

## **Copper & Diamonds – Investor roadshow**

**14 December 2017**

The attached presentation will be given by Arnaud Soirat, chief executive, Copper & Diamonds, at investor briefings in Paris, France.

The presentation material will also be available at [www.riotinto.com/presentations](http://www.riotinto.com/presentations).

## Contacts

media.enquiries@riotinto.com

riotinto.com



Follow @RioTinto on Twitter

### Media Relations, United Kingdom

Illtud Harri

T +44 20 7781 1152

M +44 7920 503 600

David Outhwaite

T +44 20 7781 1623

M +44 7787 597 493

David Luff

T +44 20 7781 1177

M +44 7780 226 422

### Investor Relations, United Kingdom

John Smelt

T +44 20 7781 1654

M +44 7879 642 675

David Ovington

T +44 20 7781 2051

M +44 7920 010 978

Nick Parkinson

T +44 20 7781 1552

M +44 7810 657 556

### Media Relations, Australia

Jonathan Rose

T +61 3 9283 3088

M +61 447 028 913

### Investor Relations, Australia

Natalie Worley

T +61 3 9283 3063

M +61 409 210 462

Rachel Storrs

T +61 3 9283 3628

M +61 417 401 018

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### Rio Tinto plc

6 St James's Square  
London SW1Y 4AD  
United Kingdom

T +44 20 7781 2000

Registered in England

No. 719885

### Rio Tinto Limited

Level 7, 360 Collins Street  
Melbourne 3000  
Australia

T +61 3 9283 3333

Registered in Australia

ABN 96 004 458 404



An aerial night photograph of an industrial facility, likely a power plant or refinery. The scene is illuminated by numerous bright lights, creating a high-contrast image against the dark sky. In the foreground, there are several large, dark-colored buildings and a complex network of pipes and structural elements. In the background, more industrial structures are visible, including a large, curved building that resembles a dome. Several tall, lattice-structured towers, possibly for power transmission, are scattered throughout the landscape. The overall atmosphere is one of intense industrial activity.

RioTinto

# Copper & Diamonds

Investor roadshow, December 2017

Arnaud Soirat | chief executive, Copper & Diamonds



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# Supporting statements

## **Ore Reserves and Mineral Resources (slide 10, 12)**

Reserve grade for Oyu Tolgoi Underground – Hugo Dummett North and Hugo Dummett North Extension. Probable Ore Reserves for Hugo Dummett North and Hugo Dummett North Extension (499 Mt at 1.66% Cu, 0.35g/t Au) were released to the market in the 2016 Rio Tinto Annual Report on 2 March 2017 and can be found on p224 of that report. The Competent Person responsible for reporting of those Ore Reserves was J Dudley (AusIMM).

The Mineral Resource estimate for Resolution was reported in Rio Tinto's 2016 Annual Report, released to the market on 2 March 2017. This resource estimate is reported on a 100% basis. The Competent Person responsible for that previous reporting was C Hehnke (AusIMM).

Rio Tinto is not aware of any new information or data that materially affects the above ore reserve or mineral resource estimates as reported in the 2016 Annual Report, and confirms that all material assumptions and technical parameters underpinning these estimates continue to apply and have not materially changed. The form and context in which each Competent Person's findings are presented have not been materially modified.

## **Production Targets**

The production target for Oyu Tolgoi shown on slides 10 and 13 is the average production 2025-2030, including open pit production. This production target was disclosed in a release to the market on 6 May 2016 ("Rio Tinto approves development of Oyu Tolgoi underground mine"). All material assumptions underpinning these production targets continue to apply and have not materially changed.

# Safety is our first priority

## Continuous improvement in safety

AIFR per 200,000 hours worked



## Copper

Fatality at Kennecott smelter in October

Continued focus on injury reduction, fatality and catastrophic event prevention

- Embedding Critical Risk Management
- Process and Underground safety

Balanced safety approach with high employee engagement across the group

Sharing and transferring best practices with our joint-venture partners

# Sector-leading attributes



Attractive industry fundamentals

Robust long-term demand

Constrained supply

Deficit expected towards end of decade



Large, high-quality resources

Long-life, low-cost, expandable assets

Interest in three of the world's Tier 1 copper mines



Leading mine to market productivity

Productivity & processing optimisation at Kennecott

OT process control innovations and blasting optimisation

Broad customer base for underground volumes at Oyu Tolgoi



Multiple, strong growth options

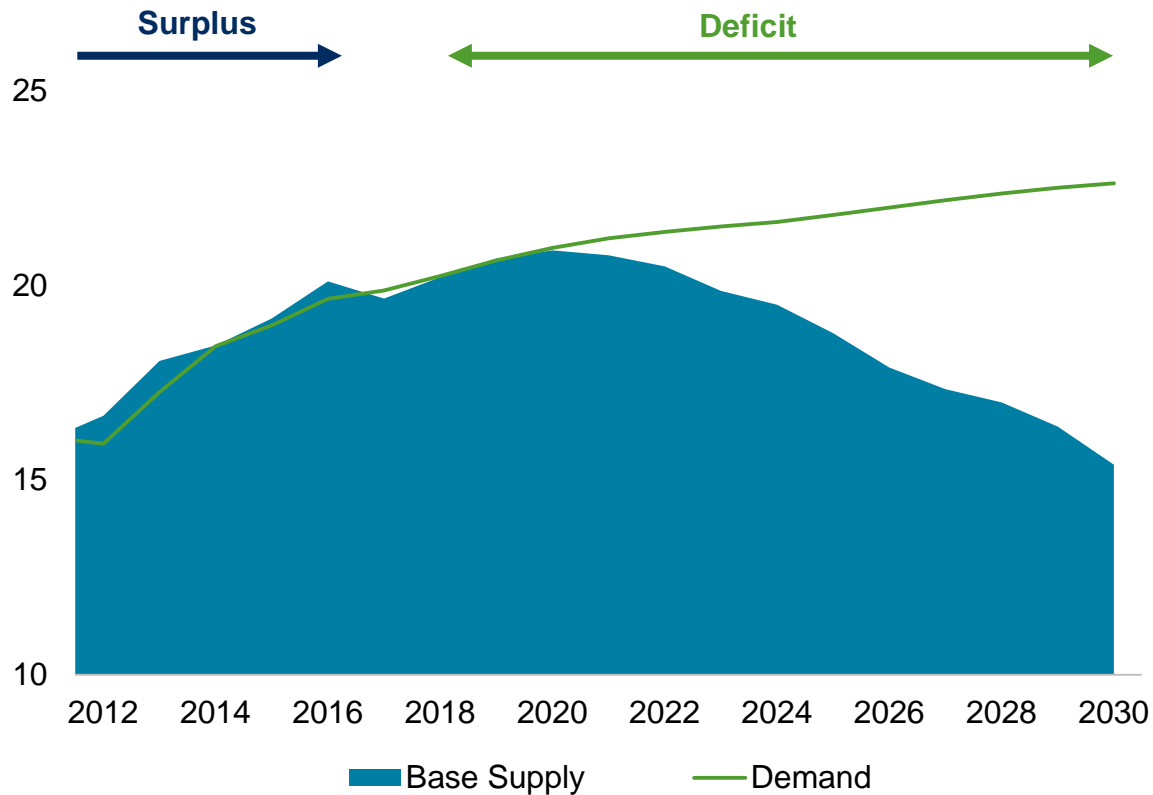
Medium-term growth from Oyu Tolgoi and Grasberg

Longer-dated optionality at Resolution

Exploration pipeline

# Rio Tinto well placed to benefit from copper's attractive long-term fundamentals

**Copper supply/demand**  
(million tonnes)



Market has rebalanced after a number of years of oversupply

Small deficit expected this year and next, as mine supply fell year-on year, whilst demand continues to grow.

Rio Tinto copper growth to be delivered into a supply deficient market

Further demand growth expected in China and other emerging markets

Consumer goods and new uses to provide upside

- renewable energy
- electric vehicles

Source: Wood Mackenzie Q3 2017. Rio Tinto. Includes Wood Mackenzie estimates of production from Oyu Tolgoi underground.



# Strategy to deliver further value



Maximise value from  
existing operations



Deliver medium-term growth  
and progress long-term options










Develop our people  
& partnerships



Unlock additional value through  
productivity initiatives



# Productivity options to continue to deliver cash benefits

	 <b>Best Practice</b>	 <b>Partnering with Suppliers</b>	 <b>Data &amp; Technology</b>	 <b>Automation</b>
 <b>Mining</b>	Effective equipment utilisation and maintenance optimisation (MTBF)		Payload optimisation	
		Light- weighting of truck beds		
	Shorter haul times			
	Increase mining rates in South wall pushback			
 <b>Processing</b>			Integrated operations	
		Increase concentrator throughput		
	Maintenance tactics and centralisation of maintenance			
	Improved feed characterisation			
		Increase metal recovery from East Wall		
 <b>Resources</b>		Tolling of concentrate for value		
	Ore grade distribution			
	Planning and schedule			
		Mine planning optimisation		

**Copper & Diamonds to deliver additional free cash flow of ~\$0.15 billion per year from 2021**



# Kennecott – a stronger contributor to cash



## Asset optimisation

- Maximise smelter and refinery productivity by blending third-party concentrate

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South wall push back underpins over a decade of high-quality cash flow

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Returns to higher grades from 2021

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## Operational excellence to maximise value

- Overall improvement of ~5% in truck productivity equates to ~12 mt additional material moved in 2017

# Oyu Tolgoi - the leading Tier 1 copper project



The highest quality, major copper development in the world.

Average underground copper grade of 1.66% Cu and 0.35g/t Au<sup>1</sup>

> 20% IRR

\$5.3 billion capex, first quartile opex

First drawbell production in 2020

Full production ~560kt/a<sup>1</sup> 2025-2030

Productivity improvement in both project development & operations

In-flight review of capital profile of underground complete – on budget and schedule



# Non-managed interest in two of the world's best copper mines

## Escondida



Strong cash flows underpin dividends

No additional significant capex required for near future

Los Colorados extension delivers incremental near-term capacity of 200ktpa<sup>1</sup>

Desalination plant fully commissioned and operating well

## Grasberg



Contract of Work renegotiation is a priority for the business

Rio Tinto's full participation beyond 2021 is likely to be delayed<sup>2</sup>

Transition to underground in progress

Supporting our partners to improve safety and protect licence to operate

# Future optionality for the Copper business

## Resolution



Indicated and inferred mineral resource of 1,787Mt @ 1.54% Cu<sup>1</sup>

Continuing to advance permitting process. Predictable timetable and pathway for positive Record of Decision

Strengthening our licence to operate

Complete pre-feasibility study by 2020

## Exploration



Continued focus on copper exploration, primarily the Americas

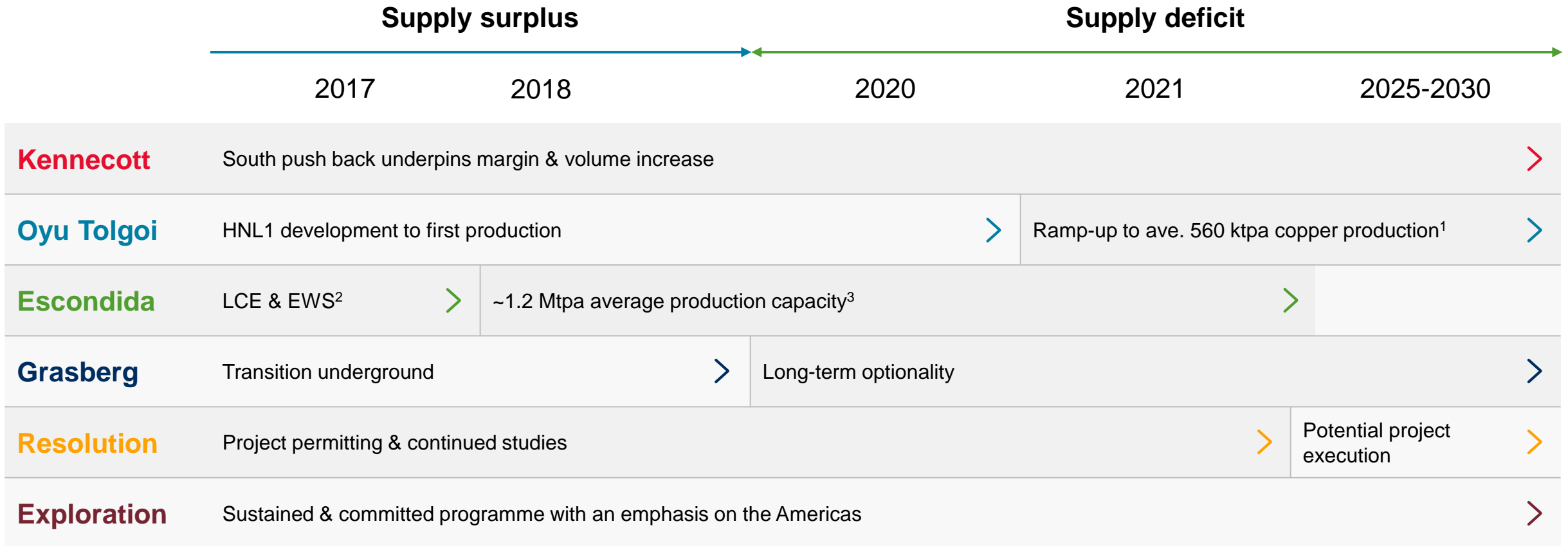
~60% Rio Tinto exploration spend is focussed on copper

16 copper exploration projects ongoing

La Granja regional exploration

<sup>1</sup> Refer to the statements supporting these resources are set out on slide 3 of this presentation

# Delivering medium-term growth and progressing long-term options



<sup>1</sup> Refer to the statements supporting this production target set out on slide 3 of this presentation.

<sup>2</sup> Los Colorados Concentrator Extension and Escondida Water Supply. <sup>3</sup> BHP Copper Briefing and Chilean site tour - <http://www.bhpbilliton.com/investors/reports/copper-briefing-and-chilean-site-tour>, released by BHP on 1 December 2015.



# Developing our people and our partnerships



Working with our partners to improve safety

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Strengthening indigenous relationships

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Consulting with communities

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Building long-term sustainable relationships at Oyu Tolgoi

- 94% local employment
- Best in class for water efficiency – 86% of water recycled
- 68% of total procurement spend is national suppliers and 75% of total spend is in-country



# Attractive industry fundamentals, sector leading resource and high quality growth options



## Copper & Diamonds

**~\$0.15 billion additional free cash flow per year from 2021 ...**

- Mining efficiency improvement
- Focusing on processing excellence
- Improving maintenance tactics
- Value chain optimisation
- Integrating operations

Attractive industry fundamentals

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Sector-leading large, high-quality resources

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Maximising value from existing operations

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Delivering value-adding growth

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Developing our people & partnerships

# 2018 guidance

**Copper** : 510-610 kt mined copper, 225-265 kt refined copper,

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**Diamonds** : 17-20 Mcts diamonds

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