



# **ILUKA REVIEW** CREATING AND DELIVERING SHAREHOLDER VALUE

# Disappointing financial performance

Mineral sands revenues declined by 11.4 per cent to \$726.3 million

Total reported loss of \$224.0 million after tax including non-recurring adjustments of \$182.8 million after tax in relation to impairment and rehabilitation provisions

Lower Mining Area C royalty earnings of \$47.1 million (2015: \$61.2 million), due to 2015 agreement modification one-off receipt of \$10.4 million and no annual capacity payments in 2016

- Modest free cash flow of \$47.3 million
- Net debt of \$506.3 million and a gearing ratio (net debt/net debt + equity) of 31.5 per cent, associated with Sierra Rutile acquisition (equity and transaction costs of \$389.5 million and assumption of Sierra Rutile net debt of \$79.7 million)
- In the context of the company's potential investment opportunities, including Cataby and the Sierra Rutile expansion options, the directors have determined that no final dividend will be declared for 2016

# Continuation of low-cycle market conditions in 2016

Total zircon/rutile/synthetic rutile sales volumes increased by 7.2 per cent to 697.7 thousand tonnes (kt) (2015: 651.0 kt)

Average revenue per tonne of Z/R/SR sold declined 12.1 per cent to \$999/tonne (2015: \$1,136/tonne)

- Weighted average received zircon price declined 19.6 per cent to US\$773/tonne, reflecting both lower received prices and mix factors
- Weighted average received rutile price was stable at US\$716/tonne

# Signs of market recovery evident

- Downstream chloride pigment market conditions most favourable since 2012 – positive demand and pricing dynamics for high grade chloride feedstocks (including rutile and synthetic rutile)
- Iluka contracted rutile volumes in first half 2017 with prices up to 4 per cent higher than 2016 weighted average received prices
- Zircon market inventory position of competitors believed to have reduced materially – Iluka partially achieved announced US\$60/tonne price increase in third quarter 2016; US\$50/tonne price increase announced from 15 February 2017

# Quality projects

- Cataby project major potential source of ilmenite to sustain synthetic rutile production from synthetic rutile kiln 2 for over eight years
- Sierra Rutile acquisition provides major, long life rutile resource base with three expansion opportunities, subject to evaluation
- Balranald development in the Murray Basin continued, phased evaluation of rutile-rich deposit, with associated zircon and ilmenite production
- Pre-feasibility study for large Sri Lankan sulphate ilmenite deposit underway
- Iluka has a number of high quality opportunities and has reviewed its Ore Reserves in context of Sierra Rutile acquisition and 10 year mine plan
- Iluka announced an inaugural Sierra Rutile rutile Ore Reserve of 3.9 million tonnes

## Sustainable cost base

- Sustainable business review commenced to ensure suitable cost structure and focus for efficient growth
- Approximately 90 roles redundant out of 440 functional support positions
- Reduction in expenditures in a number of areas including exploration and resource development, marketing and procurement
- Production adjustments contributed to 10.2 per cent lower unit cost of goods sold to \$700/tonne of zircon/rutile/synthetic rule (2015: \$780/tonne)

# Sustainability

- Lost Time Injury Frequency Rate decreased from 0.9 to 0.4
- Total Recordable Injury Frequency Rate decreased from 6.7 to 4.4
- Defined product stewardship and commenced product risk assessments
- Fourth consecutive year of reducing "open" area via land rehabilitation activities
- Voluntary Tax Transparency Report published, which supports the principles of the Extractive Industries Transparency Initiative

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# FROM THE CHAIRMAN

The safety of our people and the integrity of Iluka's operations, including the newly acquired Sierra Rutile operation, remain the priority focus of the company from Board level to mine face



#### Dear Shareholders,

This year's Iluka Review sets out a number of matters which will be of interest to you. These include:

- the impact of continued subdued zircon market conditions on the financial performance of the business, as reflected by lower zircon sales and zircon prices. Your Board is cautiously optimistic that market conditions for the company's products may be beginning to improve after an extended period of bottom-of-cycle market conditions;
- the appointment in September 2016 of Tom O'Leary as Iluka's new Managing Director and CEO;
- consistent with previously announced strategy, securing of a new long-life, high quality reserve and resource base for the company, through the acquisition of Sierra Rutile Limited in December 2016;
- the review by the new Managing Director of the company's current project set, exploration activities and associated resourcing levels and cost base resulting in a refocus on fewer, high quality, near-term value accretive opportunities, resulting in an approximate \$20 million reduction in non-production cash costs expected in 2017, relative to 2016 on a like-for-like basis;

- as a consequence of the Managing Director's business review and priorities, \$201 million pre-tax of non-cash impairments in relation to idled property, plant and equipment, project development costs and evaluation expenditure;
- an increase in rehabilitation provisions of \$45 million (pre-tax), mainly related to the now permanently closed United States' operations and projects;
- a review of Ore Reserves in the context of the acquisition of the Sierra Rutile operation as well as the company's current 10 year mine plan. This review led to a reclassification of approximately 27 per cent of Iluka's (non-Sierra Rutile) Reserves to Mineral Resources; and
- the continued commitment to the highest standards of business sustainability, with a focus in the areas of health, personal and process safety, community engagement, environmental performance, land management and remediation.

#### **Financial performance**

Iluka's full year financial result was a loss of \$224 million after tax. The loss included non-recurring items of \$244 million pre-tax or \$183 million after tax, as detailed on page 6. The underlying result before adjustments was also influenced by lower mineral sands revenues, mainly attributable to lower received product prices and a lower contribution from the Mining Area C iron ore royalty. Iluka generated modest free cash flow of \$47 million. After the assumption of Sierra Rutile net debt of \$80 million, Iluka ended the year with net debt of \$506 million.

In the context of the company's potential investment opportunities, including Cataby and the Sierra Rutile expansion opportunities, the directors have determined no final dividend will be declared for 2016. Iluka's interim dividend was 3.0 cents per share, fully franked. On a cumulative basis since 2010, the payout ratio has been 66 per cent.

#### **New Managing Director**

Tom O'Leary commenced as Iluka's Chief Executive Officer on 5 September 2016 and was invited to join the Board as Managing Director in October 2016. Tom succeeded David Robb, who served as Managing Director from October 2006 until September 2016. Tom has a depth of business development, major transactional and capital deployment experience and has also led complex operating businesses. Importantly, Tom has committed to providing continuity in terms of the capital disciplines and capital allocation decisions that have been a distinguishing feature of Iluka.

Tom has pursued the completion of the Sierra Rutile acquisition with professionalism and he is focussed on ensuring that the integration and operational performance objectives are delivered. Tom has taken early and valuable steps to focus the business and reduce costs, to review asset configurations and operating regimes for the company, and has evaluated the timing and nature of the organic project options the company has available to it.

#### Sierra Rutile acquisition

Iluka acquired Sierra Rutile Limited in 2016. Sierra Rutile is a large, long life rutile deposit and provides Iluka with a significant addition to its strong position in high grade titanium dioxide products.

Your directors are cognisant that acquiring an operating mine in West Africa represents a change in the company's risk profile. During due diligence, careful attention was given to the risks identified with such an acquisition and to the risk mitigation plans and arrangements that were required to ensure an effective integration process, involving senior Iluka management and drawing on the skilled and experienced local Sierra Rutile workforce. Efforts continue to focus on integration, safety and operational improvements and on developing dependable and enduring relationships with both the local community, as well as with government.

#### Business sustainability

The safety of our people and the integrity of Iluka's operations, including the newly acquired Sierra Rutile operation, remain the priority focus of the company from Board level to mine face. In 2015 Iluka committed to progressively aligning its sustainability practices with the International Council on Mining and Metals (ICMM) Framework for Sustainable Development. This is particularly relevant to Iluka's increasing international activities. Iluka has separated the sustainability content from the 2016 Iluka Review into a more detailed sustainability report to be released in April. This report will demonstrate Iluka's progressive alignment with ICMM and be in accordance with the Global Reporting Initiative public reporting guidelines.

#### Board and governance

On Board and governance matters, the company's governance and risk management practices have been reviewed and, where necessary, enhanced. Several areas, such as anti-bribery and corruption, have been enhanced through an external professional review.

Board evolution continued during the year with the retirement in December 2016 of Gavin Rezos, who had served as a non-executive director since 2006 and since 2014 as an Iluka-appointed director to the Board of Metalysis Ltd, the UK based titanium technology company in which Iluka has a significant shareholding. On behalf of the directors, I'd like to acknowledge and thank Gavin for his contributions to Board decision-making and effectiveness over his time on the Board.

Finally, on behalf of my fellow directors, I would like to acknowledge the valuable contribution David Robb made as Managing Director of Iluka in nearly a decade of service. In what was yet another tough year for the company, the sustained commitment and contribution of Iluka's people is both acknowledged and greatly appreciated. And by no means least, I would like to thank our shareholders for their continuing interest and support for the business.

#### **Greg Martin**

Chairman

# FROM THE MANAGING DIRECTOR

# Iluka has the people in place to responsibly develop its assets and to optimise outcomes



#### Dear Shareholders,

I joined Iluka on 5 September 2016 and I am conscious that I have assumed this role at a time when market conditions are generally regarded as having been unfavourable for an extended period for the company's main products.

I am also aware that returns and cash flows have not met expectations. While an element of financial performance for any company in the resources sector reflects the cyclical characteristics of the industry, since joining Iluka, I have emphasised to employees, the Board, customers and shareholders my belief that we need to be structured and resourced such that we're sustainable through the cycle, and that Iluka's first half result did not demonstrate that resilience. With the idling of the Jacinth-Ambrosia mine last year, the production base has been constrained in light of market conditions; and non-production cash costs have not been similarly constrained.

Prior to the acquisition of Sierra Rutile Limited in December 2016, Iluka's reserves base had not been replenished despite a consistent exploration effort.

These factors were all key components of the context in which I joined Iluka.

The finalisation of the Sierra Rutile acquisition consumed much of my time initially, but in December 2016, on completion of the acquisition, I noted the company's priorities as follows:

- the commencement of an effective integration process for Sierra Rutile;
- the conclusion of the five year corporate planning and 2017 budgetary process;
- a detailed review of the existing production portfolio and projects, including assets, configurations and operating regimes;
- an assessment of the feasibility, attraction and timing of the expansion projects available to the company; and
- a review of all non-production costs of the business to ensure a sustainable cost structure.
- By way of update on progress on these priorities:
- the Iluka team to oversee the Sierra Rutile integration and assume management of the operation has been in place since December and is making steady progress. An initial focus has been on recognising and respecting the cultural norms and traditions of Sierra Leone and the people of the Sierra Rutile operation. Operational and safety improvement measures are being advanced; feasibility studies are planned for production expansion options, and the output from Sierra Rutile is now a part of Iluka's overall product suite;
- the five year planning profile for the company, as well as 2017 budgetary settings, have been completed;
- the Chairman has touched on a number of outcomes of the review including asset impairments, the reserves reclassification and the increase to the rehabilitation provision, and these were described in detail in the ASX release of 30 January 2017. The Ore Reserves and Mineral Resources associated with Sierra Rutile have now been added to Iluka's statement and the updated statement can be viewed later in this Iluka Review; and
- as reported in the 31 January release, in December 2016 we made the difficult decision to make approximately 90 roles redundant, largely within the support functions of Iluka, and a number of exploration and other activities have been ceased or the expenditure associated with them has been reduced.

Internal portfolio opportunities being progressed in 2017 include: the Cataby project, Western Australia, which is at an execute-ready stage; feasibility studies for the expansion of the Sierra Rutile operations; the continuing evaluation, on a phased basis, of the Balranald mineral sands deposit; and progressing the evaluation of the Sri Lankan deposits.

The company's sustainability performance is of core importance to me, as well as to Iluka's management team and the Board. I realise this responsibility and challenges have increased with the Sierra Rutile operation and with it over 1,600 additional employees in the wider Iluka group. In this regard, the company is committing capital to safety infrastructure arrangements on site in Sierra Leone and has commenced the implementation of safety awareness programs.

In 2016 Iluka had 12 recordable injuries compared to 22 recordable injuries in 2015, including one lost time injury compared to three lost time injuries in 2015. This improvement is reflected in the total recordable injury frequency rate reducing from 6.7 to 4.4 and the lost time injury frequency rate reducing from 0.9 to 0.4. During the period commencing 7 December when Iluka took control of Sierra Rutile, through to 31 December 2016, there was one lost time injury recorded at Sierra Rutile. Injury reporting systems and practices at Sierra Rutile are currently being reviewed, and Iluka's acquisition of Sierra Rutile comes with a commitment to implement a range of safety improvement measures and achieve the progressive alignment of the operation with the Iluka safety and risk mitigation frameworks.

Notwithstanding challenging financial conditions, Iluka has maintained its commitment to rehabilitation activities, with 803 hectares of land subject to mining rehabilitated in 2016. This has meant the reduction in the total open area for the fourth consecutive year. A key achievement for 2016 was the Department of Mines and Petroleum in Western Australia formally releasing Iluka's environmental liability on two mining leases in the South West of the state. This was a significant milestone. All Iluka's rehabilitation and mine closure obligations for this area have been met and the land has been returned to productive farming land use.

Iluka has the people in place to responsibly develop its assets and to optimise outcomes on a number of fronts: operational and financial performance; high standards of health, safety and environmental performance; and in terms of governance and workplace culture and diversity.

I thank employees for their commitment during a period of change and challenge and I look forward to leading the company's efforts to create and deliver value for shareholders.

#### Tom O'Leary

Managing Director and Chief Executive Officer

# Summary financial results

|    |   | 2016          | 2015           | 2014           | 2013            | 2012          |
|----|---|---------------|----------------|----------------|-----------------|---------------|
| 1. | Mineral sands revenue                           | 726.3         | 819.8          | 724.9          | 763.1           | 1,069.8       |
| 2. | Underlying mineral sands<br>EBITDA <sup>1</sup> | 103.0         | 231.8          | 189.2          | 204.1           | 603.7         |
|    | EBITDA margin %                                 | 14.2          | 28.3           | 32.9           | 32.6            | 67.9          |
| 3. | Mining Area C EBITDA                            | 47.5          | 61.6           | 66.8           | 88.3            | 72.7          |
| 4. | Underlying Group EBITDA <sup>1</sup>            | 150.5         | 293.4          | 256.0          | 292.4           | 676.4         |
| 5. | Net profit (loss) after tax                     | (224.0)       | 53.5           | (62.5)         | 18.5            | 363.2         |
| 6. | Operating cash flow<br>Free cash flow           | 137.3<br>47.3 | 222.2<br>155.0 | 254.8<br>196.3 | 124.0<br>(27.5) | 368.7<br>81.2 |
| 7. | Net (debt) cash                                 | (506.3)       | 6.0            | (59.0)         | (206.6)         | (95.9)        |
|    | Gearing %                                       | 31.5          | n.a            | 3.9            | 11.8            | 5.8           |
| 8. | Return on equity                                | (17.1)        | 3.8            | (4.1)          | 1.2             | 23.2          |
|    | Return on capital                               | (18.3)        | 6.8            | (2.0)          | 2.2             | 31.3          |

<sup>1</sup> Underlying Group EBITDA excludes non-recurring adjustments including impairments, Sierra Rutile Limited transaction costs, changes to rehabilitation provisions for closed sites. Underlying EBITDA also excludes Iluka's share of Metalysis Ltd's losses, which are non-cash in nature.

#### 1. Mineral sands revenue

Mineral sands revenue declined by 11.4 per cent to \$726.3 million. Zircon/rutile/synthetic rutile (Z/R/SR) revenue was 5.8 per cent lower at \$696.8 million, primarily reflecting lower zircon prices, with sales volumes also slightly lower. Rutile and synthetic rutile sales volumes increased in 2016 and prices were relatively stable. Ilmenite and by-product revenue declined 63.2 per cent to \$29.5 million as Iluka increased its internal use of mined ilmenite for synthetic rutile production.

#### 2. Underlying mineral sands EBITDA1

Underlying mineral sands EBITDA declined 55.5 per cent to \$103.0 million. This result reflects the combination of lower zircon revenue and increased costs across several business areas including restructure and idle capacity charges (relating to operational settings at Jacinth-Ambrosia and the United States) and resource development costs (associated with Balranald development evaluation). Cash production costs were lower in 2016, reflecting lower operational settings, in line with market conditions.

#### 3. Mining Area C EBITDA

Royalty income from Mining Area C declined 22.9 per cent to \$47.5 million. 2015 royalty income included a one-off payment of \$10.4 million associated with modification of the royalty agreement with BHP Billiton. In 2015 capacity payments of \$3.0 million were received; nil in 2016. Net royalty income in 2016, excluding the one-off payment, was slightly lower due to lower iron ore sales volumes.

#### 4. Underlying Group EBITDA<sup>1</sup>

Underlying Group EBITDA decreased 48.7 per cent to \$150.5 million, reflecting factors referred to above.

#### 5. Net loss after tax

The 2016 net loss includes the impact of impairment charges and increased rehabilitation provisions. These are detailed as follows.

#### Non-recurring items - asset impairments

Non-cash impairments of \$201.0 million pre-tax (\$140.7 million after-tax).

The impairments relate to the following assets:

- idle and surplus equipment in the Murray Basin of \$156.0 million;
- \$20.4 million of capitalised costs associated with feasibility work for the previous conventional development approach for the Balranald deposit in New South Wales; and
- \$24.6 million related to exploration and evaluation assets previously capitalised and mine reserves in the Perth and Murray Basins.

#### Rehabilitation provision increase

Provisioning for rehabilitation and mine closure activities increased by \$44.8 million to \$528.1 million. For Iluka's discontinued United States' operations, now undergoing rehabilitation, the provision has been increased by US\$30.2 million or \$40.9 million. Of the \$44.8 million increase, \$42.6 million relates to closed sites, which is charged against the profit and loss statement, and \$2.2 million relates to open sites, which is reflected on the balance sheet.

An income tax benefit of \$53.7 million on a pre-tax loss of \$277.7 million reflects no tax benefit in respect of United States operating loss, nor for international exploration.

#### 6. Cash flow

Operating cash flow of \$137.3 million and full year free cash flow of \$47.3 million.

Lower 2016 operating cash flow reflects lower mineral sands EBITDA.

Higher capital expenditure in 2016, including \$19.0 million for increased equity in Metalysis Ltd (Iluka's equity stake is now 28.1 per cent), contributed to reduced free cash flow.

Changes to cash flow over recent years also reflect the utilisation of trade purchase facilities, entered into late 2014, affecting the timing of cash collections from customers.

#### 7. Net (debt) cash

Net debt increased to \$506.3 million following the acquisition of Sierra Rutile in December 2016. Iluka assumed Sierra Rutile's net debt of \$79.7 million. Total acquisition and transaction costs were \$389.5 million.

#### 8. Return on capital and return on equity

Return on capital was (18.3) per cent and return on shareholders' equity was (17.1) per cent, reflecting a reported loss inclusive of non-recurring items.

## Balance sheet and dividend framework

As at 31 December 2016 Iluka had total facilities of \$1,015.4 million.

Iluka recorded a net debt of \$506.3 million.

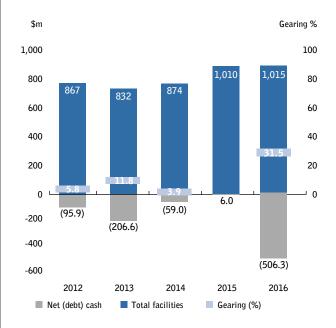
Iluka has a Multi Optional Facility Agreement (MOFA) which comprises a series of five year unsecured bilateral revolving credit facilities with several domestic and foreign institutions. Drawings under the MOFA at 31 December 2016 were \$611.2 million (2015: \$54.9 million). Undrawn MOFA facilities at 31 December 2016 were \$404.2 million (2015: \$955.0 million).

Of the above interest-bearing liabilities, \$611.2 million is subject to an effective weighted average floating interest rate of 2.7 per cent (2015: interest-bearing liabilities of \$54.9 million at 2.0 per cent).

Note 18 of Iluka's Annual Report provides details of the maturity profile and interest rate exposure.

Iluka assumed Sierra Rutile net debt of \$79.7 million in 2016, following the acquisition.

#### DEBT, GEARING AND DEBT FACILITIES PROFILE



#### Dividend framework and approach

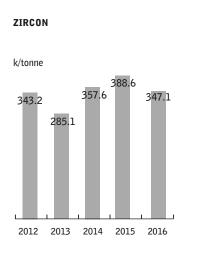
Iluka's dividend framework is to pay a minimum of 40 per cent of free cash flow, after investing and not required for balance sheet activity. The company also seeks to distribute the maximum franking credits practicable.

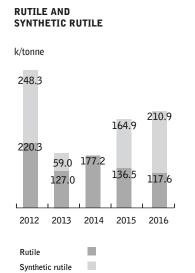
Directors have determined no final dividend will be declared for 2016. Iluka's interim dividend was 3.0 cents per share, fully franked. The dividend payment in 2016 represents 27 per cent of free cash flow generated. This is lower than the Iluka framework of a minimum of 40 per cent reflecting the company's potential investment opportunities, including Cataby and the Sierra Rutile expansion options.

From the end of 2010 and inclusive of the 2016 dividend, Iluka has paid out a cumulative 66 per cent of free cash flow.

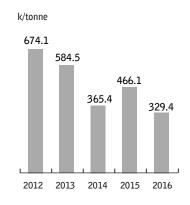
|   | 2016 | 2015 |
|---|------|------|
| Payout ratio % free cash flow                 | 27   | 68   |
| Cumulative dividend payout ratio (from 2010)% | 66   | 68   |

#### **Production volumes**





ILMENITE\*



\* Includes chloride ilmenite and sulphate ilmenite for external sales and for internal synthetic rutile production



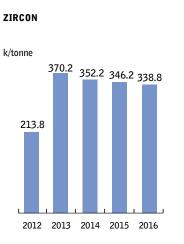
Total zircon/rutile/synthetic rutile production for the 2016 year was 676 thousand tonnes (2015: 690 thousand tonnes) and in line with Iluka's guidance. Lower production of zircon reflects the company's intent to draw down finished goods and concentrate inventories over the year. This approach was also an attempt to ensure Iluka did not contribute to typical year-end stock builds, which can suppress demand recovery patterns at the beginning of the following year.

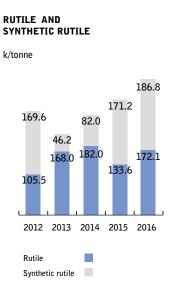
Rutile production was 118 thousand tonnes (including Sierra Rutile volumes), or 13.8 per cent lower year-on-year, in the context of the completion of mining activities in the Murray Basin – the company's prime source of rutile – following the cessation of mining at the Woornack, Rownack and Pirro deposits in Victoria in early 2015. Synthetic rutile production, at 211 thousand tonnes, was 27.9 per cent higher than the previous year, reflecting a full year of production from synthetic rutile kiln 2 in the South West of Western Australia. This kiln recommenced production in April 2015, fed by ilmenite predominantly from the Tutunup South mine in Western Australia. For the 12 months to 31 December, Iluka produced 395 thousand tonnes of heavy mineral concentrate and processed 967 thousand tonnes. This reflects the company's approach to draw-down concentrate held in inventory. At Jacinth-Ambrosia in South Australia, 144 thousand tonnes of heavy mineral concentrate was produced before mining and concentrating was idled in April 2016, with 470 thousand tonnes processed. In the Murray Basin, given the completion of mining at Woornack, Rownack and Pirro in 2015, there was no concentrate production and 166 thousand tonnes processed into final product.

During the December quarter, the only active mining operations were conducted in Australia at Tutunup South and Sierra Rutile.

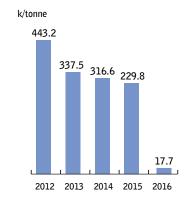
Iluka suspended production from its Narngulu mineral separation plant in October, while the Hamilton mineral separation plant was idled for approximately two weeks over the Christmas period. Both plants recommenced in January 2017.

#### Sales volumes





ILMENITE



Iluka's total zircon/rutile/synthetic rutile sales increased 7.2 per cent to 698 thousand tonnes in 2016, relative to 2015 levels (651 thousand tonnes). Zircon sales in 2016 decreased by 7 thousand tonnes or 2.1 per cent relative to 2015 levels. Sales to China, Asia, the Middle East and Europe were relatively stable while declining in the United States. Zircon concentrate sales constituted approximately 20 per cent of total zircon sales, a monetisation of residual material.

Rutile sales increased by 28.8 per cent (including the contribution of Sierra Rutile sales volumes) relative to the previous year with positive signs of market recovery across key end markets, including pigments and welding. Approximately 9 per cent of total rutile sales were of the lower

titanium grade HyTi (90 per cent  $TiO_2$  relative to 95 per cent  $TiO_2$  for rutile). Synthetic rutile sales increased 9.1 per cent year-on-year. Synthetic rutile volumes are largely underpinned by commercial arrangements and higher sales reflect the higher production associated with a full year of kiln operation. High grade feedstock sales were particularly strong in Europe and the Middle East, reflecting the market recovery in these regions, slightly offset by declines in Asia.

Ilmenite sales were 94.1 per cent lower, reflecting use of ilmenite as a feed source for synthetic rutile kiln production. There was also a lower level of sales of remaining ilmenite inventory from the Virginia operations (closed 2015).

Information on mineral sands market conditions in 2016 is provided on pages 14 - 15.



S D D S C O S

# **PRODUCTION AND SALES SUMMARY**



### Iluka weighted average prices – US\$/t FOB

The following table provides Iluka's weighted average received prices in 2016, relative to the previous four years.

|   | 2016         | 2015         | 2014  | 2013  | 2012  |
|---|--------------|--------------|-------|-------|-------|
| Zircon<br>(all products including<br>concentrate and tailings<br>material – refer Note 1) | 773          | 961          | 1,033 | 1,150 | 2,080 |
| <b>Zircon</b><br>Premium and standard<br>grade  | 810          | 986          | 1,054 | 1,171 | 2,123 |
| <b>Rutile</b><br>(all rutile products,<br>including HyTi –<br>refer Note 2)               | 716          | 721          | 777   | 1,069 | 2,464 |
| Synthetic rutile  | Refer Note 3 | Refer Note 3 | 750   | 1,150 | 1,771 |

Prices are influenced by product specifications and quality, lot size sold, contractual and customer arrangements. In recent years a higher proportion of sales of lower grade zircon (concentrate and tailings material) and HyTi (approximately 90 per cent TiO<sub>2</sub> product) have impacted average received prices. In some cases, the sale of these products represents monetisation of residual material.

In 2016, approximately 80 per cent of zircon sales were premium or standard grade zircon and approximately 91 per cent of rutile group product sales were rutile.

Notes:

- Zircon prices reflect the weighted average price for zircon premium and zircon standard, also with a weighted average price for all zircon materials, including zircon in concentrate and zircon tailings. The prices for each product vary considerably, as does the mix of such products sold period to period. In 2016 the split of premium, standard and concentrate by zircon sand-equivalent was approximately 47, 33, 20 per cent respectively.
- 2. Included in rutile sales is a lower titanium dioxide product, HyTi, which typically has a titanium dioxide content of approximately 90 per cent. This product sells at a lower price than rutile, which typically has a titanium dioxide content of 95 per cent. In 2016, approximately 9 per cent of total sales in this category were of the lower grade HyTi material.
- 3. Iluka's synthetic rutile sales are, in large part, underpinned by commercial off-take arrangements. The terms of these arrangements, including the pricing arrangements are commercial in-confidence and as such not disclosed by Iluka. Synthetic rutile, due to its lower titanium dioxide content than rutile, is typically priced lower than natural rutile.

The following table provides a summary of Iluka's Ore Reserves and Mineral Resources as at 31 December 2016. Iluka's complete Ore Reserves and Mineral Resources statement, reported in accordance with the JORC Code (2012 Edition), is available on pages 30 to 37.

| Summary heavy mineral Ore Reserves                            |                   |
|---|-------------------|
| In Situ heavy mineral   | Tonnes (millions) |
| Opening Ore Reserves 2016                                     | 23.0              |
| Production/depletions   | (0.4)             |
| New Ore Reserves/adjustments                                  | (5.9)             |
| Closing Ore Reserves  | 16.7              |
| Ore Reserves net change                                       | (6.3)             |
| Summary heavy mineral Mineral Resources                       |                   |
| In Situ heavy mineral   | Tonnes (millions) |
| Opening Mineral Resources 2016                                | 172.9             |
| Production/depletions   | (0.4)             |
| New Mineral Resources/adjustments                             | (2.0)             |
| Closing Mineral Resources                                     | 170.5             |
| Mineral Resources net change                                  | (2.4)             |
| Summary Sierra Leone rutile Ore Reserves (rutile tonnes)      |                   |
| In Situ rutile  | Tonnes (millions) |
| Opening Ore Reserves 2016                                     | -                 |
| Production/depletions   | -                 |
| New Ore Reserves/adjustments                                  | 3.9               |
| Closing Ore Reserves  | 3.9               |
| Ore Reserves net change                                       | 3.9               |
| Summary Sierra Leone rutile Mineral Resources (rutile tonnes) |                   |
| In Situ rutile  | Tonnes (millions) |
| Opening Mineral Resources 2016                                | -                 |
| Production/depletions   | -                 |
| New Mineral Resources/adjustments                             | 7.5               |
| Closing Mineral Resources                                     | 7.5               |
| Mineral Resources net change                                  | 7.5               |
|   |                   |

Heavy mineral Ore Reserves decreased by 6.3 million tonnes of heavy mineral following mining depletion and adjustments.

Heavy mineral Mineral Resources decreased by 2.4 million tonnes following mining depletion and adjustments (relinquishment, exploration discovery and development and write-downs).

Iluka announced on 30 January 2017 a review of Iluka's estimates of Ore Reserves and Mineral Resources, not including Sierra Rutile. The review was undertaken in the context of the recent acquisition of the Sierra Rutile operation and other strategic priorities. The reduction in Ore Reserves shown above in large measure reflects the outcome of this review.

Ore Reserves reclassified are not associated with any current operating mines or those idled and expected to resume, nor do they form part of any deposits within Iluka's current 10 year mine plan. It should be noted that there has been no material change to the estimates of Ore Reserves for any of Iluka's existing material projects, namely Jacinth-Ambrosia, Cataby and Tutunup South, nor has there been any change in Modifying Factors (such as price forecasts) associated with this review.

Sierra Leone rutile Ore Reserves represents an inaugural addition to Iluka's inventory of 3.9 million tonnes of rutile. The Sierra Leone rutile Mineral Resource represents an inaugural addition to Iluka's inventory of 7.5 million tonnes of rutile.

| AJU0  | Eucla Basin,<br>South Australia                            |
|-------|--|
| ÐSD   | Murray Basin,<br>Victoria and<br>New South Wales           |
| PUOS. | Perth Basin,<br>Western Australia                          |
|       | Atlantic Seaboard,<br>North Carolina Virg<br>United States |
|       | Sri Lanka  |

# Ore Reserve/Mineral Resource movements



Sierra Leone

Eucla Basin Mineral Resources decreased by 0.2 million tonnes of heavy mineral due to mining depletion and a write-down of some resources for the Jacinth deposit.

Eucla Basin Ore Reserves decreased by 0.02 million tonnes of

heavy mineral after mining depletion and pit redesign.

Ore Reserves decreased by 1.7 million tonnes of heavy mineral due to reclassification.

Mineral Resources decreased by 0.8 million tonnes of heavy mineral as a result of write-down of the Rainmaker and Rainlover Mineral Resources deemed to be uneconomic (0.4 million tonnes of heavy mineral), and updated resource estimation for the Adaptordie, Archer and Bells deposits (0.4 million tonnes of heavy mineral).

Ore Reserves in the Perth Basin decreased by 3.7 million tonnes of heavy mineral due to mining depletion at the Tutunup South deposit (0.2 million tonnes of heavy mineral) and the result of a review which reclassified the Adamson, Allied Tails, Depot Hill East, Depot Hill North, IPL South, Ocean Hill, South Capel Offices, South Tails, Twin Hills and Uplands Ore Reserves (3.5 million tonnes of heavy mineral).

Mineral Resources decreased by 1.4 million tonnes of heavy mineral associated with mining depletion and inaccessible sections of the deposit not in the current mine plan at the Tutunup South deposit (0.4 million tonnes of heavy mineral) and as a result of the reclassification of the Depot Hill Central deposit, Eneabba (1.0 million tonnes of heavy mineral).

The Ore Reserve for the Atlantic Seaboard decreased by 0.9 million tonnes of heavy mineral due to reclassification.
 There was no change to the Mineral Resources for the Atlantic Seaboard.

There was no change to the total Mineral Resources for Sri Lanka, although 0.7 million tonnes of heavy mineral was reassigned from an Indicated to an Inferred Resource classification following disturbance of material by another operation accessing the underlying limestone for cement production.

Additional Ore Reserves containing 3.9 million tonnes of rutile was secured through the acquisition of Sierra Rutile.

Additional Mineral Resources containing 7.5 million tonnes of rutile were secured through the acquisition of Sierra Rutile.

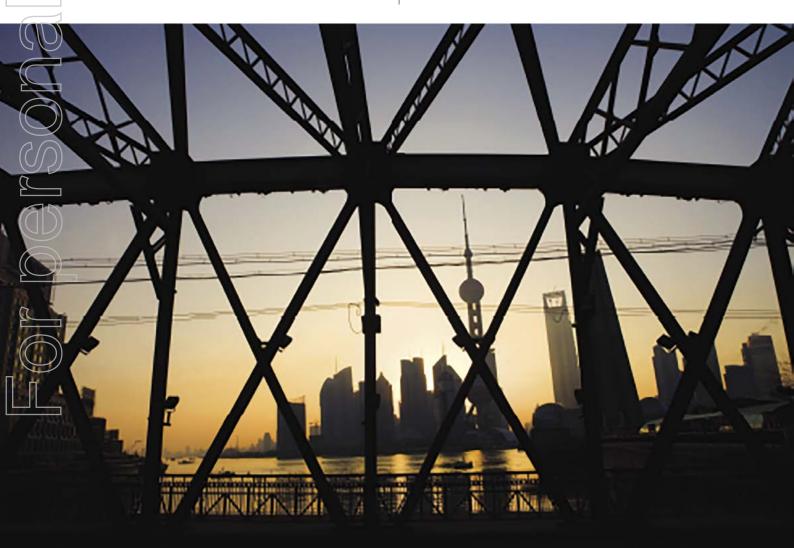
#### Zircon market

The zircon market entered 2016 with demand characteristics similar to 2015. 2016 was the fourth consecutive year Iluka's sales volumes have averaged 350 thousand tonnes, relative to higher sales levels in the immediately preceding years. This steady sales profile was achieved in the context of new entrants bringing approximately 150 thousand tonnes (net) into the market over the same period. As a result, there has been some diminution of Iluka's market share as it has sought to exercise production flexibility and supply discipline. This was an appropriate approach in Iluka's view, compared to pursuing volume or market share outcomes.

Customer demand in 2016 remained variable across sectors and geographical markets. Elevated inventories of zircon sand were held by producers at the commencement of the year and during the first half 2016. However, inventory of zircon sand and opacifier held at the direct customer level was minimal as customers sought to benefit from declining prices. In Iluka's assessment, there was a material destocking of the producer supply chain over the course of 2016, with market information that some zircon suppliers had fully committed their volumes or were having difficulties in filling some customer orders. Iluka's weighted average zircon price received was approximately 20 per cent lower in 2016 compared with 2015, with the majority of the price decline influenced by competitor pricing actions in the first and second quarters during which the zircon price declined in total by approximately US\$160/tonne. Observing apparent supply interruptions, Iluka announced a US\$60/tonne increase across its zircon portfolio for the third quarter. The intended price outcome was partially achieved and was the first increase in zircon prices for Iluka in several years.

Market conditions in the latter part of the year provided encouraging indications for 2017 in terms of the potential for demand and/or price recovery. The company increased prices from 15 February 2017 and has secured volumes in the first quarter at the higher prices.

Iluka is of the view that, subject to global economic settings and restoration of confidence in some downstream sectors, the demand outlook for zircon in 2017 and 2018 is for moderate growth. In Iluka's estimation, inventories of finished goods (mainly held by Iluka) will be drawn down over this period. This will also be a period during which industry participants will be required to make critical decisions on the commitment of significant capital necessary to maintain and replenish existing supply.



# High grade titanium feedstocks

Market conditions for pigment, the main end sector for the high grade feedstocks of rutile, synthetic rutile and slag, improved dramatically towards the end of 2015 and continued to improve through 2016. Three key attributes of the pigment sector in 2016 appear to continue to be relevant into 2017 which is favourable for feedstock; especially for high grade feedstocks such as rutile and synthetic rutile.

Firstly, pigment inventories have been drawn down, and in many geographies, remain below seasonal norms. Continued focus on working capital levels within the pigment production sector of the value chain has resulted in producers holding uncharacteristically low levels of feedstock, particularly in the case of high grade ores, exposing producers to minor disturbances in the supply chain. Iluka estimates that 2017 demand for pigment, and hence feedstock, will continue to reflect restocking of the supply chain resulting in demand for feedstocks exceeding normal end-user growth.

Secondly, pigment industry plant capacity utilisation levels have moved to levels more typical of balanced market conditions, with capacity utilisation in 2016 at elevated levels. During 2016, all major Western chloride producers have reported at times operating rates at above 90 per cent capacity utilisation. In China, reductions in sulphate capacity have seen some larger sulphate pigment producers running at above 90 per cent levels.

Thirdly, the Western chloride pigment producers have had success in achieving pricing increases for their products, with pigment prices rising in the order of 10 per cent during 2016 and with major pigment producers having announced further price increases for first quarter of 2017.

It is normal for Western chloride pigment producers to increase the head grade of feedstocks being fed into their plants as a means of increasing plant outputs. If the industry follows past practices, this will be positive for high grade ores.

Most of Iluka's rutile and synthetic rutile volumes in 2016 were contracted (volume and price). The weighted average rutile price Iluka received over 2016 remained relatively stable compared with the 2015 average, although the company achieved price increases in the order of US\$50/tonne for smaller lot supply into speciality markets, such as welding and titanium sponge. Iluka has advised customers of contracted volume price increases of up to 4 per cent, depending on product quality and quantity, for rutile in the first half of 2017. Unlike 2016, most rutile contracts have been structured on a six month or lesser period. In the case of the majority of Iluka's synthetic rutile sales volumes, these are under contracts extending over the 2017 year with some extending into 2018.

Ilmenite sales in 2016 were down from 2015, reflecting the idling of the United States' operations and utilisation of Australian ilmenites as feedstock for synthetic rutile production. Iluka anticipates a small increase in ilmenite sales in 2017 as ilmenite production from Sierra Rutile is sold under pre-existing arrangements.



# **Product development**

Iluka works closely with customers to optimise product offerings. In 2016, two new value-added zircon products were launched with highly specific thermal expansion properties for the metal casting and additive manufacturing industries. This allows Iluka to target specific markets with a quality product. Other examples of Iluka's approach include successfully collaborating with a major Chinese chloride pigment producer to demonstrate the benefits of synthetic rutile as a feedstock, resulting in synthetic rutile constituting more than 20 per cent of the plant feed blend, and modifying synthetic rutile chemistry to optimise pigment plant output.

# Enhanced logistics and supply chain

Over the year, Iluka consolidated warehouses by repositioning distribution points to better align with the company's emerging customer base. This has resulted in reductions to working capital and a lower cost-to-serve for customers.

## Industry and market analysis

Iluka has an independent and well-researched view of market conditions, including supply and demand dynamics. In 2016 this market understanding allowed the company to identify an opportunity to reverse the trend in zircon price declines and implement Iluka's first price rise in several years. This move successfully challenged the widely held beliefs in the mineral sands industry regarding the zircon market balance and resulted in many in the industry re-estimating inventory positions.

# **Production settings**

The following chart conveys Iluka's production settings in 2016 and the expected 2017 production settings.

|  | 2017  | 2016  |
|--|---|---|
| Jacinth-Ambrosia mining<br>South Australia             | Mining and concentrating idle.<br>Concentrate to be processed at the<br>Hamilton and/or Narngulu mineral<br>separation plants | Mining and concentrating activities suspended<br>from April for a period of 18 – 24 months;<br>Jacinth-Ambrosia concentrate continued to be<br>processed at Hamilton and Narngulu mineral<br>separation plants. Refer ASX Release<br>16 February 2016 |
| Murray Basin mining<br>Victoria                        | Continue to process existing concentrate  | Concentrate continued to be processed   |
| Tutunup South mining, South West,<br>Western Australia | 100% utilisation<br>Tutunup South is a principal source of<br>ilmenite feed for the SR kiln 2 at Capel                        | 100% utilisation  |
| Hamilton mineral<br>separation plant (MSP)<br>Victoria | Utilisation levels based on market demand and inventory considerations  | 60% utilisation<br>Murray Basin and Jacinth-Ambrosia<br>concentrate feed  |
| Narngulu MSP,<br>Western Australia                     | Utilisation levels based on market demand and inventory considerations  | 50% utilisation   |
| SR kiln 2  | 100% utilisation  | 100% utilisation<br>Ilmenite feed source from Tutunup South,<br>Jacinth-Ambrosia, Murray Basin and an<br>external source  |
| SR kiln 1  | Idle  | Idle  |
| US mining<br>Virginia, USA                             | Closed 31 December 2016   | Idle<br>Mining and processing operations were idled<br>at the end of 2015   |
| Stony Creek MSP<br>Virginia                            | Closed 31 December 2016   | Idle  |

# Commentary

Iluka suspended mining and concentrating activities at the Jacinth-Ambrosia operation in April 2016. This move is designed to draw down concentrate inventory held at site. During 2016, Iluka processed 967 thousand tonnes of heavy mineral concentrate overall, compared with concentrate production of 395 thousand tonnes. Operational settings exclude Sierra Rutile given the recent transaction and current integration planning.

# Iluka operations - 2016 and 2015 production

|                                       | 2016    | 2015    |
|---------------------------------------|---------|---------|
| Australian operations                 |         |         |
| Eucla / Perth Basins                  |         |         |
| Zircon                                | 307.7   | 297.0   |
| Rutile                                | 46.5    | 39.9    |
| Synthetic rutile                      | 210.9   | 164.9   |
| Ilmenite                              | 288.4   | 231.0   |
| Murray Basin                          |         |         |
| Zircon                                | 39.3    | 54.3    |
| Rutile                                | 62.3    | 96.6    |
| Ilmenite                              | 37.8    | 90.0    |
| United States' operation <sup>1</sup> |         |         |
| Zircon                                | -       | 37.3    |
| Ilmenite                              | -       | 145.1   |
| Sierra Rutile operation <sup>2</sup>  |         |         |
| Zircon                                | 0.1     | -       |
| Rutile                                | 8.8     | -       |
| Ilmenite                              | 3.2     | -       |
| Total Iluka operations                |         |         |
| Zircon                                | 347.1   | 388.6   |
| Rutile                                | 117.6   | 136.5   |
| Synthetic rutile                      | 210.9   | 164.9   |
| Total Z/R/SR                          | 675.6   | 690.0   |
| Ilmenite                              | 329.4   | 466.1   |
| Total mineral sands production        | 1,005.0 | 1,156.1 |

<sup>1</sup> Operations were idled in December 2015 and are being closed; refer ASX release, 31 January 2017.
 <sup>2</sup> Iluka acquired Sierra Rutile on 7 December and the above represents Sierra Rutile's contribution from this date.

#### Cash costs of production

In 2016, unit cash costs of production per tonne of zircon/rutile/synthetic rutile (Z/R/SR) (excluding ilmenite) produced were \$373/tonne (inclusive of Sierra Rutile), 33.1 per cent lower than 2015. This continues the trend of unit costs declining over recent years associated with reduced operational settings. This, in turn, reflects Iluka's approach to flexing production in light of market conditions. Production settings in 2016 were such that much of 2016 zircon and rutile final product volumes were from stockpiled heavy mineral concentrate mined in previous years at Jacinth-Ambrosia (Eucla Basin) and Woornack, Rownack, Pirro (Murray Basin). Mining and concentrating at Jacinth-Ambrosia was suspended in April 2016 and Woornack, Rownack, Pirro mining and concentrating ended in the first quarter of 2015.

|  |          | 2016  | 2015  | 2014  | 2013  | 2012  |
|--|----------|-------|-------|-------|-------|-------|
| Total Z/R/SR production  | kt       | 675.6 | 690.0 | 534.8 | 471.1 | 811.8 |
| Total cash costs of production   | \$m      | 260.6 | 392.5 | 381.9 | 376.1 | 583.5 |
| Unit cash costs per tonne of Z/R/SR<br>produced (excluding ilmenite & by-products)   | \$/tonne | 373   | 558   | 668   | 757   | 709   |
| Unit cash cost per tonne of Z/R/SR<br>produced (including ilmenite &<br>by-products) | \$/tonne | 386   | 569   | 714   | 798   | 719   |
| Unit cost of goods sold per tonne of Z/R/SR sold                                     | \$/tonne | 700   | 780   | 862   | 896   | 872   |
| Revenue per tonne of Z/R/SR sold   | \$/tonne | 999   | 1,136 | 1,030 | 1,173 | 1,191 |



#### Acquisition

On 7 December 2016 Iluka completed the acquisition of Sierra Rutile Limited by means of a statutory merger with Iluka Investments Limited (BVI), a wholly owned Iluka subsidiary. The total transaction cost was \$390 million, including the final consideration for Sierra Rutile equity of \$375 million and \$14 million of transaction costs.

The acquisition provides Iluka with a large, long life rutile operation, and complements the company's position as a producer of synthetic rutile, as well as zircon. The Sierra Rutile operation provides Iluka with a quality production source to continue to service the high grade titanium dioxide feedstock market, and enables the company to undertake material expansion options from existing production levels.

#### **Operations**

Sierra Rutile is located in the Bonthe and Moyamba districts of the Southern Province of Sierra Leone. Currently, both dredge and dry mining activities are being undertaken. The operation has three wet concentration plants, mineral separation plant and port facilities, as well as other supporting infrastructure, including a residential camp and health clinic. The operation produces rutile, ilmenite and a smaller quantity of zircon in concentrate. Rutile production in 2016 was 148 thousand tonnes.

Sierra Rutile and its predecessors have operated in Sierra Leone since 1967, following exploration activities in the early 1960s. The Sierra Rutile operation plays a major role in the national and regional economies of Sierra Leone and currently accounts for approximately 2.4 per cent of gross domestic product.<sup>1</sup> With a total workforce of more than 1,600 personnel (over 95 per cent of which is Sierra Leonean), the company is a significant national employer.



#### Sierra Rutile production

|        |    | 2016 | 2015 | 2014 | 2013 | 2012 |
|--------|----|------|------|------|------|------|
| Rutile | kt | 148  | 126  | 114  | 120  | 94   |

<sup>1</sup> GDP in 2015 was US\$4.4 billion; SRL revenue was US\$106 million.



#### Integration priorities

The skills and experience of Sierra Rutile personnel, combined with Iluka's operational and technical expertise, are expected to enhance the operational performance of Sierra Rutile.

The management team is led by Rob Hattingh, Chief Executive Officer, Sierra Rutile. Rob joined Iluka in 2008 and has extensive mineral sands experience across a range of projects, including operations in Africa.

The integration priorities include engagement with Sierra Rutile employees and other key stakeholders to ensure the continuity of operations; the introduction of Iluka's safety and risk mitigation frameworks; as well as its Code of Conduct to ensure alignment and integration of group level procedures and processes. The company will also implement operational improvement measures and evaluate development options at Sierra Rutile through the commencement of feasibility studies. Subject to these studies and market conditions, Iluka plans to commit progressively to expansion opportunities. These include:

- Lanti dry mining Iluka is considering an expansion of 500 tph. This expansion would partially offset the planned decommissioning of the Lanti dredge operation;
- Gangama dry mining Iluka is considering an expansion of 500 tph;
- Sembehun mining development of a new group of deposits with approximately 1,000 tph throughput;
- expansion of the mineral separation plant from the current 175 thousand tonnes per year rutile capacity to 250 thousand tonnes per year; and
- enhancement of infrastructure, notably Nitti Port, to accommodate increased production.

It is expected the Lanti and Gangama expansions will increase annual rutile production to 160-175 thousand tonnes per annum. With the Sembehun expansion, production may exceed 250 thousand tonnes per annum.

# Sustainability

Iluka has undertaken extensive country risk analysis as part of its due diligence for the acquisition and is cognisant of risk factors related to Sierra Leone's political, regulatory and social environment. Iluka is committed to maintaining its high level of sustainability and governance performance and extending this across the Sierra Rutile operation.

Iluka recognises and respects the cultural norms and traditions of Sierra Leone and the significance of the Sierra Rutile operation to its employees and the country. Iluka will seek to maximise local content, invest in the training and development of local personnel and develop community and government relationships that are mutually beneficial.

The Sierra Rutile operation will continue to support sustainable infrastructure projects with an emphasis on healthcare, education and agriculture.

Country setting



| Capital         | Freetown   |
|-----------------|--|
| Population      | 6.4 million  |
| Politics        | Democratic republic with two main political parties  |
| Language        | English (official), Krio (lingua franca)   |
| Economy         | GDP US\$4.4 billion (2015)   |
|                 | GDP per capita US\$696 (2015)  |
| Main industries | Agriculture (rice, coffee and cocoa)   |
|                 | Mining (diamonds, iron ore, rutile and bauxite)  |
| Recent events   | 1991 – 2002 civil war  |
|                 | Two peaceful elections held post the civil   |
|                 | war, including a change of governing party<br>and president  |
|                 | ,  |
|                 | and president <ul> <li>Now ranked one of the most peaceful</li> </ul>  |
|                 | <ul> <li>and president</li> <li>Now ranked one of the most peaceful countries in Africa<sup>1</sup></li> </ul> |

<sup>1</sup>The Institute for Economics and Peace produces the Global Peace Index, which ranks 163 states according to their level of peacefulness (level of conflict, societal safety and militarisation). Sierra Leone ranks 43 overall and by this measure is the fifth most peaceful country in Africa. www.visionofhumanity.org Iluka's approach is to determine the phasing of projects based on market demand and the completion of appropriate technical and commercial evaluation



Cataby, Western Australia



The Cataby mineral sands deposit is located 150 kilometres north of Perth. The Cataby deposit is capable of producing approximately 380 thousand tonnes of ilmenite per annum, and is planned as feed source for Iluka's synthetic rutile kiln 2 in the South West of Western Australia, producing approximately 200 thousand tonnes per annum of synthetic rutile.

Zircon production is estimated at 50 thousand tonnes per annum and rutile production at approximately 30 thousand tonnes per annum.

Iluka has completed the definitive feasibility study for the project. Further work has de-risked the project and it remains at an execute-ready stage. Iluka marketing personnel continue to engage with customers regarding off-take arrangements on appropriate commercial terms.



## Puttalam, Sri Lanka



Puttalam Quarry is a large sulphate ilmenite deposit located in the Puttalam District in the North Western Province of Sri Lanka. In 2016, work was focussed on legal and investment terms for the potential development. This included progressing arrangements to secure surface access rights, ministerial and other government approvals for any subsequent mining licence, and reaching agreement with the Sri Lanka Government regarding the extent of in-country upgrading, as well as Iluka's ultimate percentage holding in any mining operations.

Currently, a pre-feasibility study is being undertaken for the PQ deposit. This study is expected to be completed in 2018 at which stage the progression of this project will be reviewed in light of study outcomes and portfolio considerations.



# Balranald and Nepean, Murray Basin, New South Wales



Balranald and Nepean are two rutile-rich mineral sands deposits in the northern Murray Basin, New South Wales. The Balranald development, subject to regulatory approvals and the approval of the Iluka Board, will provide the potential for substantial rutile, zircon and associated ilmenite production. Concentrate is expected to be transported for processing at the Hamilton mineral separation plant in Victoria.

The definitive feasibility study for a conventional development approach was completed in 2016. Studies included assessment of conventional mine development options, with detailed work undertaken on a cross pit stacker concept. Associated work has included dewatering ore requirements with hydrogeological modelling and testing. The conventional development option definitive feasibility study has ceased in favour of progressing, in a phased manner, an unconventional mining approach.

During 2016 Iluka made a significant investment in trialling an innovative mineral sands mining technique. The key potential benefits of the alternative, underground mining approach are expected to include: a lower capital-intensive development approach, phased production expansion and lower environmental impacts. The outcome of the trials provided the company with sufficient confidence in terms of technical and commercial criteria to progress with further evaluation in 2017.



Tapira, Brazil



In July 2014 Iluka entered into a Joint Development Agreement and Intellectual Property Agreement with Vale S.A. for the staged evaluation and development of the major titanium mineral-bearing deposit located at Tapira in Minas Gerais State, Brazil.

In December 2016, Iluka announced that the joint venture had been terminated. Iluka and Vale have decided not to continue with further evaluation due to the inability to determine a method to produce a market acceptable titanium dioxide feedstock using current conventional or alternative technological routes.

# Metalysis has developed a single stage process for the transformation of various metal oxides into a metallic powder form



In 2014 Iluka established an Investment Agreement with the private, UK-based, Metalysis Ltd for an interest of 20.8 per cent in the company (\$22.7 million). In 2016 Iluka made a further investment of \$19.0 million, lifting its equity interest to 28.1 per cent.

This investment forms part of Iluka's alliancing and new ventures approach and, as the largest shareholder in Metalysis, Iluka has two directors on the Board.

Metalysis has developed a single stage process for the transformation of various metal oxides into a metallic powder form. The commercial production of titanium alloy powder direct from rutile and synthetic rutile could lead to a reduction in the cost of production of titanium metal and titanium metal alloys. Lower prices for titanium metal alloys could expand the use of titanium metal; for example, replacing stainless steels and high performance steel alloys in some sectors and opening up demand in other markets, such as in the manufacture of automobiles.

The use of titanium powder in 3D printing also presents opportunities in rapidly expanding applications. Such a development would be positive for high grade titanium feedstock demand.

Iluka is encouraged by the progress of Metalysis in moving towards potential commercialisation of its technology. The recent equity capital injection by Iluka and UK-based Woodford Patient Capital Trust (totalling approximately \$40 million) provides funding for the establishment of new research and development facilities at the Sheffield Advanced Manufacturing Park and the construction of the latest generation reactor (Gen 4) at the Wath on Deane facility, dedicated to titanium metal and titanium alloy production.

The Gen 4 reactor is a scaled-up version of the current operational semi-industrial units, incorporating multiple tray technology to increase potential titanium powder production per reactor to approximately 20 tonnes per annum.

Iluka remains supportive of Metalysis' commercialisation activities, including the development of a business plan focussed on the further development of a titanium alloy business.

Iluka's technical support for Metalysis continued during 2016, including the secondment of a principal metallurgist to assist with the development of pre and post-cell processes for the production of titanium metal powder. Iluka's product and technical development team in Australia undertook test work involving the addition of other elements to synthetic rutile feedstocks which may allow composite or customised titanium metal alloys to be produced.

# **EXPLORATION**

# Iluka continued to focus on greenfields exploration for high quality mineral sands deposits

#### Australia

#### Murray Basin, New South Wales / Victoria

Drilling in the Murray Basin concentrated on collecting bulk samples of fine-grained heavy mineral for metallurgical testing from existing Iluka tenements.

#### Eucla Basin, South Australia

Greenfields drilling planned for 2016 was delayed due to land access issues. Several targets remain and will be tested in 2017, pending necessary approvals.

#### Canning Basin, Western Australia

Canning Basin drilling focussed on testing the regional geological potential to host high quality mineral sands deposits. A total of 118 holes were drilled for 9,001 metres. The results of this work were interpreted as low energy with limited potential and, as such, Iluka rationalised its tenement holdings in the last quarter of 2016. With the exception of four exploration leases, all other granted and pending leases have been relinquished.

#### International

#### Kazakhstan

Work in 2016 included completion of an aerial geophysical program to better define regional geology and identify potential drilling targets for 2016 and 2017. Interpretation of this data is ongoing. In the second half, a total of 44 conventional auger holes were drilled for 725 metres in the geological investigation licence area. Permission is being sought for these samples to be assayed in Australia. Drilling is planned to continue in 2017.

#### Brazil

Iluka commenced drilling in 2015 on tenements in northern Brazil. Discontinuous packages of beach sand were encountered with little mineral sands mineralisation present. Further drilling encountered mineral-bearing sand, although at depths considered too great for commercialisation.

#### Canada

In March, an Option and Joint Venture Agreement was executed with Société D'Exploration Minière Vior Inc. in relation to its ilmenite—rutile project in Quebec, Canada. Iluka has funded exploration with ground reconnaissance, costeaning and geophysical surveys completed in 2016. Exploration will continue in 2017.

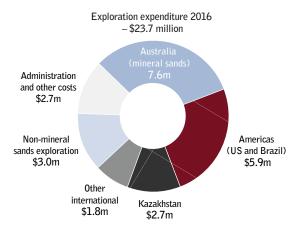
#### Other commodities

Iluka continued to assess non-mineral sands prospectivity on its tenements and evaluate other proximate opportunities in 2016. However, the company decided to focus exploration on mineral sands targets and, as such, this program will cease in 2017. Iluka will also seek to divest nickel and copper rights at the Fowler Project, south-east of Jacinth-Ambrosia.

Doray Minerals Ltd continued exploration on Iluka's Eucla Basin tenure under a farm-in agreement covering gold rights at the West Gawler Project.

#### Iluka tenement position as at the end of 2016

| Region                                   | Square<br>Kilometres |
|--|----------------------|
| Eucla Basin (South Australia)            | 22,566               |
| Murray Basin (South Australia, NSW, VIC) | 6,801                |
| Perth Basin (Western Australia)          | 570                  |
| Other – Australia                        | 2,616                |
| Kazakhstan                               | 53,688               |
| Brazil                                   | 243                  |
| Sri Lanka                                | 164                  |
| Other                                    | 296                  |
| Total                                    | 86,944               |



# **SUSTAINABILITY**

# Sustainability at Iluka means integrating economic, environmental and social considerations into business practice, and ensuring safe and responsible conduct underpins everything the company does

Iluka's approach to sustainability starts with its Game Plan. The Game Plan is the foundation of the business and defines and influences the company's culture. It is intended to ensure that Iluka fulfils its commitments with key stakeholders and operates in an ethical and responsible manner.

Iluka's objective is to create and deliver value for shareholders. The company's values are centred on Commitment, Integrity and Responsibility.

Being a sustainable corporate citizen enables the company to fulfil its objective.

In practice, this means proactive consideration for all environmental, social and economic implications prior to, throughout and following the closure of operations.

# Sustainability commitments

1. High levels of performance aimed at sustainable outcomes.

- 2. Sound governance, planning, control and risk management systems.
- 3. Positive and enduring legacies with mutually beneficial outcomes.

Iluka governs its sustainability approach through a series of polices and management systems that span across six key elements.



Iluka is committed to conducting its business in accordance with the highest standards of corporate governance.



Iluka is committed to sustainable economic outcomes allowing us to share economic benefits with the communities in which we operate, whilst creating and delivering value to shareholders.



Iluka seeks to attract and retain the best people while building and maintaining a diverse, inclusive and high-achieving workforce.



Iluka is committed to achieving a fatality free workplace, eliminating injuries and protecting the health and wellbeing of its people.



Iluka respects human rights, engages meaningfully with stakeholders and seeks to make a positive difference to the social and economic development of the areas in which it operates.



Iluka seeks to manage its impact on the environment, use resources efficiently and leave positive rehabilitation and closure outcomes.

#### Framework

In 2015, to advance Iuka's sustainability framework and support both the current operating profile and provide a foundation for growth opportunities, Iluka undertook to progressively align the company's sustainability practices with the International Council on Mining and Metals (ICMM) Framework for Sustainable Development.

Iluka's sustainability framework is underpinned by a series of policies that drive behaviour and business practice within the company:

#### Code of Conduct

Iluka is committed to high standard of conduct, underpinned by its values of commitment, integrity and responsibility.

 Anti-bribery and Corruption Policy Iluka has zero tolerance for bribery or corruption in its business.

#### Risk Policy

Iluka's risk management framework, aligned with the International Standard for risk management ISO 31000, sets out structured and systematic processes for the identification and management of risks in areas such as environment, injury, illness, reputation, stakeholder relations, compliance and finance.

#### People Policy

Iluka fosters employee accountability, commerciality and engagement by recruiting, developing and retaining a high performing diverse workforce.

Environment, Health and Safety Policy Iluka pursues industry leading practice in the areas of environment, health and safety.

#### Stakeholder Relations Policy

Iluka strives to establish and maintain mutually beneficial relationships with stakeholders.

In December 2016 Iluka acquired Sierra Rutile Limited and its mining operation in Sierra Leone. This acquisition has changed Iluka's risk profile in that the company had previously operated only in Australia and the United States of America. Iluka recognises the risks and considerations of operating in a new jurisdiction in areas such as human rights, bribery and corruption risk, resettlement, health, safety and security. Iluka is committed to maintaining its high level of sustainability performance and extending this to Sierra Rutile. Integration priorities include the introduction of Iluka's safety and risk mitigation frameworks, as well as its Code of Conduct, to ensure alignment and integration of group level procedures and processes.

## Reporting

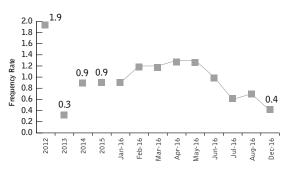
Iluka will publish a separate sustainability report for the period 1 January 2016 to 31 December 2016. The report will be prepared in accordance with the Global Reporting Initiative framework and contain information on Iluka's sustainability approach, performance in relation to material issues and 2017 focus areas.

The 2016 sustainability report will be published in April 2017 on the company's website www.iluka.com.

#### 2016 safety performance

Iluka's primary safety measures, in accordance with industry practice, include the lost time injury frequency rate and the total recordable injury frequency rate. These measures include both employees and contractors. In 2016 the total recordable injury frequency rate reduced from 6.7 to 4.4 and the lost time injury frequency rate reduced from 0.9 to 0.4. These figures do not include injuries to people working at Sierra Rutile which will be reported separately for 2016.

#### Lost Time Injury Frequency Rate decreased from 0.9 to 0.4



#### Total Recordable Injury Frequency Rate decreased from 6.7 to 4.4



# **FIVE YEAR PHYSICAL AND FINANCIALS**

|   | 2016            | 2015          | 2014            | 2013           | 2012       |
|---|-----------------|---------------|-----------------|----------------|------------|
| Production volumes (kt)   |                 |               |                 |                |            |
| - Zircon  | 347.1           | 388.6         | 357.6           | 285.1          | 343        |
| - Rutile  | 117.6           | 136.5         | 177.2           | 127.0          | 220        |
| - Synthetic rutile  | 210.9           | 164.9         | -               | 59.0           | 248        |
| Total Z/R/SR  | 675.6           | 690.0         | 534.8           | 471.1          | 811        |
| - Ilmenite  | 329.4           | 466.1         | 365.4           | 584.5          | 674        |
| Sales volumes (kt)  |                 |               |                 |                |            |
| - Zircon  | 338.8           | 346.2         | 352.2           | 370.2          | 213        |
| - Rutile  | 172.1           | 133.6         | 182.0           | 168.0          | 105        |
| - Synthetic rutile  | 186.8           | 171.2         | 82.0            | 46.2           | 169        |
| Total Z/R/SR  | 697.7           | 651.0         | 616.2           | 584.4          | 488        |
| - Ilmenite  | 17.7            | 299.8         | 316.6           | 337.5          | 443        |
| Weighted average annual prices (US\$/t)   |                 |               |                 |                |            |
| - Zircon (premium and standard)   | 810             | 986           | 1,054           | 1,171          | 2,1        |
| - Zircon (all products)   | 773             | 961           | 1,033           | 1,150          | 2,0        |
| - Rutile  | 716             | 721           | , 777           | 1,069          | 2,4        |
| - Synthetic rutile  | Not disclosed   | Not disclosed | 750             | 1,150          | 1,7        |
| Average AUD:USD spot exchange rate (cents)  | 74.4            | 75.2          | 90.3            | 96.8           | 103        |
| AUD:USD range (cents)   | 68.6/78.0       | 69.2/82.3     | 81.1/94.9       | 88.5/105.9     | 96.8/108   |
|   | 00.0/70.0       | 07.2/02.9     | 01.1/ /4. /     | 00.5/105.7     | /0.0/100   |
| Unit revenue and cash cost (\$/t)   |                 |               |                 |                |            |
| Revenue per tonne Z/R/SR sold (A\$/t)   | 999             | 1,136         | 1,030           | 1,173          | 1,9        |
| Unit cash costs of production per tonne Z/R/SR<br>produced including by-product costs | 386             | 569           | 714             | 798            | 7          |
| Unit cash costs of production per tonne Z/R/SR<br>produced excluding by-products      | 373             | 558           | 668             | 757            | 7          |
| Unit cost of goods sold per tonne of Z/R/SR   | 700             | 780           | 862             | 896            | 8          |
| Summary financials (\$m)  |                 |               |                 |                |            |
| Z/R/SR revenue  | 696.8           | 739.7         | (24.0           | (05.0          | 973        |
|   |                 |               | 634.8           | 685.8          |            |
| Ilmenite and other revenue  | 29.5<br>726.3   | 80.1          | 90.1            | 77.3           | 96         |
| Revenue from operations   |                 | 819.8         | 724.9           | 763.1          | 1,069      |
| Cash costs of production  | (260.6)         | (392.5)       | (381.9)         | (376.1)        | (583       |
| Inventory movement – cash costs of production   | (107.6)         | 9.6           | 14.7            | 14.0           | 264        |
| Restructure and idle capacity charges   | (69.5)          | (38.3)        | (40.1)          | (69.6)         | (14.       |
| Government royalties  | (20.4)          | (21.0)        | (10.6)          | (15.2)         | (19        |
| Marketing and selling costs   | (36.3)          | (32.0)        | (30.1)          | (28.2)         | (30        |
| Asset sales and other income  | (0.6)           | 1.4           | 6.0             | 3.1            | 10         |
| Corporate and other costs   | (53.8)          | (52.7)        | (48.4)          | (42.1)         | (49.       |
| Resources development   | (79.4)          | (58.4)        | (45.3)          | (44.9)         | (43.       |
| Underlying mineral sands EBITDA <sup>1</sup>  | 103.0           | 231.8         | 189.2           | 204.1          | 603        |
| Mining Area C EBITDA  | 47.5            | 61.6          | 66.8            | 88.3           | 72         |
| Underlying Group EBITDA <sup>1</sup>  | 150.5           | 293.4         | 256.0           | 292.4          | 676        |
| Rehabilitation and holding costs for closed sites                                     | (42.6)          | (2.7)         | 1.0             | 2.8            | (9.        |
| SRL transaction costs   | (14.1)          | -             | -               | -              |            |
| Depreciation and amortisation   | (79.9)          | (132.0)       | (191.7)         | (181.7)        | (203.      |
| Inventory movement – non-cash production costs  | (57.3)          | (15.3)        | -               | -              | 82         |
| Share of Metalysis Ltd losses (associate)   | (3.3)           | -             | -               | -              |            |
| Significant non-cash items  | (201.0)         | -             | (82.0)          | (40.0)         |            |
| Net interest and finance charges  | (30.0)          | (56.4)        | (31.8)          | (49.5)         | (33.       |
| Income tax (expense) benefit  | 53.7            | (33.1)        | (14.0)          | (5.5)          | (149.      |
| Net profit (loss) after tax for the period (NPAT)                                     | (224.0)         | 53.5          | (62.5)          | 18.5           | 363        |
| Operating cash flow   | 137.3           | 222.2         | 254.8           | 124.0          | 368        |
| Capital expenditure   | (82.5)          | (66.4)        | (48.3)          | (52.5)         | (167.      |
| · · · · ·   |                 |               |                 |                |            |
| Free cash (outflow) inflow <sup>2</sup> (\$m)<br>Net (debt) cash                      | 47.3<br>(506.3) | 155.0         | 196.3<br>(59.0) | (27.5) (206.6) | 81<br>(95. |

|  | 2016      | 2015    | 2014    | 2013    | 2012    |
|--|-----------|---------|---------|---------|---------|
| Capital and dividends                              |           |         |         |         |         |
| Ordinary shares on issue (millions)                | 418.7     | 418.7   | 418.7   | 418.7   | 418.7   |
| Dividends per share in respect of the year (cents) | 3         | 25      | 19      | 9       | 35      |
| Franking level %                                   | 100       | 100     | 100     | 100     | 100     |
| Opening year share price (\$)                      | 6.13      | 5.95    | 8.63    | 9.02    | 15.50   |
| Closing year share price (\$)                      | 7.27      | 6.13    | 5.95    | 8.63    | 9.02    |
| Financial ratios                                   |           |         |         |         |         |
| EBITDA/revenue margin %                            | 20.7      | 35.8    | 35.3    | 38.3    | 63.2    |
| Mineral sands EBITDA/revenue margin %              | 14.2      | 28.3    | 26.1    | 26.7    | 56.4    |
| Basic earnings (loss) per share (cents)            | (53.6)    | 12.8    | (15.0)  | 4.4     | 87.1    |
| Free cash flow per share (cents)                   | 11.3      | 37.0    | 46.9    | (6.6)   | 19.4    |
| Return on shareholders' equity <sup>3</sup> %      | (17.1)    | 3.8     | (4.1)   | 1.2     | 23.2    |
| Return on capital⁴ %                               | (18.3)    | 6.8     | (2.0)   | 2.2     | 31.3    |
| Gearing (net debt/net debt + equity) %             | 31.5      | n/a     | 3.9     | 11.8    | 5.8     |
| Financial position as at 31 December (\$m)         |           |         |         |         |         |
| Total assets                                       | 2,395.6   | 2,103.3 | 2,173.4 | 2,368.7 | 2,426.6 |
| Total liabilities                                  | (1,292.6) | (694.7) | (738.8) | (830.6) | (859.5) |
| Net assets   | 1,103.0   | 1,408.6 | 1,434.6 | 1,538.1 | 1,567.1 |
| Shareholders' equity                               | 1,103.0   | 1,408.6 | 1,434.6 | 1,538.1 | 1,567.1 |
| Net tangible asset backing per share (\$)          | 2.18      | 3.31    | 3.38    | 3.65    | 3.74    |
| Employees, as at 31 December                       |           |         |         |         |         |
| Full-time equivalent employees⁵                    | 687       | 876     | 827     | 835     | 1,074   |

<sup>1</sup> Underlying Group EBITDA excludes non-recurring adjustments including impairments, Sierra Rutile Limited transaction costs, changes to rehabilitation provisions for closed sites. Underlying EBITDA also excludes Iluka's share of Metalysis Ltd's losses, which are non-cash in nature.

<sup>2</sup> Free cash flow is determined as cash flow before any debt refinance costs, proceeds/repayment of borrowings and dividends paid in the year. 2016 free cash flow is stated before the acquisition cost of Sierra Rutile Limited of \$375.4 million.

<sup>3</sup> Calculated as NPAT for the year as a percentage of the average monthly shareholders equity over the year.

<sup>4</sup>Calculated as EBIT for the year as a percentage of average monthly capital employed for the year.

<sup>5</sup> 2016 data excludes Sierra Rutile Limited.

|  | 2016  | 2015  | 2014  | 2013  | 2012  |
|--|-------|-------|-------|-------|-------|
| Iluka Ore Reserves and Mineral Resources |       |       |       |       |       |
| Mineral Resources In Situ HM tonnes      | 170.5 | 172.9 | 176.4 | 178.7 | 122.7 |
| Ore Reserves In Situ HM tonnes           | 16.7  | 23.0  | 24.9  | 26.6  | 29.0  |
| HM Grade (%) Ore Reserves                | 5.9   | 5.7   | 5.4   | 5.6   | 5.7   |
| Assemblage <sup>6</sup> (%)              |       |       |       |       |       |
| Zircon                                   | 19    | 18    | 18    | 19    | 19    |
| Rutile                                   | 4     | 6     | 6     | 6     | 6     |
| Ilmenite                                 | 52    | 53    | 52    | 52    | 52    |

<sup>6</sup> Mineral assemblage is reported as a percentage of the In Situ heavy mineral content.

Refer pages 109 to 115 of the Iluka Annual Report for Iluka's Ore Reserves and Mineral Resources Statement or refer to Iluka's website www.iluka.com

|  | 2016 |
|--|------|
| Sierra Rutile Ore Reserves and Mineral Resources |      |
| Mineral Resources In Situ Rutile tonnes          | 7.5  |
| Ore Reserves In Situ Rutile tonnes               | 3.9  |

The Ore Reserves and Mineral Resources for the Sierra Leone rutile deposits are reported separately as there is insufficient information to state the assemblage in terms of a portion of the heavy mineral (HM) content which is traditionally done in reporting heavy minerals. Historical data focussed on the in situ rutile content which is honoured in the reporting of Ore Reserves and Mineral Resources for Sierra Leone.

Refer pages 109 to 115 of the Iluka Annual Report for Iluka's Ore Reserves and Mineral Resource Statement or refer Iluka's website www.iuka.com

# Operating mines physical data

12 Months to 31 December 2016

|                         | Jacinth-<br>Ambrosia | Murray<br>Basin | Western<br>Australia | Australia<br>Total | Virginia | Group Total<br>2016 | Group Total<br>2015 |
|-------------------------|----------------------|-----------------|----------------------|--------------------|----------|---------------------|---------------------|
| Mining                  |                      |                 |                      |                    |          |                     |                     |
| Overburden moved bcm    | 429                  | -               | 390                  | 819                | -        | 819                 | 3,630               |
| Ore mined kt            | 2,497                | -               | 1,851                | 4,348              | -        | 4,348               | 13,815              |
| Ore grade HM %          | 6.2                  | -               | 12.4                 | 8.8                | -        | 8.8                 | 9.1                 |
| VHM grade %             | 5.5                  | -               | 11.0                 | 7.8                | -        | 7.8                 | 7.9                 |
| Concentrating           |                      |                 |                      |                    |          |                     |                     |
| HMC produced kt         | 144                  | -               | 227                  | 371                | -        | 371                 | 1,137               |
| VHM produced kt         | 127                  | -               | 198                  | 325                | -        | 325                 | 978                 |
| VHM in HMC assemblage % | 88.2                 | -               | 87.2                 | 87.6               | -        | 87.6                | 86.0                |
| Zircon                  | 57.9                 | -               | 14.6                 | 31.4               | -        | 31.4                | 38.2                |
| Rutile                  | 6.4                  | -               | 5.3                  | 5.7                | -        | 5.7                 | 9.0                 |
| Ilmenite                | 23.9                 | -               | 67.3                 | 50.5               | -        | 50.5                | 38.7                |
| Processing              |                      |                 |                      |                    |          |                     |                     |
| HMC processed kt        | 470                  | 166             | 306                  | 942                | -        | 942                 | 1,206               |
| Finished product kt     |                      |                 |                      |                    |          |                     |                     |
| Zircon                  | 247.0                | 39.3            | 60.7                 | 347.0              | -        | 347.0               | 388.6               |
| Rutile                  | 37.6                 | 62.3            | 8.9                  | 108.8              | -        | 108.8               | 136.5               |
| Ilmenite                | 113.0                | 37.8            | 175.4                | 326.2              | -        | 326.2               | 466.1               |
| Synthetic rutile        | -                    | -               | 210.9                | 210.9              | -        | 210.9               | 164.9               |

The Basin data shown above relates to the 2016 year; Group totals for the 2015 year are shown. An explanation of Iluka's physical flow information can be obtained from Iluka's Briefing Paper - Iluka Physical Flow Information on the company's website www.iluka.com, under Investor Relations, Mineral Sands Briefing Material, 2010. The nature of the Iluka operations base means that HMC from various mining locations can be processed at various mineral separation plants.

This table shows physical movements for 2016, compared to 2015. In relation to heavy mineral concentrate (HMC) produced and that processed, the figures indicate a net HMC draw-down of 571 thousand tonnes, mainly in the Eucla Basin at Jacinth-Ambrosia (326 thousand tonnes), in line with company's intention to draw down concentrate inventory. 166 thousand tonnes of concentrate inventory was processed from the Murray Basin, with no concentrate production.

This table excludes Sierra Rutile, acquired December 2016.

# Explanatory comments on terminology

Overburden moved (bank cubic metres) refers to material moved to enable mining of an ore body.

Ore mined (thousands of tonnes) refers to material moved containing heavy mineral ore.

Ore grade HM % refers to percentage of heavy mineral (HM) found in the ore mined.

VHM grade % refers to percentage of valuable heavy mineral (VHM) - titanium dioxide (rutile and ilmenite), and zircon found in a deposit.

Concentrating refers to the production of heavy mineral concentrate (HMC) through a concentrating process at the mine site, which is then transported for final processing into finished product at one of the company's two Australian mineral processing plants, or the Virginia mineral processing plant.

HMC produced refers to HMC, which includes the valuable heavy mineral concentrate (zircon, rutile, ilmenite) as well as other non-valuable heavy minerals (gangue).

VHM produced refers to an estimate of valuable heavy mineral in heavy mineral concentrate expected to be processed.

VHM produced and the VHM assemblage - provided to enable an indication of the valuable heavy mineral component in HMC.

HMC processed provides an indication of material emanating from each mining operation to be processed.

Finished product is provided as an indication of the finished production (zircon, rutile, ilmenite – both saleable and upgradeable) attributable to the VHM in HMC production streams from the various mining operations. Finished product levels are subject to recovery factors which can vary. The difference between the VHM produced and finished product reflects the recovery level by operation, as well as processing of finished material/concentrate in inventory. Ultimate finished product production (rutile, ilmenite, and zircon) is subject to recovery loss at the processing stage \_\_ this may be in the order of 10 per cent.

Ilmenite is produced for sale or as a feedstock for synthetic rutile production.

Typically, one tonne of upgradeable ilmenite will produce between 0.56 to 0.60 tonnes of SR. Iluka also purchases external ilmenite for its synthetic rutile production process. Refer Iluka's website www.iluka.com – Mineral Sands Technical Information for more detailed information on the mineral sands mining and production process. -OFDGFSONALUSG ONIV

| The following provides an overview of Iluka's main operationa | I bases (Sierra Rutile not included). |
|---|---------------------------------------|
|---|---------------------------------------|

| )   | <b>Jacinth-Ambrosia</b><br>Eucla Basin<br>South Australia  | <b>Tutunup South</b><br><b>Perth Basin</b><br>Western Australia  | <b>Murray Basin</b><br>Victoria/NSW  |
|---|--|--|--|
| Mining<br>Logistics                             | <ul> <li>Mining and concentrating operations suspended in April 2016</li> <li>High zircon assemblage deposit</li> <li>Dry mining</li> <li>Ore at average thickness of 20m</li> <li>Ore pushed by dozers into mobile mining unit plant dozer trap</li> <li>Mobile mining unit plant</li> <li>Ore slurry pumped to wet concentrator plant</li> <li>Accommodation village - 160 persons</li> <li>Sealed airstrip</li> <li>Water from borefield to site 32km</li> <li>Off-grid diesel power station</li> </ul> | <ul> <li>Chloride ilmenite suitable as feed<br/>for synthetic rutile kiln/s</li> <li>Dry mining</li> <li>Mining unit rate ~250tph</li> <li>50t AH500 trucks</li> <li>Ore fed into mining unit to control<br/>grade and blend ore</li> <li>Water from the Yaragadee<br/>aquifer</li> <li>Mains power 25 Iluka employees and<br/>up to 40 contractors</li> </ul> | <ul> <li>Operations idled March 2015</li> <li>Next planned development<br/>Balranald, subject to approval</li> </ul>   |
| Mining unit                                     | (6.8 MW)<br>• ~1,300tph (ore)  | <ul> <li>~250tph (ore)</li> </ul>  |  |
| Wet<br>concentrator                             | <ul> <li>~1,000tph (rougher head feed) to<br/>produce up to 120tph of heavy<br/>mineral concentrate, depending<br/>on feed grade</li> </ul>  | <ul> <li>~200tph (rougher head feed) to<br/>produce up to 50tph of heavy<br/>mineral concentrate</li> </ul>  |  |
| Heavy mineral<br>concentrate<br>(HMC) transport | <ul> <li>Heavy mineral concentrate (HMC) transported 270km by road to Port of Thevenard</li> <li>Triple road trains – 96t capacity</li> <li>40kt storage bunker at Port of Thevenard</li> <li>Charter shuttle vessels to Geraldton for Narngulu separation plant (WA) and Portland for Hamilton separation plant (VIC): <ul> <li>payload of 20kt – 30kt</li> <li>~two week round trips</li> </ul> </li> </ul>  | <ul> <li>HMC transported 40km by road<br/>to North Capel operations</li> <li>B double trucks carrying 50t<br/>per load</li> </ul>  |  |
| Mineral<br>separation plant                     | • Concentrate processed at Narngulu or<br>Hamilton plants  | <ul> <li>Narngulu plant ~1,200ktpa<br/>concentrate feed</li> <li>Indicative finished product<br/>capacities:         <ul> <li>Zircon ~300ktpa</li> <li>Rutile and ilmenite also produced</li> </ul> </li> </ul>  | <ul> <li>Hamilton plant ~700ktpa<br/>concentrate feed</li> <li>Indicative finished product<br/>capacities:</li> <li>Zircon ~220ktpa</li> <li>Rutile ~230ktpa</li> <li>Ilmenite ~100ktpa</li> </ul> |
| Synthetic rutile<br>(ilmenite upgrading)        |  | Two synthetic rutile kilns<br>South West:<br>SR1 ~115ktpa (idled)<br>SR2 ~200ktpa (operating)  |  |

In December 2015, Iluka Virginia operations were idled. In January 2017, a decision was made to close the operation, as well as not proceed with two potential mine developments. As such, the site is now undergoing rehabilitation. Some small-scale processing of tailings material will occur in 2017.

# **ORE RESERVES AND MINERAL RESOURCES STATEMENT**

### **Ore Reserves**

| Summary   | of Ore Reserves <sup>1,2,3</sup> for Ilul | ka                      |                           |                                  |                    |                          |                        |                        |                                 |
|-----------|---|-------------------------|---------------------------|----------------------------------|--------------------|--------------------------|------------------------|------------------------|---------------------------------|
|           |   |                         |                           |                                  |                    |                          | HM Ass                 | emblage⁴               |                                 |
| Country   | Region                                    | Ore Reserve<br>Category | Ore<br>Tonnes<br>Millions | In Situ HM<br>Tonnes<br>Millions | HM<br>Grade<br>(%) | Ilmenite<br>Grade<br>(%) | Zircon<br>Grade<br>(%) | Rutile<br>Grade<br>(%) | Change<br>HM Tonnes<br>Millions |
| Australia | Eucla Basin                               | Proved                  | 99                        | 3.9                              | 3.9                | 27                       | 50                     | 4                      |                                 |
|           |   | Probable                | 4                         | 0.1                              | 2.1                | 20                       | 52                     | 4                      |                                 |
| Total     | Eucla Basin                               |                         | 103                       | 3.9                              | 3.8                | 27                       | 50                     | 4                      | (0.0)                           |
|           | Murray Basin                              | Proved                  | -                         | -                                | -                  | -                        | -                      | -                      |                                 |
|           |   | Probable                | -                         | -                                | -                  | -                        | -                      | -                      |                                 |
| Total     | Murray Basin                              |                         | -                         | -                                | -                  | -                        | -                      | -                      | (1.7)                           |
|           | Perth Basin                               | Proved                  | 90                        | 5.8                              | 6.5                | 60                       | 9                      | 4                      |                                 |
|           |   | Probable                | 92                        | 7.0                              | 7.5                | 60                       | 8                      | 4                      |                                 |
| Total     | Perth Basin⁵                              |                         | 182                       | 12.8                             | 7.0                | 60                       | 9                      | 4                      | (3.7)                           |
| USA       | Atlantic Seaboard                         | Proved                  | -                         | -                                | -                  | -                        | -                      | -                      |                                 |
|           |   | Probable                | -                         | -                                | -                  | -                        | -                      | -                      |                                 |
| Total     | Atlantic Seaboard                         |                         | -                         | -                                | -                  | -                        | -                      | -                      | (0.9)                           |
|           |   |                         |                           |                                  |                    |                          |                        |                        |                                 |
|           | Total Proved                              |                         | 189                       | 9.7                              | 5.1                | 47                       | 26                     | 4                      |                                 |
|           | Total Probable                            |                         | 96                        | 7.0                              | 7.3                | 60                       | 9                      | 4                      |                                 |
|           |   |                         |                           |                                  |                    |                          |                        |                        |                                 |
|           | Grand Total                               |                         | 286                       | 16.7                             | 5.9                | 52                       | 19                     | 4                      | (6.3)                           |

1 Competent Persons - Ore Reserves: C Lee (MAusIMM(CP)). The Ore Reserves in this table have been estimated in accordance with the JORC Code (2012 Edition), other than the Ore Reserves for the IPL North and South West deposits (excluding Tutunup South), which have not materially changed and have been estimated in accordance with the JORC Code (2004 Edition). Iluka Resources is undertaking further work in order to report these estimates in accordance with the JORC Code (2004 Edition). Iluka Resources

2 Ore Reserves are a subset of Mineral Resources.

3 Rounding may generate differences in last decimal place.

4 Mineral assemblage is reported as a percentage of heavy minerals content.

 $\label{eq:states}$  Rutile component in Perth Basin South West operations is sold as a leucoxene product.

## Rutile Ore Reserves (Sierra Leone)

#### Iluka Ore Reserve for Sierra Rutile and JORC Category at 31 December 2016

|              | re Reserves <sup>1,2,3</sup> for Iluka |                         |                           | In Situ Assemblage <sup>4,5</sup>    |                        |                          |                        |                                     |
|--------------|--|-------------------------|---------------------------|--------------------------------------|------------------------|--------------------------|------------------------|-------------------------------------|
| Country      | Region                                 | Ore Reserve<br>Category | Ore<br>Tonnes<br>Millions | In Situ<br>Rutile Tonnes<br>Millions | Rutile<br>Grade<br>(%) | Ilmenite<br>Grade<br>(%) | Zircon<br>Grade<br>(%) | Change<br>Rutile Tonnes<br>Millions |
| Sierra Leone | Sierra Leone                           | Proved                  | 34                        | 0.5                                  | 1.45                   | -                        | -                      | 0.5                                 |
|              |  | Probable                | 271                       | 3.4                                  | 1.24                   | -                        | -                      | 3.4                                 |
| Total        | Sierra Leone                           |                         | 306                       | 3.9                                  | 1.27                   | -                        | -                      | 3.9                                 |

1 Competent Persons - Ore Reserves: C Lee (MAusIMM(CP)).

2 Ore Reserves are a subset of Mineral Resources.

3 Rounding may generate differences in last decimal place.

4 Mineral assemblage is reported as a percentage of In Situ material.

5 Ilmenite and zircon are only considered to be at an Inferred level of confidence in the Mineral Resource estimation, and while present, currently have a low value ascribed in the reserve optimisation process for Sierra Leone.

Ore Reserves are estimated using all available geological and relevant drill hole and assay data, including mineralogical sampling and test work on mineral recoveries and final product qualities. Reserve estimates are determined by the consideration of all of the "Modifying Factors" in accordance with the JORC Code 2004 and 2012, and for example, may include but are not limited to, product prices, mining costs, metallurgical recoveries, environmental consideration, access and approvals. These factors may vary significantly between deposits.

The Ore Reserves and Mineral Resources for the Sierra Leone rutile deposits are reported separately as there is insufficient information to state the assemblage in terms of a portion of the heavy mineral (HM) content which is traditionally done in reporting heavy minerals. Historical data focussed on the in situ rutile content which is honoured in the reporting of Ore Reserves and Mineral Resources for Sierra Leone. An equivalent comparison of the rutile tonnages contained in Iluka's Ore Reserve inventory for heavy minerals can be calculated using the formula:

[Rutile tonnes = HM tonnes \* Rutile %] that is [16.7\*(4/100)] = 0.7Mt of rutile.

For the year ending 2016, HM Ore Reserves decreased by 6.3Mt HM associated with mining depletion and adjustments, down from 23.0Mt HM to 16.7Mt HM.

The main factors contributing to the movement in Iluka's HM Ore Reserves during 2016 include the following:

- The Eucla Basin Ore Reserves decreased by 0.02Mt HM associated with mining depletion of the Jacinth deposit.
- The Perth Basin Ore Reserves decreased by 3.7Mt HM as a result of mine depletion at Tutunup South (0.2Mt) and write-down of Ore Reserves for the South Capel Offices, Allied Tails, Adamson, Depot Hill East, Depot Hill North, IPL South, Ocean Hill, South Tails, Twins Hills and Upland deposits (3.5Mt). The write-downs reflect a combination of development uncertainty and inadequacy in the current level of supporting feasibility studies.
- The Murray Basin Ore Reserves decreased by 1.7Mt HM with the reclassification of Ore Reserves for the Castaway and Kerribee deposits. The write-downs reflect a combination of development uncertainty and inadequacy in the current level of supporting feasibility studies.
- The Atlantic Seaboard Ore Reserves decreased by 0.9Mt HM with the reclassification of Ore Reserves for the Old Hickory and Brink, being deemed sub-economic at this time.

In December 2016 Iluka acquired the assets of Sierra Rutile Limited which comprise Ore Reserves of 306Mt of Ore containing 3.9Mt of rutile.

# **ORE RESERVES AND MINERAL RESOURCES STATEMENT**

# Ore Reserves Mined and Adjusted

|           | -  |                                      |                     |  |                                |  |  |  |                                |   |  |  |  |
|-----------|--|--------------------------------------|---------------------|--|--------------------------------|--|--|--|--------------------------------|---|--|--|--|
|           |  | Iluka Or                             | e Reserves Mined an | d Adjusted by                            | Country a                      | and Region at                                  | 31 December 2  | 2016                                     |                                |   |  |  |  |
|           | Summary of Ore Reserves Depletion <sup>1</sup> |                                      |                     |  |                                |  |  |  |                                |   |  |  |  |
|           | Country  | Region                               | Category            | In Situ<br>HM Tonnes<br>Millions<br>2015 | In Situ<br>HM<br>Grade<br>2015 | In Situ<br>HM Tonnes<br>Millions<br>Mined 2016 | In Situ<br>HM Tonnes <sup>2</sup><br>Millions<br>Adjusted 2016 | In Situ<br>HM Tonnes<br>Millions<br>2016 | In Situ<br>HM<br>Grade<br>2016 | In Situ<br>HM Tonnes <sup>3</sup><br>Millions<br>Net Change |  |  |  |
|           | Australia                                      | Eucla Basin                          | Active Mines        | 2.0                                      | 4.7                            | (0.1)  | 0.1  | 2.0                                      | 4.3                            | (0.0)   |  |  |  |
|           | )  |                                      | Non-Active Sites    | 2.0                                      | 3.5                            | -  | -  | 2.0                                      | 3.5                            | -   |  |  |  |
|           | Total  | Eucla Basin                          |                     | 4.0                                      | 4.1                            | (0.1)  | 0.1  | 3.9                                      | 3.8                            | (0.0)   |  |  |  |
|           |  | Murray Basin                         | Active Mines        | -  | -                              | -  | -  | -  |                                | -   |  |  |  |
|           |  |                                      | Non-Active Sites    | 1.7                                      | 15.2                           | -  | (1.7)  | -  | -                              | (1.7)   |  |  |  |
|           | Total  | Murray Basin                         |                     | 1.7                                      | 15.2                           | -  | (1.7)  | -  | -                              | (1.7)   |  |  |  |
| an        | )  | Perth Basin                          | Active Mines        | 0.5                                      | -                              | (0.2)  | 0.0  | 0.3                                      | 12.7                           | (0.2)   |  |  |  |
| O 2       | 2  |                                      | Non-Active Sites    | 16.0                                     | 5.5                            | -  | (3.5)  | 12.5                                     | 6.9                            | (3.5)   |  |  |  |
|           | Total  | Perth Basin                          |                     | 16.5                                     | 5.5                            | (0.2)  | (3.5)  | 12.8                                     | 7.0                            | (3.7)   |  |  |  |
|           | USA  | Atlantic Seaboard                    | Active Mines        | 0.9                                      | 5.1                            | -  | (0.9)  | -  | -                              | (0.9)   |  |  |  |
|           |  |                                      | Non-Active Sites    | -  | -                              | -  | -  | -  | -                              | -   |  |  |  |
|           | Total  | Atlantic Seaboard                    |                     | 0.9                                      | 5.1                            | -  | (0.9)  | -  | -                              | (0.9)   |  |  |  |
| 60        | 7  |                                      |                     |  |                                |  |  |  |                                |   |  |  |  |
| UU        | Total  | Active Mines                         |                     | 3.4                                      | 4.9                            | (0.4)  | (0.7)  | 2.3                                      | 4.6                            | (1.1)   |  |  |  |
| $\square$ | Total  | Non-Active Sites                     |                     | 19.7                                     | 5.8                            | -  | (5.2)  | 14.4                                     | 6.1                            | (5.2)   |  |  |  |
|           |  |                                      |                     |  |                                |  |  |  |                                |   |  |  |  |
|           | Total  | Ore Reserves                         |                     | 23.0                                     | 5.7                            | (0.4)  | (5.9)  | 16.7                                     | 5.9                            | (6.3)   |  |  |  |
|           | 1 Devediere men                                | ganarata difforances in last desimal |                     |  |                                |  |  |  |                                |   |  |  |  |

1 Rounding may generate differences in last decimal place.

2 Adjusted figure includes write-downs and modifications in mine design.

<sup>3</sup>Net change includes depletion by mining and adjustments.

## **Mineral Resources**

| Summary 0 | f Mineral Resources <sup>1,2,3</sup> f | Ur TIUKA                     |                                |                                  |                    |                          |                        | emblage⁴               |                               |
|-----------|--|------------------------------|--------------------------------|----------------------------------|--------------------|--------------------------|------------------------|------------------------|-------------------------------|
| Country   | Region                                 | Mineral Resource<br>Category | Material<br>Tonnes<br>Millions | In Situ HM<br>Tonnes<br>Millions | HM<br>Grade<br>(%) | Ilmenite<br>Grade<br>(%) | Zircon<br>Grade<br>(%) | Rutile<br>Grade<br>(%) | Change<br>HM Tonne<br>Million |
| Australia | Eucla Basin                            | Measured                     | 227                            | 7.1                              | 3.1                | 32                       | 44                     | 4                      |                               |
|           |  | Indicated                    | 85                             | 8.1                              | 9.5                | 65                       | 20                     | 2                      |                               |
|           |  | Inferred                     | 74                             | 3.7                              | 5.1                | 60                       | 20                     | 2                      |                               |
| Total     | Eucla Basin                            |                              | 386                            | 18.9                             | 4.9                | 52                       | 29                     | 3                      | (0.2)                         |
|           | Murray Basin                           | Measured                     | 16                             | 4.4                              | 27.6               | 62                       | 11                     | 11                     |                               |
|           |  | Indicated                    | 88                             | 18.5                             | 21.0               | 56                       | 11                     | 14                     |                               |
|           |  | Inferred                     | 85                             | 10.1                             | 11.9               | 49                       | 10                     | 14                     |                               |
| Total     | Murray Basin                           |                              | 189                            | 33.0                             | 17.5               | 54                       | 11                     | 13                     | (0.8)                         |
|           | Perth Basin                            | Measured                     | 497                            | 29.6                             | 6.0                | 59                       | 10                     | 5                      |                               |
|           |  | Indicated                    | 302                            | 15.9                             | 5.2                | 54                       | 10                     | 5                      |                               |
|           |  | Inferred                     | 242                            | 11.6                             | 4.8                | 55                       | 9                      | 5                      |                               |
| Total     | Perth Basin⁵                           |                              | 1,041                          | 57.0                             | 5.5                | 57                       | 10                     | 5                      | (1.4)                         |
| USA       | Atlantic Seaboard                      | Measured                     | 59                             | 2.4                              | 4.0                | 65                       | 12                     | -                      |                               |
|           |  | Indicated                    | 43                             | 2.4                              | 5.6                | 65                       | 10                     | -                      |                               |
|           |  | Inferred                     | 16                             | 0.5                              | 2.9                | 61                       | 11                     | -                      |                               |
| Total     | Atlantic Seaboard <sup>6</sup>         |                              | 118                            | 5.2                              | 4.4                | 65                       | 11                     | -                      | -                             |
| Sri Lanka | Sri Lanka <sup>7</sup>                 | Measured                     | 214                            | 22.2                             | 10.4               | 70                       | 3                      | 4                      |                               |
|           |  | Indicated                    | 39                             | 3.4                              | 8.8                | 69                       | 4                      | 3                      |                               |
|           |  | Inferred                     | 437                            | 30.7                             | 7.0                | 66                       | 4                      | 5                      |                               |
| Total     | Sri Lanka                              |                              | 690                            | 56.3                             | 8.2                | 67                       | 4                      | 4                      | -                             |
|           |  |                              |                                |                                  |                    |                          |                        |                        |                               |
| Total     | Measured                               |                              | 1,012                          | 65.7                             | 6.4                | 60                       | 12                     | 5                      |                               |
| Total     | Indicated                              |                              | 558                            | 48.3                             | 8.7                | 58                       | 11                     | 8                      |                               |
| Total     | Inferred                               |                              | 854                            | 56.5                             | 6.6                | 60                       | 7                      | 6                      |                               |
|           |  |                              |                                |                                  |                    |                          |                        |                        |                               |
|           | Grand Total                            |                              | 2,424                          | 170.5                            | 7.0                | 59                       | 10                     | 6                      | (2.4                          |

1 Competent Persons - Mineral Resources: B Gibson (MAIG).

2 Mineral Resources are inclusive of Ore Reserves.

3 Rounding may generate differences in last decimal place.

4 Mineral assemblage is reported as a percentage of In Situ HM content.

5 Rutile component in Perth Basin South West operations is sold as a leucoxene product.

6 Rutile is included in ilmenite for the Atlantic Seaboard region.

7 It should be noted that the Sri Lanka resource estimates are based on a 100 per cent ownership basis which applies to the exploration stage. The Sri Lankan Exchange Control Act currently limits the percentage holding of a foreign entity in a Sri Lankan mining company to 40 per cent, although approval for up to 100 per cent may be granted.

# **ORE RESERVES AND MINERAL RESOURCES STATEMENT**

### Rutile Mineral Resources (Sierra Leone)

| Iluka Mineral Resources for Sierra Leone Rutile and JORC Category at 31 December 2016 |              |                                 |                                |   |                        |                          |                        |  |
|---|--------------|---------------------------------|--------------------------------|---|------------------------|--------------------------|------------------------|--|
| Summary of Mineral Resources <sup>1,2,3</sup> for Iluka                               |              |                                 |                                |   |                        |                          |                        |  |
|   |              |                                 |                                |   |                        | In Situ Assemblage⁴      |                        |  |
| Country   | Region       | Mineral<br>Resource<br>Category | Material<br>Tonnes<br>Millions | In Situ<br>Rutile<br>Tonnes<br>Millions | Rutile<br>Grade<br>(%) | Ilmenite<br>Grade<br>(%) | Zircon<br>Grade<br>(%) | Change<br>Rutile<br>Tonnes<br>Millions |
| Sierra Leone  | Sierra Leone | Measured                        | 60                             | 0.8                                     | 1.26                   | 0.12                     | 0.16                   | 0.8                                    |
|   |              | Indicated                       | 538                            | 5.5                                     | 1.02                   | 0.14                     | 0.07                   | 5.5                                    |
| 615   |              | Inferred                        | 122                            | 1.3                                     | 1.06                   | -                        | 0.01                   | 1.3                                    |
| Total   | Sierra Leone |                                 | 719                            | 7.5                                     | 1.04                   | 0.11                     | 0.07                   | 7.5                                    |

1 Competent Persons - Mineral Resources: B Gibson (MIAG).

2 Mineral Resources are reported inclusive of Ore Reserves.

<sup>1</sup>3 Rounding may generate differences in last decimal place.

4 Mineral assemblage is reported as a percentage of in situ material.

5 Ilmenite and zircon are included for tabulation purposes under the Measured and Indicated resource categories. The confidence in the estimates for ilmenite and zircon are only considered to be at an Inferred level of confidence and should not be used in the estimation of Ore Reserves.

Mineral Resources are estimated using all available and relevant geological, drill hole and assay data, including mineralogical sampling and test work on mineral and final product qualities. Resource estimates are determined by consideration of geology, heavy mineral (HM) cut-off grades, mineralisation thickness vs. overburden ratios and consideration of the potential mining and extraction methodology and are prepared in accordance with the JORC Code 2012. These factors may vary significantly between deposits.

For the year ending 2016, Mineral Resources (excluding the Mineral Resources attributable to the Sierra Rutile acquisition) decreased by 2.4Mt HM net of mining depletion and adjustments (sale, relinquishment, exploration discovery and development and write-downs) down from 172.9Mt HM to 170.5Mt HM.

The change in Mineral Resources for 2016 was driven by the following:

Eucla Basin Mineral Resources decreased by 0.2Mt HM, principally as a result of mining depletion at Jacinth.

The Perth Basin Mineral Resources decreased by 1.4Mt HM, principally as a result of mining depletion at Tutunup South of 0.4Mt HM and write downs for Depot Hill Central (1.0Mt HM).

Murray Basin Mineral Resources decreased by 0.8Mt HM as a result of write downs for the Rainmaker and Rainlover deposits (0.4Mt HM) and decreases of the Mineral Resources for Adaptordie (0.1Mt HM), Archer (0.2Mt HM) and Bells (0.1Mt HM) following remodelling and updated resource estimation.

In December 2016 Iluka acquired the assets of Sierra Rutile Limited which include 719Mt of material grading 1.04 per cent rutile and containing 7.5Mt of rutile.

| Iluka Mineral Resources Mined And Adjusted By Country And Region At 31 December 2016 |                          |                  |  |                                |  |  |  |                                |   |
|--|--------------------------|------------------|--|--------------------------------|--|--|--|--------------------------------|---|
| Summary o  | of Mineral Resources Dep | oletion1         |  |                                |  |  |  |                                |   |
| Country  | Region                   | Category         | In Situ<br>HM Tonnes<br>Millions<br>2015 | In Situ<br>HM<br>Grade<br>2015 | In Situ<br>HM Tonnes<br>Millions<br>Mined 2016 | In Situ<br>HM Tonnes <sup>2</sup><br>Millions<br>Adjusted 2016 | In Situ<br>HM Tonnes<br>Millions<br>2016 | In Situ<br>HM<br>Grade<br>2016 | In Situ<br>HM Tonnes <sup>3</sup><br>Millions<br>Net Change |
| Australia  | Eucla Basin              | Active Mines     | 2.5                                      | 4.0                            | (0.1)  | (0.1)  | 2.3                                      | 3.9                            | (0.2)   |
|  |                          | Non-Active Sites | 16.6                                     | 5.7                            | -  | -  | 16.6                                     | 5.7                            | -   |
| <b>Fotal</b>   | Eucla Basin              |                  | 19.2                                     | 5.4                            | (0.1)  | (0.1)  | 18.9                                     | 5.4                            | (0.2)   |
|  | Murray Basin             | Active Mines     | -  | -                              | -  | -  | -  | -                              | -   |
|  |                          | Non-Active Sites | 33.8                                     | 17.0                           | -  | (0.8)  | 33.0                                     | 17.5                           | (0.8)   |
| Total  | Murray Basin             |                  | 33.8                                     | 17.0                           | -  | (0.8)  | 33.0                                     | 17.5                           | (0.8)   |
|  | Perth Basin              | Active Mines     | 0.9                                      | 9.6                            | (0.2)  | (0.2)  | 0.5                                      | 9.7                            | (0.4)   |
|  |                          | Non-Active Sites | 57.5                                     | 5.5                            | -  | (1.0)  | 56.6                                     | 5.5                            | (1.0)   |
| <b>Fotal</b>   | Perth Basin              |                  | 58.4                                     | 5.5                            | (0.2)  | (1.2)  | 57.0                                     | 5.5                            | (1.4)   |
| JSA  | Atlantic Seaboard        | Active Mines     | 2.2                                      | 2.8                            | -  | (2.2)  | -  | -                              | (2.2)   |
|  |                          | Non-Active Sites | 3.1                                      | 7.4                            | -  | 2.2  | 5.2                                      | 4.4                            | 2.2   |
| Total  | Atlantic Seaboard        |                  | 5.2                                      | 4.4                            | -  | -  | 5.2                                      | 4.4                            | -   |
| Sri Lanka  | Sri Lanka                | Active Mines     | -  | -                              | -  | -  | -  | -                              | -   |
|  |                          | Non-Active Sites | 56.3                                     | 8.2                            | -  | -  | 56.3                                     | 8.2                            | -   |
| Total  | Sri Lanka                |                  | 56.3                                     | 8.2                            | -  | -  | 56.3                                     | 8.2                            | -   |
|  |                          |                  |  |                                |  |  |  |                                |   |
| Total  | Active Mines             |                  | 5.6                                      | 3.8                            | (0.4)  | (2.4)  | 2.8                                      | 4.3                            | (2.8)   |
| Total  | Non-Active Sites         |                  | 167.3                                    | 7.4                            | -  | 0.4  | 167.7                                    | 7.2                            | 0.4   |
|  |                          |                  |  |                                |  |  |  |                                |   |
| Fotal  | Mineral Resources        |                  | 172.9                                    | 7.1                            | (0.4)  | (2.0)  | 170.5                                    | 7.1                            | (2.4)   |

# Heavy Mineral Resources Mined and Adjusted

 $1 \ {\rm Rounding} \ {\rm may} \ {\rm generate} \ {\rm differences} \ {\rm in} \ {\rm last} \ {\rm decimal} \ {\rm place}.$ 

 $\ensuremath{\mathbf{2}}$  Adjusted figure includes write-downs and modifications in mine design.

3 Net difference includes depletion by mining and adjustments.

#### Annual Statement of Mineral Resources and Ore Reserves

The Annual Statement of Mineral Resources and Ore Reserves as at the 31 December 2016 presented in this report has been prepared in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 Edition (the JORC Code 2012) and ASX listing Rules and disclosed in the announcement dated the 23 February 2017. Information prepared and disclosed under the JORC Code 2004 Edition and which has not materially changed since last reported has not been updated. Iluka is not aware of any new information or data that materially affects the information included in this Annual Statement and confirms that the all the material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

# **Competent Persons Statement**

The information in this report that relates to Mineral Resources is based on information compiled by Mr Brett Gibson who is a member of the Australian Institute of Geoscientists.

The information in this report that relates to Ore Reserves is based on information compiled by Mr Chris Lee who is a member of the Australasian Institute of Mining and Metallurgy (AUSIMM). Mr Gibson and Mr Lee are full-time employees of Iluka Resources Limited.

Mr Gibson and Mr Lee have sufficient experience that is relevant to the styles of mineralisation and types of deposits under consideration and to the activity which is being undertaken to qualify as a Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves', the JORC Code 2012 Ed.. Mr Gibson and Mr Lee consent to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The information in this report that relates to specific Mineral Resources and Ore Reserves is based on and accurately reflects reports compiled by Competent Persons as defined in the JORC Code 2012 for each of the company regional business units. Each of these persons is a full-time employee of Iluka Resources Limited or its relevant subsidiaries, holds equity securities in Iluka Resources Limited and is entitled to participate in Iluka's executive equity long term incentive plan, details of which are included in Iluka's 2016 Remuneration Report.

All of the Mineral Resource and Ore Reserve figures reported represent estimates as at 31 December 2016. All tonnes and grade information has been rounded, hence small differences may be present in the totals. All of the Mineral Resource information is inclusive of Ore Reserves (i.e. Mineral Resources are not additional to Ore Reserves).



### Mineral Resources and Ore Reserves corporate governance

Iluka has an established governance process supporting the preparation and publication of Mineral Resources and Ore Reserves which includes a series of structures and processes independent of the operational reporting through business units and product groups.

The Audit and Risk Committee has in its remit the governance of resources and reserves. This includes an annual review of Mineral Resources and Ore Reserves at a group level, as well as review of findings and progress from the Group Resources and Reserves internal audit program within the regular meeting schedule.

Mineral Resources and Ore Reserves are estimated by employees of Iluka Resources Limited or suitably qualified independent personnel using industry standard techniques and supported by internal guidelines for the estimation and reporting of Mineral Resources and Ore Reserves.

All Mineral Resource and Ore Reserve estimates and supporting documentation is reviewed by Competent Persons employed by Iluka. If there is a material change in the estimate of a Mineral Resource, the Modifying Factors for the preparation of Ore Reserves, or reporting an inaugural Mineral Resource or Ore Reserve and it is considered prudent to have external review then the estimate and supporting documentation in question is reviewed by a suitably qualified independent Competent Person.

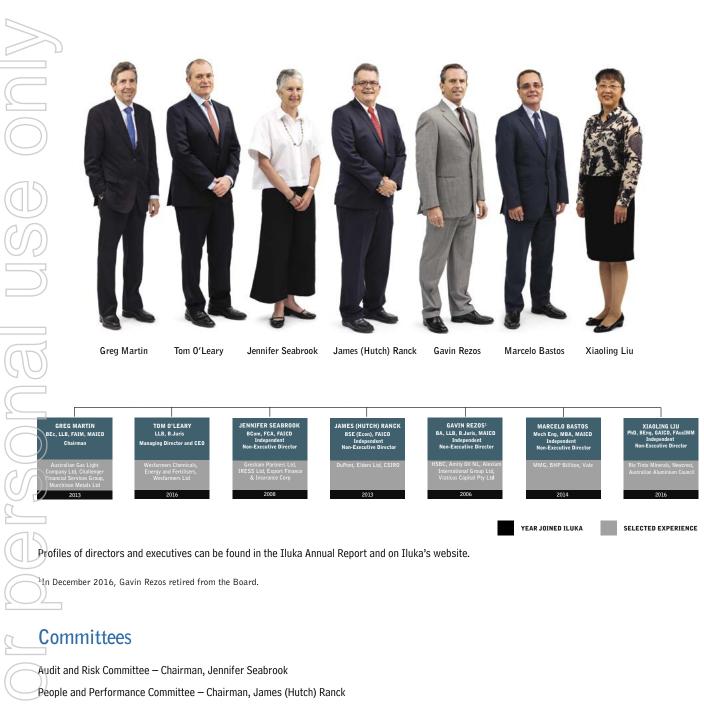
All Mineral Resources and Ore Reserves are internally reviewed by Iluka Competent Persons.

The Iluka Mineral Resource and Ore Reserve position is reviewed annually by a suitably qualified independent Competent Person prior to publication and the governance process is also audited by an independent body (PricewaterhouseCoopers).

Iluka has continued the development of internal systems and controls in order to meet JORC 2012 guidelines in all external reporting including the preparation of all reported data by Competent Persons as members of the Australasian Institute of Mining and Metallurgy (The AusIMM), the Australian Institute of Geoscientists (AIG) or recognised overseas professional organisations (ROPOs).

The establishment of an enhanced governance process has also been supported by a number of process improvements and training initiatives over recent years, including a web-based group reporting and sign-off database, annual internal Competent Person reports and Competent Person development and training.





Nominations Committee – Chairman, Greg Martin

The Board of Directors comprises five non-executive directors and one executive director (the Managing Director and Chief Executive Officer).

# EXECUTIVE





<sup>2</sup>Position established for integration activities relating to the merger with Sierra Rutile Limited.

# Executive

The executive is structured to include seven senior executives, reporting to the Managing Director. The responsibilities include achieving defined business and financial outcomes, capital deployment business planning, identification and pursuit of appropriate growth opportunities, sustainability performance, promotion of diversity objectives and succession planning.

Shareholder information as at 31 January 2017

## Australian Securities Exchange listing

Iluka's shares are listed on the Australian Securities Exchange (ASX) Limited. The company is listed as "Iluka" with an ASX code of ILU.

#### Shares on issue

The company had 418,701,360 shares on issue as at 31 January 2017. A total of 446,050 ordinary shares are restricted pursuant to the directors, executives and Employees Share Acquisition Plan and Employee Share Plan.

#### **Shareholdings**

There were 24,047 shareholders. Voting rights, on a show of hands, are one vote for every registered holder and on a poll, are one vote for each share held by registered holders.

#### **Distribution of shareholdings**

| Size of shareholding   |                                 | Number of holders   |
|--|---------------------------------|---------------------|
| 1 - 1,000  |                                 | 12,759              |
| 1,001 - 5,000  |                                 | 7,730               |
| 5,001 - 10,000   |                                 | 1,276               |
| 10,001 - 100,000   |                                 | 729                 |
| 100,001 - 1,000,000  |                                 | 39                  |
| 1,000,001 and over   |                                 | 14                  |
| Unmarketable parcel (less than \$500):                               |                                 | 1,500               |
| Substantial shareholders (as provided in disclosed substantial share | eholder notices to the company) |                     |
| Shareholder  | Size of shareholding            | % of issued capital |
| Schroder Investment Management Australia Limited                     | 45,649,855                      | 10.90               |
| BlackRock Investment Management (Australia) Limited                  | 30,619,502                      | 7.31                |
| SailingStone Capital Partners LLC                                    | 32,910,017                      | 7.86                |
| Northcape Capital Pty Ltd  | 30,408,843                      | 7.25                |
| Sumitomo Mitsui Trust Holdings, Inc. (SMTH)                          | 30,326,071                      | 7.24                |
| Top 20 shareholders (nominee company holdings)                       |                                 |                     |
| Shareholder  | Number of shares                | % of issued capital |
| HSBC Custody Nominees (Australia) Limited                            | 140,792,949                     | 33.63               |
| J P Morgan Nominees Australia Limited                                | 77,435,300                      | 18.49               |
| Citicorp Nominees Pty Limited  | 57,788,878                      | 13.80               |
| National Nominees Limited  | 40,186,929                      | 9.60                |
| BNP Paribas Noms Pty Ltd (DRP)                                       | 19,882,754                      | 4.75                |
| BNP Paribas Nominees Pty Ltd (Agency Lending DRP)                    | 8,506,823                       | 2.03                |
| Warbont Nominees Pty Ltd   | 3,123,323                       | 0.75                |
| Australian Foundation Investment Company Limited                     | 2,367,000                       | 0.57                |
| Argo Investments Limited   | 1,700,000                       | 0.41                |
| Australian Foundation Investment Company Limited                     | 1,275,000                       | 0.30                |
| UBS Nominees Pty Ltd   | 1,235,000                       | 0.29                |
| HSBC Custody Nominees (Australia) Limited                            | 1,232,369                       | 0.29                |
| Citicorp Nominees Pty Limited  | 1,149,856                       | 0.27                |
| R 0 Henderson (Beehive) Pty Limited                                  | 1,145,000                       | 0.27                |
| BNP Paribas Noms (NZ) Ltd  | 981,195                         | 0.23                |
| Mirrabooka Investments Limited                                       | 900,000                         | 0.21                |
| RBC Investor Services Australia Nominees Pty Limited                 | 841,543                         | 0.20                |
| BNP Paribas Nominees Pty Ltd   | 818,000                         | 0.20                |
| HSBC Custody Nominees (Australia) Limited                            | 590,946                         | 0.14                |
| Mr Adam Matthew Hartley  |                                 |                     |

# Calendar of key events

| 2017 Calendar   |   |
|---|---|
| 23 February   | Announcement of Financial Results                             |
| 20 April  | March Quarter Production Report                               |
| 26 April 9:30am WST                                       | Closure of acceptances of proxies for AGM                     |
| 28 April 9:30am WST                                       | Annual General Meeting – Perth                                |
| 20 July   | June Quarter Production Report                                |
| 17 August   | Announcement of Half Year Financial Results                   |
| 19 October  | September Quarter Production Report                           |
| 31 December   | Financial Year End  |
| All dates are indicative and subject to change. Sharehold | ers are advised to check with the company to confirm timings. |

# SHAREHOLDER AND INVESTOR INFORMATION

# Shareholder and new investor information

Iluka key physical and financial information 2017

Please refer to Iluka's website for this document which provides guidance parameters for 2017.

#### Key shareholder information - Iluka website

To assist those considering an investment in the Company, the Investors and Media section of the Iluka website contains a key shareholder information, which includes the calendar of events.

This site contains information on Iuka's products, marketing, operations, ASX releases and financial and quarterly reports. It also contains links to other sites, including the share registry.

## Investor relations enquiries

Dr Robert Porter

General Manager, Investor Relations and Corporate Affairs robert.porter@iluka.com

+61 8 9360 4700 +61 (0) 407 391 829

## Dividends

Iluka's Board of Directors typically makes a determination on dividend payments twice a year. Iluka does not operate a dividend reinvestment plan (DRP).

#### Share registry services

Shareholders who require information about their shareholdings, dividend payments or related administrative matters should contact the company's share registry:

Computershare Investor Services Pty Limited Level 2, 45 St Georges Terrace Perth WA 6000 Telephone: +61 3 9415 5000 (Head office) +61 8 9323 2000 (Perth) or 1300 850 505 Facsimile: +61 8 9323 2033 (Perth) or +61 3 9473 2500 (Melbourne)

# Annual reports and email notification of major accounts

Shareholders can elect to receive a printed copy of the Annual Report and/or recipient of email notification related to major company events. Please contact Computershare.

#### **Postal address**

GPO Box 2975 Melbourne, VIC, 3000

Website: www.computershare.com

Each enquiry should refer to the shareholder number which is shown on issuer-sponsored holding statements and dividend statements.

# **CORPORATE INFORMATION**

#### **Company details**

Iluka Resources Limited ABN: 34 008 675 018

#### **Registered office**

Level 23, 140 St Georges Terrace Perth, Western Australia, 6000

# Postal address

GPO Box U1988 Perth, Western Australia, 6845 Australia Telephone: +61 8 9360 4700 Facsimile: +61 8 9360 4777

#### **Company Secretary**

Sue Wilson, Company Secretary

Nigel Tinley, Joint Company Secretary

## Website

#### www.iluka.com

The site contains information on Iluka's products, marketing, operations, ASX releases and financial and quarterly reports. It also contains links to other sites, including the share registry.

## Notice of Annual General Meeting

Iluka's 62nd Annual General Meeting of Shareholders will be held on Level 2 in Meeting Room 8 at the Perth Convention and Exhibition Centre, 21 Mounts Bay Road, Perth, Western Australia on Friday 28 April 2017 commencing at 9:30am (WST).

#### **Disclaimer – forward-looking statements**

This report may contain certain forward-looking statements. These statements may include, without limitation, estimates of future production and production potential; estimates of future capital expenditure and cash costs; estimates of future product supply, demand and consumption; statements regarding future product prices; and statements regarding the expectation of future Mineral Resources and Ore Reserves.

Where Iluka expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and on a reasonable basis. No representation or warranty, express or implied, is made by Iluka that the matters stated in this presentation will in fact be achieved or prove to be correct.

Forward-looking statements are only predictions and are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks and factors include, but are not limited to:

- changes in exchange rate assumptions;
- changes in product pricing assumptions;
- major changes in mine plans and/or resources;
- changes in equipment life or capability;
- emergence of previously underestimated technical challenges; and
- environmental or social factors which may affect a licence to operate.

Iluka does not undertake any obligation to release publicly any revisions to any forward-looking statement to reflect events or circumstances after the date of this report, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

#### Non-IFRS financial information

This document uses non-IFRS financial information including underlying mineral sands EBITDA, underlying Group EBITDA and Group EBIT which are used to measure both group and operational performance. Non-IFRS measures are unaudited but derived from audited accounts.

All currency shown in the Iluka Review is expressed in Australian dollars, unless otherwise indicated.

# **MINERAL SANDS – PART OF EVERYDAY LIFE**



From everyday applications in the home and workplace, to medical, lifestyle and industrial applications, the unique properties of titanium dioxide and zircon are utilised in a vast and increasing array of products and applications.



Roof/building/construction



Solar panels, electrical insulators, bricks/cement, fibre optics, exterior and interior paint, tiles/ anti-pollution coatings

# Home/office



Mobile phones, plastic, printer inks, paper, packaging

# Bathroom/lifestyle



Ceramics, sanitary and toilet basins, glass, faucets for taps, cosmetics, pharmacuetical products, toothpaste, anti-perspirants, sunscreens

#### Kitchen/utilities



Light bulbs, dishes, glasses, clock parts, food colouring, ceramic knives, pans



## Automotive



Brake linings/pads, car parking sensors, automotive paint, catalytic converters, automotive electrics, rubber products

## Sporting goods/recreation



Golf clubs, tennis racquets, bicycle frames (titanium)

#### Healthcare/medicine



Dental implants, hip and bone replacements, heart pacemakers, kidney dialysis

#### Aircraft/industry



Titanium metal, desalination plants, zirconia-nuclear medicine, zirconium metal, corrosion resistant coatings



# www.iluka.com

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