic viability of mining the deposit and that the licensee has fulfilled the obligations specified in the license and is not in any breach of any provision of Proclamation No. 68/1995. - Granting of land for the Pipeline Corridor between Anfile Bay and Colluli is implied and expected to form part of the mining licence application. - Land was granted to the Colluli Potash Project for the development of coastal facilities including a product export terminal at Anfile Bay on 6 June 2014, subject to economic viability and social and environmental conditions being met. The Anfile Bay export terminal will not be developed as part of this FS.
Classification	- The basis for the classification of the Ore Reserves into varying confidence categories. - Whether the result appropriately reflects the Competent Person's view of the deposit. - The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	- Measured Mineral Resources convert to Proved Ore Reserves. - Indicated Mineral Resources convert to Probable Ore Reserves. - Inferred Mineral Resource regarded as waste for optimization and evaluation purposes. - The Colluli Ore Reserve estimate appropriately reflects the Competent Person's views. - No Probable Ore Reserve was derived from Measured Mineral Resources.
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	- The process design and design criteria, metallurgical testwork, plant configuration and process equipment list presented in the PFS were reviewed both internally and by recognised industry independent experts and were found to be appropriate and fit for purpose. - No material change to the process flow design has occurred between PFS and DFS. - The process design and design criteria, metallurgical testwork, plant configuration and process equipment list presented in the DFS were reviewed by a recognised industry expert and were found to be appropriate and fit for purpose. - The financial model developed by DNK, and used for valuation purposes, was independently reviewed and verified cashflows were modelled against the Colluli shareholders agreement. - The Competent Person is not aware of any other audits or reviews of the 2015 Colluli PFS or DFS.
Discussion of relative accuracy/ confidence	- Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. - The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic	- In the Competent Person's view the Colluli DFS achieves the required level of confidence in the modifying factors to justify estimation of an Ore Reserve. The DFS determined a mine plan and production schedule that is technically achievable and economically viable. - DFS capital cost estimates are based on quoted budget prices and rates, material take-offs from drawings, and allowances. DFS operating cost estimates have a similar level of accuracy. - Additional testwork and design is planned for the implementation phase of the project which will enable refinement of the DFS assumptions. Improving the confidence in these modifying factors is unlikely to materially change the Ore Reserve estimate. - The Ore Reserve classification is insensitive to changes in the Modifying Factors and no conversion of Measured Mineral Resource to Probable Ore Reserve was required. - Review by independent experts of the process design at the PFS stage indicated that there are no major flaws in the process design, plant



evaluation. Documentation should include assumptions made and the procedures used.

- Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.
- It is recognized that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.

configuration and process recovery. No material changes were made to the process design for DFS. Modifying factors are unlikely to change sufficiently with further study to materially change the Ore Reserve.

- Detailed design and analysis was based on a 60 year economic period of review with sufficient sustaining capital allowed to enable regeneration of critical items over the 60 year period.
- Adopted long-term SOP price of US\$586/t product was used in mine planning. Financial modelling was subsequently completed at an SOP price of US\$572/t product following recommendations from the marketing specialists. Cut-off parameters were not adjusted because the difference in total ore tonnes at each price is negligible (less than 0.05%). This difference in long-term SOP pricing is immaterial to the Ore Reserve estimate.