

# Minera Escondida Ltd



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#### **Non-GAAP Financial Information**

BHP Billiton results are reported under International Financial Reporting Standards (IFRS). References to Underlying EBIT and EBITDA exclude any exceptional items. A reconciliation to statutory EBIT is contained within the profit announcement, available at our website www.bhpbilliton.com.

#### **Important Notices**



#### **Competent Persons**

This document includes information on Mineral Resources and/or Ore Reserves reported at various times between 1994 and 2010, as indicated for the individual citations. Competent Persons for Mineral Resources and Ore Reserves are named in the BHP Billiton Annual Report of the cited year, which can be viewed at <a href="www.bhpbilliton.com">www.bhpbilliton.com</a>. The Mineral Resource and Ore Reserve information referenced in this document was sourced from and should be read together with and subject to the notes set out in the appropriate BHP Billiton Annual Report.

The Mineral Resource and Ore Reserve information pertaining to BHP Billiton Base Metals deposits referenced in this document is based on information compiled from Annual Report information by Richard Preece who is a Fellow of the AusIMM and a full-time employee of BHP Billiton. Mr Preece has sufficient experience which is relevant to the styles of mineralisation and types of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (The JORC Code). Mr Preece consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

### **Escondida visit**



Time	What
07:25	Arrive at Antofagasta Airport
08:00 - 11:00	Transport by bus to Escondida (3 hours)
11:00 - 11:40	Arrive at Villa San Lorenzo – Safety Video and PPE
11:40 - 13:30	Escondida Management Presentations (working lunch included)
13:30 - 14:00	Prepare for site visit – Safety induction
14:00 - 17:00	Escondida site tour:  Laguna Seca Concentrator Plant Escondida Main Pit Electrowinning Plant
17:00 - 17:30	Return to VSL to freshen up and leave PPE
17:30 - 19:30	Return to Antofagasta, directly to Hotel Terrado
20:15	Rendezvous at hotel lobby for transfer to dinner venue
20:30	Dinner, bus at restaurant for return at 22:00

## Agenda



- Safety induction
- Key messages
- Overview
- HSEC
- Operations description & performance
- Financial performance
- Growth
- Exploration
- Summary

### Visitor safety induction – on site



- Stay with your escort at all times especially if an emergency occurs
- You will be advised when to wear:
  - Reflective vest and safety helmets
  - Safety glasses (fit over prescription glasses)
  - Face mask
- Use handrails when on stairs
- Keep clear of all machinery
- We have a no smoking policy inside buildings and vehicles
- Cameras can be used outside buildings

#### Escondida – key messages



- Simple and effective organisation led by an experienced team
- Zero Harm is non-negotiable
- The operation is performing strongly following the successful SAG mill repair
- FY2011 FY2012 is the turning point in the production cycle
- Numerous options for growth
- Significant exploration upside within this tier one basin

## Diverse and experienced leadership team





Alfredo Atucha **VP** Finance



Patricio Enei Manager Corporate Affairs



**Edgar Basto** President



**Patricio Barros VP** Explorations



Carlos Avila **VP Planning** 



**Jorge Lopez VP Human Resources** 







Julio Aranis **VP Mining** 



Jorge Muñoz **VP HSE** 



**Andres Hevia VP Development & Projects** 



Claudio Monken VP Ops. Services



**Pedro Damjanic VP Processing** 

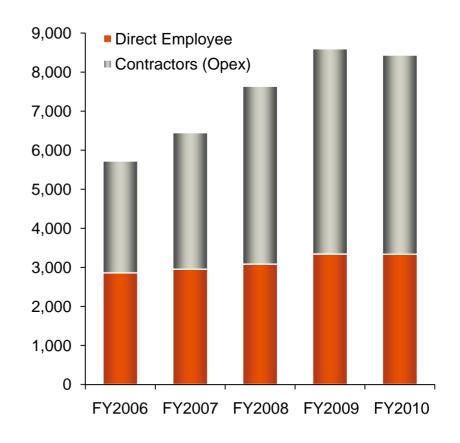
#### Our people



#### **Highlights**

- Talent management plays a key role in Escondida's performance
- Strong programs in place to build people capacity:
  - Graduate program
  - Operators/Maintainers training and development program
- Stable labour climate
- Collective agreement signed last year
   next bargaining process July 2013

#### Headcount





# Zero Harm is non-negotiable



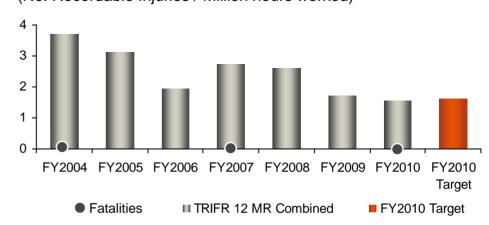
#### **HSEC – Safety performance**



- Recordable Injury Frequency Rate reduced by 8.2% and Classified Injury Frequency Rate reduced by 34%
- Improvement in Fatal Risk Control implementation and in Job Safety Observation reporting (22,765 JSO per month)

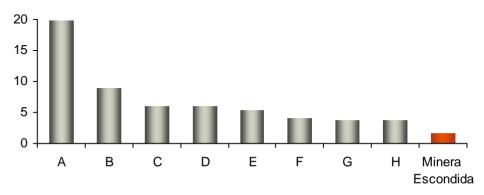
- Safety award granted by National Safety Council based on CY2009 safety performance
- Progressive implementation of the plan to minimise exposure to silica, noise and acid mist
- 100% of workforce included in alcohol and drugs testing program

## Total Recordable Injury Frequency Rate (TRIFR) (No. Recordable Injuries / Million hours worked)



#### Mining Industry TRIFR Benchmarks(a)

(No. Recordable Injuries / Million hours worked)



(a) Source: BHP Billiton benchmark information consists of the following companies TRIFR for CY2009 (in no particular order): Rio Tinto, Newmont, Freeport, Vale, Barrick, Xstrata, AG Ashanti, BHP Billiton.

#### **HSEC – Communities**



#### Community

- Minera Escondida has established two foundations: "Fundación Minera Escondida" (FME) and "Fundación Educacional Escondida" (FEE) – "Centro Entrenamiento Industrial Minero" (CEIM)
- Relationship with our closest neighbor: Coloso fishermen community
- Atacamanian community work and development of inclusive business through Escondida Foundation
- Development of a Community Plan for sustaining the growth of Escondida
- National level initiatives: Santiago a Mil, Santiago in 100 Words and Professionals for a Global Chile Scholarship program

#### **Bicentennial projects**

- Bicentennial Award presented by former President Bachelet
- Alliances with relevant stakeholders allow project sustainability and positive networking
- Strengthening of Escondida's reputation
- Project expenditure of US\$43 million in Antofagasta (US\$82 million total with third party contribution)























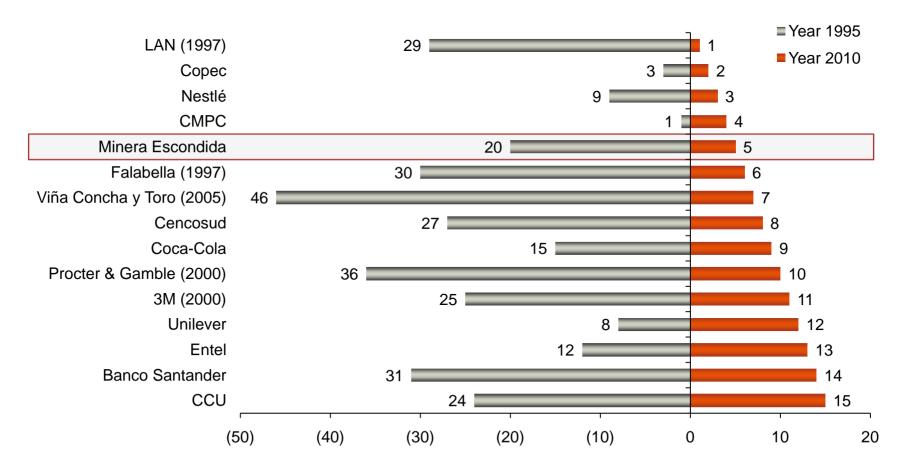
# Recognised as leading mining company in Chile



Adimark Gfk Ranking – La Segunda Newspaper July 2010

#### 2010 most respected companies

Where they were 15 years ago?





# **Operations**

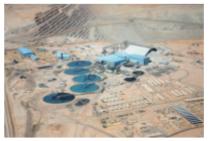


#### **Operations overview**





**Laguna Seca Concentrator** 



**Electrowinning Plants** 



Los Colorados Concentrator



Coloso Port - Facilities



**Escondida Pit** 

■ Depth: 620 m

■ Dimensions: 3800 m x 2700 m

#### **Escondida Norte Pit**

■ Depth: 500 m

■ Dimensions: 1600 m x 1400 m

#### **Plants: Sulphide**

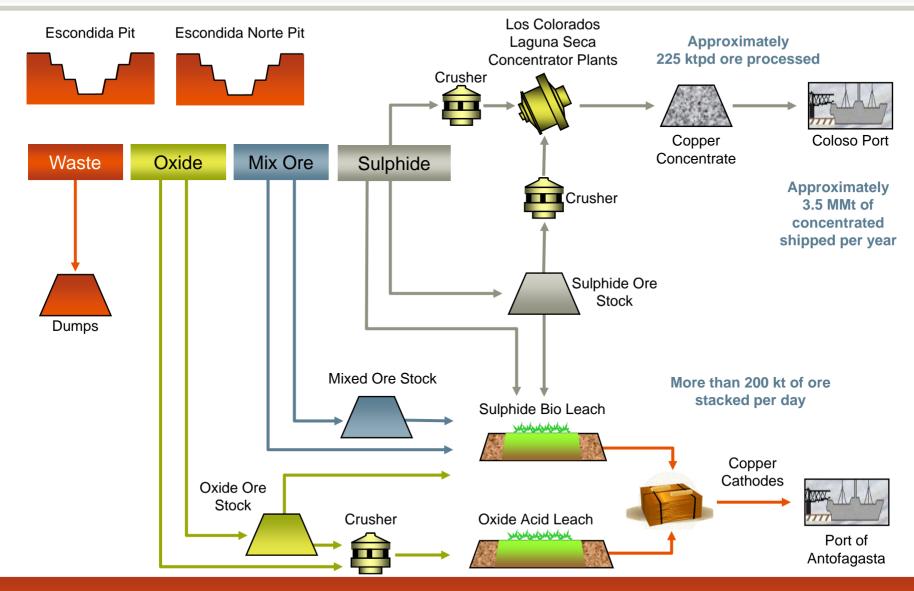
- Los Colorados Concentrator
- Laguna Seca Concentrator
- Coloso Facilities (filter and port)

#### **Leaching and Bio Leaching**

- Oxide Leach Pad
- Sulphide Leach Pad
- SX EW facilities

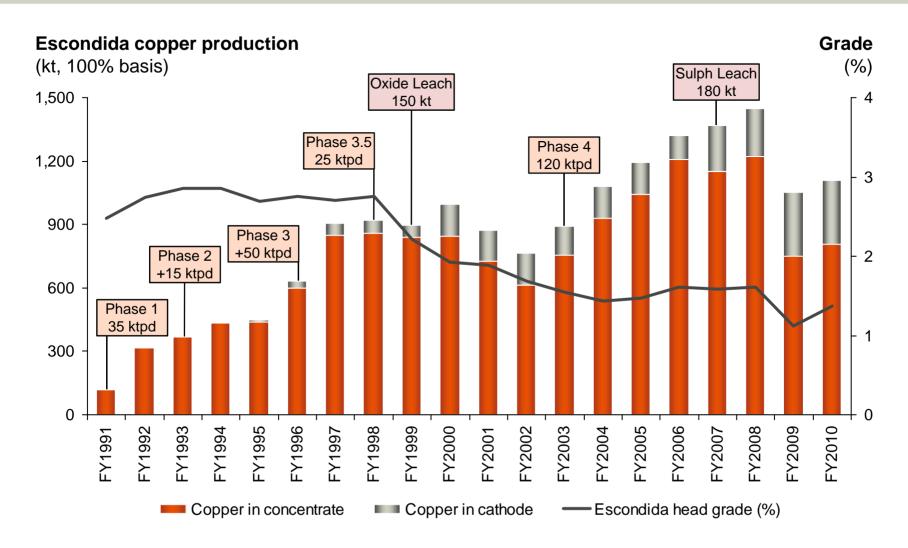
### **Operations overview**





## **Operations – production history**





Note: Copper in concentrate is kt Cu contained, Copper in cathodes is kt payable metal



# Mine operations



## Mining equipment & statistics



#### Mine mobile equipment

- 17 Shovels
- 158 Trucks
- 5 Front end loaders
- 19 Drills
- 22 Bulldozers
- 18 Wheel tyre dozer
- 9 Graders
- 8 Water trucks

#### Mine fixed equipment

- 5 Primary crushers
- 30 km Conveyor belts

#### Truck fleet daily average distance

■ 36 km

#### Daily average distance driven by field supervisor

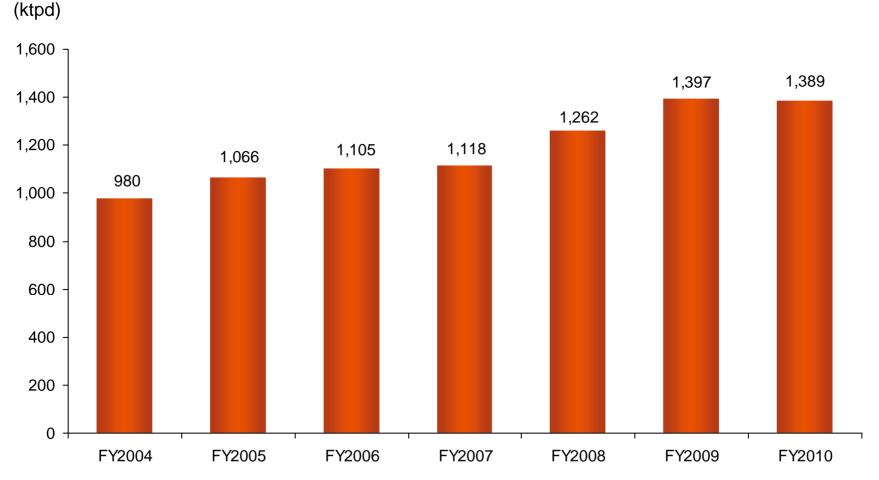
■ 150 km



## Mine operation summary



## Total material moved per day



## Mine safety improvement initiatives



#### **Completed:**

- Central berms
- Mine traffic and signage
- Safety video (care of hands, use of binnacle)
- Numeration and reflective tapes for mine equipment
- Collision Detection System Shovel & Tyre dozer

#### Implementation:

- Collision Detection System Trucks & Light Vehicle
- Fatigue & drowsiness control (OPTALERT)
- Dust control and mine road stabilisation



















# Operations – Concentrator plants



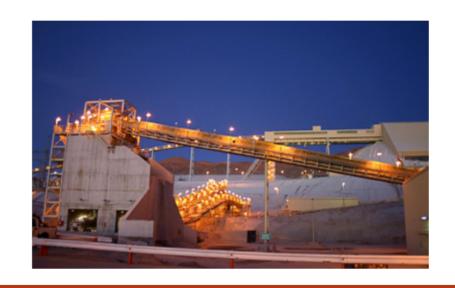
#### **Concentrator plants – overview**



- Los Colorados started operations in 1990
- 115 ktpd design capacity
- Average monthly energy consumption of 62,000 MWh



- Laguna Seca started operations in 2002
- 110 ktpd design capacity
- Average monthly energy consumption of 62,000 MWh

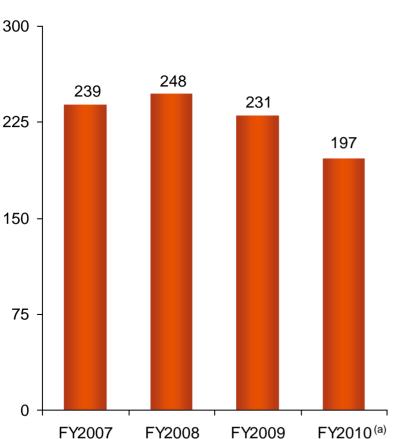


## **Operations – Concentrators production**

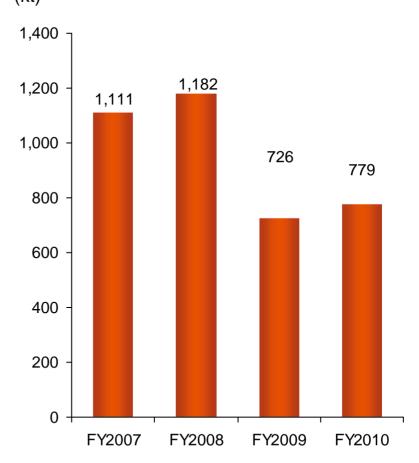




(tonnes milled, ktpd)



# Total payable metal in concentrate (kt)



(a) 2010 impacted by SAG mill stator repair.



# Operations – Hydrometallurgy



## **Operations – Hydrometallurgy processes**



- Two solvent extraction plants (Oxides and Sulphides)
- Sulphide and oxide ore leached in separate pads
- Electrowinning with a nominal capacity of 330 ktpa
- The cathodes produced are transported to Antofagasta port for shipping



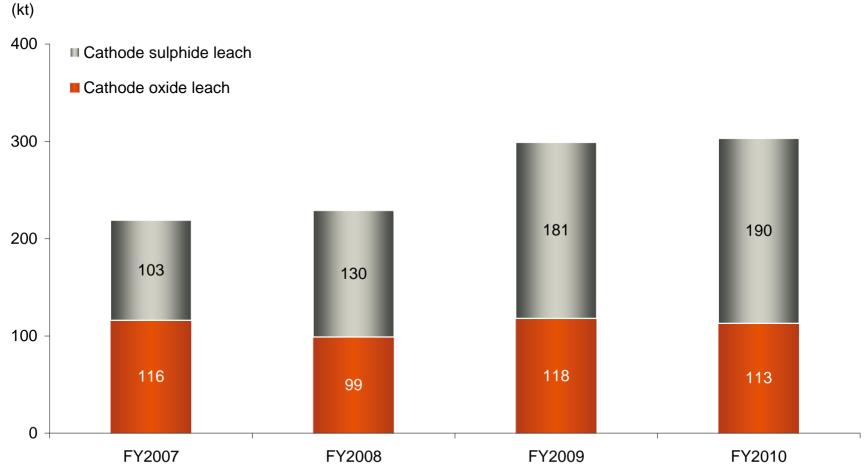




## **Operations – Hydrometallurgy production**



#### **Cathode production**



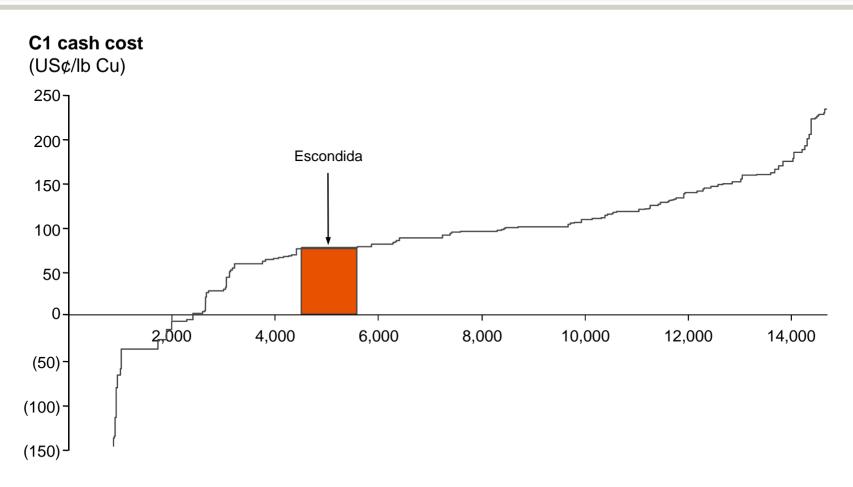


# **Operational performance**



## **Current cash cost relative position**



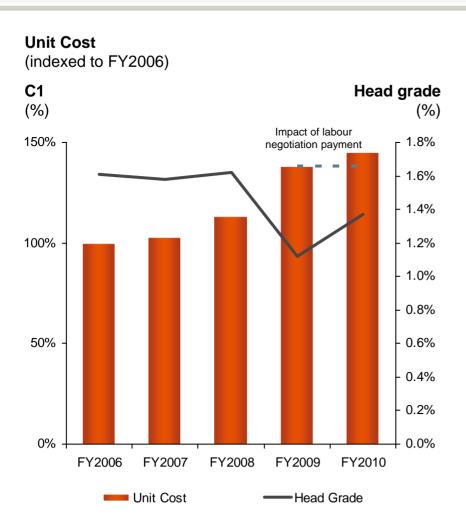


# Cumulative production (kt)

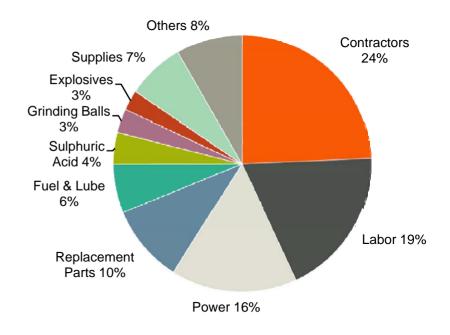
Source: Brook Hunt Q2 2010, 2010 C1 cash cost (normal costing). Adjusted for Pampa Norte.

### Unit cost change and cost breakdown





# Cost breakdown (FY2010)

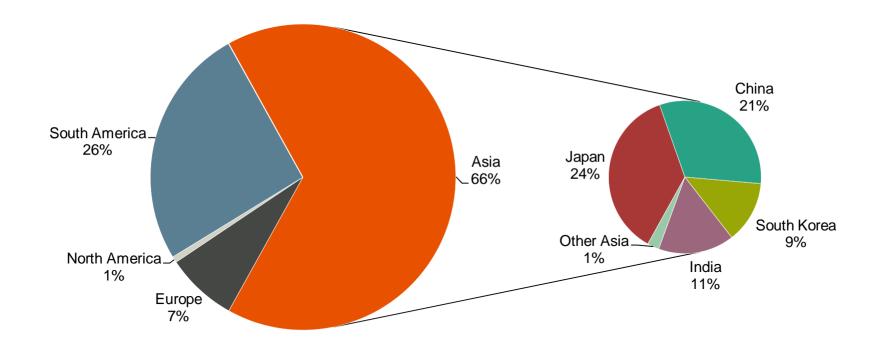


# Marketing Combined Escondida cathodes & concentrates



#### **Base Metals Escondida volume by region FY2010**

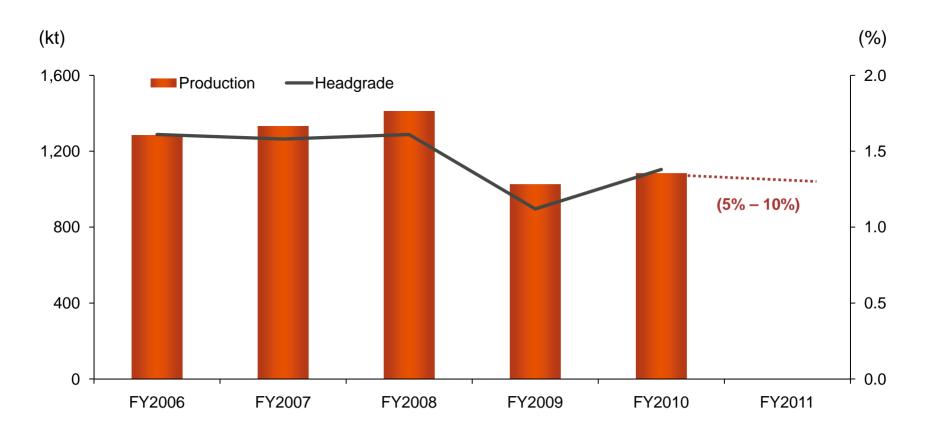
(Total Volume: 2.8 Mt)



Note: Volumes includes concentrates & cathodes, source BHP Billiton Marketing. Analysis is in accordance with marketing rights and includes 100% Escondida volumes.

### FY2011 guidance





 Lower head grade in the FY2011 period expected as part of the long term mine plan



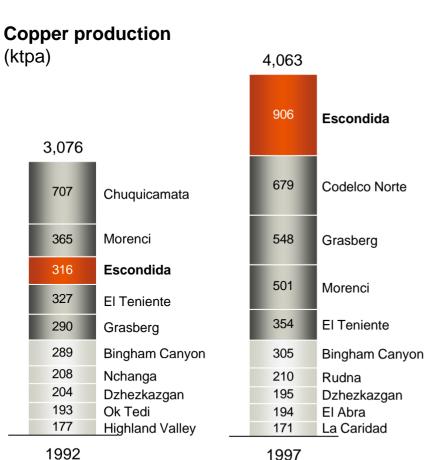
# Numerous options for growth

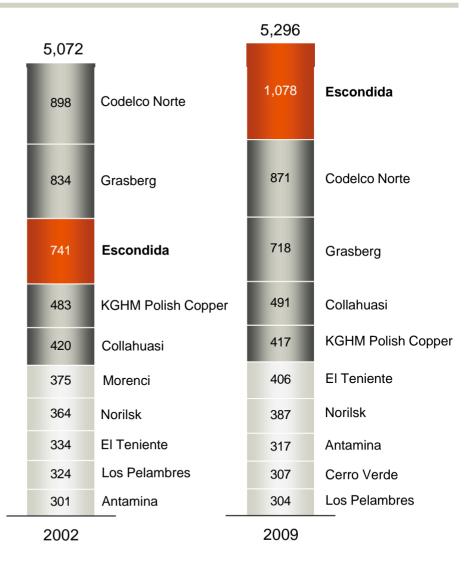


## Escondida - the global leader



# Escondida has been among the world's top producers for two decades

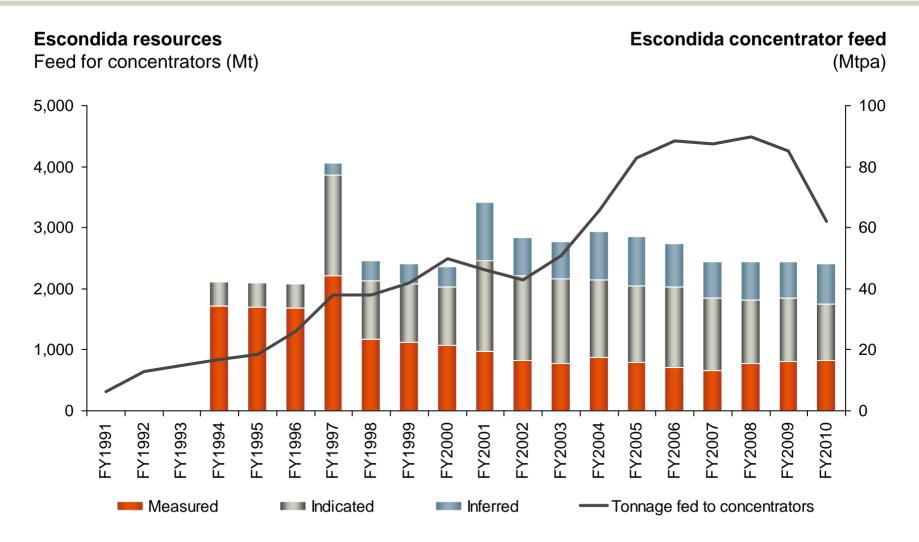




Source: Brook Hunt Q2 2010.

# Sustaining resource level Despite increases in plant throughput





The Mineral Resource information, compiled from Annual Report information by Richard Preece, was sourced from and should be read together with and subject to the notes set out in the BHP Billiton Annual Reports between 1994 and 2010.

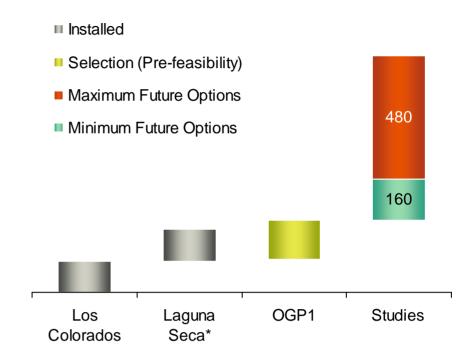
# The conveyor belt of projects Escondida – future expansion options



# Benefiting from the extensive resource base at Escondida

- Extensive exploration program in place
- Successive processing capacity expansion options following Organic Growth Project 1
- Implementation driven by standard design
- Installed SX-EW capacity allows extra flexibility to treat lower grade ore

# Conveyor belt of Escondida concentrator capacity expansion projects (ktpd nameplate)

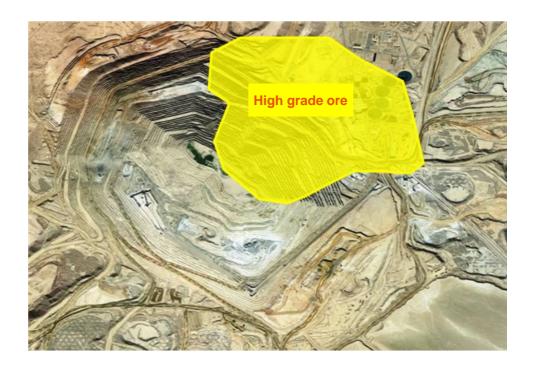


<sup>\*</sup>Note: Laguna Seca includes Laguna Seca debottlenecking project, in Definition (Feasibility)

#### **OGP1 – Organic Growth Project 1**



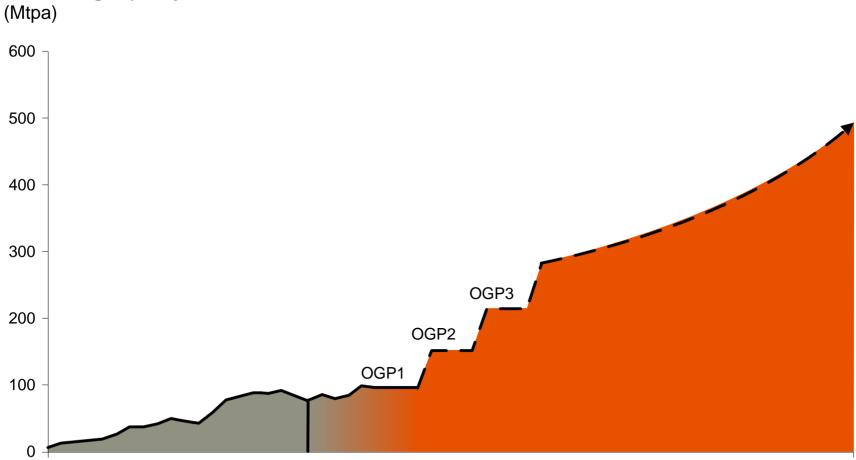
- The project will bring forward access to high grade ore
- New concentrator plant and demolition of Los Colorados
- Proven technology and standard design with large SAG mill



# **Escondida growth**







Note: Conceptual representation of our conveyor belt of growth options.



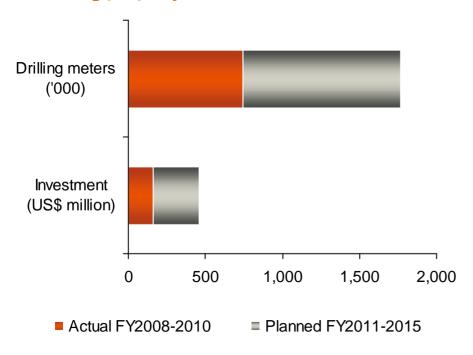
# **Escondida exploration strategy**

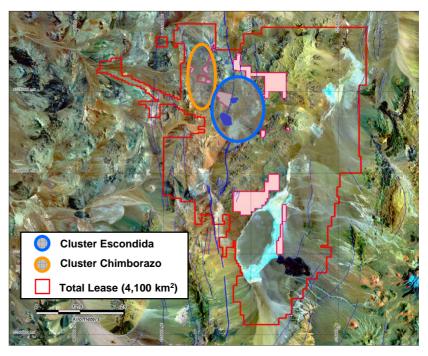


# Extensive brownfield exploration program Escondida



# Extensive exploration program within the mining property<sup>(a)</sup>



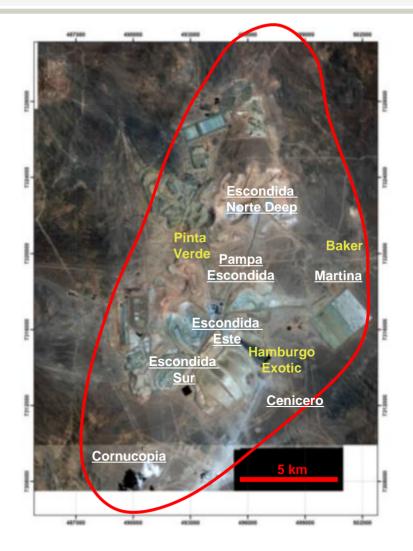


<sup>(</sup>a) Exclusive of production (in-fill) and project development drilling.

## **Cluster Escondida exploration targets**



- Numerous early stage drilling targets
- Escondida Norte deep project
- Continuation of Escondida Este and South Exploration
- In addition, Pampa Escondida in advanced stage of evaluation



## Escondida – key messages



- Simple and effective organisation led by an experienced team
- Zero Harm is non-negotiable
- The operation is performing strongly following the successful SAG mill repair
- FY2011 FY2012 is the turning point in the production cycle
- Numerous options for growth
- Significant exploration upside within this tier one basin

