

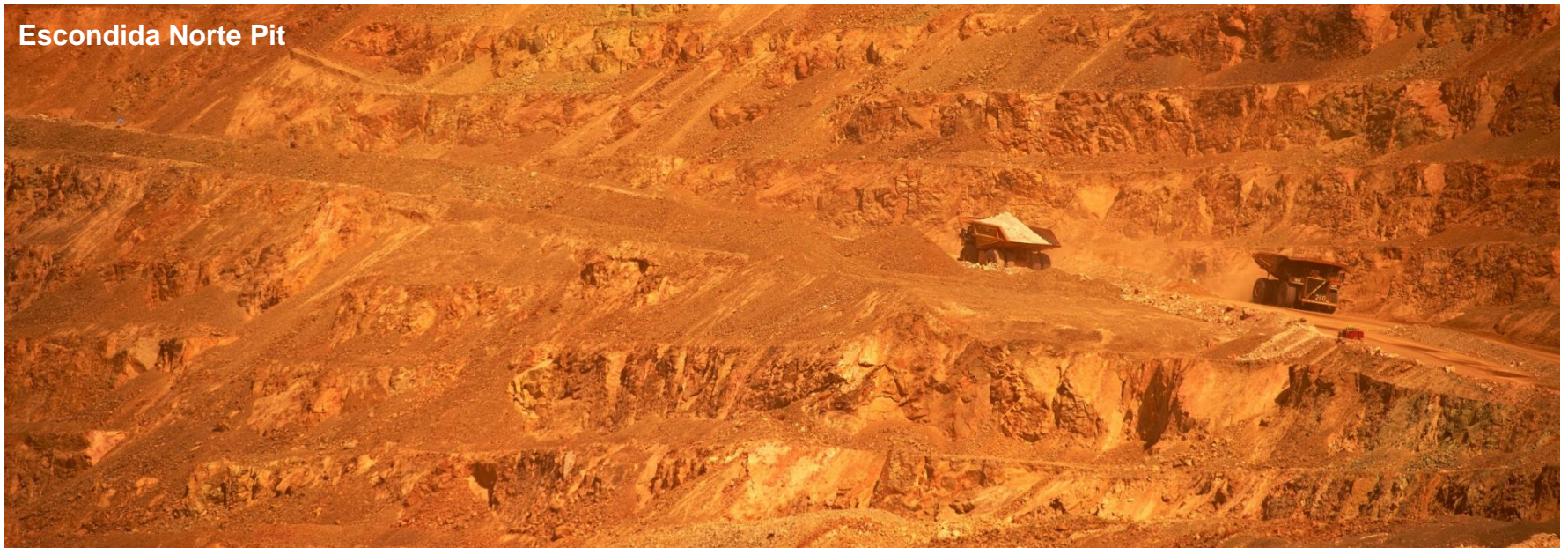


# Escondida

## Enhancing our competitive advantage

Hilmar Rode  
Asset President, Escondida

Escondida Norte Pit



# Disclaimer

## Forward-looking statements

This presentation contains forward-looking statements, including statements regarding: trends in commodity prices and currency exchange rates; demand for commodities; plans, strategies and objectives of management; closure or divestment of certain operations or facilities (including associated costs); anticipated production or construction commencement dates; capital costs and scheduling; operating costs and shortages of materials and skilled employees; anticipated productive lives of projects, mines and facilities; provisions and contingent liabilities; tax and regulatory developments.

Forward-looking statements can be identified by the use of terminology such as 'intend', 'aim', 'project', 'anticipate', 'estimate', 'plan', 'believe', 'expect', 'may', 'should', 'will', 'continue', 'annualised' or similar words. These statements discuss future expectations concerning the results of operations or financial condition, or provide other forward-looking statements.

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BHP Billiton results are reported under International Financial Reporting Standards (IFRS) including Underlying EBIT and Underlying EBITDA which are used to measure segment performance. This release may also include certain non-IFRS measures including Adjusted effective tax rate, Attributable profit excluding exceptional items, Free cash flow, Gearing Ratio, Net debt, Net operating assets, Underlying attributable profit, Underlying basic earnings per share, Underlying EBIT margin, Underlying EBITDA margin, Underlying EBITDA interest coverage and Underlying return on capital. These measures are used internally by management to assess the performance of our business, make decisions on the allocation of our resources and assess operational management. Non-IFRS measures have not been subject to audit or review and should not be considered as an indication of or alternative to an IFRS measure of profitability, financial performance or liquidity.

## Presentation of data

Unless specified otherwise, all data is presented on a continuing operations basis to exclude the contribution from assets that were demerged with South32 and references to Underlying EBITDA margin and Underlying EBIT margin exclude third party trading activities.

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# Statement of Mineral Resources and Mineral Inventory Classifications

## Mineral Resources

The information in this presentation that relates to the FY2015 Mineral Resources (inclusive of Ore Reserves) was first reported by the Company in compliance with the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012' ('The JORC Code 2012 Edition') in the 2015 BHP Billiton Annual Report of September 2015.

All reports are available to view on <http://www.bhpbilliton.com>.

Mineral Resources are reported by: L. Soto (MAusIMM), M Cortes (MAusIMM, both employed by Minera Escondida Limitada) – for Escondida, Pampa Escondida, Pinta Verde, L. Vaccia (MAusIMM, employed by Minera Escondida Limitada) – for Chimborazo.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.

The above-mentioned persons are full-time employees of BHP Billiton, unless otherwise stated, and have the required qualifications and experience to qualify as Competent Persons for Mineral Resources under the 2012 edition of the JORC Code. The compilers verify that this presentation is based on and fairly reflects the Mineral Resources information in the supporting documentation and agree with the form and context of the information presented.

Asset	Deposit	Ore Type	Measured Resource (Mt)	Indicated Resource (Mt)	Inferred Resource (Mt)	FY15 ROM production (Mt)	BHP Billiton interest (%)
	<b>Copper</b>						
Escondida Cluster	Escondida <sup>1</sup>	All	5,870 @ 0.64% Cu	3,230 @ 0.50% Cu	10,100 @ 0.50% Cu	193	57.5
	Pampa Escondida	Sulphide	294 @ 0.53% Cu	1,150 @ 0.55% Cu	6,000 @ 0.43% Cu		
	Pinta Verde	All leach ore types	109 @ 0.60% Cu	87 @ 0.52% Cu	52 @ 0.48% Cu		
	Chimborazo	Leach sulphide	NA	139 @ 0.50% Cu	84 @ 0.60% Cu		

1. Escondida includes Escondida and Escondida Norte combined.

# Key themes

- **Our outstanding safety record is being enhanced by an increased focus on vehicle safety**
- **Our transformation program (E3.0) is delivering a step change in productivity**
  - targeting a grade-adjusted 20% reduction in unit cost by end FY17<sup>1</sup>
  - targeting 65% improvement in people productivity by end FY17<sup>2</sup>
- **Our proactive approach to water and power provides a strategic advantage**
- **Our three concentrator strategy will release latent capacity at very low capital intensity**
  - the Los Colorados Extension (LCE) project will prolong the life of the concentrator until at least FY30
  - investment ~US\$200 million, IRR ~100%, one year execution, approval targeted in H2 FY16
- **~1.2 Mtpa average production capacity for a decade from FY16 with minimal further capital required**
  - maintaining our competitive position on the cost curve with unit costs of US\$1.08/lb by FY17<sup>3</sup>
- **Outstanding resource quality provides optionality for long-term growth through technology**

1. Relative to FY15 and on a FY15 grade-equivalent basis.

2. Relative to FY14.

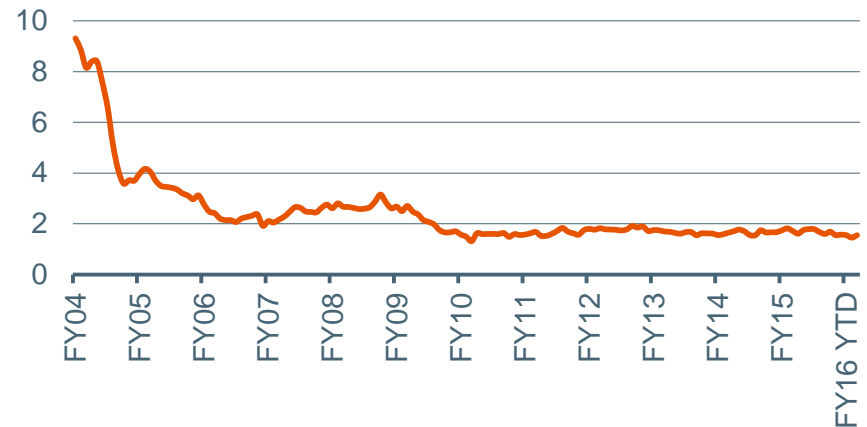
3. Unit cash costs presented net of one-off items, by-product credits, freight and TCRCs; exchange rates of USD/CLP 729 in FY17e.

# A strong safety culture enabling productivity

- Tragically we lost one of our colleagues in FY15
- Escondida has one of the lowest TRIFs in the industry at 1.7
- Our material safety risk management process focuses on effective critical controls in the field
- Our personal HSE programs ensure the physical and mental well being of our people, with a focus on key risks
  - high-altitude health
  - fatigue
  - mental wellness
  - drugs and alcohol
  - noise and hazardous material exposure reductions

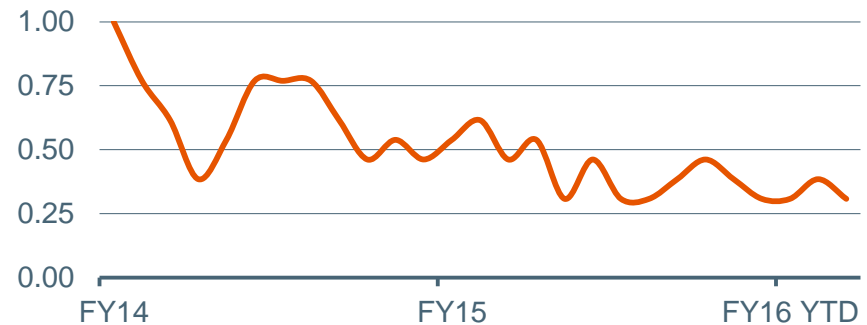
## Safety performance

12 month rolling average TRIF<sup>1</sup> per million hours worked



## Incidents with potential significant impact<sup>2</sup>

Index, July 2013=1.00, number of incidents, 3 month rolling average



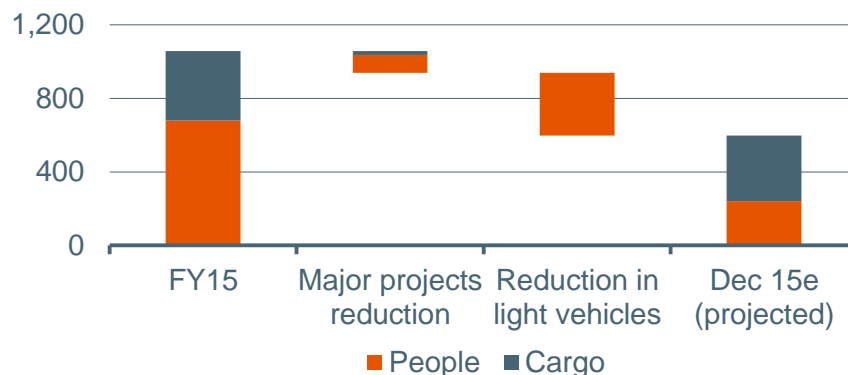
1. Total Recordable Injury Frequency (TRIF).  
2. Incident with uncontrolled release of energy.

# Reducing our exposure to material risks

- There have been several fatal accidents on route B-475, the 134 km public access road from Antofagasta to Escondida
  - average of ~1,100 trips per day in FY15
  - road conditions can include dust, fog, blind spots and extended curves
- After a thorough investigation we have intensified our focus on reducing exposure and reinforcing existing controls
  - road design and quality
  - traffic management
  - fatigue management
  - road usage analytics
- A 30% reduction in light vehicles on site will also be achieved by December 2015

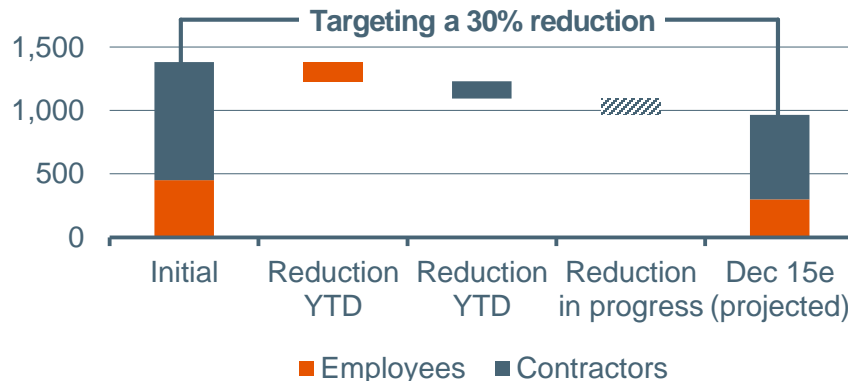
## Trips on route B-475 to Escondida

Trips per day



## Reduction of light vehicles on site

Number of vehicles





# Upholding our licence to operate

## Environment

- Existing water recovery programs and an additional desalination plant are expected to reduce fresh water consumption by >50% from FY18
- Kelar will provide 517 MW of gas-fired power and secure our long-term supply needs in a more sustainable way while providing flexibility
- Our greenhouse gas reduction projects have reduced CO<sub>2</sub> emissions by 13% since FY14

## Community

- Partnering with local and indigenous communities
- >US\$150 million invested since FY12
- We are improving the quality of life in Antofagasta through our support of the CREO<sup>1</sup> project and other local community programs
- Our education initiatives focus on early childhood and social participation, as well as specialised technical training for the mining industry

1. A long-term plan supported by the OECD to improve quality of life in Antofagasta, aligning public and private investment with citizen participation.



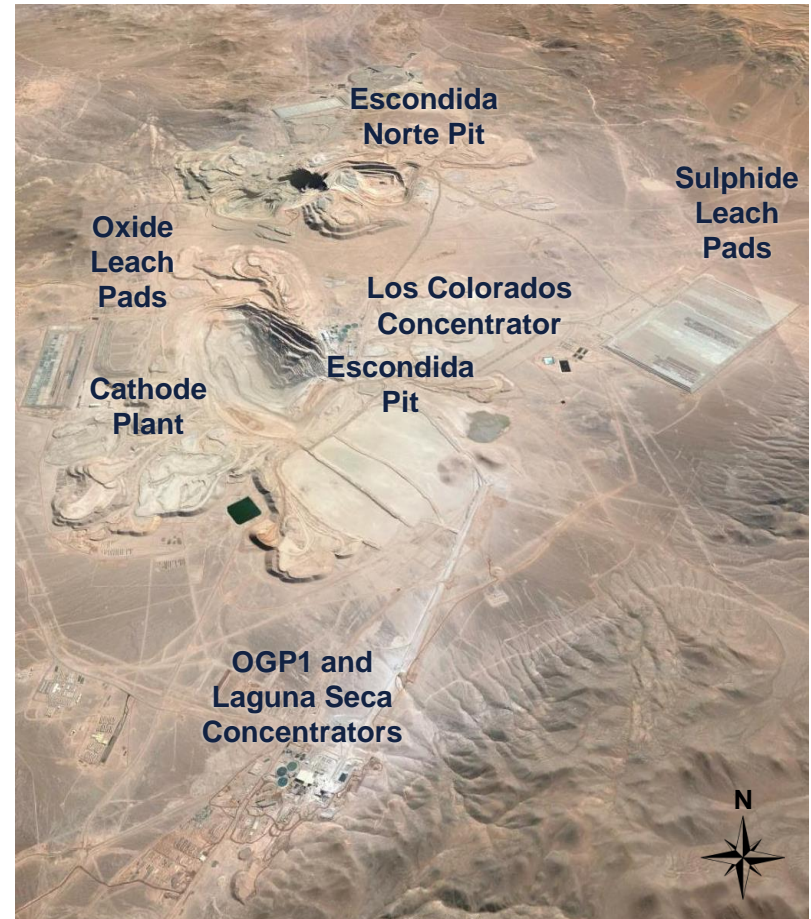
EWS, Coloso Port



Cultural event, Antofagasta

# The world's largest copper mine...

- Escondida's ownership
  - BHP Billiton 57.5%, operator
  - Rio Tinto 30%
  - JECO and JECO2 12.5%<sup>1</sup>
- The world's largest copper mine
  - ~1.4 Mtpd total material moved from two pits
  - three concentrators with ~375 ktpd effective throughput capacity
  - oxide and sulphide leaching streams with ~330 ktpa effective cathode capacity
  - ~3.5 Mtpa of concentrate shipments
- Delivery of OGP1 and OLAP<sup>2</sup> supporting our concentrate and leaching strategy
- The Escondida 3.0 (E3.0) transformation program was introduced in FY15



Mine site aerial view

1. JECO Corporation and JECO2 Ltd comprising Mitsubishi Corporation, JX Nippon Mining and Metals Corporation, and Mitsubishi Materials Corporation.  
2. Oxide Leach Area Project (OLAP).

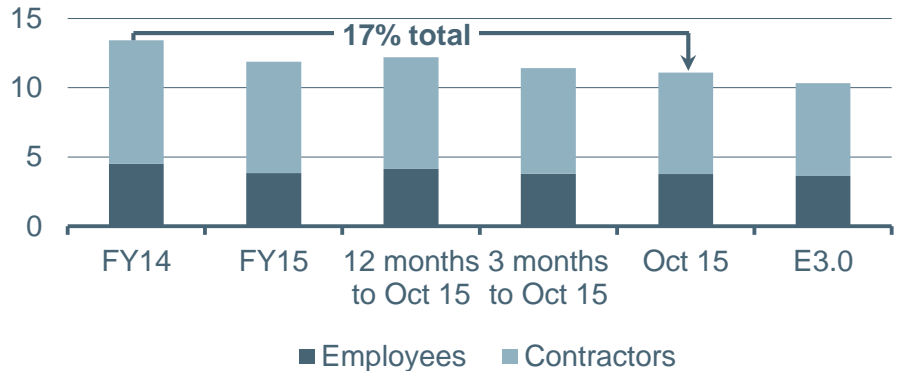


# ...is becoming the world's best copper mine...

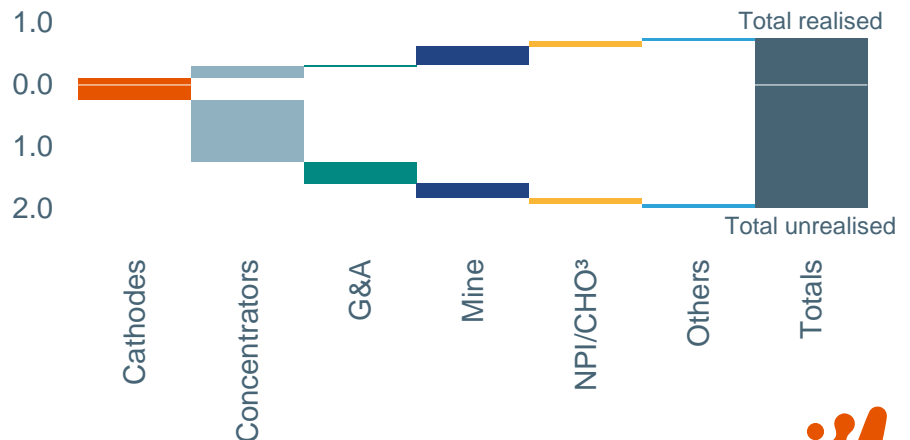
- We have achieved substantial gains since FY14<sup>1</sup>
  - embedded >US\$700 million in recurring annual productivity benefits
  - improved people productivity by 48% supported by a 17% headcount reduction
  - reduced total throughput unit cost by 26%<sup>2</sup>
- E3.0 expected to achieve a further ~US\$2 billion in recurring annualised gains by the end of FY17
  - achieving productivity safely
  - optimising key value drivers, bottlenecks and synergies across operational areas
  - significantly reducing external spend
  - being a more effective organisation that has a high performance culture

1. As at 31 October 2015.  
 2. Weighted average of throughput unit cost of each area, e.g. US\$/t ex-pit for mine.  
 3. Non-process infrastructure (NPI) / Concentrate handling operations (CHO).

**Escondida workforce**  
 Full-time equivalent, '000



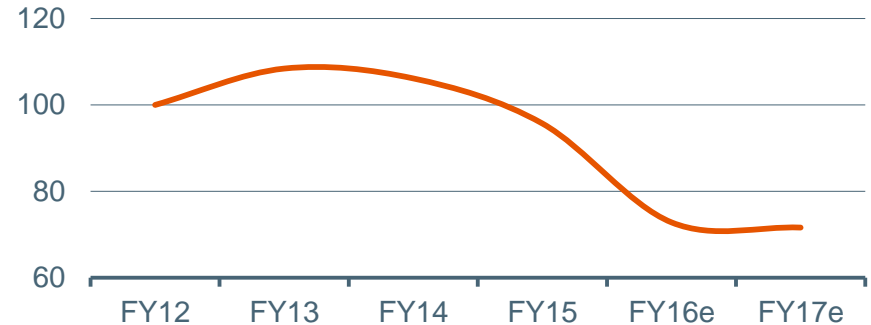
**Initiative tracking**  
 Productivity benefits, US\$ billion



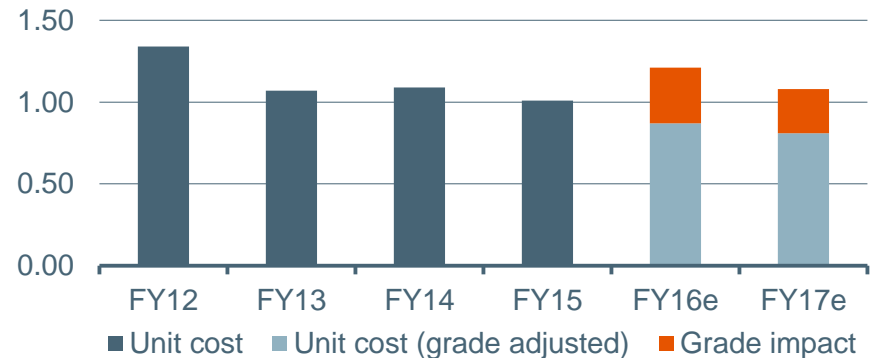
# ...with E3.0 driving substantially lower unit costs through scale and efficiency

- Targeting a grade adjusted 20% reduction in unit cost by end FY17<sup>1</sup>
  - additional installed capacity
  - cross-functional collaboration
- Since FY14 we have implemented a US\$1 billion external spend reduction program
  - truck fleet costs reduced 25% and productivity improved by 30%
  - camp services costs reduced 35% and productivity improved by 30%
  - crusher and conveyor maintenance services costs reduced 50% and productivity improved by 35%
  - routine concentrator maintenance service costs reduced by 45% and productivity improved 35%

**Reducing cost per tonne of material mined**  
Index, FY12=100



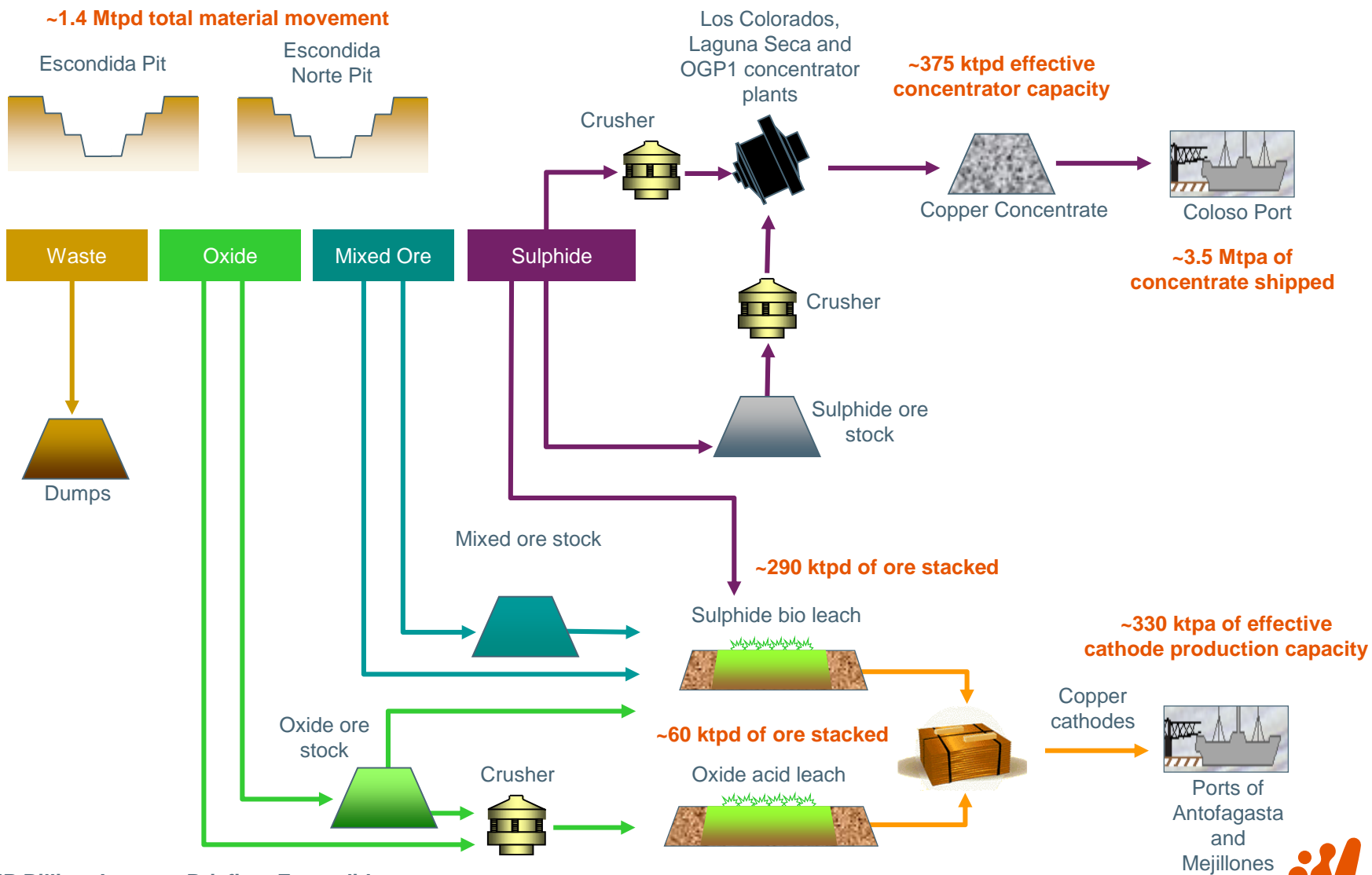
**Productivity efforts offset grade decline at Escondida**  
US\$/lb<sup>2</sup>



1. Relative to FY15 and on a FY15 grade-equivalent basis.

2. Unit cash costs presented net of one-off items, by-product credits, freight and TCRCs. One-off items relate to the implementation of the Escondida voluntary redundancy program which is expected to reduce employee head count by >20%.

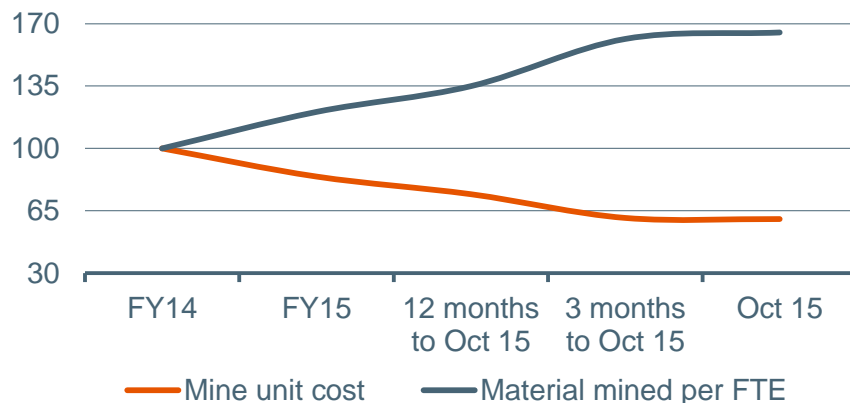
# Efficient, fully integrated infrastructure



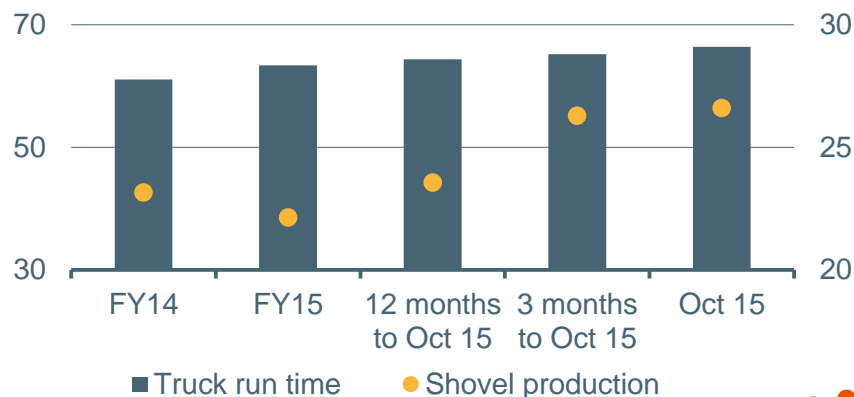
# Mine: moving more material at lower cost

- We operate two open pits with the largest mining fleet in Chile
  - total material movement of 1.4 Mtpd
  - 20 electric rope shovels and 172 trucks
- Improved equipment productivity has supported a 23% increase in material movement since FY14
  - 9% increase in truck runtime
  - 15% increase in shovel production
- Mining costs have reduced 40% since FY14 to ~US\$2.0/t, with a further 10% reduction targeted by the end of FY17
  - improving truck and electric rope shovel Overall Equipment Effectiveness (OEE)
  - reducing external spend (scope, specification, productivity, low cost country sourcing)
  - maintenance efficiencies (strategy, tool-in-hand)

**Moving more tonnes per FTE<sup>1</sup> at a lower cost...**  
Index, FY14=100



**...through increased truck and shovel productivity<sup>2</sup>**  
Truck runtime, % 73 yd shovels, Mtpa

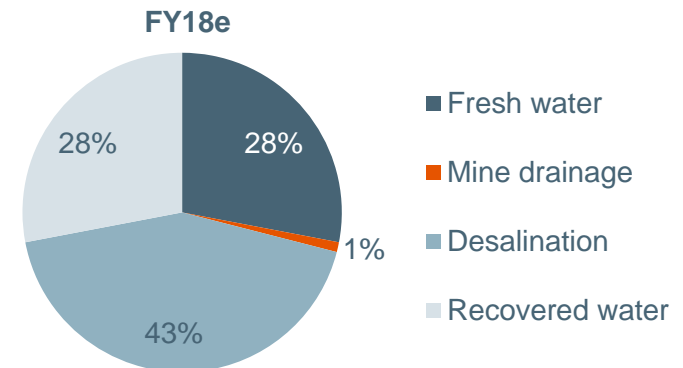
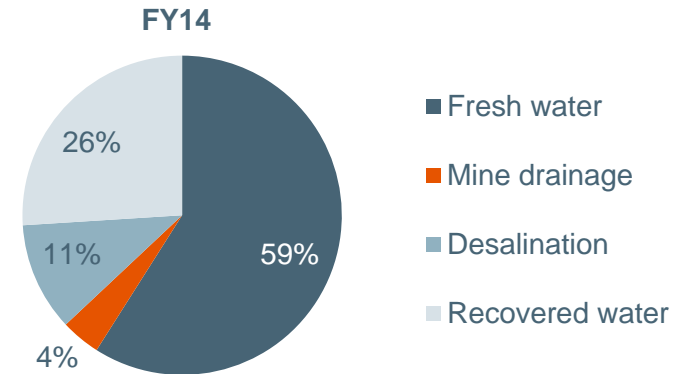


1. Full time equivalent (FTE) employees and contractors.  
2. Calculated by the BHP Billiton Time Usage Model.

# Turning water into a strategic advantage

- As we increase concentrator throughput to offset grade decline, water has become the bottleneck
- Short-term operational improvements have increased water availability and supported higher throughput
  - tailings dam optimisation
  - desalination plant debottlenecking
  - asset integrity of water infrastructure
  - mine dewatering
- Our long-term water strategy is designed to enable operation of three concentrators
  - Monturaqui aquifer permits secured until December 2019
  - EWS on track for commissioning H2 FY17
  - improving process efficiency will reduce water demand

## Shifting towards greater use of desalination

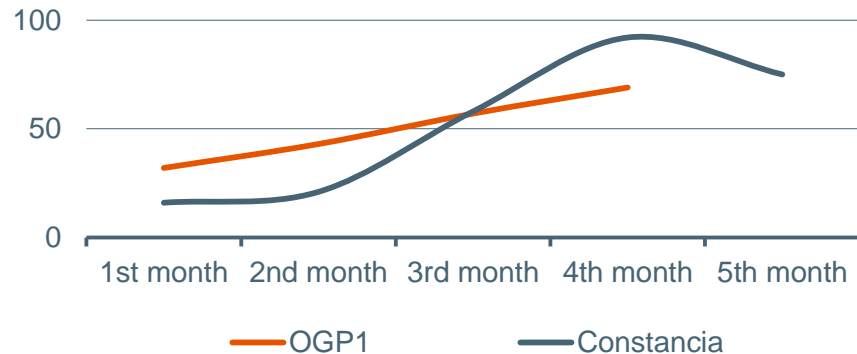




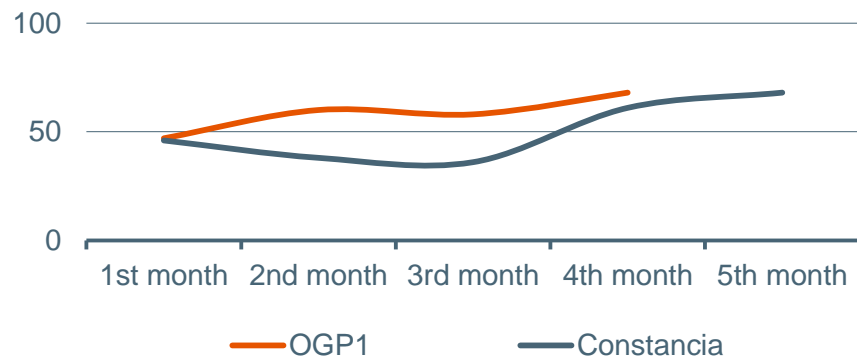
# Maximising the value of our resources

- OGP1 concentrator achieved mechanical completion in May 2015
  - ramp up is ahead of schedule with full capacity expected by June 2016
- We now have the largest effective concentrator capacity in the world at 375 ktpd
  - 100 ktpd at Los Colorados
  - 130 ktpd at Laguna Seca
  - 145 ktpd at OGP1
- Our water and power solutions will enable increased throughput albeit at higher cost
  - enables full utilisation of three concentrators
  - increased throughput and further productivity gains expected to offset higher water and power costs

**OGP1 ramp up is proceeding to plan...**  
Throughput, % of capacity



**...including recovery performance**  
Recovery, %

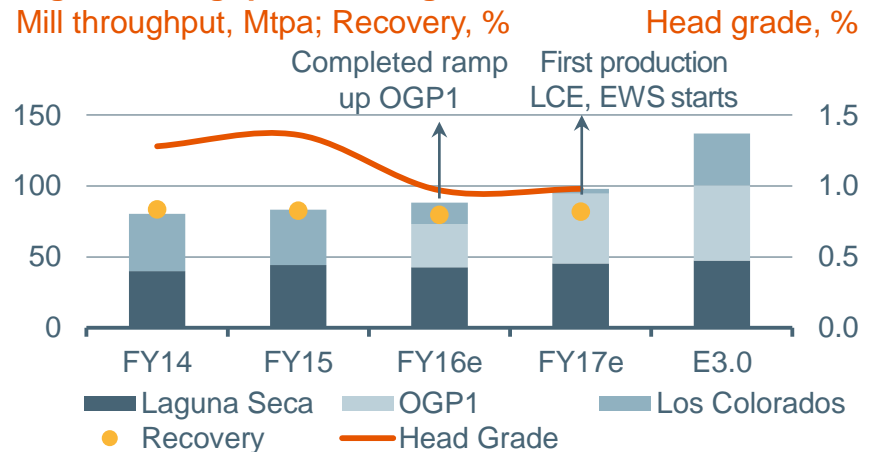


Source: Constancia Mine Site Visit, September 2015.

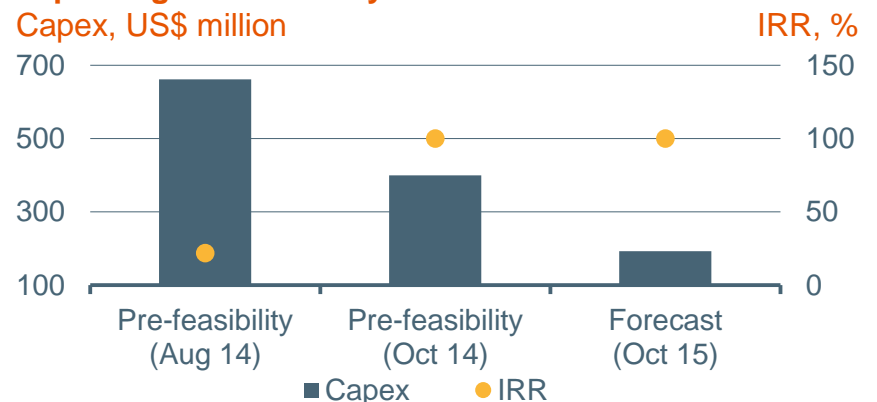
# Three concentrators will offset grade decline

- Our optimised mine plan has enabled the extension of Los Colorados until at least FY30<sup>1</sup>
- Completion of the low-cost LCE project will support a >70% increase in concentrator throughput by the end of FY17<sup>2</sup>
  - concentrator overhaul
  - optimisation of existing conveyor capacity
  - upgrade of water tanks and tailings dam reticulation
  - investment of ~US\$200 million, IRR ~100%
- LCE is currently in feasibility phase with approval to execution expected in H2 FY16<sup>3</sup>
  - first production expected in H2 FY17
  - access to three concentrators expected to achieve ~375 ktpd (~137 Mtpa) in ore throughput
  - expected incremental copper production of ~150 ktpa

## Higher throughput offsets grade decline



## Improving the efficiency of our LCE investment



1. Subject to long-term water availability.

2. Three concentrators with potential to increase throughput capacity to ~375 ktpd relative to the 220 ktpd average achieved in FY14.

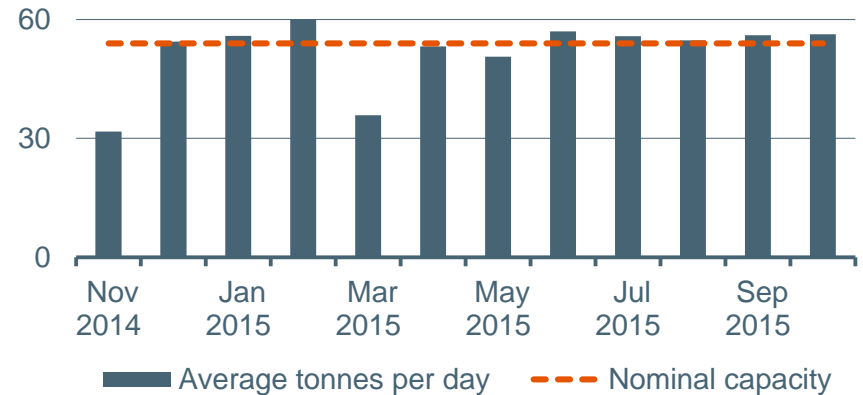
3. Subject to Escondida Owners Council approval.

# Maintaining cathode volumes through productivity and technology

- We can sustain average cathode production of ~310 ktpa through FY17 despite grade decline
  - stacking 90 ktpd of additional material
  - improving pad thermodynamics
- We have a robust long-term oxide leach strategy
  - OLAP ore stacking at design capacity
  - life of oxide leach extended through FY33 with the ability to process mixed ores
  - potential to improve recovery, kinetics and life through chloride enhanced leaching technology
- Our long-term sulphide leach strategy is under review
  - decision to divert sulphide ore feed to the higher value concentrator stream
  - changing sulphide ore mineralogy

## Oxide leach throughput

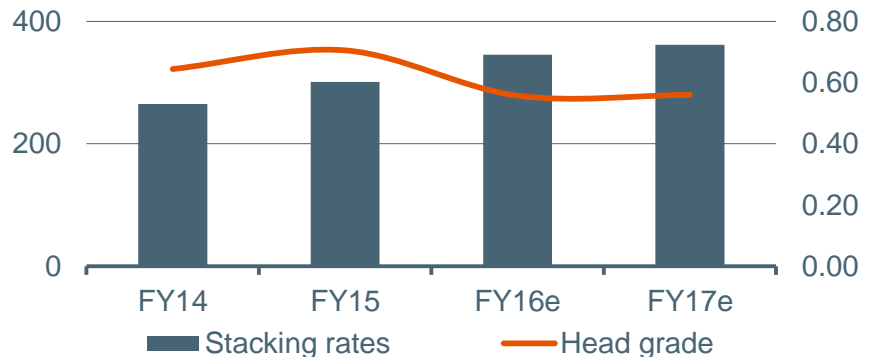
Ore stacked, ktpd



## Continue to improve total leaching stacking rates

Stacking rates, ktpd

Head grade, %

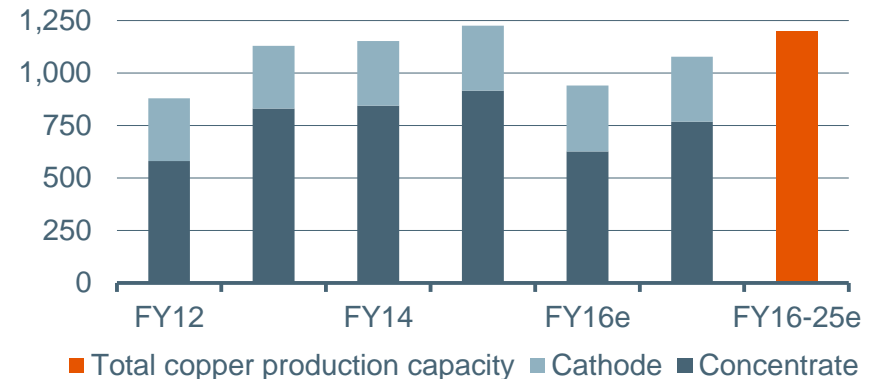


# ~1.2 Mtpa average production capacity for a decade

- We are optimising the mine plan to reduce variability in grade and recoveries
  - split shell on pit expansions
  - ore value ranking to optimise material to concentrator and cathode feed
- EWS is expected to resolve the water availability bottleneck in H2 FY17
- Copper production capacity expected to average ~1.2 Mtpa for a decade from FY16
  - ~0.94 Mt production expected in FY16
  - ~1.08 Mt production expected in FY17
- Average annual concentrator head grade of ~0.9% expected for the decade from FY16
  - ~0.8% for several years from FY18
  - increase to ~1.0% expected in the early 2020s
- No new major capital required for the decade post FY17, supporting strong free cash flow generation

## Achieving stability in our production processes

Payable copper production, kt

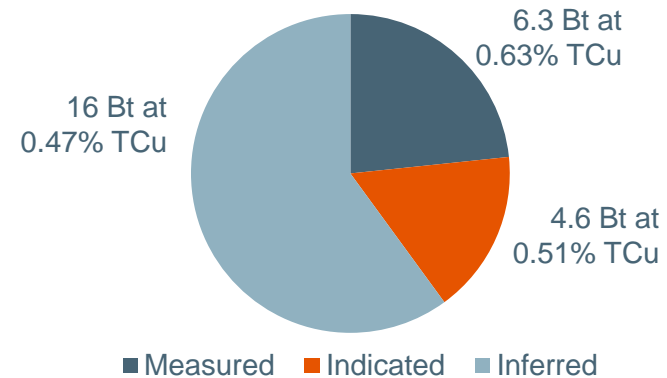


OLAP bucket wheel reclaimer

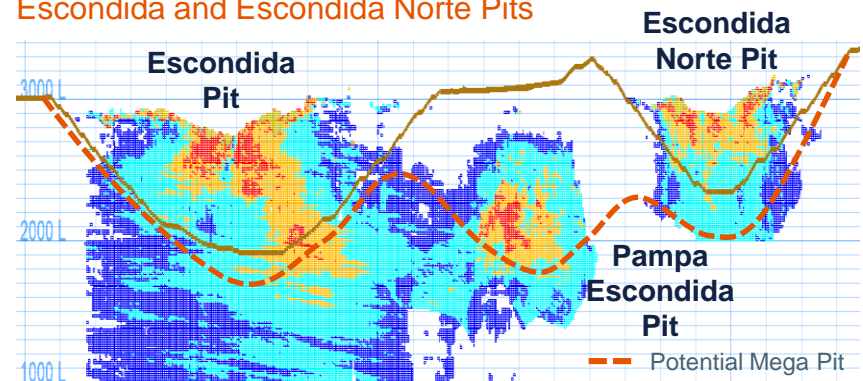
# Unlocking our full potential

- Mineral resource base of ~27 Bt at 0.52% TCu<sup>1</sup> could extend our operation to >100 years
- Strategic resource availability (water, power, capital, logistics, labour) and intensity of use
- Technology is the key to our mining strategy
  - massive mining methods
  - equipment evolution (autonomy, scale)
- Improving concentrator and cathode recovery through operating excellence and technology
  - grind size optimisation
  - flotation optimisation
  - leaching optimisation (salt enhanced leaching)

## Resource enables future growth<sup>1,2</sup> Bt



## Potential future pit development Escondida and Escondida Norte Pits



1. Total copper (TCu) includes oxide, mixed and sulphide.  
 2. Total classified mineral Resources on a 100% basis as presented in slide 3.



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