ILUKA

ILUKA BRIEFING PAPER
MODELLING METHODOLOGY

June 2016

Key Physical and Financial Parameters

Iluka issued guidance on a range of parameters in its Key Physical and Financial Parameters of 19 February 2016). Key elements of this guidance, **all of which remain unchanged** are provided in Appendix 1.

This guidance provides the main financial parameters with the exception of sales volumes; price; FX and net interest and bank charges. Interest is not guided. In 2015 interest and bank charges were $11 million and included funding commitment fees in relation to the Multi Option Facility Agreement (MOFA) which are payable on undrawn funds under the facility (refer page 10 of 2016 Annual Report). In 2016 to date the level of facilities ($1,010 million) has remained unchanged and based on the company's commentary that it would expect free cash flow generation to be second half weighted, together with the payment of 2015 final dividend in April, some debt will be drawn in the first half.

In relation to zircon price structure reflecting different types of products and varying customer relationships with respect to Iluka's Reference Price, refer to Iluka's Briefing Paper Iluka Zircon Products and Pricing June 2016.

Inventory Movement

Iluka provided two worked examples (based on 2015 data) to reconcile Mineral Sands EBIT based on two methodologies in its Key Physical and Financial Parameters document (refer Appendix 2):

- Cost of goods sold (COGS) derived from cash cost of production + depreciation +/- inventory movement; and
- COGS derived from unit COGS x sales volumes.

Iluka indicated in this document that unit COGS in 2015 were A$780/t of Z/R/SR and in 2016 unit COGS are expected to be in line with 2015 levels, although ultimately sales mix dependent. The adoption of one of these methodologies, utilising assumptions on zircon, rutile, synthetic rutile sale volumes, prices and FX, and Iluka's guidance parameters, provides a useful way to consider Minerals Sands EBIT. From this determination of a Mineral Sands EBIT, the following items then comprise a consideration of Net Profit After Tax (NPAT):

- exploration, major projects and corporate costs;
- Mining Area C royalty income;
- net interest and bank charges;
- other finance costs; and
- tax (refer below).

Utilising of one or other of these methodologies, outlined on pages 5 – 6 below, based on forecast sales volumes and prices, relative to Iluka's zircon/rutile/synthetic rutile sales commentary as expected to be higher than combined Z/R/SR production guidance (~660 thousand tonnes); relative to opening inventory value ($812 million) and the 2015 unit cost of goods sold of A$780/t of Z/R/SR), and the company's guidance on non-production costs (below) provides a cross-check to modelling assumptions.

Taxation/US losses

Iluka recorded an effective taxation rate of 38.2 per cent in 2015. This was above the Australian corporate tax rate of 30 per cent due to minimal tax benefits recognised for US losses of A$35.5 million incurred during 2015, combined with an increase in non-deductible expenses, specifically in relation to overseas exploration and Kenmare Resources Plc transaction costs.

At the full year results teleconference on 19 February, Iluka's Chief Financial Officer stated:

As stated in the notes to the key physical and financial parameters released this morning, we expect the 2016 tax rate to be in the mid-30s% range and ***there will continue to be some US losses associated with care and maintenance activities****, as well as continued overseas exploration expenditure which is non-deductible.*

In simplified terms Iluka has predominantly two separate tax groups: one in Australia and one in US. Iluka cannot claim tax deductions in Australia for work undertaken in the US, so in 2015 (and 2016) the US losses as well as some level of overseas exploration and marketing-related expenditure, do not reduce the tax expense of the Australian group, resulting in a higher effective tax rate for the Group. The overseas exploration expenditure in 2015 which could not be tax-effected was A$15 million. The amount in 2016 is expected to be of a similar order of magnitude

Metalysis – Equity Accounting

As stated in Note 33 of the 2015 Annual Report (page 89), Events occurring after the reporting period, Iluka increased its investment in Metalysis to an ultimate 28.8 per cent interest, resulting in Iluka obtaining "significant influence" over this investment which will entail equity accounting effective from 18 February 2016. This requires Iluka to record its share of the Metalysis earnings/losses each year and is expected to be reflected in a loss within the P&L, of an amount of around A$5 million for 2016.

Foreign Exchange

The majority of Iluka's sales are denominated in US dollars and translated into Australian dollars depending on the prevailing exchange rate. Iluka does not hedge any of the exchange rate exposure associated with its revenue. Depending on the USD/AUD relatively, revenue and earnings can be influenced materially. As an indicative guide, a one cent move in the USD/AUD rate equates to an ~ A$7 million variance in net profit after tax.

APPENDIX 1 PHYSICAL TRENDS

Production (kt)	2016 Guidance	Commentary
		Production settings are dependent on market demand conditions and can be adjusted upwards or downwards dependent on market conditions, cash cost and inventory monetisation considerations.
Zircon	~ 350	Lower planned production in 2016 [than 2015 – 389kt]. This mainly reflects no production from Virginia, which was idled in December 2015 (2015 production: 37kt).
Rutile	~110	In the Murray Basin, HMC inventory will continue to be progressively drawn down and final product “allocated” until the next planned development.
Synthetic rutile (SR)	~200	Full year of production from SR kiln 2 compared with 9 months of production in 2015 (kiln recommenced production in April 2015).
Total Z/R/SR	**~660**	
Ilmenite	Not guided	Ilmenite produced can be sold directly, and some can be used as a feed source for synthetic rutile production. Ilmenite production in 2016 will be less than in 2015 with cessation of mining and processing activities in Virginia (2015 – 145kt of ilmenite production).

Sales Volumes (kt)	2015	2016 Guidance	Commentary 2016 vs 2015
Zircon	346	Not guided (Zircon, Rutile, Synthetic rutile, Total Z/R/SR)	Iluka expects that **aggregate** Z/R/SR sales may exceed 2016 aggregate Z/R/SR production (660kt). 2016 will have a full year of synthetic rutile sales. A major proportion of Iluka’s 2016 SR and rutile sales (which includes a lower titanium dioxide content HyTi product) are underpinned by commercial arrangements as to volume and price. Iluka expects a higher proportion of standard grade and zircon in concentrate in the 2016 zircon sales profile. Ilmenite sales will be lower in 2016, given no production from Virginia and use of the majority of chloride ilmenite as a feed for synthetic rutile production.
Rutile	134		
Synthetic rutile	171		
Total Z/R/SR	**651**		
Ilmenite	300		

Financial Trends

	2016 Guidance	Commentary 2016 vs 2015
Cash Costs A$m		
Production cash costs Z/R/SR (excluding ilmenite concentrate and by-products)	~290	Cash costs of production expected to decrease by ~25% [relative to 2015] with the cessation of mining and processing in Virginia, no Murray Basin mining in 2016 and the suspension of mining and concentrating activity at Jacinth-Ambrosia, partially offset by increased SR costs (full year of production).
Ilmenite concentrate and by-product costs	~10	Marginally higher costs associated with expected higher South West Western Australian iron concentrate movements. Costs also involve handling and shipment of activated carbon, which results in a co-product credit for the production of synthetic rutile.
Other cash costs	~190	Non-production costs associated with exploration, marketing, royalties and port costs, major projects and corporate costs are expected to be lower in aggregate than 2015 although other cash costs in total are higher, associated primarily with ~$35 million for the further development of innovative solutions to certain mineral sands mining and processing technical challenges.
Restructure, idle capacity, rehabilitation & holding costs	~65	Higher – associated with suspension of mining and concentrating at Jacinth-Ambrosia.
Total Cash Costs	**~555**	
Depreciation & amortisation	~75	Mainly associated with lower mining activity in 2016. Refer Note 6
Other	~15	Rehabilitation unwind and other finance costs 2015 amount included an additional $25 million for an accounting adjustment associated with a reduction in discount rate – refer ASX Release 16 December 2015.
Capital Expenditure	~90	Includes investment in Metalysis and land purchases in US. Iluka's corporate plan forecast, including Balranald, Cataby and 2nd kiln reactivation incorporates an average annual capital expenditure (2016-2020) of $150 to $175 million per annum. This excludes any potential M&A activity and also any execute capital for Puttalam, Sri Lanka, US projects, and Jacinth-Ambrosia satellite deposits. These are not sufficiently advanced to include in corporate plan forecasts at this time. The level of capital expenditure in any given year will be determined by final project scope decisions, approvals and the phasing of expenditure.

The original disclosure available on Iluka's website has the 2015 comparative and notes to the various items.

APPENDIX 2 COST OF GOODS SOLD AND INVENTORY METHODOLOGY

To assist in modelling inventory movement, the following information is provided:

1. an explanation of costs of goods sold (COGS) and inventory movements on the profit or loss and balance sheet, with an illustrative schematic provided;

2. based on 2015 disclosed financials, a reconciliation of Mineral Sands EBIT using two different methodologies: COGS derived from cash cost of production plus depreciation and amortisation (D&A) plus/minus inventory movement; and COGS derived from unit COGS x sales volumes of zircon/rutile/synthetic rutile.

Cost of Goods Sold

Mineral sands earnings reflect the difference between revenue and COGS, rather than the cash costs of production and depreciation incurred in a period. COGS is the inventory value of each tonne of finished product sold. All production is added to inventory at cost, which includes direct costs and an appropriate portion of fixed and variable overhead expenditure, including depreciation and amortisation, allocated to each product on the basis of relative sales value.

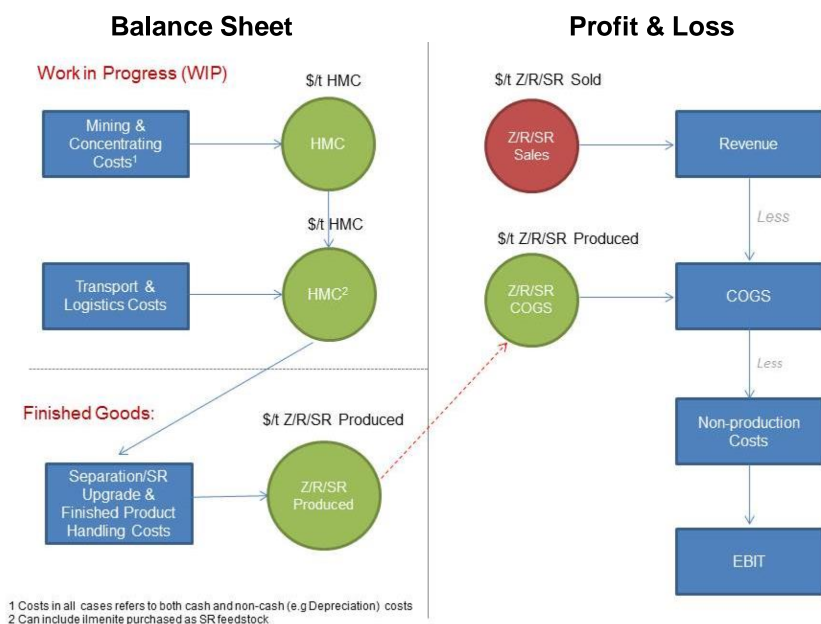
The inventory value recognised as COGS for each tonne of finished product sold is the weighted average value per tonne for the stockpile from which the product is sold.

Iluka provides guidance on cash and non-cash costs of production, as well as finished goods production volumes, which in periods of low and stable inventory levels will **be a surrogate for COGS**. However, in periods of draw-down from large inventory balances, the **unit cost of inventory drawn has a more significant influence on COGS**, than current year production costs.

Production settings are provided for 2016 in Appendix 3. There will be no heavy mineral concentrate (HMC) production in Murray Basin and the US, and HMC production will be suspended at Jacinth-Ambrosia from 16 April 2016. As a result, HMC inventory will be drawn down during 2016 as it is processed into finished products through the mineral separation plants and not replenished from mining.

Iluka's COGS was $780 per tonne (cash and non-cash costs) of Z/R/SR in 2015. 2016 COGS is expected to be in line with 2015, but is dependent on sales mix and can, as such, vary. In periods of large expected movements in inventory, it can be simpler to model COGS on a unit basis, with the unit COGS ($/t) multiplied by the expected Z/R/SR sales volumes (kt).

The diagram below illustrates how costs of production (both cash and non-cash) are built up on the balance sheet in both work in progress and finished goods inventory and then transferred to the profit or loss (cost of goods sold) as finished product is sold.



Notes:

- Production costs (cash costs and depreciation) are allocated to inventory on the balance sheet as incurred
- Inventory is held at various stages through the production process and accumulates further cost at each stage
- Typical inventory stages (and type of costs accumulated):
  - Work in progress (WIP): ore mined (overburden and ore mining costs)
  - WIP: HMC at mine (ore mined costs plus concentrating costs)
  - WIP: HMC at mineral separation plants (ore and concentrating previously allocated, plus transport costs)
  - Finished products: Z/R/SR/I (all prior HMC, plus separation and finished product handling costs)
- For each tonne of finished product sold, the average cost to produce a tonne (COGS as $/t) is charged to the P&L
- The annual balance sheet inventory movement is therefore:
  - annual production costs incurred to produce new WIP and finished products; less
  - production costs of finished products sold transferred from inventory to the P&L (COGS)
- The annual cost of goods sold in the P&L represents the unit cost of products sold drawn from inventory, multiplied by the sales volume
- Non-production costs (e.g. corporate, exploration, idle capacity and restructure) are expensed to P&L as incurred

Reconciliation of 2015 Mineral Sands EBIT Based on Different Cost of Goods Sold Methodologies

The analysis below provides a reconciliation of Iluka's 2015 Mineral Sands EBIT based on the following different methodologies:

- Method 1 – COGS derived from cash costs of production + depreciation +/- inventory movement
- Method 2 – COGS derived from unit COGS x sales volumes

This analysis has been provided to assist in understanding Iluka's COGS given the large inventory movements expected in 2016-2018.

Z/R/SR sales volumes 2015	kt	651	
COGS unit cost	$/t	780	
Opening inventory 1.1.2015		810	
Cash costs of production		393	
Operating depreciation & amortisation		117	Inventory movement: 2
COGS (Z/R/SR sales x COGS unit cost)		(508)	
Closing inventory 31.12.2015		812	

Method 1 - COGS = Cash Cost + D&A +/- Inventory Movement	**$m**	**Method 2 - COGS derived from unit COGS x Sales Volumes**	**$m**
Mineral Sands revenue	820	Mineral Sands revenue	820
Cash costs of production, excluding by-product costs	(385)	COGS (Z/R/SR sales 651kt x COGS unit cost $780/t)	(508)
By-product costs	(8)	By-product costs	(8)
Depreciation & amortisation - operating	(117)		
Inventory movement	2		
Inventory movement - FX & other	(7)		
Depreciation & amortisation - idle and corporate	(15)	Depreciation & amortisation - idle and corporate	(15)
Restructure & idle	(38)	Restructure & idle	(38)
Rehabilitation and holding	(3)	Rehabilitation and holding	(3)
Government royalties	(21)	Government royalties	(21)
Marketing & selling costs	(32)	Marketing & selling costs	(32)
Asset sales and other income	1	Asset sales and other income	1
Resource development	(58)	Resource development	(58)
Mineral Sands EBIT	**139**	**Mineral Sands EBIT**	**139**

For further information, please contact:
Dr Robert Porter, General Manager, Investor Relations
Phone: +61 3 9225 5008
Mobile: + 61 (0) 407 391 829
Email: robert.porter@iluka.com

Disclaimer

This briefing paper contains information that is based on projected and/or estimated expectations, assumptions and outcomes. These forward-looking statements are subject to a range of risk factors associated, but not exclusive, with potential changes in:

- exchange rate assumptions
- product pricing assumptions
- mine plans and/or resources
- equipment life or capability
- current or new technical challenges
- market conditions
- management decisions

Iluka makes no representation that any or all of the matters referred to in this briefing paper will occur nor that the indicative cash and capital costs will apply, being subject as indicated to further evaluation and ultimate investment decision making. While Iluka has prepared this information based on its current knowledge and understanding and in good faith, there are risks and uncertainties involved which could cause results to differ from projections. Iluka shall not be liable for the correctness and/or accuracy of the information nor any differences between the information provided and actual outcomes, and furthermore reserves the right to change its projections from time to time. Except for statutory liability which cannot be excluded, Iluka, its officers, employees and advisers expressly disclaim any responsibility for the accuracy or completeness of the material contained in this presentation and exclude all liability whatsoever (including in negligence) for any loss or damage which may be suffered by any person as a consequence of any information in this presentation or any error or omission there from.

Iluka accepts no responsibility to update any person regarding any inaccuracy, omission or change in information in this presentation or any other information made available to a person nor any obligation to furnish the person with any further information.

All currency referred to is Australian denominated unless otherwise indicated.