

## HIGHLIGHTS

- Further strengthening of rutile and zircon prices.
- Record rutile production for the quarter of 24,451 tonnes.
- Successful ramp up of mining operations following commissioning of Kwale Phase 2 optimisation project.
- No lost time or medical treatment injuries.
- Production for financial year 2018 consistent with guidance for all products.
- Near mine exploration drilling continued to the north-east of Kwale Operations.
- Appointment of a Mineral Technologies and Lycopodium partnership to deliver the Toliara Project PFS which is now underway.
- Net debt further reduced by US\$27.6 million to US\$33.2 million.
- Production guidance for financial year 2019:
  - Rutile - 88,000 to 93,000 tonnes
  - Ilmenite – 420,000 to 450,000 tonnes
  - Zircon – 32,000 to 37,000 tonnes

African mineral sands producer, **Base Resources Limited** (ASX & AIM: BSE) (**Base Resources** or the **Company**) is pleased to provide a quarterly corporate, development and operational update. At its Kwale Mineral Sands Operations (**Kwale Operations**) in Kenya, the focus has been on ramping up mining rates and optimising the wet concentrator plant (**WCP**) recoveries following commissioning of the Kwale Phase 2 (**KP2**) upgrade. The Company continued activity on its Toliara mineral sands project (**Toliara Project**) in the south-west of Madagascar with the appointment of a Mineral Technologies and Lycopodium partnership to deliver the Pre-Feasibility Study (**PFS**). On the marketing front, pricing for rutile and zircon continued to strengthen during the quarter.

## KWALE OPERATIONS

<b>PRODUCTION &amp; SALES</b>	June 2017 Quarter	Sept 2017 Quarter	Dec 2017 Quarter	Mar 2018 Quarter	June 2018 Quarter
Production (tonnes)					
Ilmenite	119,364	119,376	119,209	111,630	<b>114,773</b>
Rutile	22,762	22,789	22,798	21,634	<b>24,451</b>
Zircon	8,375	9,136	9,569	9,166	<b>9,286</b>
Zircon low grade <sup>1</sup>	3,026	1,425	-	-	-
Sales (tonnes)					
Ilmenite	142,405	106,260	119,554	140,665	<b>107,170</b>
Rutile	27,779	12,594	25,377	25,526	<b>25,635</b>
Zircon	8,540	9,283	8,144	9,884	<b>9,007</b>
Zircon low grade <sup>1</sup>	3,045	-	3,287	-	-

<sup>1</sup> Zircon low grade tonnes contained in concentrate, equivalent to approximately 70-80% of the value of primary zircon.

Following the successful commissioning of a second hydraulic mining unit (**HMU**) and upgraded WCP as part of the KP2 mine optimisation project, the Company is pleased to report achieving nameplate mining and WCP throughput rates of 2,400tph.

The second HMU is an upgraded version of the first HMU and operated at an average mining rate of 865tph in the quarter, compared to a design rate of 800tph. With three mining units operating in the quarter (two HMUs and one dozer mining unit (**DMU**)) a record mining volume was achieved, despite reduced mining in April due to KP2 commissioning. A third and final HMU was commissioned in July, and consequently the DMU has been removed from current service but remains on hand and available, if required.

Following the KP2 WCP upgrade, which included a 69% increase in spiral capacity, recoveries of heavy minerals (**HM**) to concentrate have been slightly below design levels but ongoing optimisation at the higher throughput rates and lower grades continue to yield improvements.

<b>MINING &amp; WCP PERFORMANCE</b>	June 2017 Quarter	Sept 2017 Quarter	Dec 2017 Quarter	Mar 2018 Quarter	<b>June 2018 Quarter</b>
Ore mined (tonnes)	2,975,694	3,023,550	2,882,529	1,883,159	<b>3,543,430</b>
HM %	8.40	8.01	7.61	6.88	<b>6.36</b>
HMC produced (tonnes)	232,574	238,580	196,725	125,298	<b>192,559</b>

WCP production of heavy mineral concentrate (**HMC**) for the quarter increased to 193kt (125kt last quarter, low due to the KP2 shutdown) as mining volumes increased. HMC stockpiles drawn down during the quarter as result of the KP2 commissioning were rebuilt to 78kt by quarter end (77kt at the end of March quarter) as mining and HMC production increased.

The tailings storage facility (**TSF**) sand wall stacking, lining and slimes deposition continued according to plan, with the final wall lift nearing completion. Sand stacking continued in the mined-out area of the Central Dune. Rehabilitation of the TSF outer wall continued during the quarter, albeit at a slower rate due to the heavy rains associated with the main wet season.

Good rains were received during the quarter, resulting in the Mukurumudzi Dam reaching its full capacity of 8.6GL and spilling in June.

<b>MSP PERFORMANCE</b>	June 2017 Quarter	Sept 2017 Quarter	Dec 2017 Quarter	Mar 2018 Quarter	<b>June 2018 Quarter</b>
MSP Feed (tonnes of HMC)	192,432	190,499	190,798	180,128	<b>192,376</b>
MSP feed rate (tph)	92	91	91	92	<b>90</b>
MSP recovery %					
Ilmenite	101	100	100	101	<b>100</b>
Rutile	98	100	100	99	<b>101</b>
Zircon	73	75	77	78	<b>79</b>

Mineral separation plant (**MSP**) availability was extremely good at 98% (91% last quarter) with a total of 192.3kt of HMC processed (180.1kt last quarter). All MSP recoveries were at or above design levels and production of all finished products was higher than the prior quarter as a result of the higher throughput

Bulk loading operations at the Company's Likoni Port facility continued to run smoothly, dispatching more than 130kt of ilmenite and rutile during the quarter (162kt last quarter). Containerised shipments of rutile and zircon through the Mombasa Port proceeded according to plan.

<b>SUMMARY OF UNIT COSTS &amp; REVENUE PER TONNE (US\$)</b>	June 2017 Quarter	Sept 2017 Quarter	Dec 2017 Quarter	Mar 2018 Quarter	June 2018 Quarter
Unit operating costs per tonne produced	\$96	\$90	\$92	\$98	<b>\$102</b>
Unit cost of goods sold per tonne sold	\$103	\$107	\$120	\$114	<b>\$143</b>
Unit revenue per tonne of product sold	\$297	\$285	\$344	\$314	<b>\$376</b>
Revenue:Cost of goods sold ratio	2.9	2.7	2.9	2.8	<b>2.6</b>

Total operating costs were 10% higher than recent quarters due to the increase in mining and processing volumes and the recognition of typical end of financial year costs. Unit operating cost of US\$102 per tonne produced (rutile, ilmenite and zircon) higher than both the prior quarter (US\$98 per tonne) and the same quarter in the prior year (\$96 per tonne) due to the higher overall operating costs associated with the increased mining and processing volumes. Cost of goods sold of US\$143 per tonne sold (operating costs, adjusted for stockpile movements, and royalties) was higher than last quarter due to product sales mix (proportionally more high value rutile and zircon) and the associated cost allocation.

Revenue per tonne of product sold varies significantly each quarter, with the number of bulk rutile sales during that quarter being the primary factor. In a normal year, there are usually seven or eight bulk rutile sales of approximately 10-12kt each, which means any given quarter will typically contain either one or two of these sales. As annual rutile sales account for approximately 40% of revenue but only 15% of volume, the number of bulk rutile sales in a quarter has a significant bearing on revenue, but not sales volume. The June quarter had two bulk rutile sales taking total rutile sales to 25.6kt, in line with last quarter's 25.5kt total rutile sales. Higher rutile and zircon prices together with significantly lower ilmenite sales volume this quarter has resulted in the average revenue per tonne increasing to US\$376 per tonne (US\$314 last quarter).

## MINING TRANSITION TO SOUTH DUNE

Engineering work and procurement commenced during the quarter for the planned transition of mining from the Central Dune to the South Dune in July 2019. The total cost of works for the mine move are forecast to be US\$12.3 million to be incurred over FY2019. Negligible costs were incurred during the June quarter.

<b>FY2019 PRODUCTION GUIDANCE</b>	FY2017 Actual	FY2018 Actual	<b>FY2019 Guidance Range</b>
Rutile (tonnes)	90,625	91,672	88,000 to 93,000
Ilmenite (tonnes)	467,359	464,988	420,000 to 450,000
Zircon (tonnes)	34,228	37,157	32,000 to 37,000
Zircon contained in zircon low grade (tonnes)	10,210	1,425	nil <sup>2</sup>

The above production guidance is based on the following assumptions for financial year 2019 (FY2019):

- Mining of 18.3Mt at an average HM grade of 3.98%, all from Ore Reserves<sup>3</sup>. Forecast mining volumes are significantly higher than FY2018 (11.3Mt) facilitated by the addition of a third mining unit as part of the KP2 upgrade project to offset declining ore grades.
- MSP feed rate at an average of 89tph, consistent with recent performance.

<sup>2</sup> No production of zircon low grade is anticipated for FY2019.

<sup>3</sup> The Ore Reserves estimates underpinning the above production targets were prepared by Competent Persons in accordance with the JORC Code (2012 edition). The above production targets are the result of detailed studies based on the actual performance of the Kwale mine and processing plant. These studies include the assessment of mining, metallurgical, ore processing, environmental and economic factors.

- MSP product recoveries of 100% for ilmenite, 99% for rutile and 77% for zircon, consistent with recent performance.

## MARKETING

The global TiO<sub>2</sub> pigment industry remained buoyant, as expected, through the seasonally strong June quarter. High plant utilisation rates and low inventory levels among major western pigment producers continue to support a strong pigment pricing environment. Pigment producers in China, whilst targeting maximum output levels, have been somewhat hampered in recent months by renewed environmental inspection shutdowns by local authorities.

Demand for ilmenite from the Chinese pigment industry continues to be volatile, caused by the impact of periodic environmental inspections on both domestic ilmenite producers and pigment producers. Chinese domestic ilmenite production was restricted during the second half of the quarter as a result of environmental inspections and in response to softer demand from pigment producers affected by environmental shutdowns. Imports of ilmenite to China from Vietnam and India continue to be restrained due to political factors and lower market prices. Ilmenite prices decreased slightly during May but have remained stable through to the start of July. It is expected ilmenite prices will remain steady through the September quarter with the potential for upside if Chinese pigment prices increase and/or Chinese pigment output from major producer's trends back towards maximum capacity.

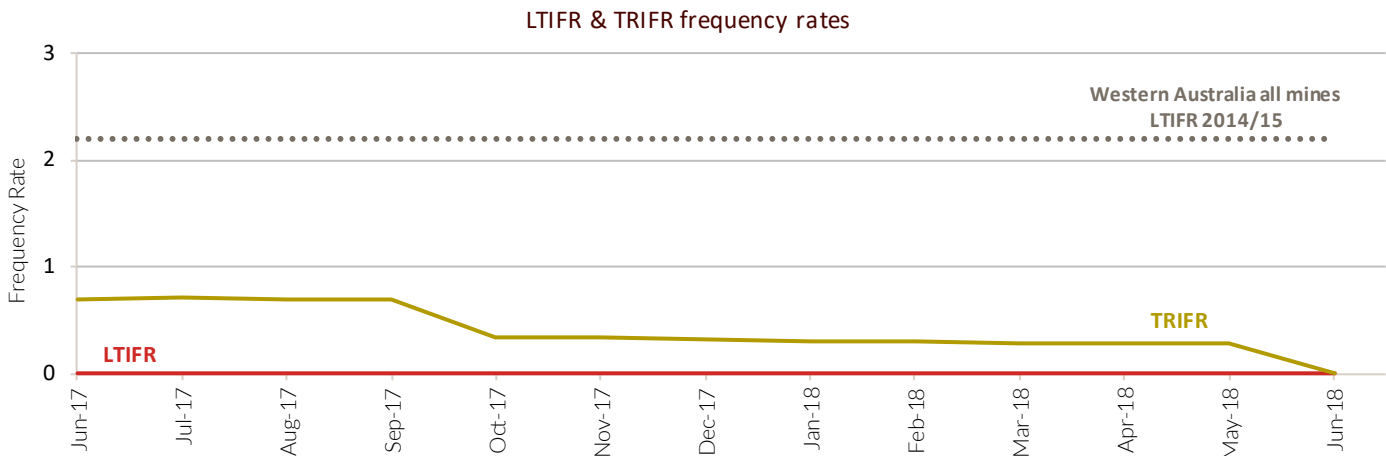
A supply deficit in the high-grade feedstock sector (which includes rutile), driven mostly by the strength in the western chloride pigment sector, has seen market conditions continue to tighten. Most recently, a major producer has announced that it has applied a 14% price increase for contracted rutile sales in the second half of 2018.

Zircon demand continued to be strong through the June quarter with volumes requested by customers remaining well above the Company's capacity to supply. Indications of ongoing tight supply from major zircon sources through 2018 have supported further substantial zircon price increases. Base Resources has again secured significant price gains on zircon contracts for the September quarter. Concerns from zircon producers in relation to the potential for substitution or thrifting of zircon by customers may begin to restrain the extent and/or frequency of price increases going forward.



## SAFETY

With no lost time or medical treatment injuries occurring during the quarter or in the past year, Kwale Operations’ lost time injury frequency rate (LTIFR) and total recordable injury frequency rate (TRIFR) are both now zero, an exceptional performance reflective of the ongoing focus and importance placed on safety by management. Base Resources’ employees and contractors have now worked 13.2 million man-hours LTI free, with the last LTI recorded in 2014.



## COMMUNITY AND ENVIRONMENT

Agricultural livelihood programs, run in conjunction with partners Business for Development, DEG, FMO, Australia’s DFAT and Kenya Red Cross, continue to develop with encouraging support from both national and county Kenyan governments. These programs, covering cotton, potato, sorghum, legumes, bee keeping and poultry, have expanded to involve around 2,500 smallholder farmers and community groups with early and persistent rains in the quarter contributing to good results.

Sorghum harvest and commercial sales continue with a large Kenyan brewing company and a solid relationship is developing between the farmers’ cooperative and the brewer. Further training has been provided by the brewer to help lift product quality in their campaign to increase locally sourced produce.

Cotton is also growing well this season with harvest anticipated in the September quarter. In June, the Kwale Cotton project was shortlisted for the Unilever Global Development Award out of hundreds of applicants.

A recently announced Kenyan national development initiative, known as the “Big Four Agenda”, has identified the cotton value chain as a major element to achieving one of its key pillars – jobs growth by increasing local manufacturing. As a result, the government is directing significant resources to the growth of cotton farming nationwide, together with assisting the PAVI farmers’ cooperative with construction of cotton processing and storage facilities to help farmers release additional value from their crops.

Rehabilitation of the TSF wall is underway with over 8 hectares revegetated so far.

## BUSINESS DEVELOPMENT

### TOLIARA PROJECT DEVELOPMENT - MADAGASCAR

Base Resources’ development plan is on track to complete a full study phase ahead of a decision to proceed to construction in the second half of calendar year 2019 (H2 CY19). This timetable could be expected to see the Toliara Project in production in H2 CY21.

During the quarter, the high-level concept study to identify and assess various enhancement options was completed, with a short list taken forward for evaluation during the PFS.

A Mineral Technologies and Lycopodium partnership (**MTL**) was appointed as engineering consultants to deliver the PFS<sup>4</sup>. The PFS is progressing to plan with a range of mining, processing and infrastructure options being evaluated with the aim of selecting the preferred development option by the end of the September quarter and the full PFS targeted for completion in Q1 CY19. The definitive feasibility study (**DFS**) completion is expected in Q3 CY19.

A number of long lead activities progressed during the quarter which will feed into the PFS and the DFS, including:

- A 115-tonne bulk sample arrived at Mineral Technologies in Brisbane and a full program of wet and dry plant testwork, which will inform process flow sheet design, is progressing to plan.
- The appointment of Wallis Drilling to complete a drilling program to define the boundaries of the Mineral Resource, upgrade the existing Inferred Resource to Indicated status, and complete an Ore Reserve estimation. Drilling commenced in July.
- A site visit by MTL to plan further geotechnical investigations.

The September quarter will focus on completion of the evaluation of mining, processing and infrastructure options and will see commencement of a number of activities including:

- Bathymetric survey of the sea bed for the proposed port jetty.
- Further geotechnical investigations for the port, mine site, haul road and river crossing.
- Infill aerial survey for infrastructure planning.

Total expenditure on the Toliara Project for the June quarter was US\$1.5 million.

## EXTENSIONAL EXPLORATION - KENYA

As announced on 4<sup>th</sup> October 2017<sup>5</sup>, an updated Mineral Resource estimate for the Kwale South Dune (the **2017 Kwale South Dune Mineral Resource**) was completed, resulting in a 19% increase in contained in situ HM in the Measured and Indicated categories. Completion of an updated Ore Reserve based on the 2017 Kwale South Dune Mineral Resource is subject to finalisation of mining tenure arrangements, which are currently being progressed with the Kenyan Ministry of Petroleum and Mining.

The next phase of extensional exploration drilling at Kwale Operations commenced in April in the North-East Sector of the Company's Kwale Special Prospecting License (**SPL**) 173, adjacent to the Kwale Operation's Central Dune. At quarter end, 274 holes for 3,835 metres have been drilled. Completion of the remaining drilling program (4,200 metres) in this area is currently suspended whilst community access issues are being resolved. Drill assay results from work completed to date are expected to be available in the September quarter.

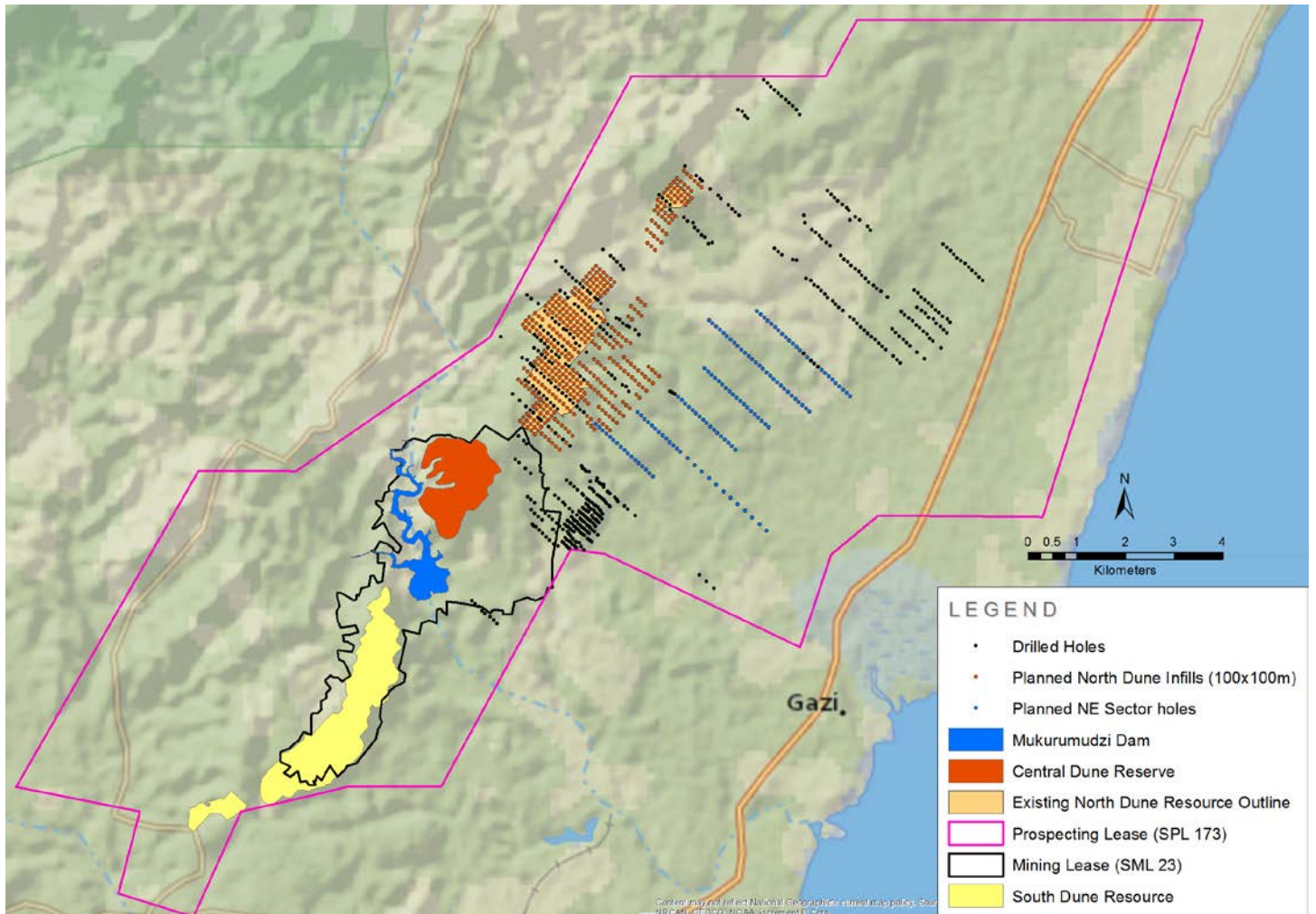
During the quarter, the Company commenced a re-evaluation, including infill drilling, of the higher-grade areas of the North Dune, motivated by an improved economic environment, refined resource definition methodology and insights from five years of operations on the Central Dune. At quarter end, 36 holes for 2,450 metres have been drilled and a further 14,000

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<sup>4</sup> Refer to Base Resources' market announcement "Appointment of a Mineral Technologies and Lycopodium partnership to deliver PFS" released on 15 May 2018, which is available at <http://www.baseresources.com.au/investor-centre/asx-releases>.

<sup>5</sup> Refer to Base Resources market announcement "Mineral Resource Increase for Kwale South Dune" released on 4 October 2017, which is available at <http://www.baseresources.com.au/investor-centre/asx-releases>, which contains the JORC competent persons statement for this estimate of Mineral Resource. The Company confirms that it is not aware of any new information or data that materially affects the information included in this ASX announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimates in this announcement continue to apply and have not materially changed.

metres is planned for the coming quarter. The North Dune is currently not included in the Kwale Mineral Resources. The Company’s Vanga SPL application has been approved by the Mineral Rights Board and is awaiting issuance. Once issued, the planned drilling program will be scheduled to follow on from the North Dune and North-East Sector drilling.



Extensional exploration drilling at Kwale Operations

## EXPLORATION - TANZANIA

The Company holds five prospecting licences in northern Tanzania with a combined area of 475km<sup>2</sup>. A stratigraphic drilling program across all five licences was completed during the prior quarter to enhance understanding of the area’s geology, marine sequences and potential to host heavy mineral. Drill samples have been analysed at the Kwale Operations laboratory and key findings are as follows:

- The red sand dunal deposits are very shallow (1-6m) and overlie a limestone base (Tanga terrace).
- The dunal deposits are weakly mineralised and are high in slime content (average of about 50%).
- Below the limestone base (approx. 50m) lies a mineralised paleo-strand deposit.
- Microscopic analysis of the deep mineralised zone indicates that most of the HM is dominated by garnets and staurolite with low valuable HM content.

Based on these results, it is unlikely the Company will pursue further exploration on these licences.

Total exploration expenditure for the quarter, across all licences in Kenya and Tanzania, was US\$0.4 million.

## CORPORATE

### KENYAN VAT RECEIVABLE

As previously announced, Base Resources has refund claims for VAT paid in Kenya, relating to both the construction of the Kwale Project and the period since operations commenced, totalling approximately US\$21.3 million at 30 June 2018. These claims are proceeding through the Kenya Revenue Authority process and refunds totalling US\$1.4 million were received during the quarter (nil last quarter). Base Resources is continuing to engage with the Kenyan Treasury and the Kenya Revenue Authority, seeking to expedite the remainder of the refunds.

*In summary, at 30 June 2018:*

- Net debt of US\$33.2 million, consisting of:
  - Cash and cash equivalents were US\$29.7 million (unrestricted) and an additional US\$29.6 million (restricted – debt service reserve account).
  - Debt of US\$92.5 million (Kwale Project Debt Facility US\$80.0 million and Corporate RCF US\$12.5 million).
- 1,127,575,014 shares on issue.
- 61,425,061 options (exercise price of A\$0.40, expiring 31 December 2018).
- 71,281,661 performance rights issued pursuant to the terms of the Base Resources Long Term Incentive Plan.

ENDS.



# CORPORATE PROFILE

Base Resources Limited ABN 88 125 546 910

## DIRECTORS

<b>Keith Spence</b>	Non-Executive Chairman
<b>Tim Carstens</b>	Managing Director
<b>Colin Bwye</b>	Executive Director

<b>Sam Willis</b>	Non-Executive Director
<b>Michael Stirzaker</b>	Non-Executive Director
<b>Malcolm Macpherson</b>	Non-Executive Director
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