

## HIGHLIGHTS

- 40% increase in ilmenite prices in the quarter, with further price increase locked in for contracted March quarter sales.
- Record revenue to cost of goods sold ratio of 2.5.
- Hydraulic mining unit fully ramped-up and exceeding 400tph design performance, contributing to record mining volumes.
- No lost time injuries.
- Near mine exploration drilling underway at Kwale Operations.
- Extension of the Taurus Facility to 30 September 2017.
- Further cash “sweep” from the Kwale Operations.
- Net debt reduced by US\$18.1m to US\$129.5 million.

Base Resources Limited (ASX & AIM: BSE) (“Base Resources” or the “Company”) is pleased to provide a quarterly corporate and operational update for its Kwale Mineral Sands Operations (“Kwale Operations”) in Kenya, East Africa. The quarter was characterised by continuing improvement in ilmenite markets and higher mining volumes following the successful ramp up of hydraulic mining. The continued strong performance of Kwale Operations has reduced net debt by a further US\$18.1 million in the quarter.

## KWALE OPERATIONS

SUMMARY PHYSICAL DATA	Dec 2015 Quarter	Mar 2016 Quarter	June 2016 Quarter	Sept 2016 Quarter	Dec 2016 Quarter
Ore mined (tonnes)	2,101,295	2,410,503	2,363,395	2,325,174	<b>3,049,333</b>
HM%	4.31%	8.96%	9.87%	7.51%	<b>5.83%</b>
HMC produced (tonnes)	88,087	209,787	226,453	164,192	<b>152,259</b>
HMC consumed (tonnes)	176,717	175,224	187,244	193,349	<b>191,576</b>
MSP feed rate (tph)	84	86	88	92	<b>91</b>
Production (tonnes)					
Ilmenite	109,649	110,760	119,340	121,821	<b>116,982</b>
Rutile	21,768	21,194	21,766	22,458	<b>22,870</b>
Zircon	7,507	7,865	9,471	9,050	<b>8,591</b>
Zircon low grade <sup>1</sup>	-	-	-	2,160	<b>2,550</b>
Sales (tonnes)					
Ilmenite	103,035	95,984	150,911	139,441	<b>97,047</b>
Rutile	23,896	14,500	32,454	23,023	<b>19,773</b>
Zircon	7,723	9,556	9,590	8,525	<b>9,432</b>
Zircon low grade	-	-	-	-	<b>3,397</b>

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

Mining operations have set a new quarterly record of 3.0 million tonnes (“Mt”) for total ore mined following the successful commissioning of the 400 tonnes per hour (“tph”) hydraulic mining unit (“HMU”) in the September quarter. The HMU has quickly exceeded its design throughput to achieve an average mining rate for the quarter of 431tph, for total ore tonnes mined of 746kt. Combined with the existing dozer trap mining unit (“DMU”), which mines higher grade ore while the HMU mines the thinner, lower grade perimeter blocks, mining operations have surpassed the previous best total ore mined (2.4Mt in the March 2016 quarter) by 26%.



The HMU in operation at the Central Dune

The blended average mined ore grade was lower this quarter due to the HMU remaining in low grade perimeter blocks while the mining methodology is being refined. Average mined ore grade is expected to increase prior to the end of the financial year as both the HMU and the DMU move to higher grade blocks of the Central Dune.

Historically, tailings pump constraints in the wet concentrator plant (“WCP”) have limited mining operations’ ability to significantly increase throughput when mining low grade ore. However, recent changes to the tailings pump impellers have delivered a significant increase in their performance and allowed the higher mining volumes and WCP throughput. The higher throughput rates and lower ore grades have had an impact on the WCP recoveries and the required re-optimisation and de-bottlenecking is underway to increase all recoveries again.

As a result of the lower feed grade and lower WCP recoveries, overall WCP production of heavy mineral concentrate (“HMC”) was lower than recent quarters. The HMC stockpile, built up in prior quarters to accommodate the planned mining sequence and ore grades, was drawn down by 39kt. HMC production will increase once mining moves into higher grade areas before the end of the financial year.

The tailings storage facility (“TSF”) wall stacking, lining and slimes deposition continued to proceed to plan and the final wall lift will commence during the coming quarter.

The Mukurumudzi Dam volume dropped from 5.8 gigalitres (“GL”) to 4.7GL or 56% of capacity during the quarter. The

December quarter ‘short rains’ largely failed to eventuate, further extending the drought conditions being experienced in the region, with total 2016 rainfall at 54% of the historical average, the lowest since 1974. Water conservation measures, implemented at the Kwale Operations earlier in 2016, have ensured sufficient water volume to continue to operate at full capacity through to, and beyond, the anticipated ‘long rains’ wet season between April and June.

The mineral separation plant (“**MSP**”) maintained throughput rates for the quarter (91tph versus 92tph last quarter) with an availability of 95% (96% last quarter). Optimisation and debottlenecking continues, aimed at improving recoveries and also to ensure maximum value outputs are achieved by balancing primary final product production and zircon concentrate production (for sale).

Rutile production set another quarterly record of 22.9kt (22.5kt last quarter) as recoveries increased to 98% (97% last quarter). In addition to the increased recoveries, the proportionally higher rutile content of low grade ore has contributed to the increased production.

Ilmenite production dropped to 117.0kt (121.8kt last quarter), mainly because of the proportionally lower ilmenite content of low grade ore. Average recoveries for the quarter were 102%<sup>2</sup>, slightly higher than the previous quarter’s 100%.

Zircon production for the quarter was lower at 8.6kt (9.1kt last quarter), reflecting the lower zircon content of the feed. Average zircon recovery of 73% was consistent with last quarter but lower than design target. This was partly caused by some electrical supply instability that resulted in repeated stoppages in the wet zircon circuit, which was resolved in the last week of the quarter.

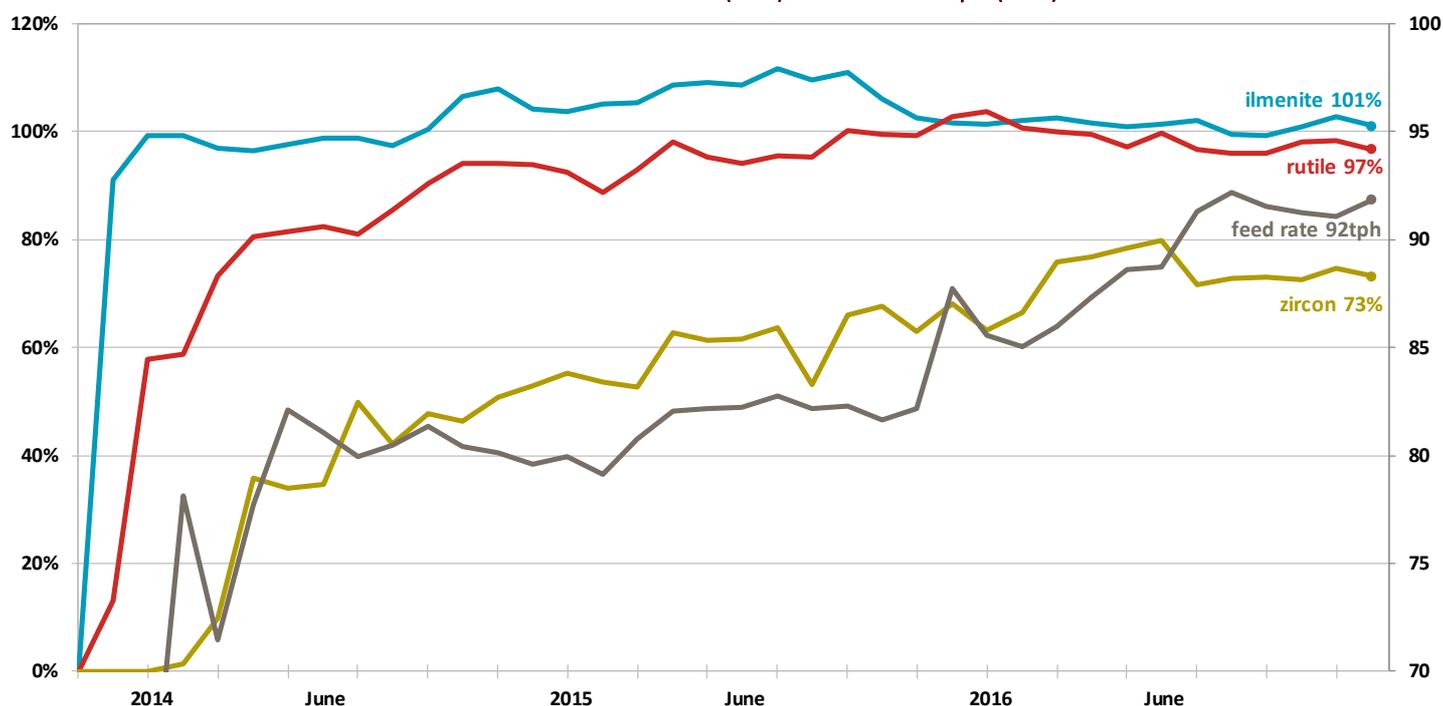
In addition to primary zircon, over the past two quarters, Kwale Operations has been producing a lower grade zircon product (“**zircon low grade**”) from re-processing of zircon tails into a zircon rich concentrate, which has historically realised 70-80% of the value of each contained tonne of zircon. Reported zircon low grade represents the volume of zircon contained in the concentrate. To date, zircon low grade has been produced from the re-processing of run-of-production and stockpiled zircon circuit tails and this is anticipated to continue for the remainder of the financial year. During the quarter 2.6kt of zircon low grade was produced (2.2kt last quarter) and a single shipment containing 3.5kt of zircon low grade was made to China (nothing shipped last quarter). A further shipment containing an estimated 3.0kt of zircon low grade is planned for the March quarter. The production of zircon low grade has more than offset the lower primary zircon recoveries of the past two quarters.

The MSP product recoveries shown in the graph below reflect the primary product recoveries only and do not include any uplift for the production of zircon low grade.

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<sup>2</sup> The presence of altered ilmenite species that are not defined as either “rutile” or “ilmenite” in the Resource but are recovered in the production of both, results in calculated recoveries above 100% being achievable for both products.

MSP PRODUCT RECOVERY % (LHS) & FEED RATE tph (RHS)



Bulk loading operations at Base Resources’ Likoni Port facility continued to run smoothly, dispatching more than 125kt of ilmenite, rutile and concentrate during the quarter (155kt last quarter). Containerised shipments of rutile and zircon through the Mombasa Port proceeded according to plan.

**SUMMARY OF UNIT COSTS & REVENUE PER TONNE (US\$)**

	Dec 2015 Quarter	Mar 2016 Quarter	June 2016 Quarter	Sept 2016 Quarter	Dec 2016 Quarter
Unit operating costs per tonne produced	\$90	\$84	\$93	\$77	\$84
Unit cost of goods sold per tonne sold	\$123	\$106	\$111	\$91	\$102
Unit revenue per tonne of product sold	\$245	\$208	\$201	\$200	\$250
Revenue : Cost of goods sold ratio	2.0	2.0	1.9	2.2	2.5

Total operating costs were marginally higher than last quarter, but remain low overall. This, when combined with lower production volumes, resulted in a higher unit operating cost of US\$84 per tonne produced (rutile, ilmenite, zircon and zircon low grade) (US\$77 per tonne last quarter). Cost of goods sold of US\$102 per tonne sold (operating costs, adjusted for stockpile movements, and royalties) were also higher than last quarter (US\$91 per tonne sold) due the impact of product sales mix.

Revenue per tonne of product sold varies significantly each quarter depending on the number of bulk rutile sales during that quarter. In a normal year, there are usually seven or eight bulk rutile sales of approximately 10-12kt each, which means any given quarter will contain either one or two of these sales (or even three in exceptional circumstances, as was the case in the June quarter). As annual rutile sales account for approximately 50% 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 December quarter saw two bulk rutile sales of 10.1kt and 6.9kt, and total rutile sales of 19.8kt, similar to the prior quarter’s 23.0kt total rutile sales, which, when combined with the lower ilmenite sales volume, higher ilmenite prices and zircon low grade sales, contributed to the rise in average revenue per tonne to US\$250 per tonne (US\$200 last quarter).

The high average revenue per tonne sold and continued cost discipline in the quarter has resulted in a record revenue to cost of sales ratio of 2.5 (2.2 last quarter).

#### **FY2017 PRODUCTION GUIDANCE- MID-YEAR UPDATE**

Kwale Operations production guidance for financial year 2017 (“FY17”) has been updated to reflect lower than forecast first half production of zircon and rutile, whilst factoring in the on-going MSP optimisation and debottlenecking at the higher feed rates, aimed at improving zircon and rutile recoveries. The revised production guidance is:

- Rutile – 88,000 to 93,000 tonnes (previously 88,000 to 95,000 tonnes).
- Ilmenite – 450,000 to 480,000 tonnes (no change).
- Zircon – 33,000 to 37,000 tonnes (previously 35,000 to 40,000 tonnes).
- Zircon contained in zircon low grade – 8,000 to 10,000 tonnes (no previous guidance).

The above updated production targets are based on the following assumptions for FY17:

- Mining of 10.4Mt at an average HM grade of 6.95%, all from Ore Reserves<sup>3</sup>.
- MSP feed rate at an average of 92tph (previously 91tph), consistent with recent performance.
- MSP product recoveries of 102% for ilmenite and 98% (previously 100%) for rutile, and 74% (previously 78%) for zircon, consistent with past performance and planned recovery improvements from MSP optimisation.

#### **2016 MINERAL RESOURCES & ORE RESERVES UPDATE**

On 11 October 2016, updated Kwale Mineral Resources and Ore Reserves estimates were announced.<sup>4</sup> The 2016 Kwale Mineral Resources estimate is the product of revised geological interpretations following the mineralogical assessment of 1,718 individual drill samples (compared to the 71 composite samples previously used), observation of 5 test pits in the South Dune deposit and knowledge gained from mining.

The 2016 Kwale Mineral Resources as at 30 June 2016, are estimated to be 134.6Mt at an average HM grade of 4.2% and 26% slimes containing 5.62Mt HM, based on a 1% HM cut-off grade. The 2016 Kwale Mineral Resources estimate represents a small increase of 1% for total material tonnes and 2% for contained HM tonnes over the previously reported 2015 Kwale Mineral Resources estimate, after allowing for depletion by mining during the year.

Contained within the Mineral Resources, the Ore Reserves are estimated to be 102.5Mt at an average HM grade of 4.6 per cent as at 30 June 2016. The 2016 Kwale Ore Reserves estimate represents a small increase of 2% in total ore tonnes and negligible change in contained HM tonnes over the previously reported 2015 Kwale Ore Reserves estimate, after allowing for depletion by mining during the year.

## **MARKETING**

The TiO<sub>2</sub> pigment industry maintained its strength through the quarter resulting in further price improvement and ongoing strong demand for TiO<sub>2</sub> feedstock. This is encouraging and a departure from the traditional seasonal slow-down in the lead up to the end of the calendar year. Global pigment producers announced a series of price increases over the course of

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<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.

<sup>4</sup> Ore Reserves and Mineral Resources are reported in accordance with the JORC Code (2012 edition). Refer to the “2016 Mineral Resources and Ore Reserves Update for Kwale” released on 11 October 2016, which is available at <http://www.baseresources.com.au/investor-centre/asx-releases/>. Base Resources confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of Mineral Resources and Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed. Base Resources further confirms that the form and context in which the findings of the Competent Persons are presented have not been materially modified from the original market announcement.

2016, with a number of major producers recently announcing a further price increase effective from 1 January 2017.

TiO<sub>2</sub> feedstock consumption continued to increase throughout the quarter on the back of firming pigment production and ongoing re-stocking activity within the downstream supply-chain. This led to another very strong sales quarter for Base Resources’ ilmenite and rutile. Prices for Base Resources’ ilmenite have increased by over 100% between May and December 2016. The Company continues to secure forward sales and has now contracted all ilmenite production through to late February 2017 and has secured further price increases for these forward sales.

There have been recent reports of political disruption to ilmenite exports from Tamil Nadu in India and suppressed ilmenite production in China’s main ilmenite producing region, the Sichuan province, due to increased environmental inspections. These events together with the ongoing strength in pigment demand is expected to result in further improvements in ilmenite prices through 2017.

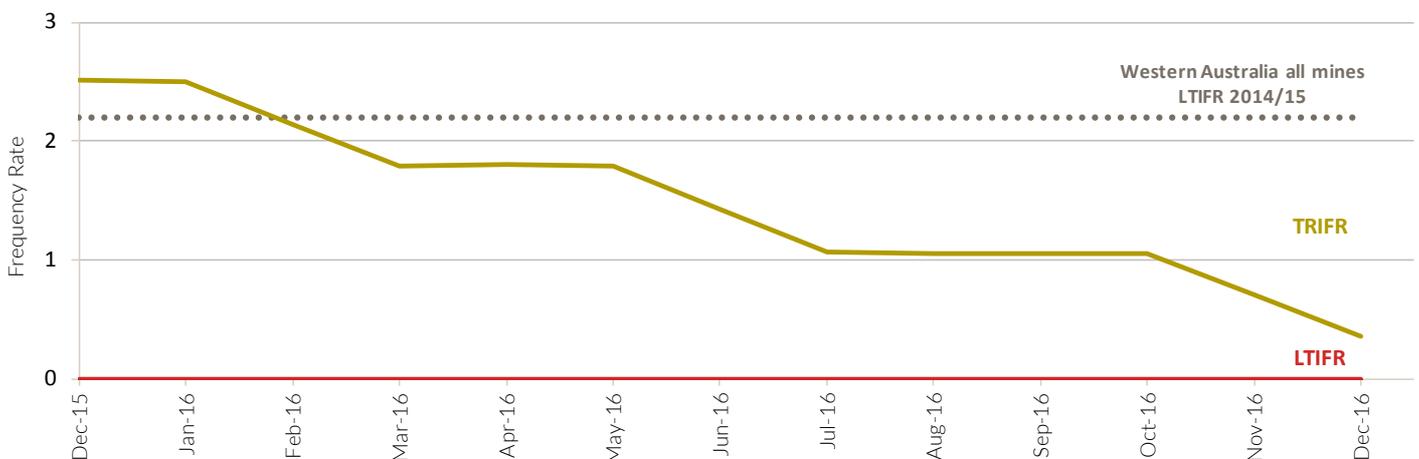
Despite the improvement in demand, an overhang of high grade TiO<sub>2</sub> feedstock (including rutile) supply from the first half of 2016 restrained rutile price growth through the second half of the year. However, higher than expected offtake by major consumers has resulted in supply and demand being more balanced by the end of calendar year 2016. Base Resources’ expectation is for rutile prices to start trending upwards during 2017.

The December quarter saw another solid zircon sales performance with minimal stocks being held throughout the period. Zircon prices saw a modest improvement through the December quarter and further marginal improvements are being secured for the March quarter. Provided supply management continues, ongoing gradual upward momentum in zircon prices should occur through 2017.

## SAFETY

With no serious injuries occurring during the quarter, Kwale Operations’ lost time injury frequency rate (“LTIFR”) remains at zero. Base Resources’ employees and contractors have now worked 8.2 million man-hours LTI free, with the last LTI recorded in the March quarter of 2014. The total recordable injury frequency rate (“TRIFR”) reduced from 0.70 to 0.35 in this quarter, continuing the steady downward trend of 2016.

Lost time injury (“LTIFR”) and total recordable injury (“TRIFR”) frequency rates



## COMMUNITY AND ENVIRONMENT

Agricultural livelihood programmes, run in conjunction with partners Business for Development, DEG, FMO and Kenya Red Cross, continue to develop with encouraging support from both national and county Kenyan governments. These programmes, covering cotton, potato and poultry, currently involve around 500 farmers and community groups with the ultimate aim being to establish new large scale agricultural industries that will provide economic opportunities well beyond the life of mining activities.

A stated long-term industrialisation goal of the Kenyan government is to see the revitalisation of the cotton value chain. The economic returns associated with this sector have enormous potential to deliver benefits to the various participants from farmers right through to garment manufacturers. Reflecting this focus, during the quarter, the Cabinet Secretary for Agriculture, Mr Willy Bett, toured Base Resources' cotton programme in the course of which he met with participating farmers, Kwale County officials, cooperative members and ginnery operators. The Australian government has also now committed to contribute to the development of the program with funding through the Business Partnerships Platform.

The current cotton crop is currently being harvested, with good results from fibre testing carried out in both Nairobi and Bangladesh. Processing at the local ginnery will take place once the harvest is complete in the coming quarter.

During the quarter, Base Resources also provided 29 tonnes of relief food in collaboration with the Kwale County Government, local civil society organisations and Kenya Red Cross to alleviate hunger in the region resulting from drought conditions.

## BUSINESS DEVELOPMENT

### EXTENSIONAL EXPLORATION - KENYA

The Company commenced an aircore drilling programme in the latter half of the quarter within its Special Prospecting License 173 (“SPL 173”). At quarter end, 169 holes for 2,544 metres had been drilled in the area targeting a potential south-western extension of the existing Kwale resource, marked as SW Sector in Figure 1. This will be followed in the coming quarter by an infill drilling programme that will be informed by a preliminary assessment of mineralised zones intersected. Preliminary exploration results for the drilling completed to date are expected to be available in the March quarter.

Extensive community engagement has continued in the north-eastern sector of SPL 173, marked as NE Sector in Figure 1, to obtain informed consent and access to the target drill sites located in this area. Planned drilling is expected to commence during the March quarter.

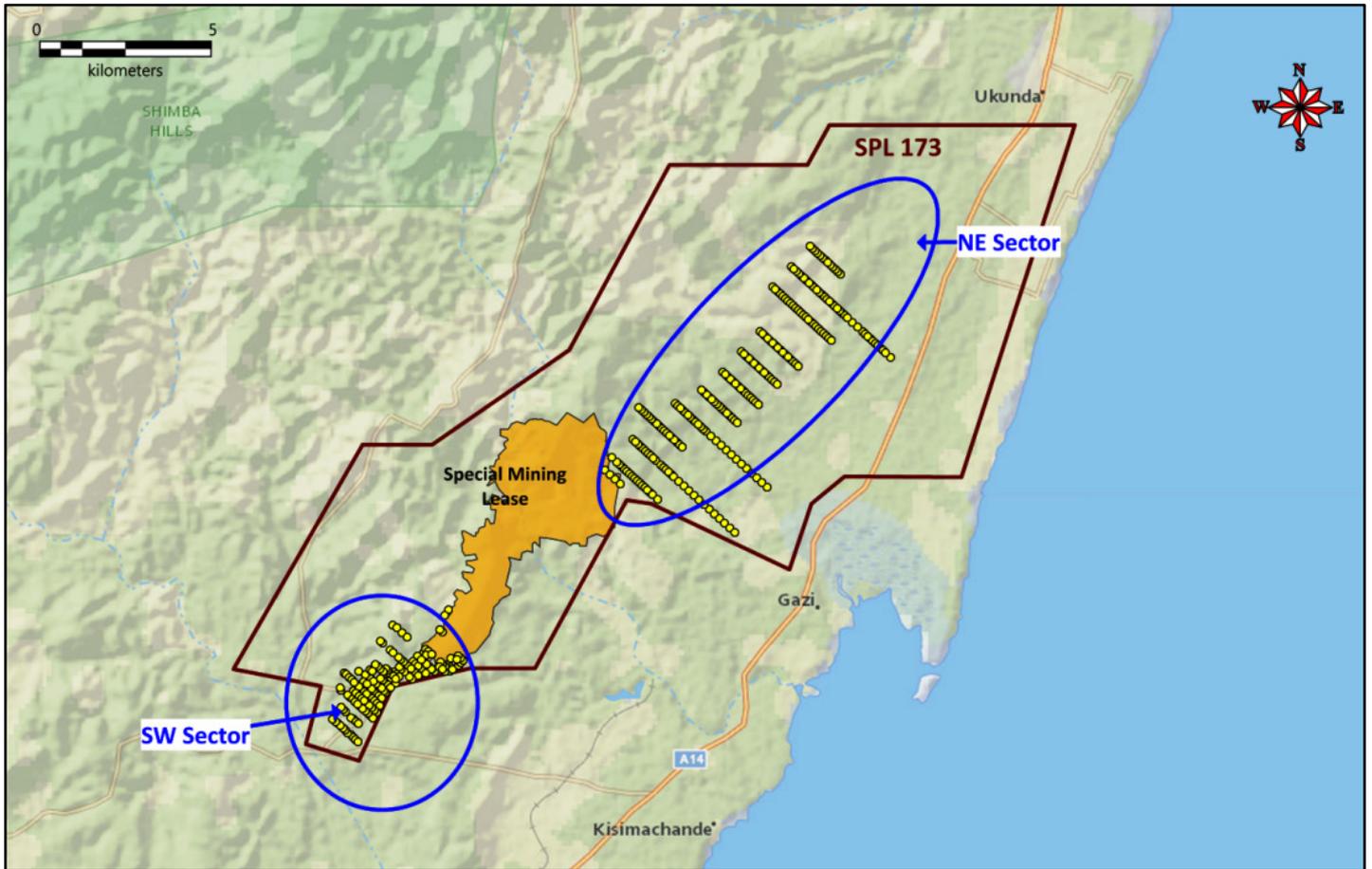


Figure 1: SPL173 with completed and planned drill lines

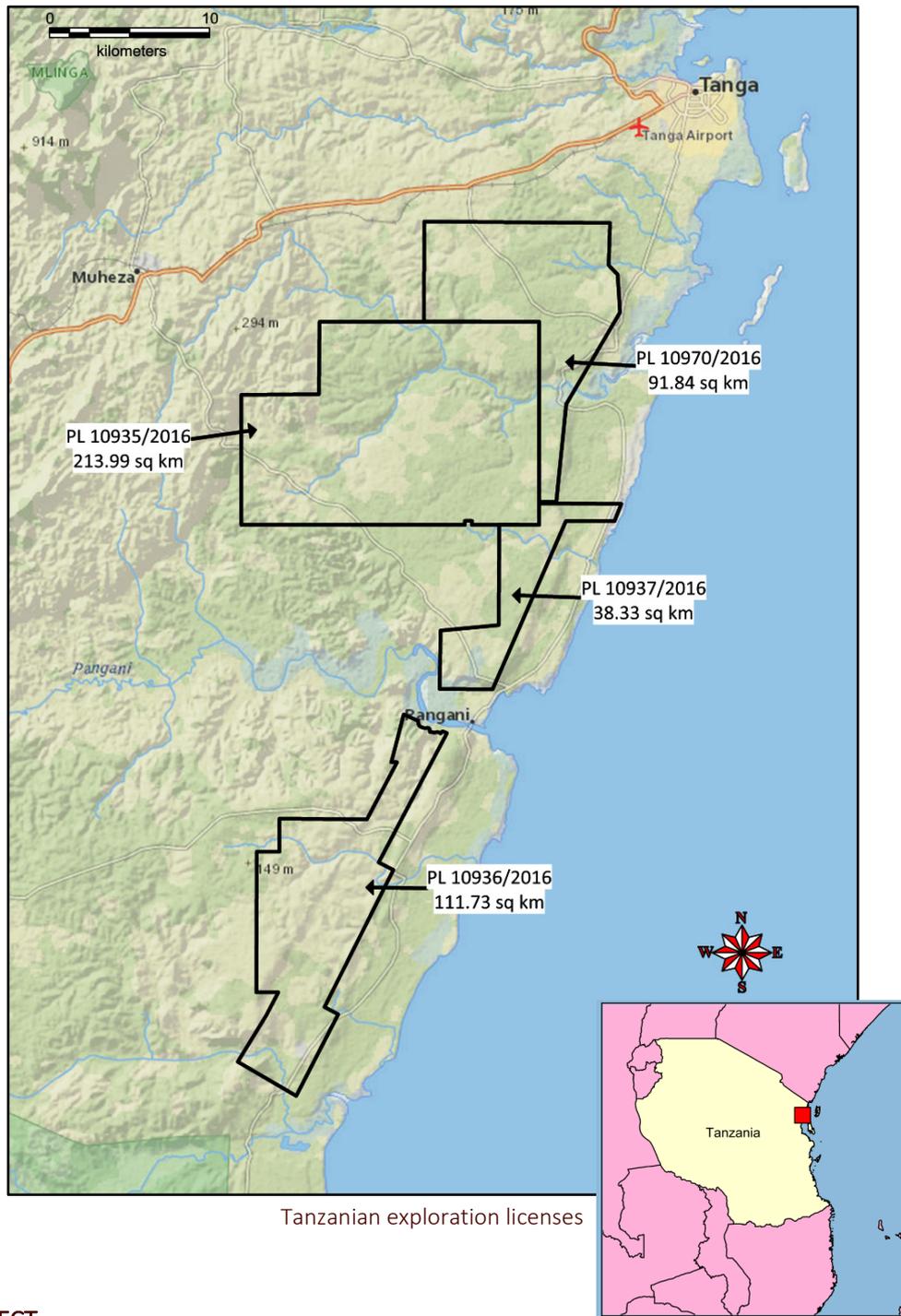
In addition, the Company has also applied for a further Special Prospecting License covering an area of 136km<sup>2</sup> extending south west from SPL 173 towards the Tanzanian border. This application has been approved, but the license remains subject to final grant pursuant to applicable regulations.

#### EXPLORATION - TANZANIA

Following the grant of three prospecting licenses in early October 2016, the Company has secured tenure over a fourth license in northern Tanzania for a combined area of 456km<sup>2</sup>. The areas of interest in Tanzania were identified as part of a prospectivity review and subsequent reconnaissance work on the ground to confirm these findings.

The Company has commenced the process of obtaining the necessary consents and clearances ahead of a planned preliminary drilling programme across all four licenses. The programme, comprising approximately 3,000 metres of drilling, is planned for the first half of 2017.

Total exploration expenditure for the quarter, across all licenses in Kenya and Tanzania, was US\$0.35 million.



### KWALE PHASE 2 PROJECT

Base Resources initiated the Kwale Phase 2 project in 2015 with its focus being an optimised mining methodology, increased mining rates in lower grade zones and increased concentrate production. The Pre-Feasibility Study was completed in July 2016 and, based on the potential value Kwale Phase 2 can add to the Kwale Operations, a Definitive Feasibility Study (“DFS”) is underway. The HMU, currently being used successfully in mining operations, has delivered encouraging results and work is underway to determine the optimum tonnage split between HMU and DMU mining rates. The DFS is scheduled for completion in the June quarter of 2017.

## CORPORATE

### EXTENSION OF THE TAURUS FACILITY

As announced on 31 October 2016, Base Resources extended the maturity date of the fully drawn US\$20 million unsecured debt facility provided by one of its major shareholders, Taurus Funds Management (“Taurus”) (“Taurus Facility”), from 31 December 2016 to 30 September 2017.

The Taurus Facility was established in December 2014, and is held by Base Resources. Prior to final maturity, under the terms of the Taurus Facility, repayments are only required to be made from the surplus cash distributions (“Cash Sweeps”) of the Kwale Operations to Base Resources, as permitted by the Kwale Operations Debt Facility. These Cash Sweeps, if permitted, occur six-monthly with the first having taken place in July 2016 for US\$5.4 million. Following the Cash Sweep, a mandatory 50% of which was applied towards progressive repayment of the Taurus facility, the amount outstanding under the Taurus Facility at 31 December 2016 was US\$17.3 million.

The extension of the Taurus Facility final maturity date allows additional repayments to be made from the now confirmed US\$7.3 million Cash Sweep in January and a further potential Cash Sweep in July 2017, and removed the need to secure external funding to repay the balance that would otherwise have been due on 31 December 2016.

As part of the extension, the mandatory proportion of Cash Sweeps to be applied toward progressive repayment of the Taurus Facility increased from 50% to 75%. All other terms of the Taurus Facility remained unchanged, including the interest rate of 10% on the outstanding balance. As consideration for the extension, Base Resources issued Taurus 10 million fully paid ordinary shares.

### 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\$18.2 million at 31 December 2016. These claims are proceeding through the Kenya Revenue Authority process, with a number of operational period claims, totalling approximately US\$1.5 million, settled during the quarter. Base Resources is continuing to engage with the Kenyan Treasury and the Kenya Revenue Authority, seeking to expedite the remainder of the refund.

### ACCELERATED DEBT REPAYMENT FROM SURPLUS CASH

On 16 January 2017, and in accordance with the terms of the Kwale Operation Debt Facility, US\$14.6 million of surplus cash was ‘swept’ from the Kwale Operation. Half of the Cash Sweep (US\$7.3 million) went towards mandatory repayment of the Kwale Operations Debt Facility, with the other half distributed up to the group’s Australian parent entity, Base Resources. From the Cash Sweep portion received by Base Resources, a mandatory 75% (US\$5.5 million) was applied to repayment of the Taurus Facility with the balance available to the Company for general corporate funding.

*In summary, at 31 December 2016:*

- Net debt of US\$129.5 million, consisting of:
  - Cash and cash equivalents were US\$29.1 million (unrestricted) and an additional US\$18.6 million (restricted – debt service reserve account).
  - Debt of US\$177.2 million, following a US\$15.2 million scheduled repayment on 15<sup>th</sup> December 2016.
- 742,231,956 shares on issue.
- 61,425,061 options (exercise price of A\$0.40, expiring 31 December 2018).
- 67,085,620 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 Anderson</b>	Non-Executive Director
<b>Michael Stirzaker</b>	Non-Executive Director
<b>Malcolm Macpherson</b>	Non-Executive Director

## COMPANY SECRETARY

Chadwick Poletti

## NOMINATED ADVISOR & BROKER

### RFC Ambrian Limited

As Nominated Advisor:

Andrew Thomson or Stephen Allen

Phone: +61 (0)8 9480 2500

As Broker:

Jonathan Williams

Phone: +44 20 3440 6800

## SHARE REGISTRY

### ASX

#### Computershare Investor Services Pty Limited

Level 11, 172 St Georges Terrace

PERTH WA 6000

Enquiries: 1300 850 505 / +61 (3) 9415 4000

[www.computershare.com.au](http://www.computershare.com.au)

### AIM

#### Computershare Investor Services PLC

The Pavilions

Bridgwater Road

BRISTOL BS99 6ZZ

Enquiries: +44 (0) 870 702 0003

[www.computershare.co.uk](http://www.computershare.co.uk)

## AUSTRALIA MEDIA RELATIONS

### Cannings Purple

Annette Ellis / Andrew Rowell

Email: [aellis@canningspurple.com.au](mailto:aellis@canningspurple.com.au)

[arowell@canningspurple.com.au](mailto:arowell@canningspurple.com.au)

Phone: +61 (0)8 6314 6300

## UK MEDIA RELATIONS

### Tavistock Communications

Jos Simson / Emily Fenton

Phone: +44 (0) 207 920 3150

## KENYA MEDIA RELATIONS

### Africappractice (East Africa)

Evelyn Njoroge / James Njuguna / Joan Kimani

Phone: +254 (0)20 239 6899

Email: [jkimani@africappractice.com](mailto:jkimani@africappractice.com)

## PRINCIPAL & REGISTERED OFFICE

Level 1, 50 Kings Park Road

West Perth WA 6005

Email: [info@baseresources.com.au](mailto:info@baseresources.com.au)

Phone: +61 (0)8 9413 7400

Fax: +61 (0)8 9322 8912