# Australian Site Tour
# Olympic Dam

31 October 2008

bhpbilliton
resourcing the future

# Disclaimer

**Reliance on third party information** The views expressed here contain information that have been derived from publicly available sources that have not been independently verified. No representation or warranty is made as to the accuracy, completeness or reliability of the information. This presentation should not be relied upon as a recommendation or forecast by BHP Billiton.

## Forward looking statements

This presentation includes forward-looking statements within the meaning of the U.S. Securities Litigation Reform Act of 1995 regarding future events and the future financial performance of BHP Billiton. These forward-looking statements are not guarantees or predictions of future performance, and involve known and unknown risks, uncertainties and other factors, many of which are beyond our control, and which may cause actual results to differ materially from those expressed in the statements contained in this presentation. For more detail on those risks, you should refer to the sections of our annual report on Form 20-F for the year ended 30 June 2008 entitled "Risk factors" , "Forward looking statements" and "Operating and financial review and prospects" filed with the U.S. Securities and Exchange Commission.

## No offer of securities

Nothing in this release should be construed as either an offer to sell or a solicitation of an offer to buy or sell BHP Billiton securities in any jurisdiction.

## Resources and reserves

Cautionary Note to US Investors – The SEC generally permits mining companies in their filings with the SEC to disclose only those mineral deposits that the company can economically and legally extract. Certain terms in this presentation, including "resource", "inferred resource", "indicated resource" and "measured resource", would not generally be permitted in an SEC filing. The material denoted by such terms is not proven or probable Reserves as such terms are used in the SEC's Industry Guide 7, and there can be no assurance that BHP Billiton will be able to convert such material to proven or probable Reserves or extract such material economically. BHP Billiton urges investors to refer to its Annual Report on Form 20-F for the fiscal year ended June 30, 2008 for its most recent statement of mineral Reserves calculated in accordance with Industry Guide 7.

Competent Persons for Mineral Resources and Ore Reserves are named in the BHP Billiton Annual Report 2008, which can be viewed at www.bhpbilliton.com. Shane O'Connell, who is a member of the AusIMM and a full time employee of BHP Billiton, has the required qualifications and experience and is the Competent Person for the assessment of Mineral Resources at Olympic Dam, which has been reported in accordance with the Australasian Code for Reporting of Mineral Resources and Ore Reserves, December 2004 (the JORC Code).

Shane O'Connell verifies that the 2008 Mineral Resource data included in this document is based on and fairly reflects the information in the supporting documentation relating to Olympic Dam Mineral Resource. The Mineral Resource numbers prior to 2008 have been sourced from the publicly available Annual Reports for WMC and BHPBilliton.

# Agenda

- Introduction & Olympic Dam Resource
- Market
- Current Business Performance
- Olympic Dam Expansion
- Strong Future for the Uranium Business

# Introduction & Olympic Dam Resource

Graeme Hunt
President Uranium and Olympic Dam Development

bhpbilliton
resourcing the future

# Introduction and Resource

## Key Points

- Safety is our Key Priority
- The current business is performing strongly
- Work is progressing on the Olympic Dam Expansion Study

# One co-ordinated Uranium business unit

**Marius Kloppers**
Chief Executive Officer

**Graeme Hunt**
President Uranium and Olympic Dam Development
- 33 years with BHP Billiton
- Previously
  - President Aluminium
  - President Iron Ore

## Olympic Dam

**Dean Dalla Valle**
*President & Chief Operating Officer*

- 31 years with BHP Billiton
- Previously
  - Asset Leader Olympic Dam
  - Asset Leader Cannington

## Olympic Dam Expansion

**Ted Bassett**
*Project Director*

- 2 years with BHP Billiton
- 38 years mine project development experience, Previously
  - VP Capital Projects (Inco Ltd)
  - Project Director Goro Nickel Project

## Corporate Affairs

**Richard Yeeles**
*Manager Corporate Affairs*

- 12 years with BHP Billiton
- 25 years experience with government, public relations and journalism, Previously
  - Manager Government and Community Relations
  - Chief of Staff to South Australian Premier

## Technology

**Andrew Shook**
*Chief Technology & Information Management Officer*

- 16 years with BHP Billiton
- Previously
  - Global Technology Manager Process Engineering
  - Team Leader Pyrometallurgy

## Marketing & Development

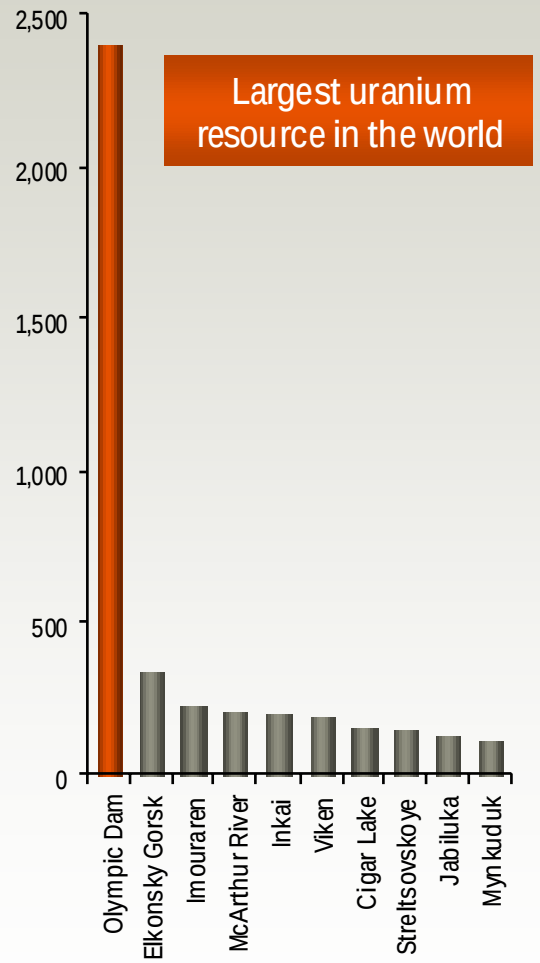
**John Crofts**[1]
*Chief Commercial Officer*

- 23 years with BHP Billiton
- Director, London Metal Exchange
- Previously
  - Marketing Director, Base Metals

Note: 1 – J Crofts reports jointly to Graeme Hunt, President Uranium and Olympic Dam Development and Tommy Schutte, President Marketing.

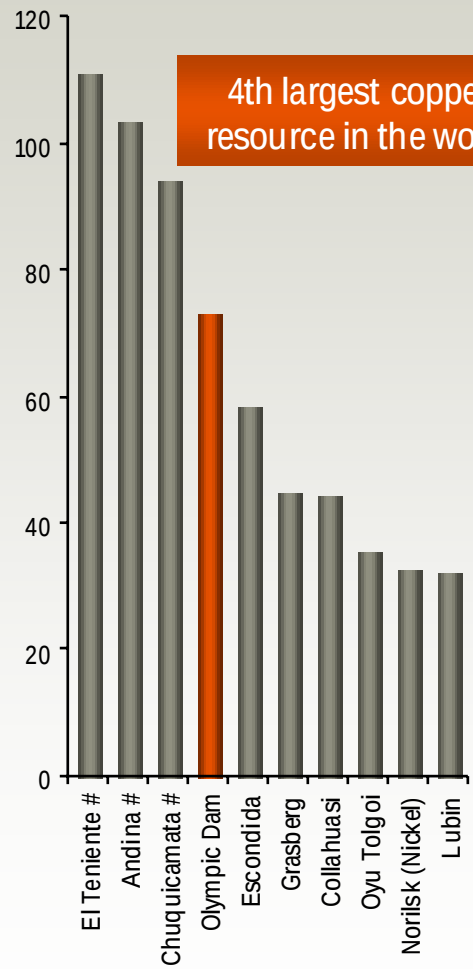
# Olympic Dam: A world class resource

Thousand tonnes $U_3O_8$



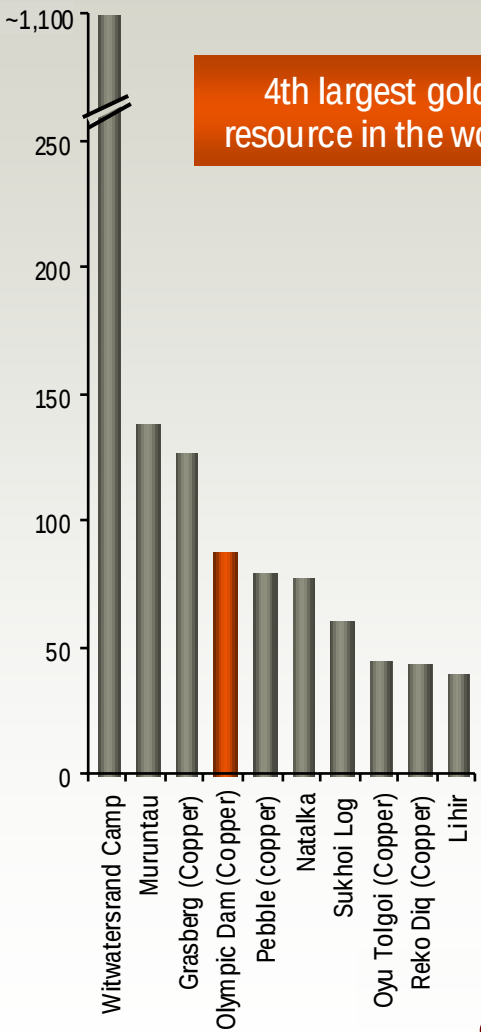

Largest uranium resource in the world

Million tonnes Copper




4th largest copper resource in the world

Million oz Gold




4th largest gold resource in the world

Sources: Company Annual Reports, press releases and International Atomic Energy Agency (as at September 2008).
Witwatersrand figure is BHP Billiton estimate and is approximate only.
Note: # Based on reported resource "inventory" at 0.2% Cu cut-off grade.



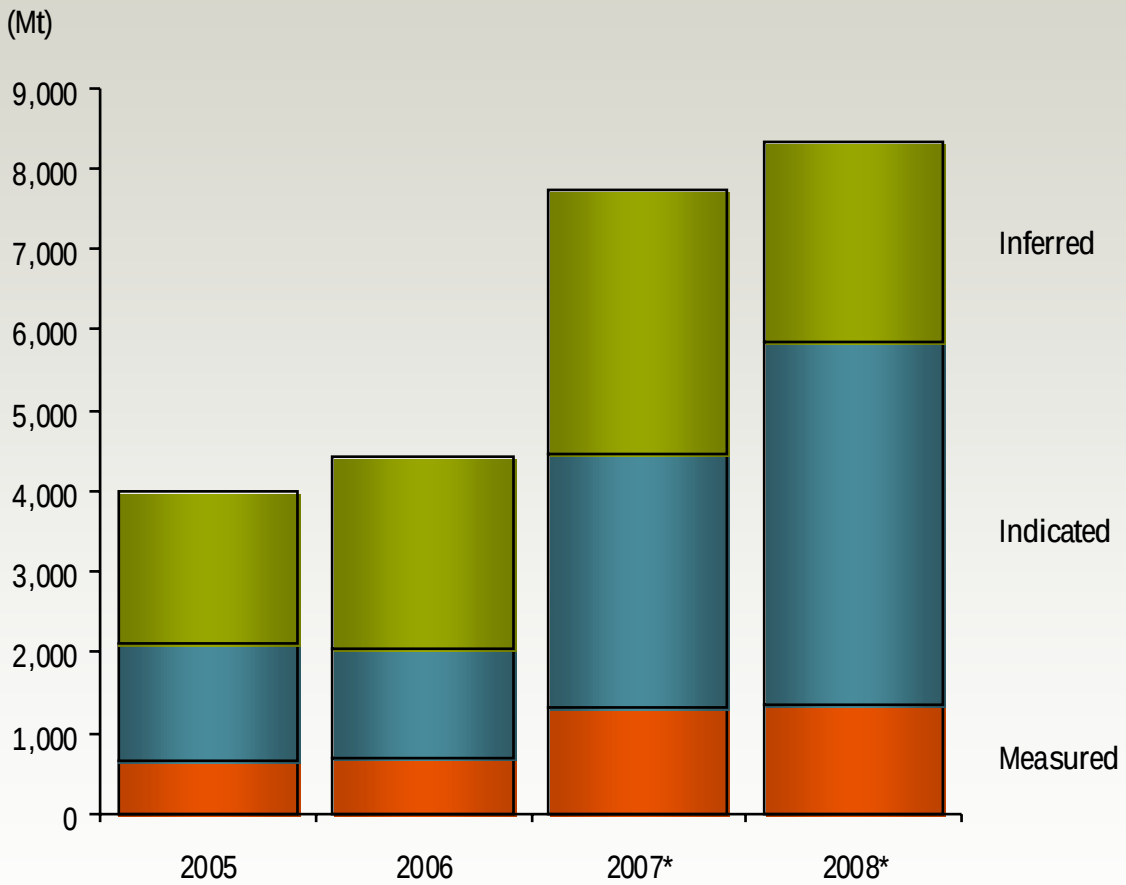
bhpbilliton
resourcing the future

# A multi-generational business

## Olympic Dam Resource

- 8,339 Mt Resource
- 2.33 Mt Contained U3O8
- Existing Operation in our backyard

## Mineral Resource




* Excludes Non Sulphide Au resource declared for the first time in 2007

Sources: BHP Billiton annual report, BHP Billiton estimates, Company Annual Reports, press releases and International Atomic Energy Agency (as at September 2008).



bhpbilliton
resourcing the future


# Copper Market

John Crofts
Chief Commercial Officer

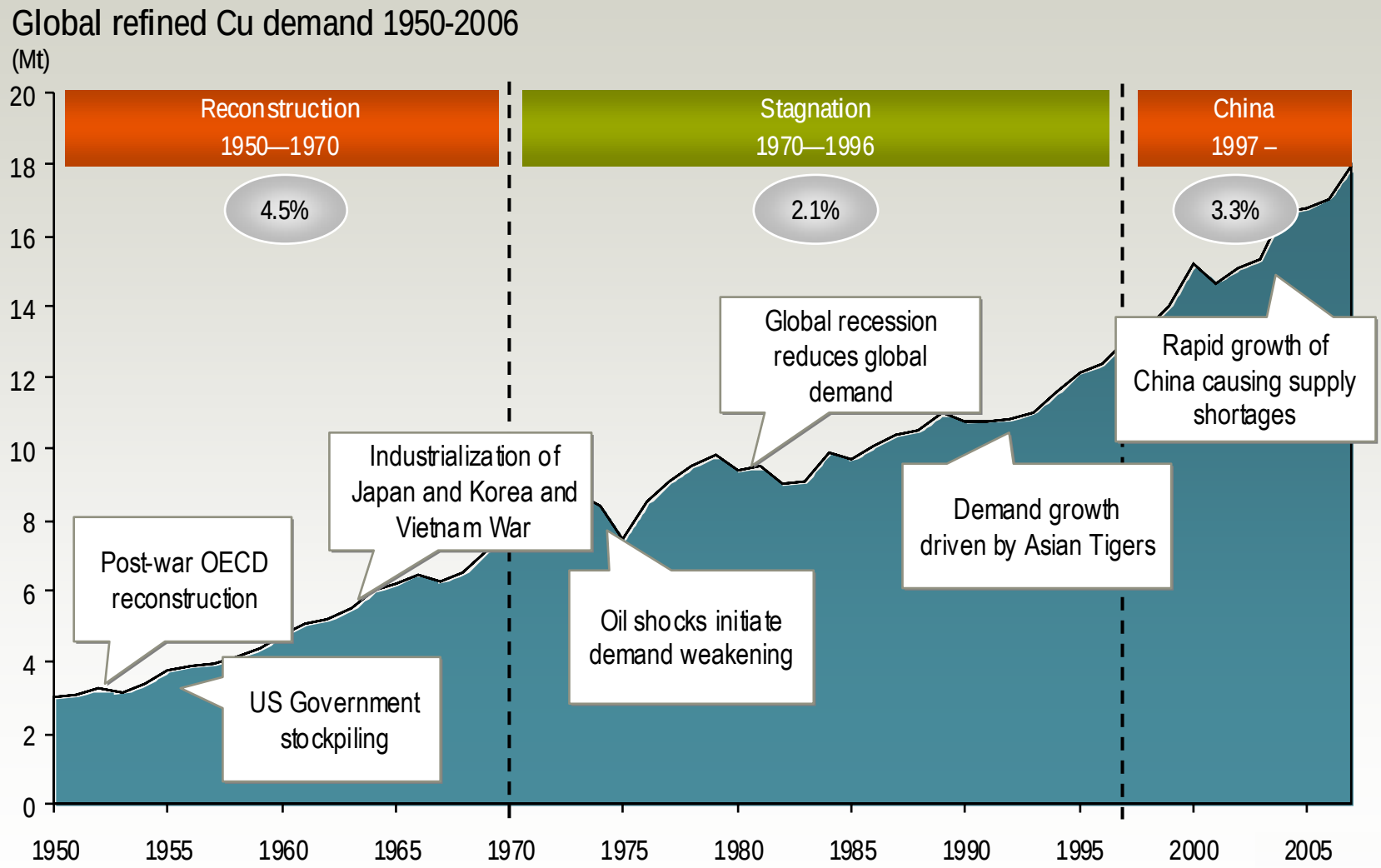
bhpbilliton
resourcing the future

# Copper Market

## Key Points

- BRICs development underpinned by energy & infrastructure build out associated with urbanisation
- Advantageous industry economics. Low price elasticity of demand in key electrical uses
- Supply interruptions (now) and constrained growth (future) a differentiator
- Low stocks and no significant rate of ingress thus far

# World copper demand: The paradigm shift

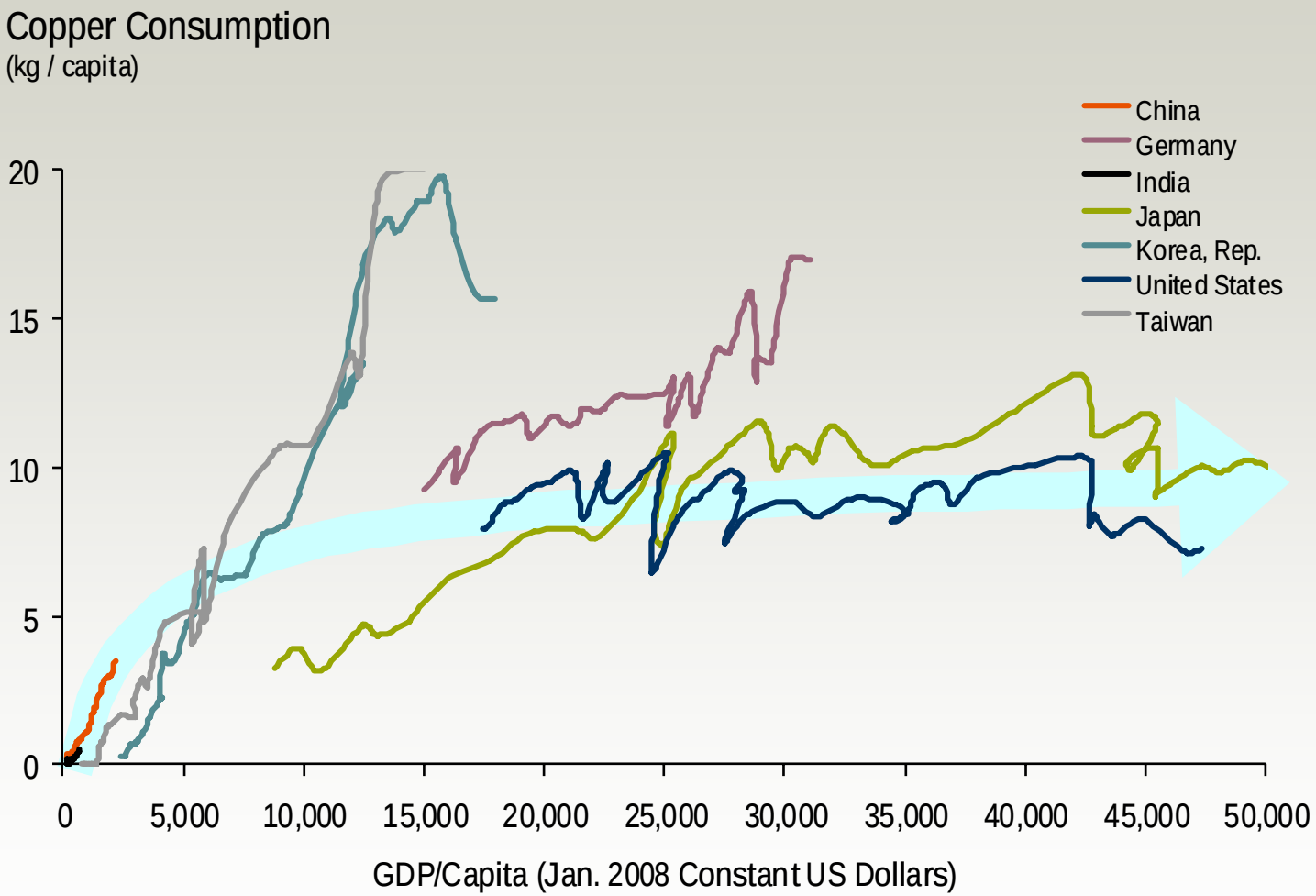



Source: World Bureau of Metal Statistics (WBMS)



bhpbilliton
resourcing the future

# Copper – GDP per capita vs consumption per capita




Source: World Bank, Government Statistics, CRU, Brook Hunt.

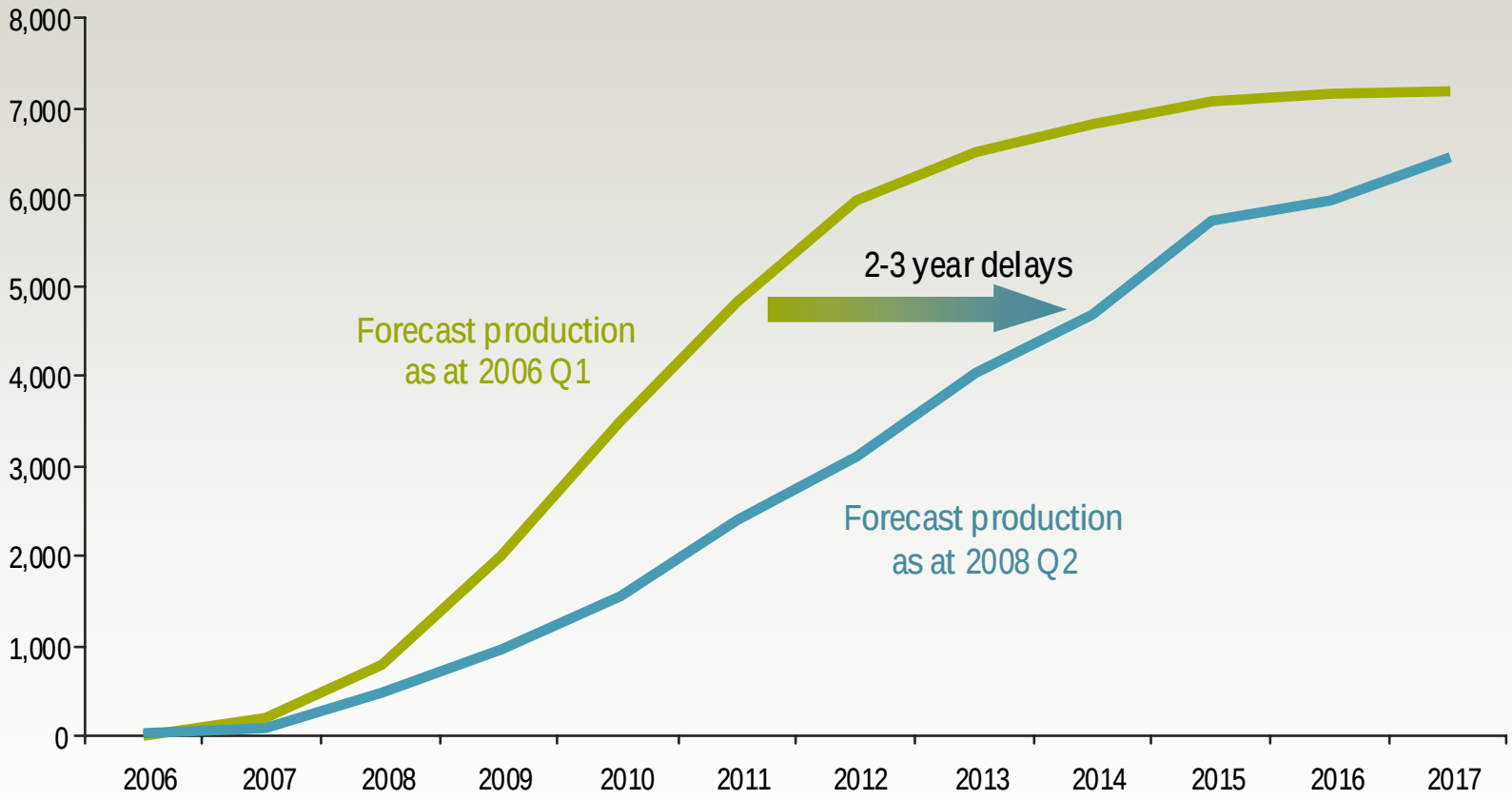
Note: The shape of the arrow shows the general trend among countries for copper consumption as GDP per capita increases and is not to scale



bhpbilliton
resourcing the future

# Future supply growth:
# Disruption a feature of new supply growth?

Expected future production from highly probable and probable copper developments as at 2006 Q1




Source: Brook Hunt.
Note: "Forecast production as at 2008 Q2" represents the expected future production as at 2008 Q2 from those copper developments classified as highly probable and probable as at 2006 Q1. It excludes new developments classified as highly probable or probable since 2006 Q1.



bhpbilliton
resourcing the future

# Supply side constraints are limiting the industry's response

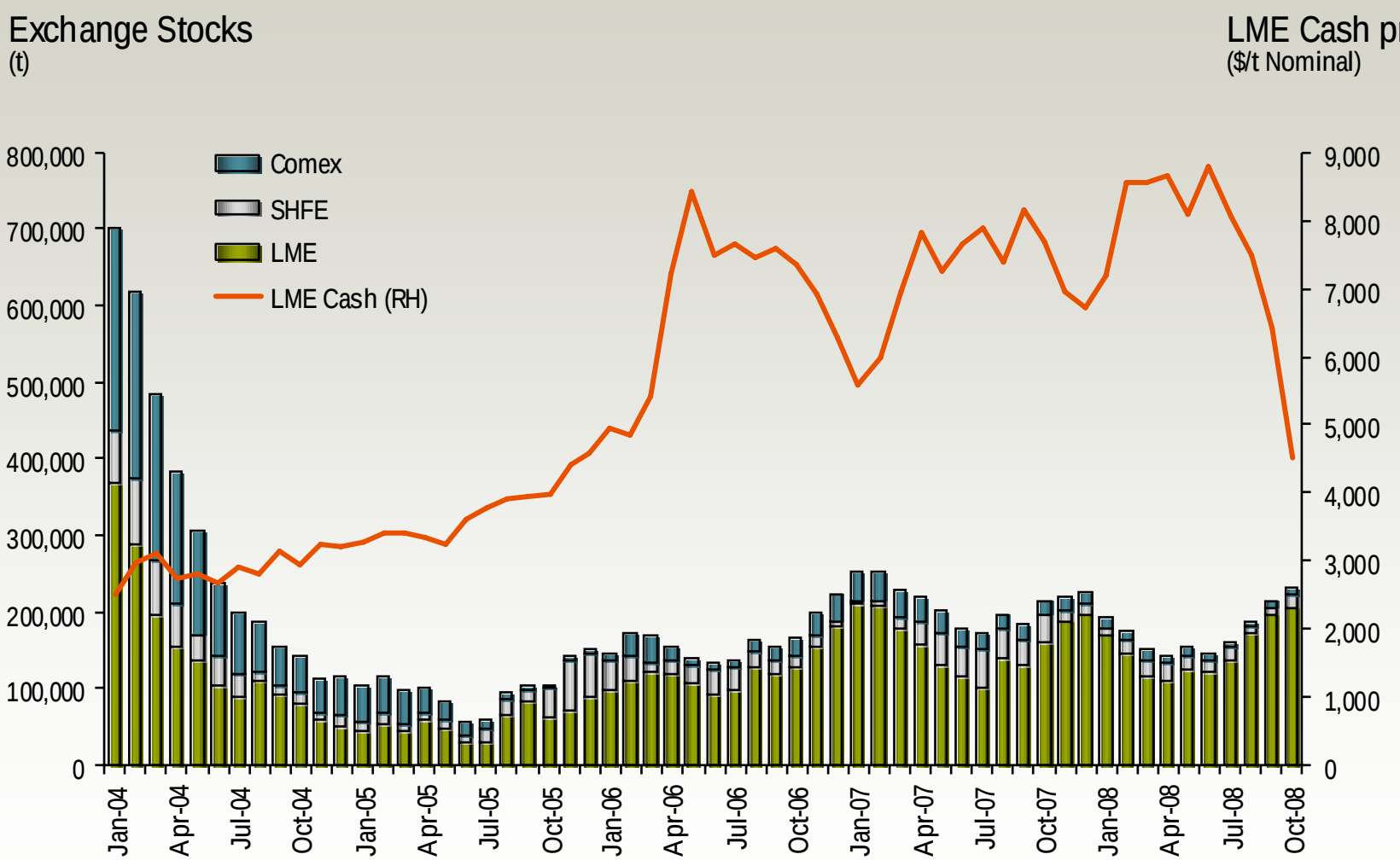
## Existing Supply

- Equipment stress
- Industrial action and wage disputes
- Labour shortages
- Equipment shortages
- Significant cost pressures, including fuel
- Energy and power constraints
- Declines in ore-grade levels
- Rising tariffs

## Future Supply Growth

- Infrastructure challenges
- Developments are increasingly tending to be:
  - Smaller
  - Lower grade
  - Higher risk geographies
- Equipment shortages – longer lead times and project delivery dates
- Rising capital costs
- Resources nationalism

# Copper



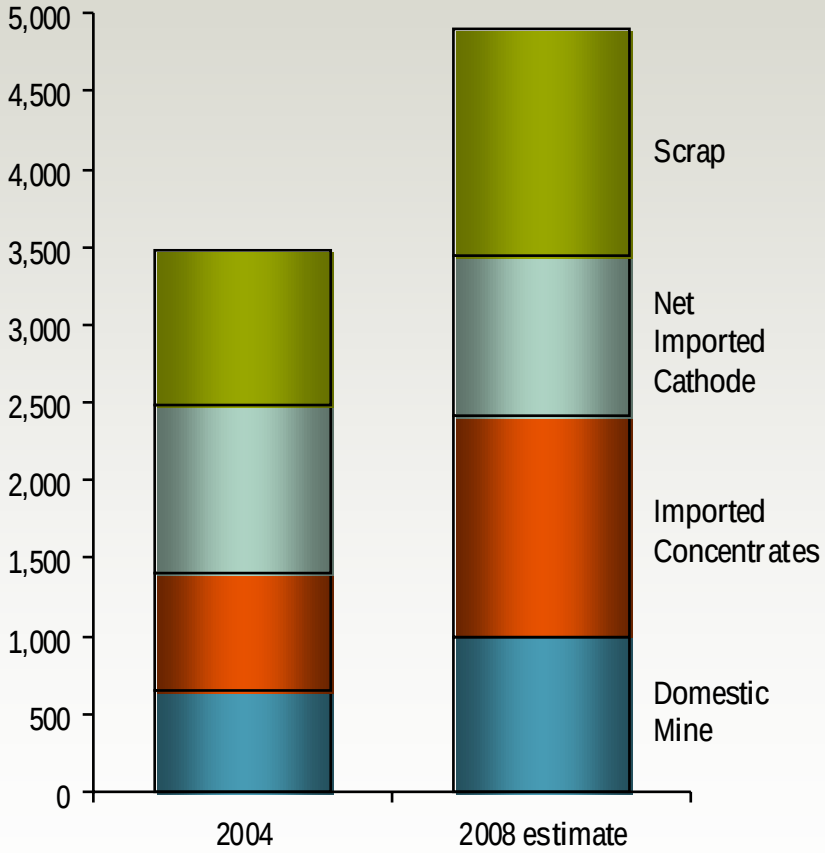

Source: London Metal Exchange (LME), Shanghai Futures Exchange (SHFE) and Comex.



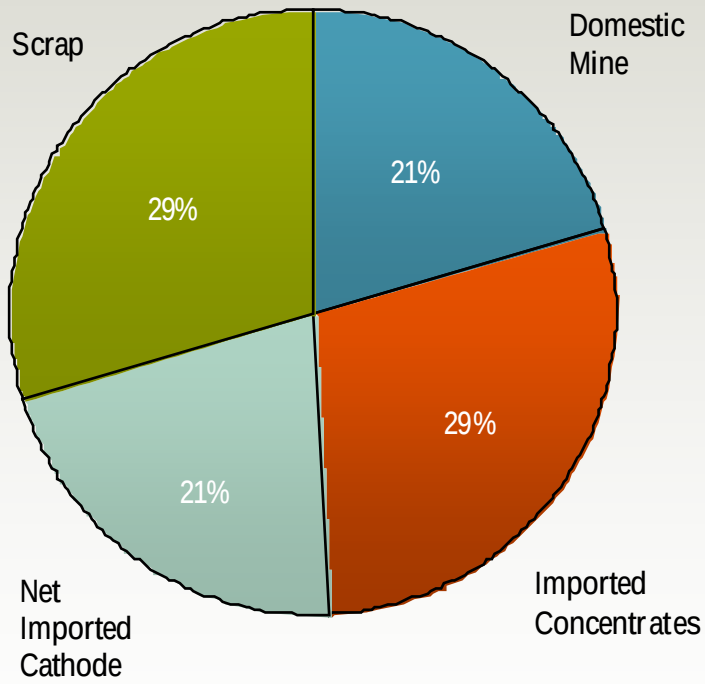
bhpbilliton
resourcing the future

# China copper raw material requirements

## Copper raw materials
(kt Cu contained)




## 2008 estimates by sources

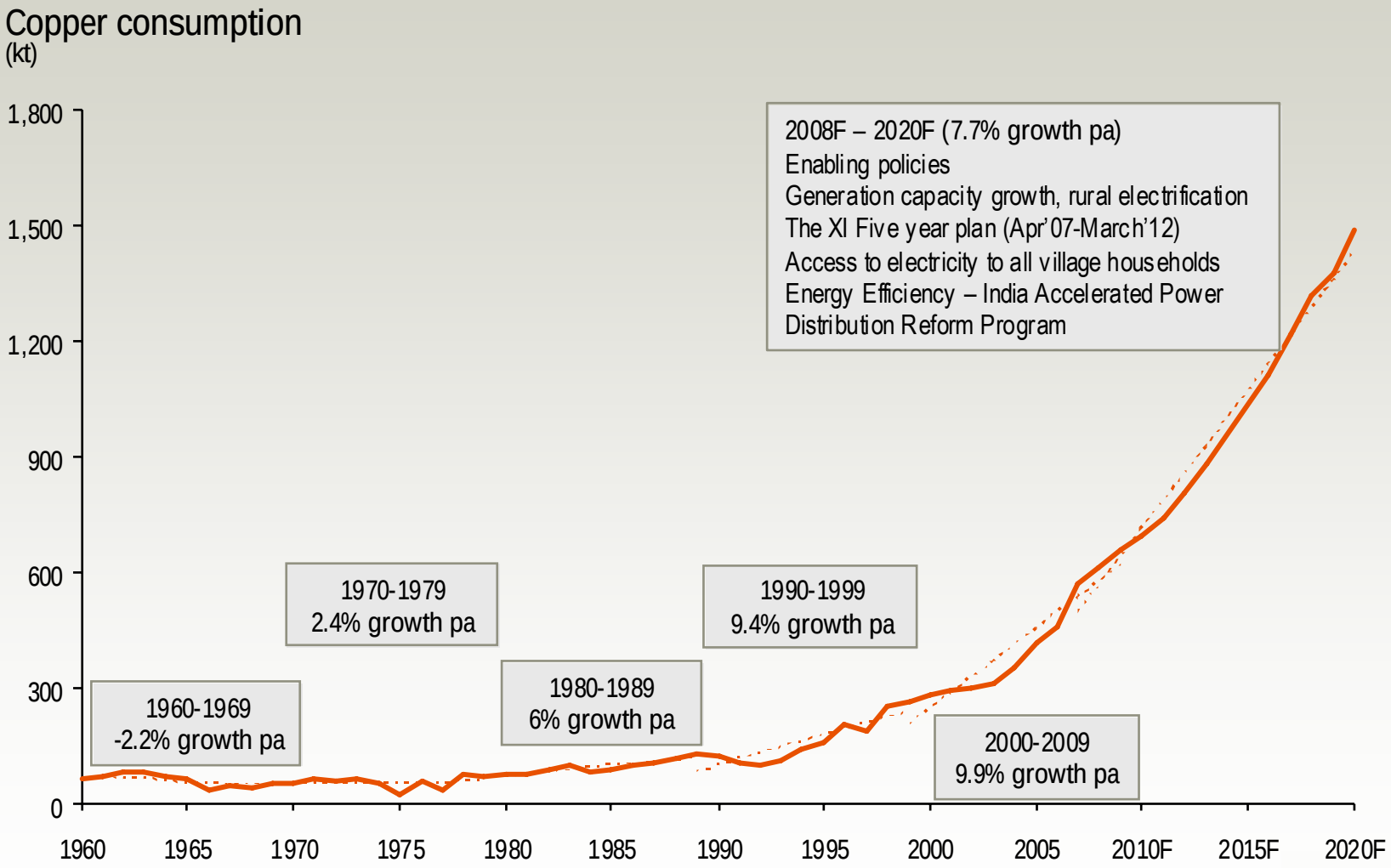



Source: BHP Billiton, Customs trade data.
Note: Data assumes imported concentrate grade 27% and scrap 25% copper



bhpbilliton
resourcing the future

# Indian copper consumption 1960-2020F




Sources of data: Brook Hunt Quarterly Reports (September 2008); International Copper Association (ICA) Sustainable electrical energy.



bhpbilliton
resourcing the future

# Results of Network Substitution Survey

| Selected applications of which 2006 CU demand = 14 Mt | | Level of substitution – Net view | | % share of 14 Mt by threat | % share of 14.5 Mt by threat |
|---|---|---|---|---|---|
| % share of 14 Mt | Selected applications | 2006 | 2007 | 2006 | 2007 |
| 21 | Building wire | Low and stable | Low | 76 | 59 |
| 14 | Electrical/Electronic Strip | Low to medium | Low to medium | | |
| 14 | Industrial power cable | Low to medium | Low to medium | | |
| 11 | Commercial tube | Low and increasing | Medium | | |
| 10 | Electric motors | Low | Low | | |
| 7 | Plumbing tube | High and sustained | High | | |
| 6 | Automotive wire | Low and increasing | Medium | | |
| 5 | Utility power cable | Medium | Medium and increasing | | 29 |
| 4 | Telecom cable | Medium and increasing | High | | |
| 4 | Power/distribution transformers | Medium and stable | Medium | | |
| 2 | Roofing strip | High but stable | High and increasing | | |
| 1 | Automotive HEX | High and increasing | High and increasing | 14 | 13 |
| 1 | LAN cable | Medium | Medium and increasing | | |
| 1 | Industrial HEX tube | High and increasing | High | 10 | |

Source: CRU substitution data / International Copper Association (ICA).


# Uranium Market

John Crofts
Chief Commercial Officer

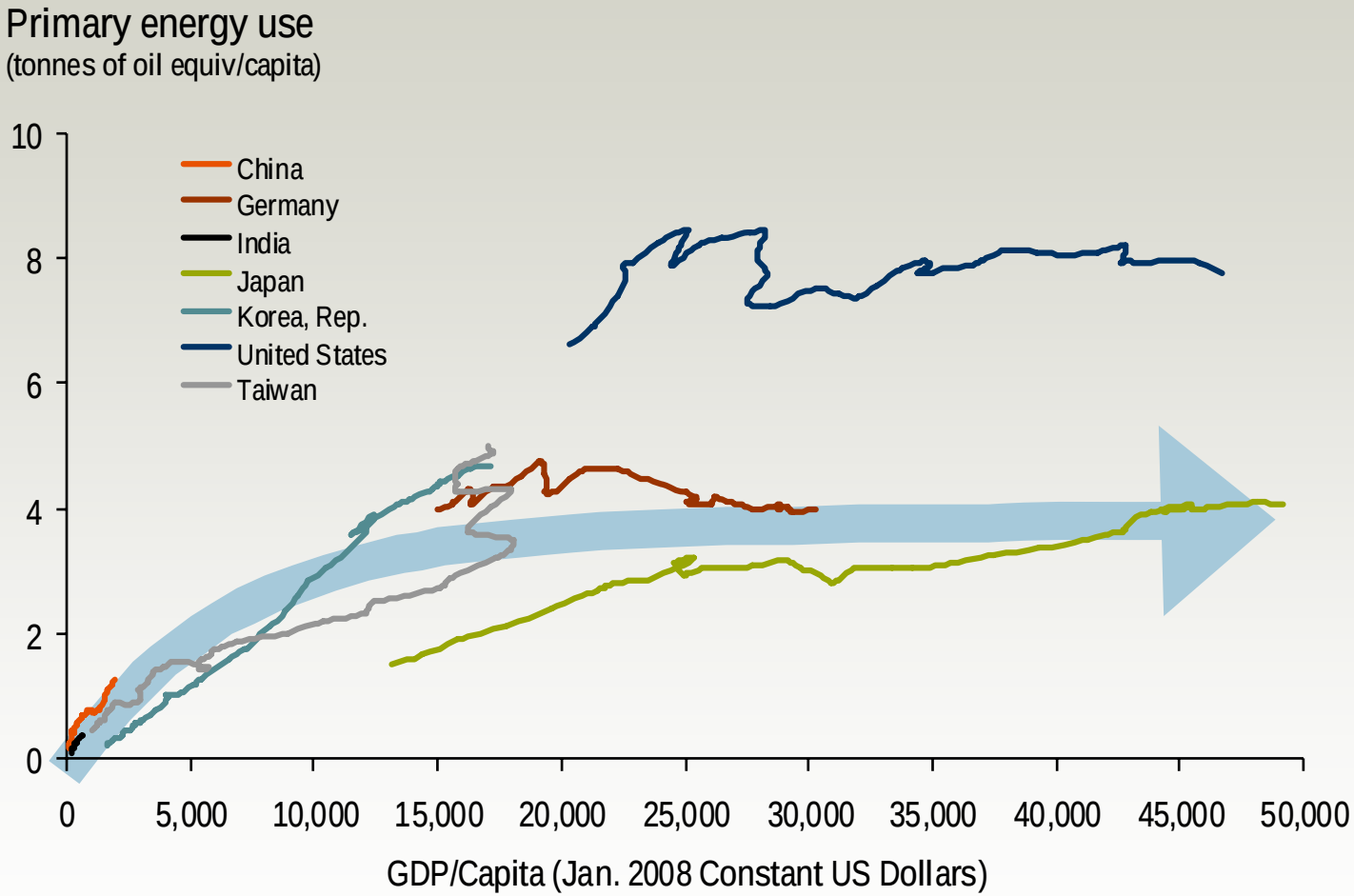
bhpbilliton
resourcing the future

# Uranium Market

## Key Points

- Real impact of Climate Change still to come & meaningful options are limited
- Security of supply key for BRICs
- Supply side response challenges (near term & future)
- Nuclear cost competitiveness on the rise – priced carbon & reduced capital intensity (China) are further upside

# Primary energy consumption is strongly correlated to economic development



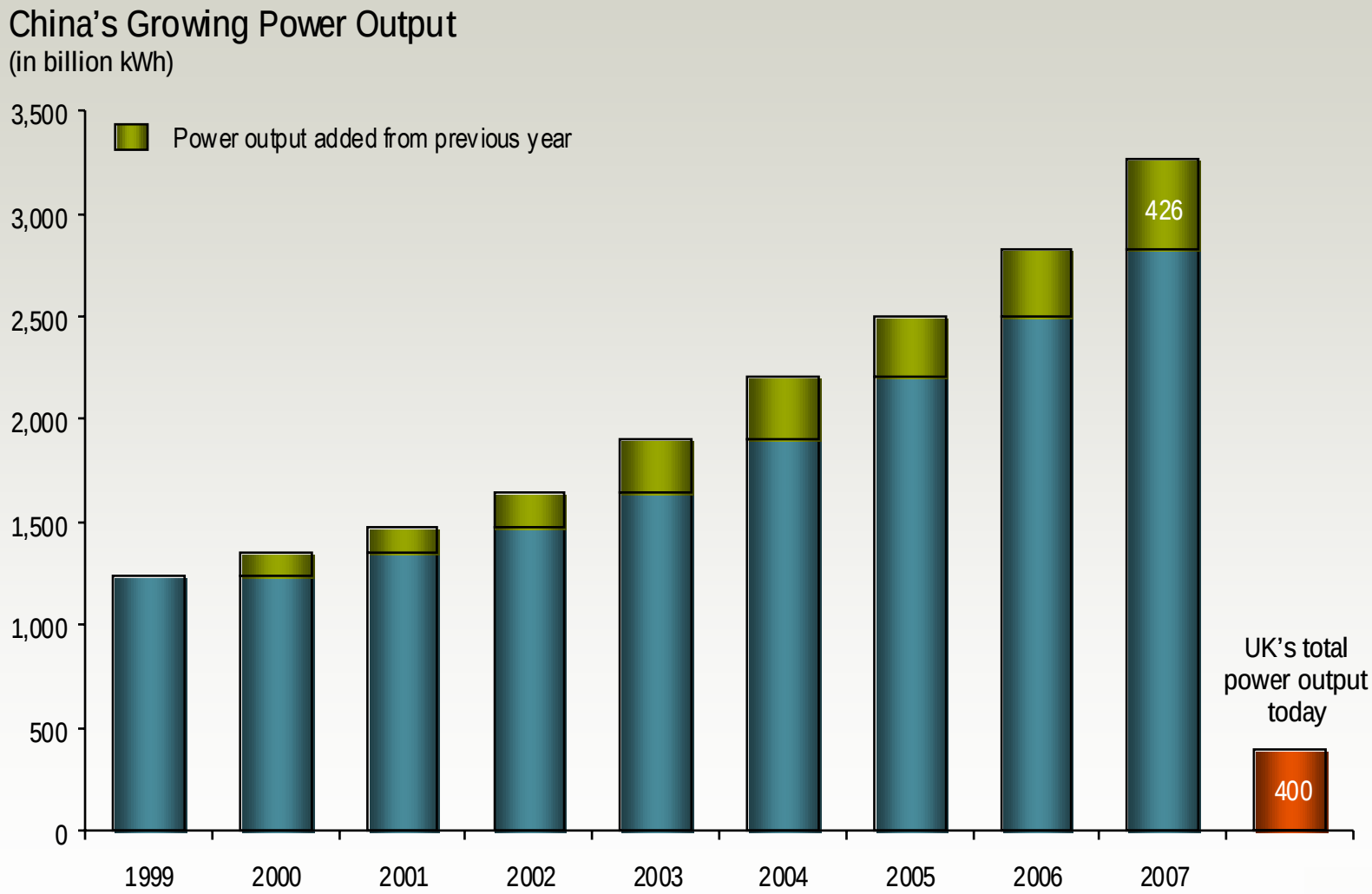

Source: World Bank, Government Statistics for Taiwan, BP Statistical Review of World Energy (2007).

Note: The shape of the arrow shows the general trend among countries for primary energy consumption as GDP per capita increases and is not to scale.



bhpbilliton
resourcing the future

# China's power output is annually growing by as much as the total power output of a major European country




Source: National Bureau of Statistics of China (Yearbook), China Electricity Council, and Digest of UK Energy Statistics (Dept. for Business Enterprise & Regulatory Reform).



bhpbilliton
resourcing the future

# China is only just starting to develop nuclear strategy

China's nuclear programme:

- Current share of nuclear generation approximately 2%
- Latest announced target of 70 GWe, approximately 5% of 2020 generation
- Recent purchase of reactors (Areva) included technology transfer
- In 2007, China added 80 GWe of coal fired generation alone, consuming an additional 200 to 250 million tonnes of thermal coal per annum

Current nuclear projects in China:

- First reactor on commercial operation in 1994 (Daya Bay)
- 11 reactors operational at 4 sites totalling approximately 9 GWe
- 16 reactors under construction at 2 brownfield and 6 greenfield sites (combined 16 GWe)

# China is preparing for a major nuclear programme

Ling Ao: two new reactors being built adjacent to the two operating reactors, representing a key strategy for China nuclear power expansion, complementary to green-field (Date: 10 Dec. 2007)

Taishan project ready for foundation work, 2 EPRs

Source: BHP Billiton China

| | |
|---|---|
| Shanghai Electric: | partnership with Westinghouse – AP1000 – specifically including technology transfer |
| Dongfang Electric: | partnership with Areva – EPR – specifically including technology transfer |
| Harbin Electric: | partnership with Doosan Babcock |
| China Nuclear Energy Industry Cooperation: | applied Tenex enrichment technology – capacity 500,000 SWU |
| Shenyang Blower Works: | to be major supplier of AP1000 main pumps specifically including technology transfer |
| Sichuan Sanzhou: | produces critical piping units for 1 GW level nuclear units |

# Nuclear growth in China is not restricted to coastal areas


- Current nuclear capacity and capacity under construction is concentrated along the coast
- Increasing number of planned and proposed reactors in landlocked provinces

Currently operating
Under construction
Planned / proposed

Source: http://www.insc.anl.gov/pwrmaps/map/china.php and internal BHP Billiton analysis

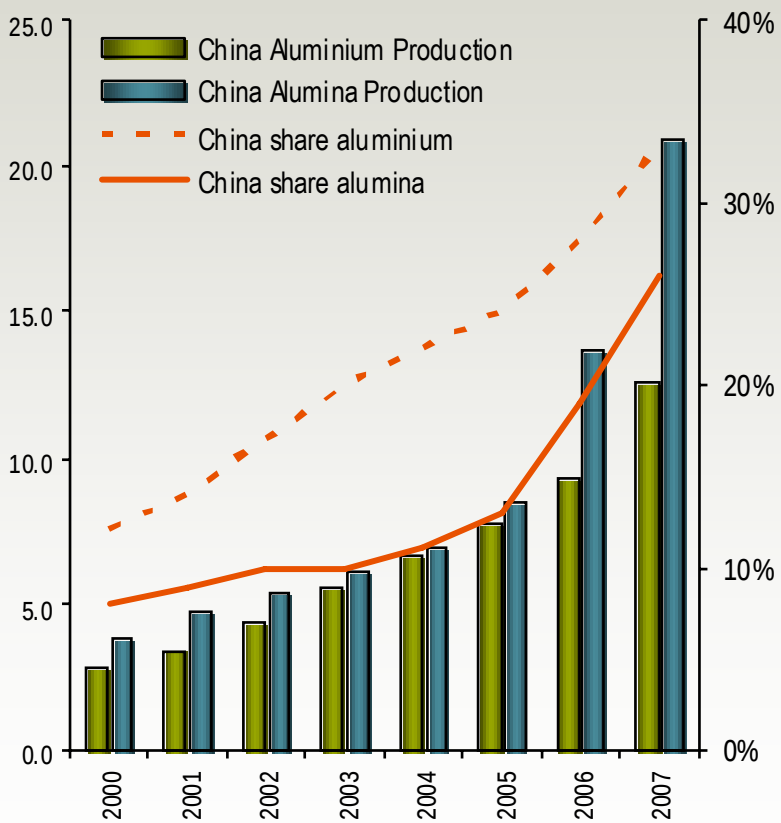


bhpbilliton
resourcing the future

# China has demonstrated its ability for fast growth……

## China's share of world aluminium production has grown from 11% in 2000 to 33% in 2007

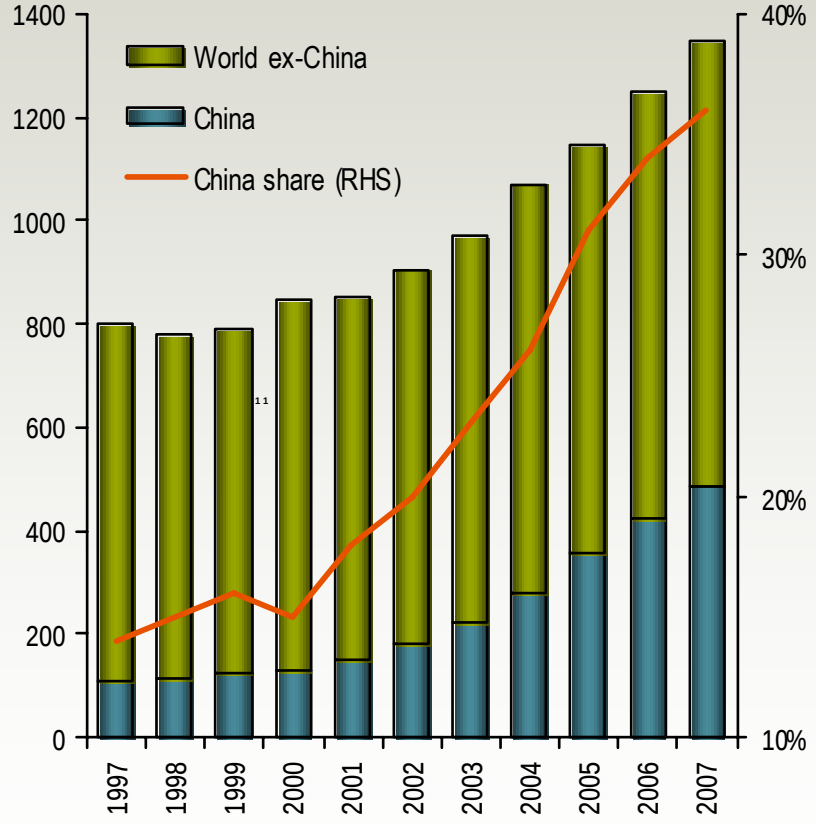
(Million tonnes)




Sources: Brook Hunt Aluminium Metal Service.

## China's share of crude steel production has grown from 15% in 2000 to 36% in 2007

(Million tonnes)




Source: International Iron and steel Institute



bhpbilliton
resourcing the future

# ….and shown itself very capable of re-writing capital intensity and delivery times

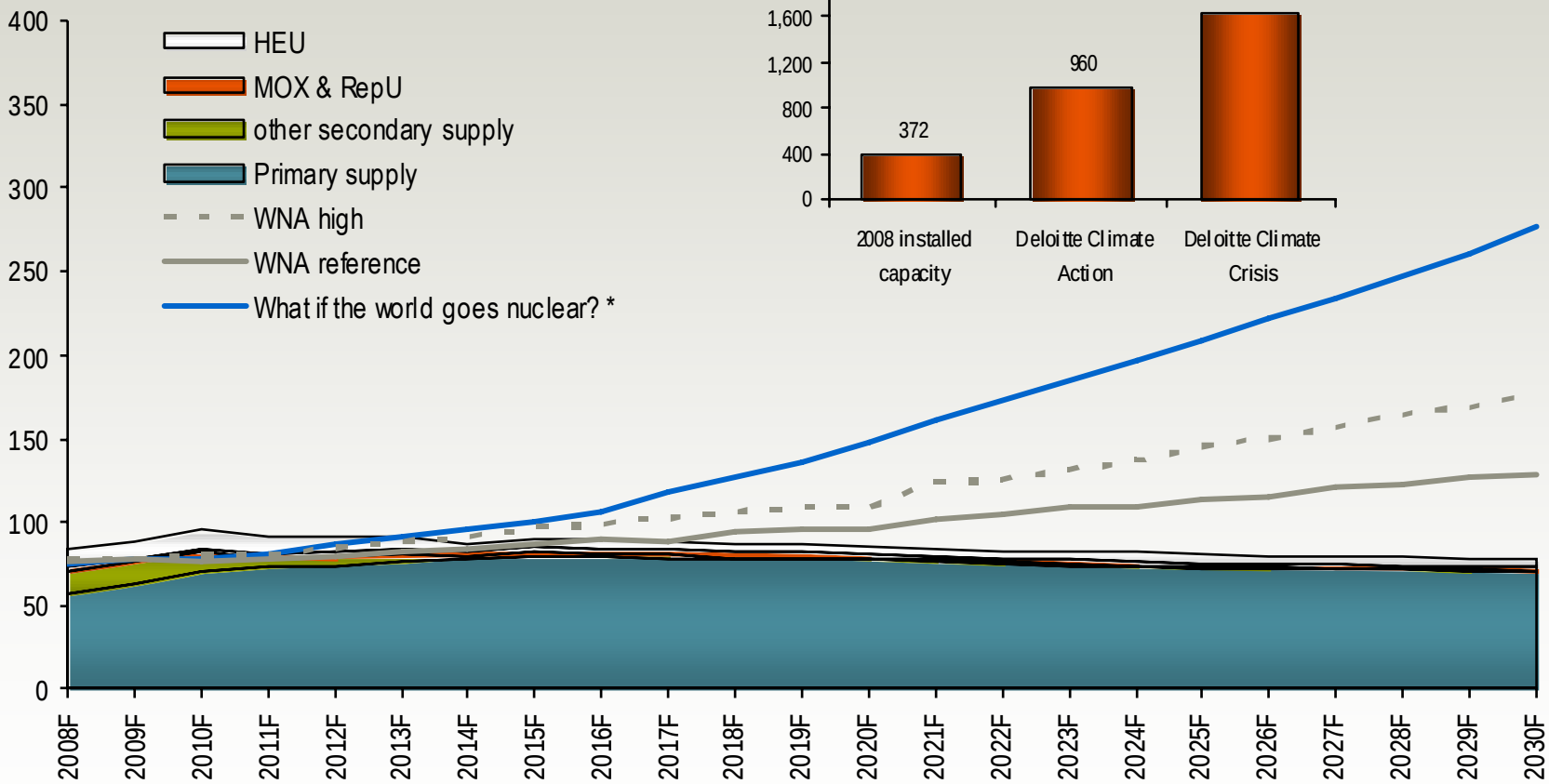
| | China | Western Benchmark |
|---|---|---|
| Alumina refinery Shangdong province | 10x 300mw power stations and 3500kt/yr alumina refinery – construction time 10 months | 40 Months + |
| East Hope Alumina | 800kt/yr alumina refinery – construction time 10 months | 40 Months + |
| Jinbei Alumina | 400kt/yr alumina refinery – construction time 14 months | 40 Months + |
| Kaiman alumina | 400kt/yr alumina refinery – construction time 10 months | 40 Months + |
| Copper smelters | 40 Months, Greenfields US$1000-1300/t installed capacity Detailed engineering through commissioning | 60-66 Months US$3000-US$5000/t installed capacity |

Source: BHP Billiton Analysis.

# Short to medium term market outlook balanced, long term primary supply growth required

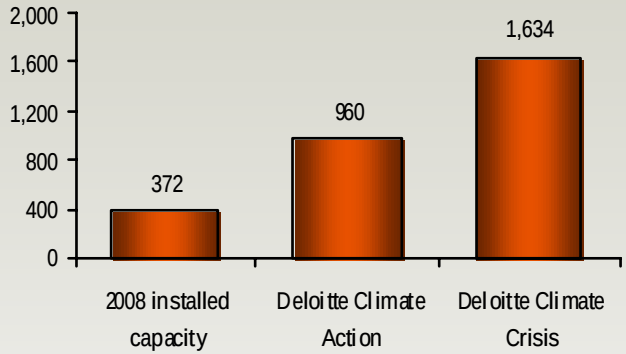
## WNA supply and demand forecast

(kt u3o8)




## An external view

(GWe)




* BHP Billiton analysis concludes 1,300 GWe is feasible by 2030 if the world seriously embraces nuclear power generation.

Source: International Atomic Energy Agency Power Reactor Information System (IAEA PRIS), World Nuclear Association (WNA) 2007 Supply & demand; Deloitte & Australian Uranium Association (AUA) Outlook for the uranium industry, April 2008, BHP Billiton internal analysis.



bhpbilliton
resourcing the future

# Short to medium term market outlook balanced, long term primary supply growth required

Supply developments and events likely to dominate short to medium term market dynamics:

- Kazakhstan – upside surprise
- Cigar Lake – uncertainty on start-up
- Dominion – care and maintenance

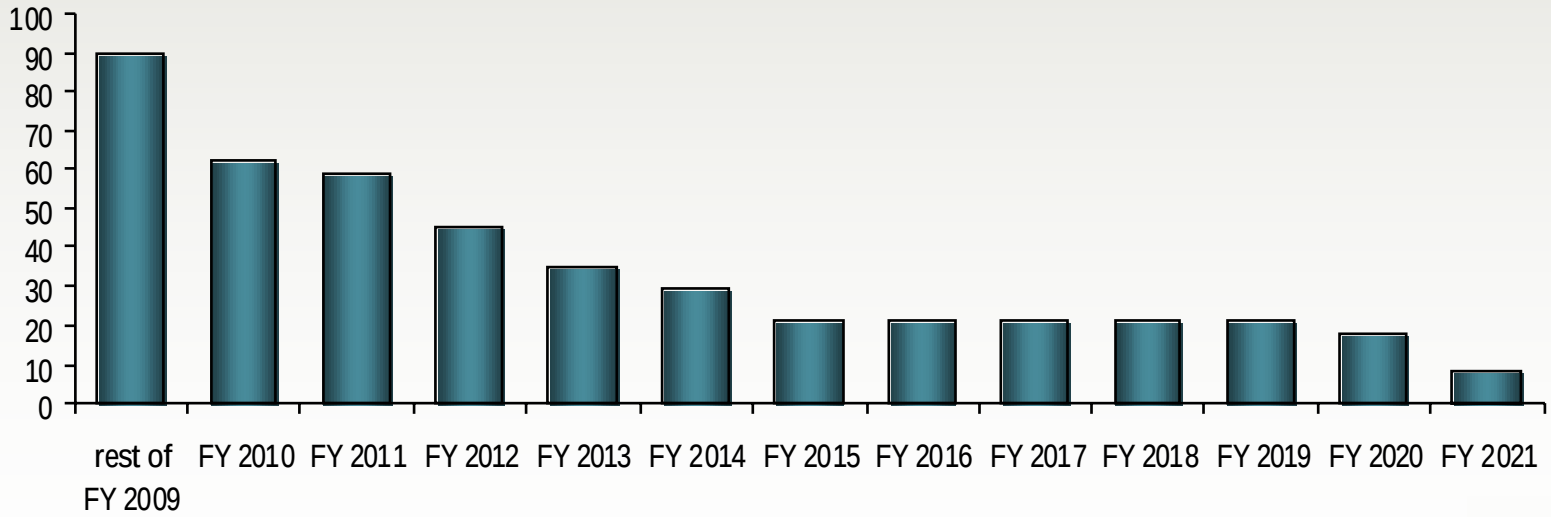
Recent events in the nuclear industry with long term implications:

- India granted exemption by NSG
- Combined Construction and Operating applications submitted for 24 reactors to NRC in USA (as at 30 Sep 2008)
- UK energy white paper reversal (Jan 08) & EdF acquisition of British Energy (Sep 08)

# Legacy fixed sales position is winding off

- Current "legacy" portfolio continues to hold significant fixed price sales at historic prices
- BHP Billiton does not have committed sales at fixed prices more than forecast production in any one financial year

Uranium fixed sales commitments
(% of forecast production)




Note: Production data includes only current life of mine production from Olympic Dam (underground).
Sales data includes only sales at fixed prices (including base escalated prices).
Data as at 1 October 2008.



bhpbilliton
resourcing the future

# Olympic Dam Expansion - Uranium marketing

- BHP Billiton has agreed 10 term sheets with customers in Europe, US and Asia
  - Aggregate market interest is well in excess of the first phase expansion tonnage
- BHP Billiton intends to put in place a portfolio of sales contracts prior to making an expansion decision
  - A portion of the volumes in these contracts will be conditional upon a positive decision to expand Olympic Dam
  - Pricing mechanism will be designed to capture the fair market price of uranium at the time of delivery
  - BHP Billiton is actively engaging with its customers to develop an improved price discovery mechanism that will meet the requirements of both consumers and producers

# Current Business Performance

Paul Dunn
Vice President Finance

bhpbilliton
resourcing the future

# Current Business Performance

## Key Points

- Experienced team leading the turnaround in performance
- Safety the driver for cultural change
- Sustainable improvement in performance

# An experienced team leading the turnaround in performance

**Dean Dalla Valle**
President and Chief Operating Officer
- 31 years with BHP Billiton
- Previously
  - Asset Leader Olympic Dam
  - Asset Leader Cannington

**Barry Mitchell**
*Vice President Mining*
- 2 years with BHP Billiton
- 33 years minerals industry experience, previously
  - Perilya Ltd, General Manager Broken Hill
  - Barrack Gold, GM Nth Eastern Goldfields

**John England**
*VP Processing*
- 32 years with BHP Billiton
- Previously
  - Senior Manager Metallurgical Engineering
  - Operations General Manager BHP Titanium Beenup

**Justin Bauer**
*VP Smelter and Refinery*
- 6 years with BHP Billiton
- 22 years minerals industry experience, previously
  - Production Manager WMC Fertilisers Phosphate Hill
  - Operations Manager Boodarie Iron

**Giles Hellyer**
*VP Maintenance and Engineering*
- 24 years with BHP Billiton
- Previously
  - Production Manager TEMCO
  - Manager Engineering and Maintenance, Escondida

**John Hatty**
*VP Health Safety and Enviroment*
- 30 years with BHP Billiton
- Previously
  - Manager HSEC Assessment and Review
  - Manager Environmental Auditing

**Paul Dunn**
*Vice President Finance*
- 23 years with BHP Billiton
- Previously
  - Finance Manager Cannington
  - Manager Forecasting BHP Minerals

**Paul Harvey**
*VP Business Improvement and Planning*
- 16 years with BHP Billiton
- 23 years minerals industry experience, previously
  - Project Director Undreground Projects, EKATI
  - U/G Mine Manager EKATI

**Paul Walters**
*VP Human Resources*
- 3 years with BHP Billiton
- 10 years minerals industry experience, previously
  - Manager HR & Legal Services Vetco Aibel
  - National Employee Relations Manager, ABB Australia

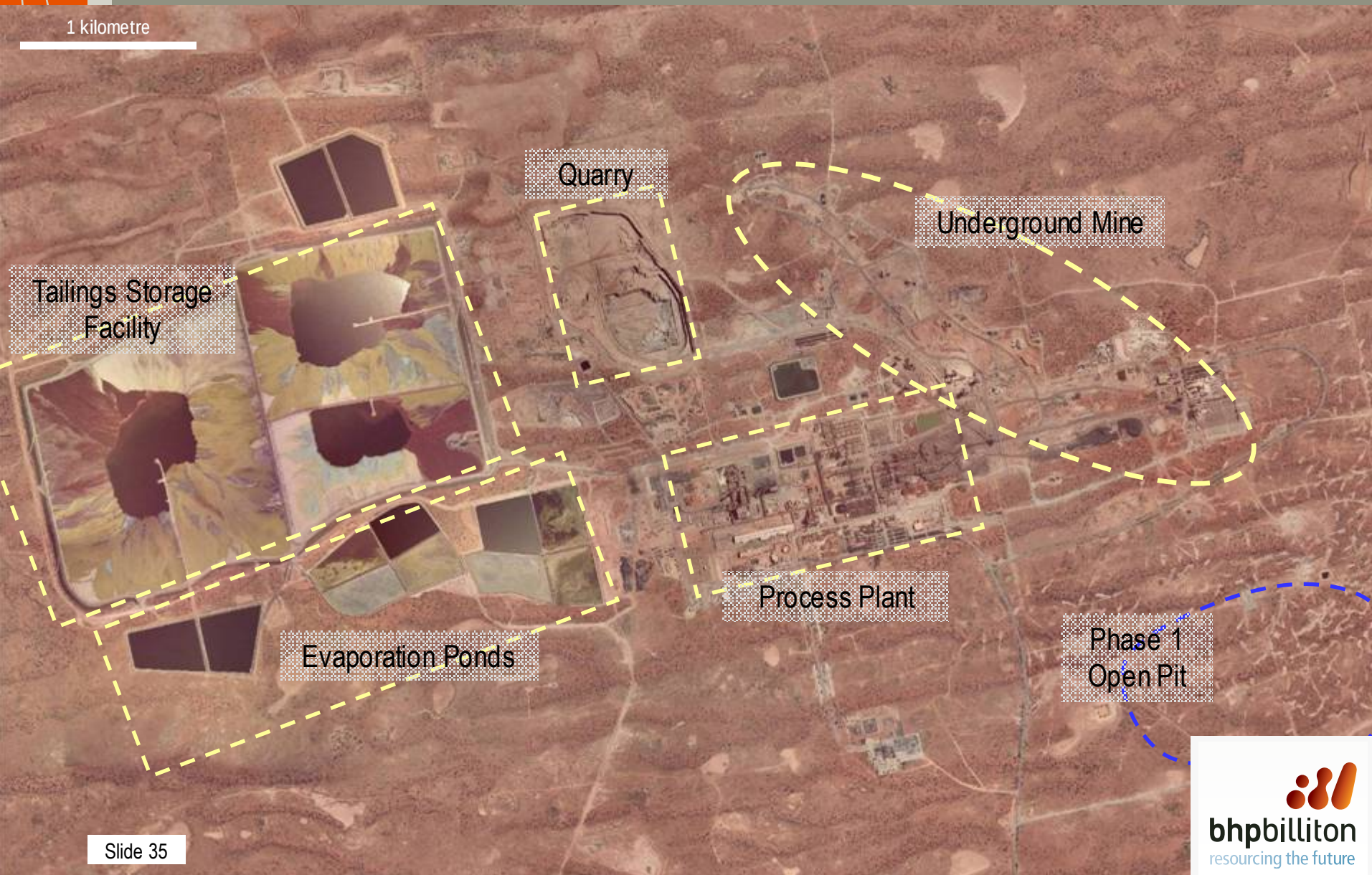
**Kym Winter-Dewhirst**
*VP Government and Community Relations*
- 3 years with BHP Billiton
- 22 years government and media experience, previously
  - Government Relations Advisor WMC
  - Chief of Staff to SA Environment Minister

**Gary Sutherland**
*Client Representative – OD Expansion*
- 7 years with BHP Billiton
- 23 years minerals industry experience, previously
  - VP Processing Olympic Dam
  - Operational Manager Pasminco



bhpbilliton
resourcing the future

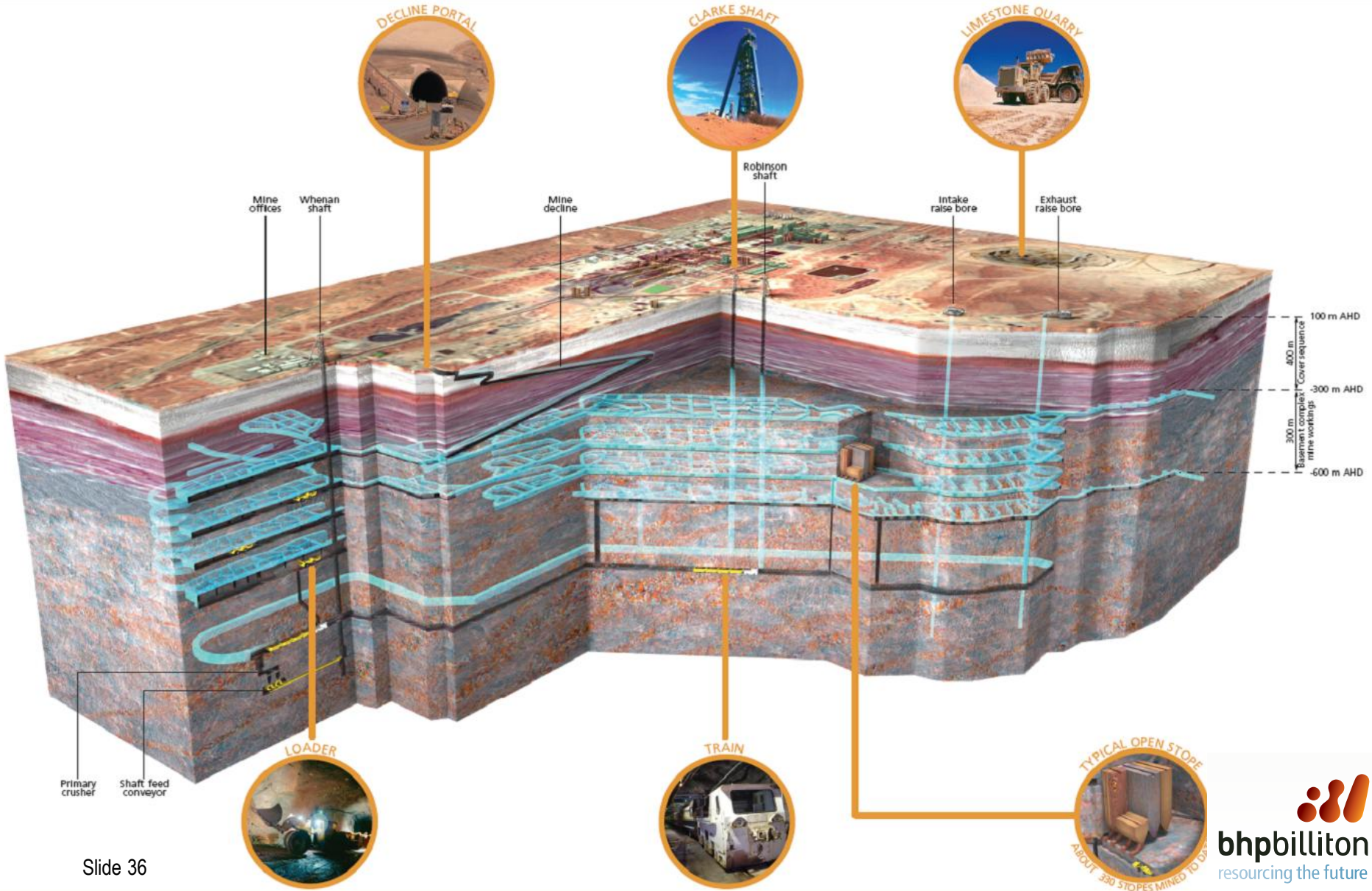
# Site Layout






bhpbilliton
resourcing the future

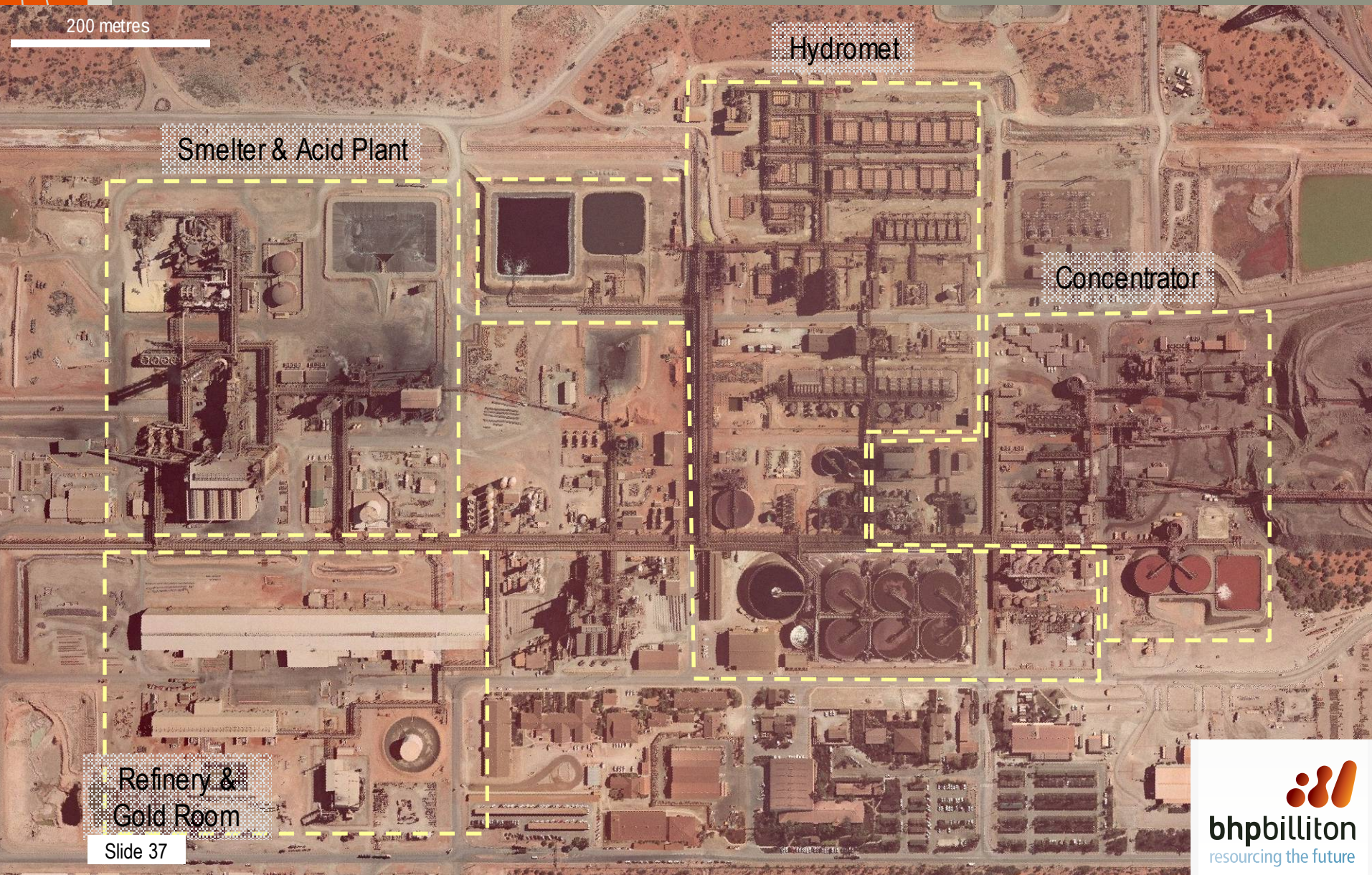
# Olympic Dam Underground Mine Layout






bhpbilliton
resourcing the future

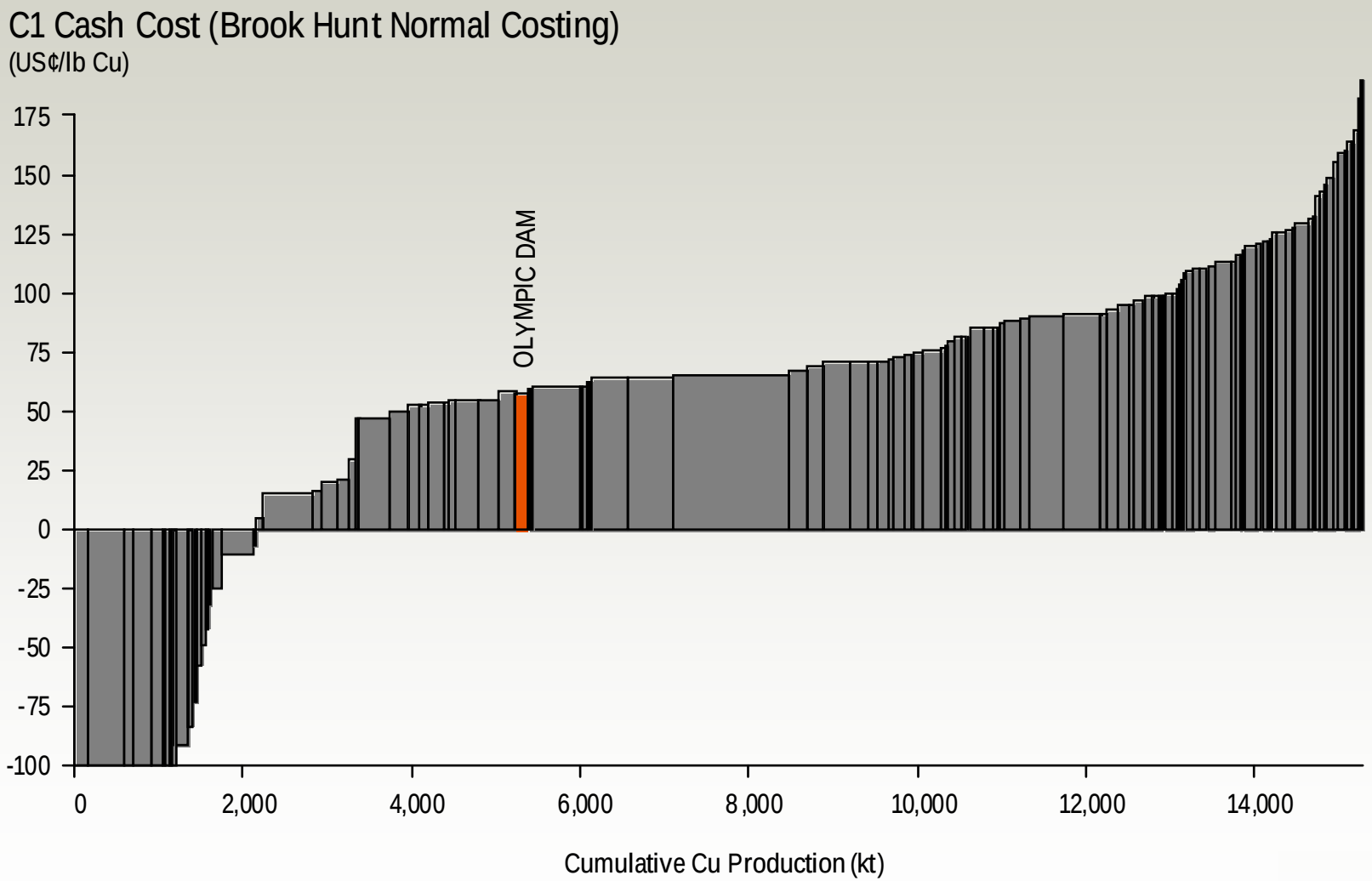
# Process Plant Layout






bhpbilliton
resourcing the future

# 2008 Copper Supply Cost Curve

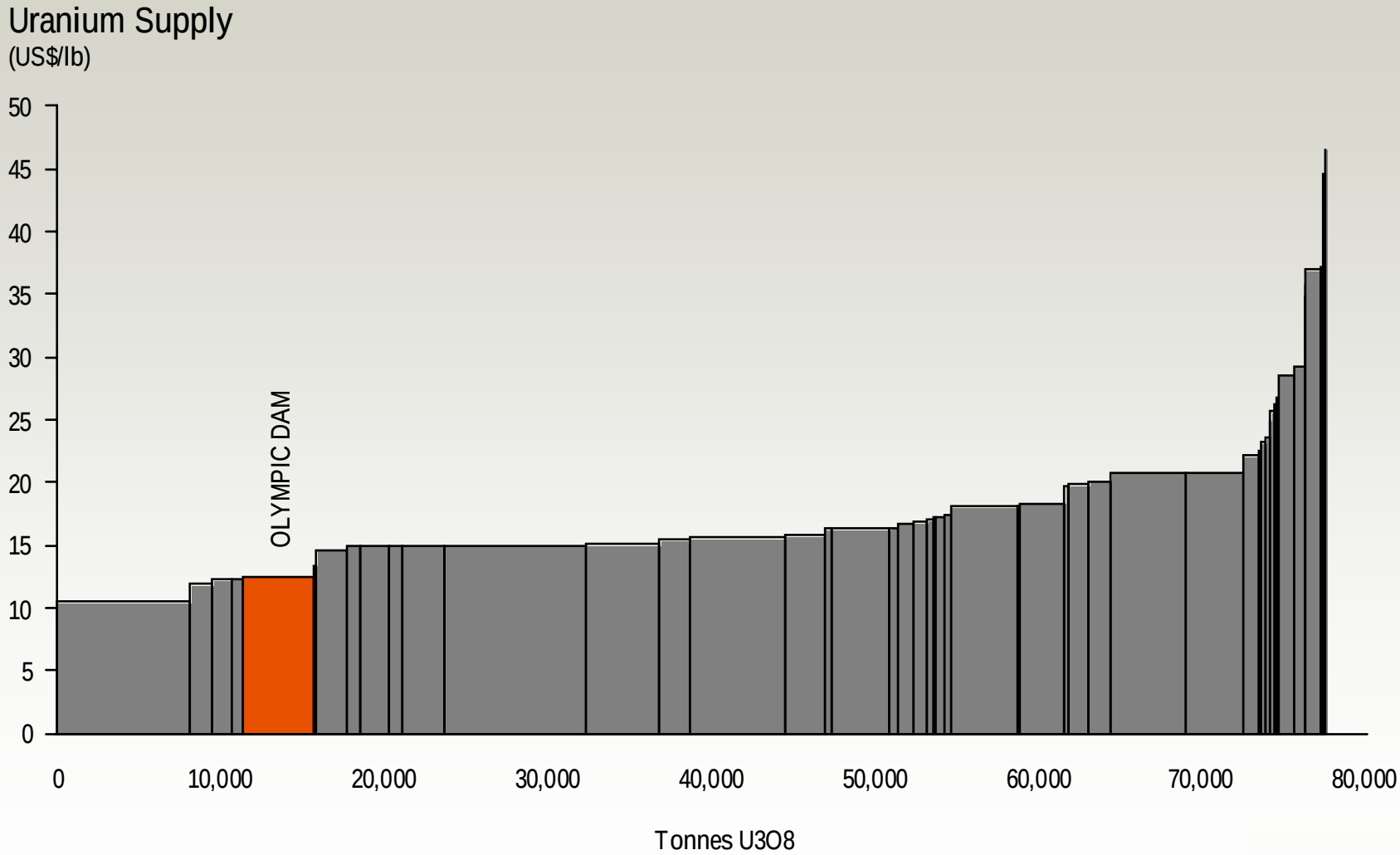



Source: Brook Hunt 2008 Production Cost League



bhpbilliton
resourcing the future

# 2008 Uranium Supply Cost Curve



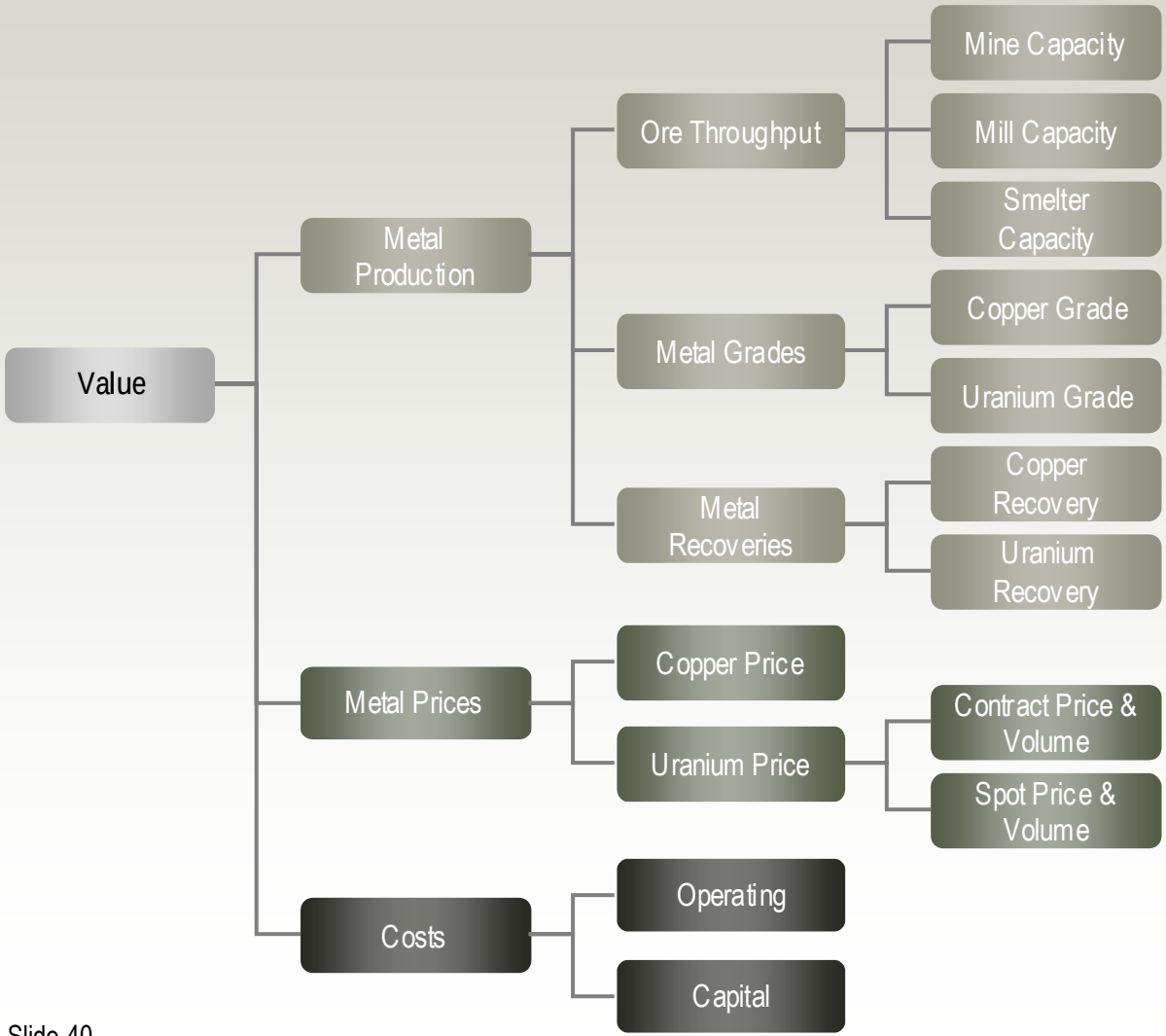

Source: NAC International, estimated 2008.



bhpbilliton
resourcing the future

# What Drives Value at Olympic Dam?

## Economic Value Drivers



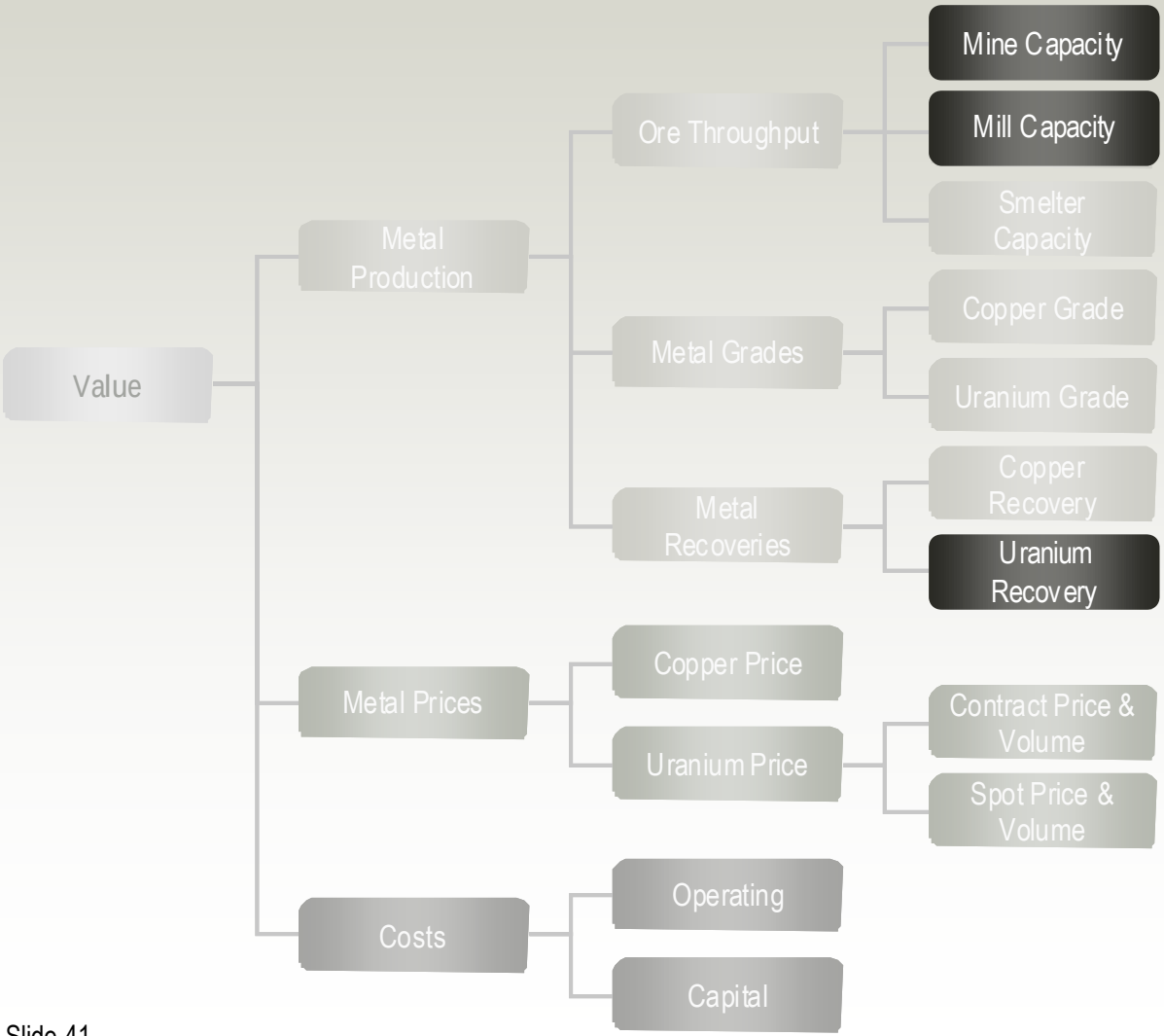

## Supported by




bhpbilliton
resourcing the future

# High Priority Areas since Acquisition

## Economic Value Drivers



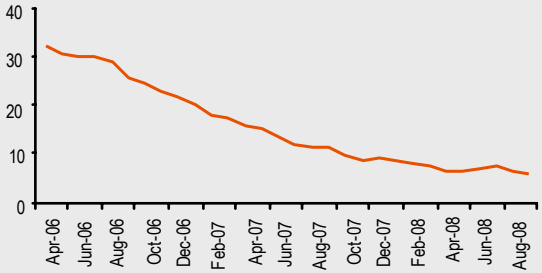

## Supported by




bhpbilliton
resourcing the future

# High Priority Areas since Acquisition

Supported by




- Safety – the driver of cultural change

Zero Harm

- > 50 BHP Billiton people transferred into business
- Clear accountability through BHP Billiton operating model
  - Uranium Business Unit
- Incentive program linked to business outcomes for all employees
- Co-operative industrial agreement in place for next 5 years

People

- Implement BHP Billiton Planning processes
- Improved understanding of Resource
- Existing business recovery and growth plans
- Expansion study
- Business Improvement capability developed

Planning

# High Priority Areas since Acquisition

## Economic Value Drivers

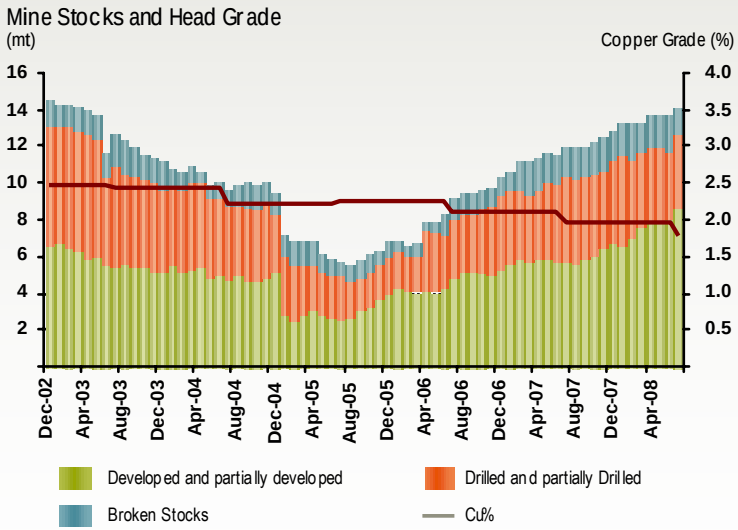
Annual Record Ore Hoisted and Material Milled in FY08

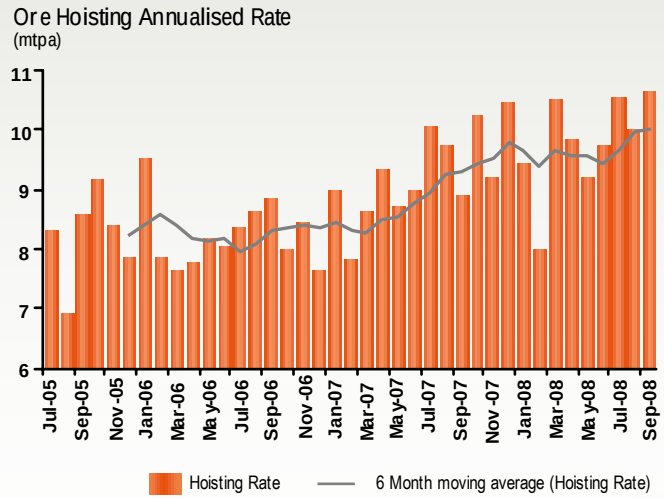
Quarterly Record Ore Hoisted in Q1 FY09

- Improve mine flexibility
  - Restore & grow underground stocks
  - Focus on bottleneck (development and production drilling)
- Improve mill capacity
  - Advanced control systems
  - Reliability focus

| | | FY06 | FY07 | FY08 |
|---|---|---|---|---|
| Ore Hoisted | (kt) | 8,219 | 8,566 | 9,674 |
| Material Milled [1] | (kt) | 9,635 [2] | 8,889 | 9,910 |

Notes: 1 – Includes re-treatment of electric furnace slag
2 – FY06 production supported by surface ore stockpiles




Sources: BHP Billiton production reports, BHP Billiton internal reporting.



bhpbilliton
resourcing the future

# High Priority Areas since Acquisition

## Economic Value Drivers

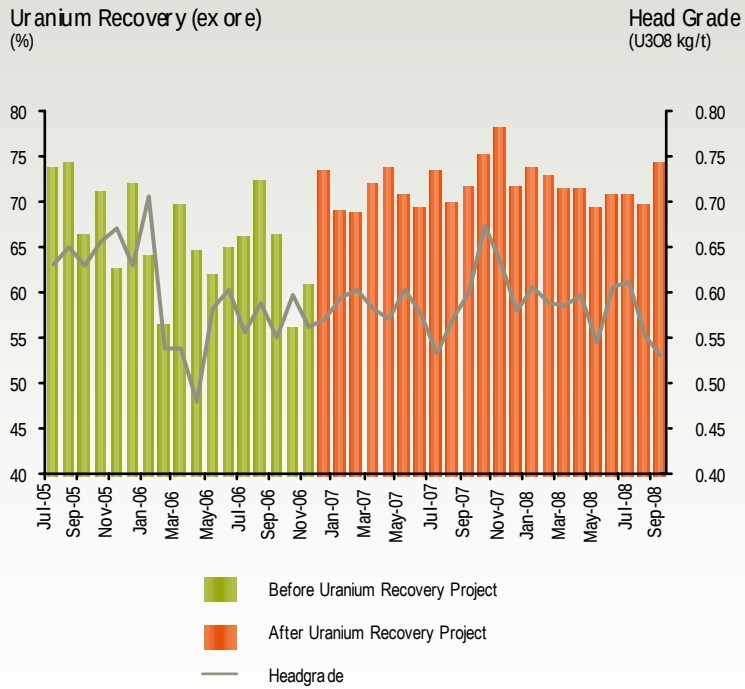
### Uranium Recovery

- Uranium recovery project
- Improved process optimisation and control, supported by improved resource understanding

| | FY06 | FY07 | FY08 |
|---|---|---|---|
| Uranium oxide concentrate production (t) | 3,936 | 3,486 | 4,144 |
| Uranium recovery (ex ore) (%) | 67.5 | 68.7 | 72.8 |

### Future

- Leach circuit tank upgrade and capacity increase
- Minor upgrades of Solvent Extraction circuit



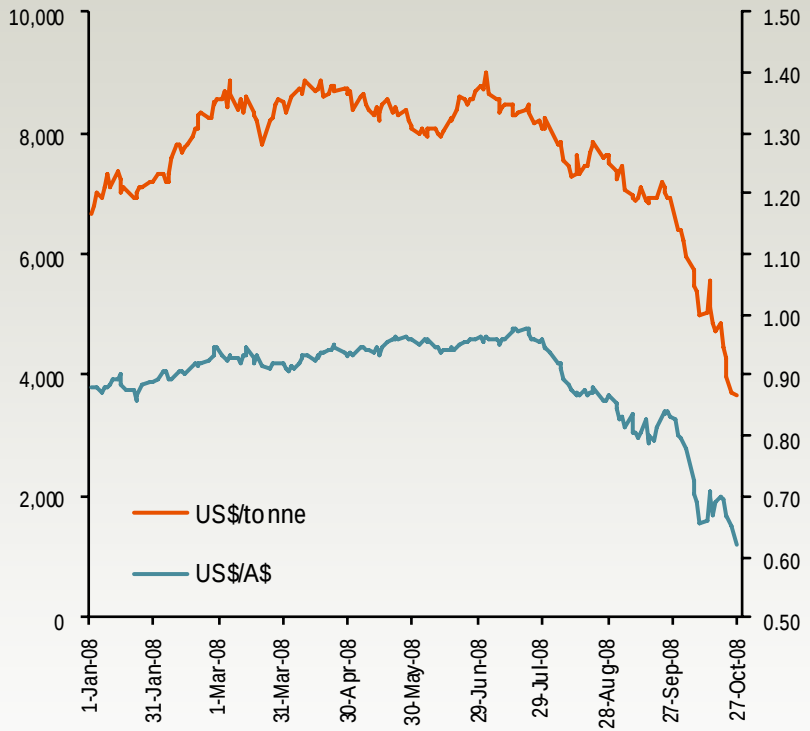

Sources: BHP Billiton production reports, BHP Billiton internal reporting.



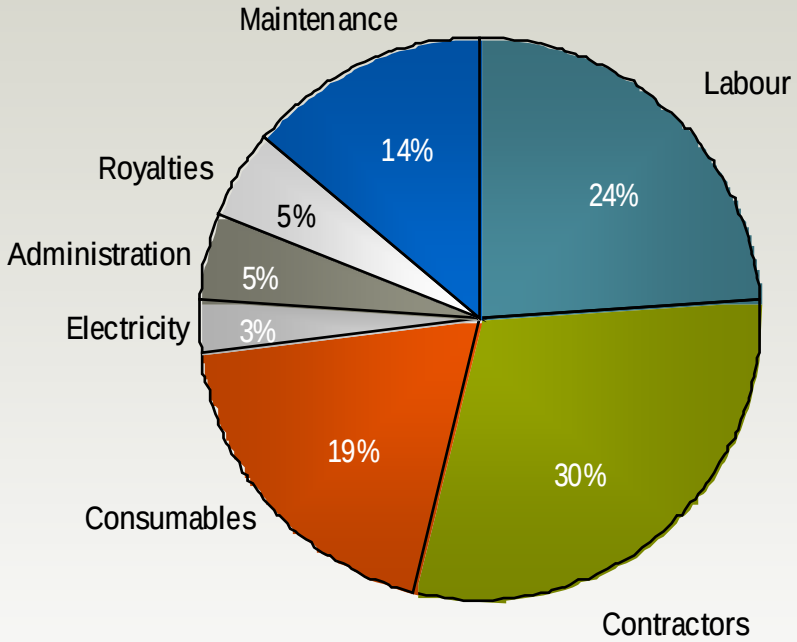
bhpbilliton
resourcing the future

# Recent copper price performance and cost structure

## 2008 Daily Copper Price & Exchange Rate




## Current Cost Structure




- Exchange rate movement in correlation with commodity price
- Approximately 85% of operating cost is A$ denominated

Sources: London Metal Exchange (LME), Reserve Bank of Australia (RBA), BHP Billiton internal analysis.



bhpbilliton
resourcing the future

# Moving Forward – Priority Areas

Zero Harm – A core value

- Good safety is good business
- Water efficiency
- Energy efficiency

People

- Transition organisation to align with expansion
- Talent Pipeline
- Employee value proposition – maintain low turnover (14.5%)

Planning

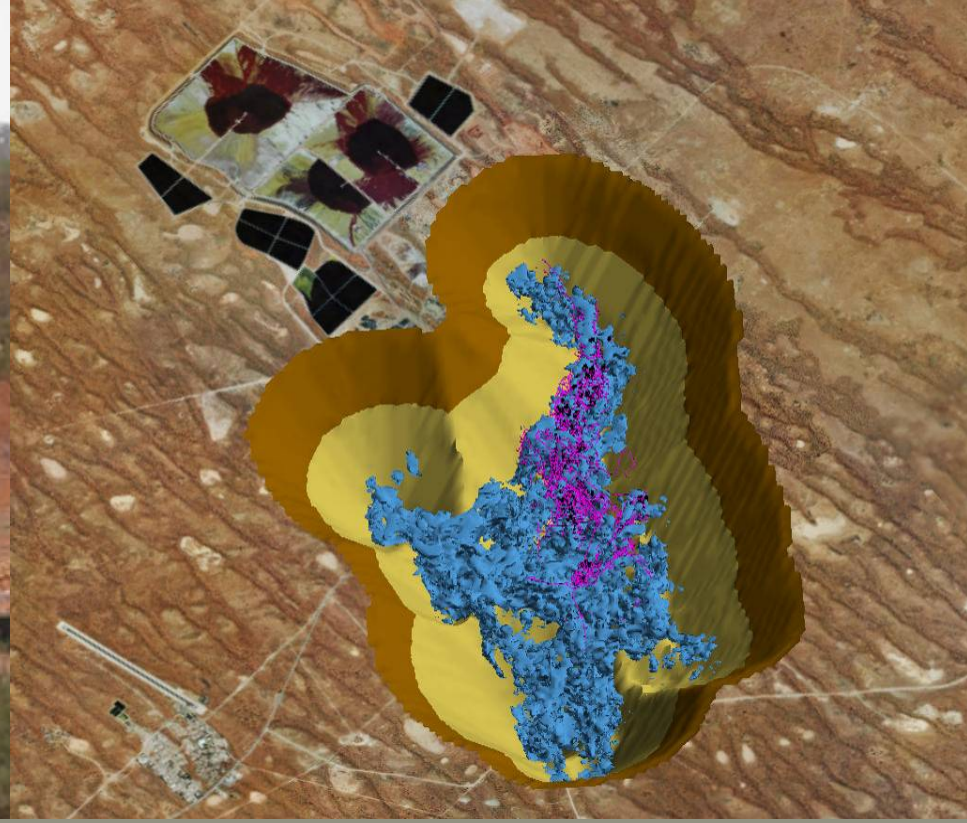
- Build on planning discipline
- Integration of underground mine with open pit
- Regional exploration

Volumes

- Pre-expansion volume growth to offset declining grades
  - US$30.5m approved for early works
- Smelter outage FY2011
  - 60 days Sept 2010
  - Relining both major furnaces
  - Modifications to suit declining grades

Uranium Recovery

- Uranium leach circuit upgrade
- Geometallurgy – optimisation of process plant conditions to suit future ore types



# Olympic Dam Expansion

Ted Bassett
Project Director

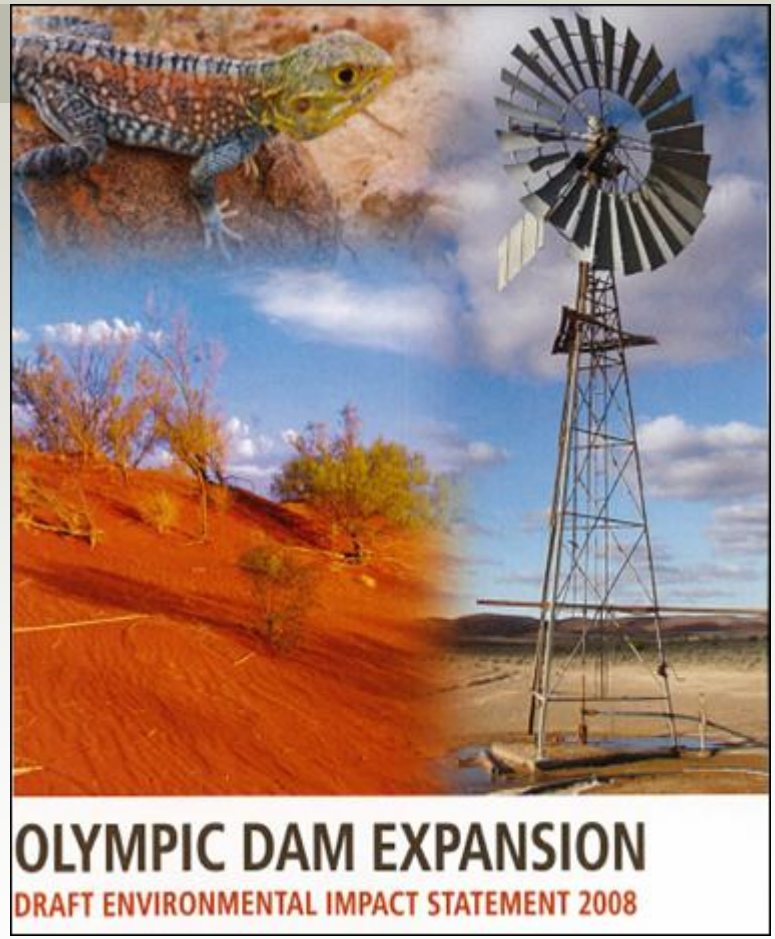
31 October 2008

bhpbilliton
resourcing the future

# Olympic Dam Expansion

## Key Points

- Configuration established
- Utilising a staged expansion path
- Politically stable environment
- Environmental Impact Statement to be issued to government before the end of 2008
- Focus on simplicity & preservation of future options



# A team with large project experience

**Ted Bassett**
*Project Director*
- 2 years with BHP Billiton
- 38 years mine project development experience, Previous Roles
  - VP Capital Projects Inco Ltd
  - Project Director Goro Nickel Project

**Jon Gilligan**
*DPD Mine Development*
- 15 years with BHP Billiton
- 8 yrs project & 16 yrs operations experience, Previous Roles
  - Operations Manager, Escondida Norte
  - Assistant Manager, Mine Engineering Escondida

**Dave Thomas**
*DPD Infrastructure*
- 3 years with BHP Billiton
- 24 yrs project & 20 yrs operations experience, Previous Roles
  - Project Manager SX Plant
  - General Manager WMC

**Rob Williams**
*DPD Operational Development*
- 3 years with BHP Billiton
- 20 years experience in the mining industry, Previous roles
  - Principal Mining Engineer – Coffey Mining
  - GM Gympie Gold

**Graham Batten**
*Manager IT & Communications*
- 2 years with BHP Billiton
- 17 years experience in mining related IT, Previous Roles
  - Newmont - Regional IT Director
  - WMC Manager Project Systems OD Expansion

**Michael Anstey**
*Manager Health & Safety*
- 2 years with BHP Billiton
- 20 years experience in operations, Previous Roles
  - Newmont - Director Safety & Risk
  - Minera Alumbrera Ltd - HSE Manager

**Ken Sutliff**
*DPD Ore Processing*
- 2.5 years with BHP Billiton
- 37 yrs experience in operations & projects, Previous Roles
  - Project Manager Bechtel
  - Project Manager Southern Peru Copper

**Marco Herrera**
*DPD Project Services*
- 2 years with BHP Billiton
- 16 yrs project & 12 yrs operations experience, Previous Roles
  - Project Manager Hydrometallurgy-BHPB ODX
  - Project Director Sth. America Ops - Newmont

**Jason Schell**
*DPD Stage 1*
- 16 years with BHP Billiton
- Previous Roles
  - VP OD Maintenance & Engineering
  - GM Engineering & Site Services

**Brink Van Schalkwyk**
*Manager Business Evaluation*
- 11 years with BHP Billiton
- Previous Roles
  - Project Manager, Integration of OD
  - Business Analysis Manager, Base Metals

**Alison Hartman**
*Manager – Risk & Approvals*
- 4 years with BHP Billiton
- 15 Years experience in HSEC & engineering, Previous Roles
  - VP HSEC Olympic Dam
  - Steelscape - Corporate EHS Manager



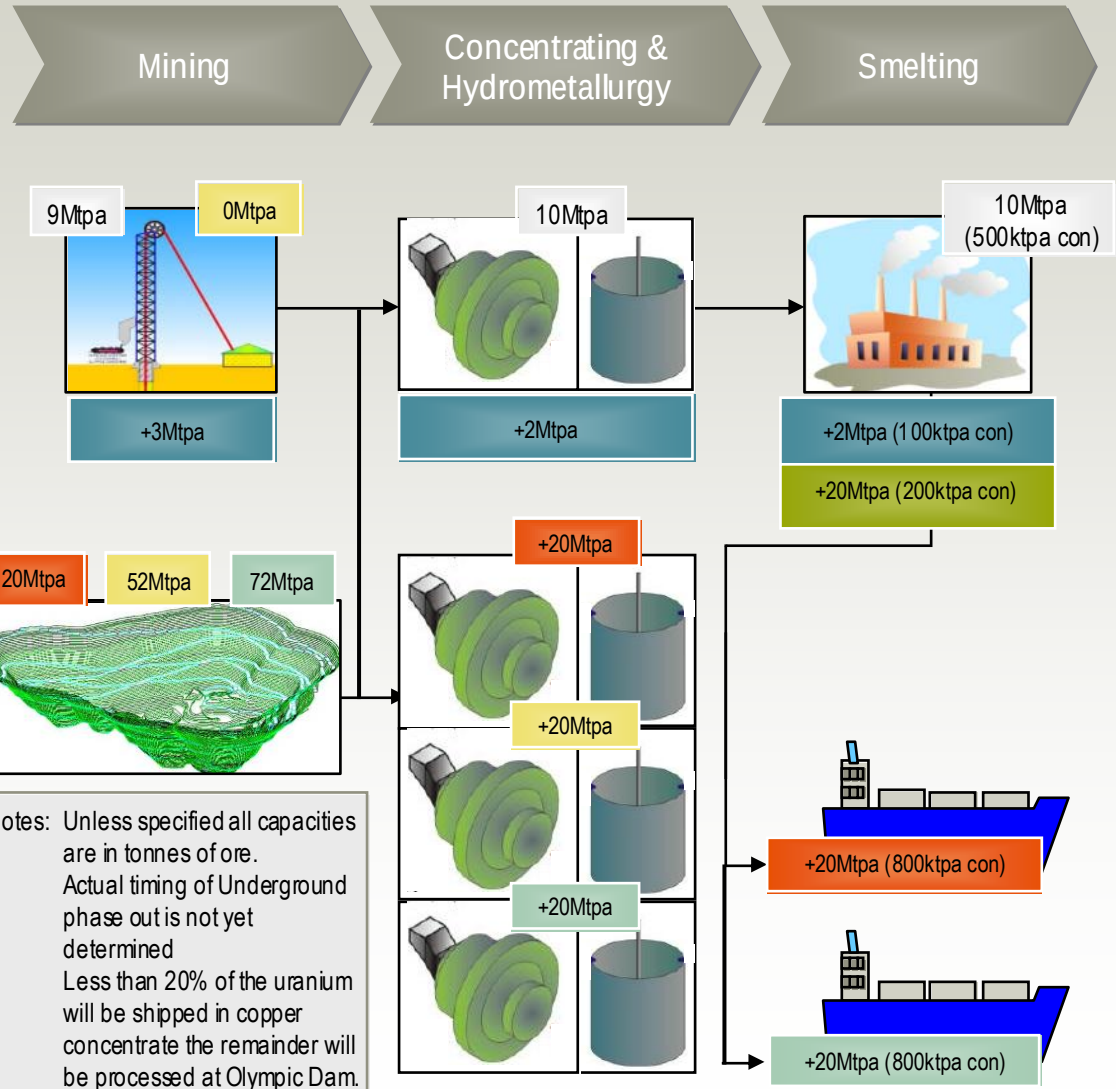
Notes: DPD – Deputy Project Director.

bhpbilliton
resourcing the future

# Staging reduces risk and allows integration of technology

| | |
|---|---|
| Stage 1 | **Optimise the existing operation.** Alternatives are under evaluation for expansion of the ore delivery and treatment capacities up to 12 Mtpa. |
| Stage 2 | **Develop** 20 Mtpa open pit ore supply (2A), Cu concentrator and $U_3O_8$ leach plant (2B). Cu concentrate sold to China smelter. |
| Stage 3 | **Expand the existing OD smelter** to treat stage 4 & 5 high Cu:S Cu concentrate. Delivery of Stages 3 & 4 coincide. |
| Stage 4 | **Expand to** 40 Mtpa the open pit ore supply, Cu concentrator and $U_3O_8$ leach plant capacities. Low Cu:S Cu concentrate sold to China smelter. |
| Stage 5 | **Expand to** 60 Mtpa the open pit ore supply, Cu concentrator and $U_3O_8$ leach plant capacities. Low Cu:S Cu concentrate sold to China smelter. |

# The proposed staged development of Olympic Dam




Notes: Unless specified all capacities are in tonnes of ore.
Actual timing of Underground phase out is not yet determined
Less than 20% of the uranium will be shipped in copper concentrate the remainder will be processed at Olympic Dam.

**CONCEPTUAL**

| Stages | | Proposed Capacity Cu (ktpa) | $U_3O_8$ (ktpa) | Au (kozpa) |
|---|---|---|---|---|
| 0 | Current | 180 | 4 | 100 |
| 1 | Optimise underground | 200 | 4.5 | 120 |
| 2 | Develop open pit production build greenfield concentrator and hyrdometallurgy circuits sell excess concentrate | 350 | 9 | 400 |
| 3 | Expand on site smelter to 800ktpa | 350 | 9 | 400 |
| 4 | Expand open pit add greenfield concentrator and hydrometallurgy circuits | 540 | 14 | 600 |
| 5 | Further expansion of open pit, build new concentrator and hydrometallurgy circuit Sell excess concentrate | 730 | 19 | 800 |
| + | Further growth opportunities | | | |



bhpbilliton
resourcing the future

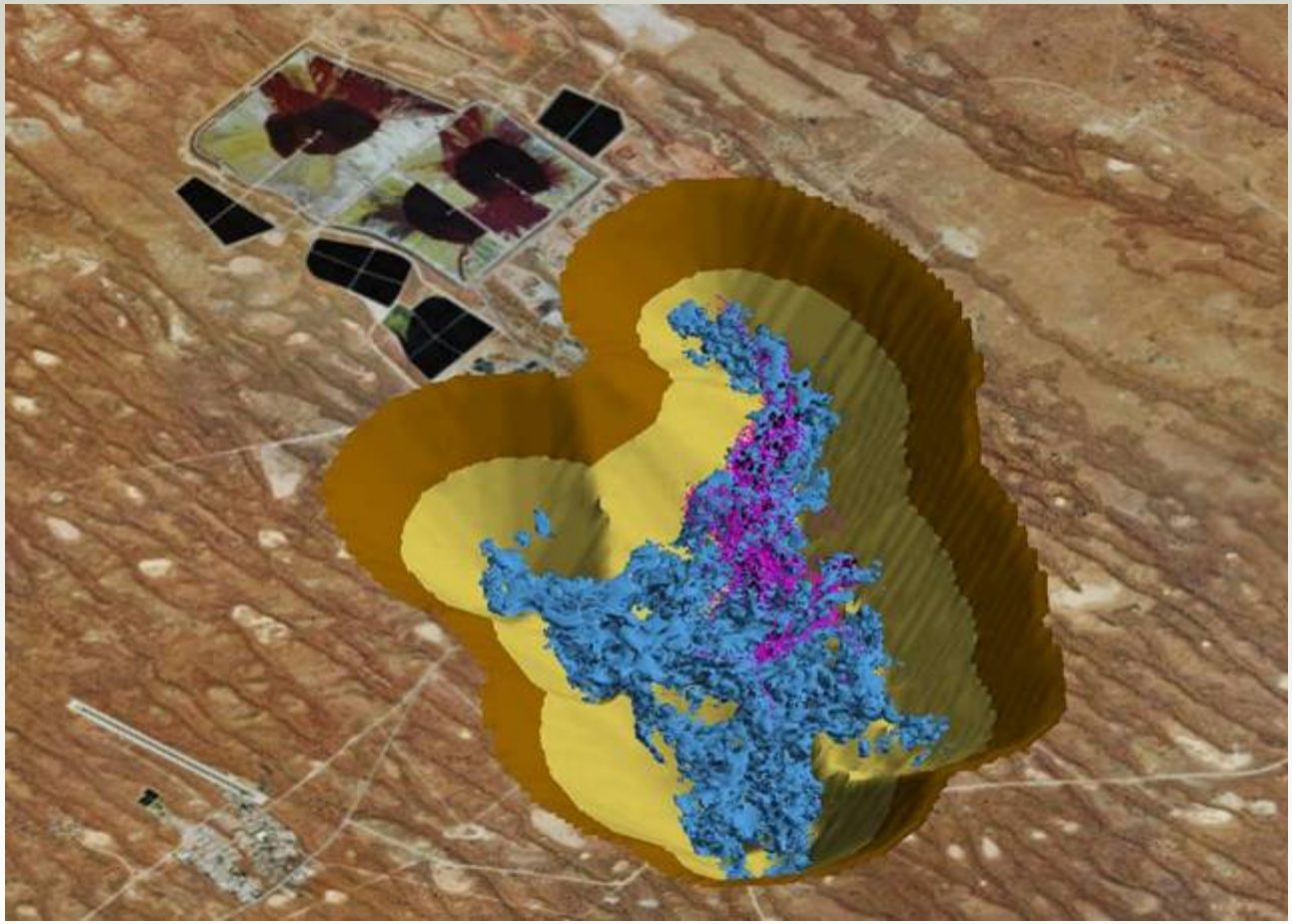
# Scale: A very large open pit





bhpbilliton
resourcing the future

# Olympic Dam Resource



$U_3O_8$ >300ppm

Au >0.3g/t

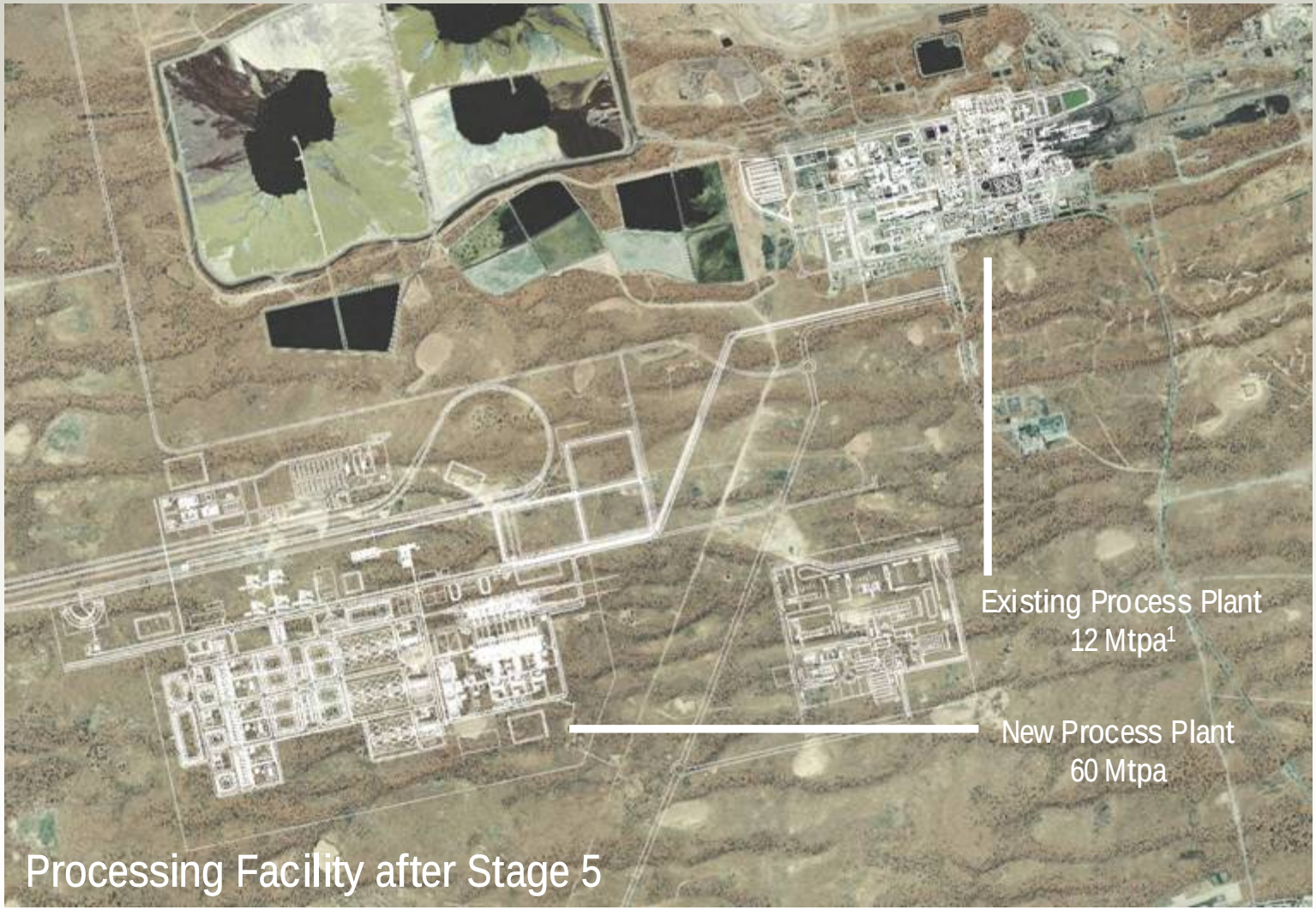
Cu >0.5%

Cu >1.0%

Cu >2.0%

Pit @ 100 yrs

# Simplification:
# Five-fold increase in ore volume, doubling of plant footprint

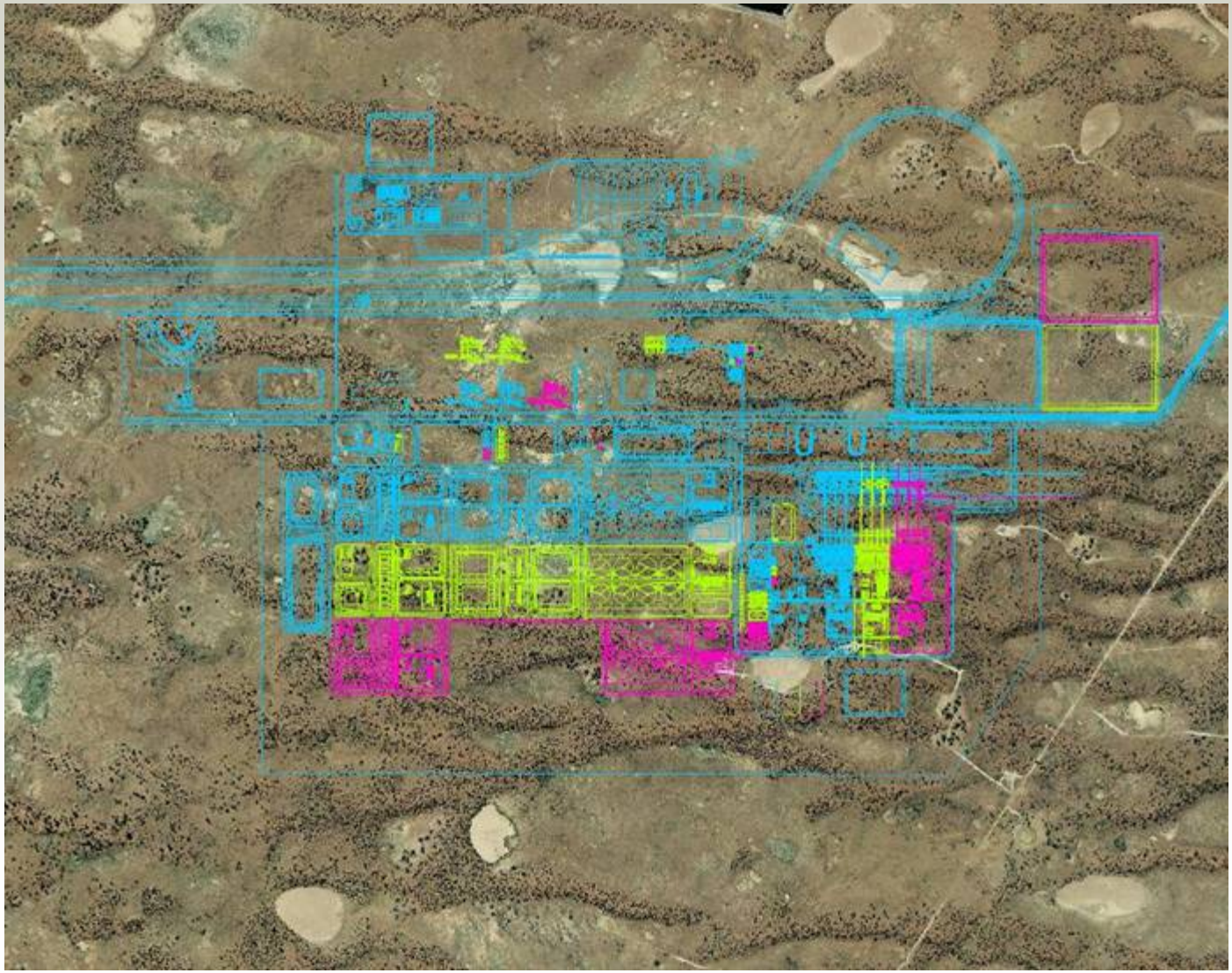



Notes: 1- Potential capacity after optimisation, current capacity 10Mtpa.



bhpbilliton
resourcing the future

# Process Plant Project Staging






bhpbilliton
resourcing the future

# Shipping copper concentrate and not cathode allows capital intensive smelter to move to China

1

Get concentrate out of Australia, in front of schedule:
Final process report handed to ASNO

2

Transport concentrate across the seas, in front of schedule:
AMSA has written a transport schedule that the team is comfortable we can deliver

Commercial agreement needed to import concentrate into China. Discussions positive, work plan in place. Significant capital savings (ballpark figures)

3

Note: ASNO – Australian Safeguards and Non-Proliferation Office.
AMSA – Australian Maritime Safety Authority.

# Autonomous Mining Systems

## Why?

- Potential step change in risk exposure
- Reduced mining cost

## Technology

- DARPA Urban Challenge
- Autonomy trials at a number of different mine sites
- Technology is well advanced. Integration remaining

## BHP Billiton

- Development contract signed with Caterpillar for trucks and drills
- Truck testing started at Caterpillar facilities
- Extensive pilot program planned




bhpbilliton
resourcing the future

# Environmental Impact Statement (EIS) Status

- Documentation completed for internal review
- Subject to above review
  - First release to Governments end of 2008 (permission to print)
  - Public display April/May 2009
  - Submit response document Oct 2009
  - Ministers' decisions Feb 2010 (timing subject to political processes)
- Approving Ministers
  - Federal – Environment Minister – Peter Garrett
  - South Australia – Planning Minister – Paul Holloway
  - Northern Territory – Infrastructure Minister - Delia Lawrie

# Project Schedule

- Stage 1 in production by 2013
- EIS approval to take between 12 and 18 months
- Development of open pit to take 5 years
- Ore Processing expansion developed in three stages




# Strong Future for the Uranium Business

Graeme Hunt

President Uranium and Olympic Dam Development

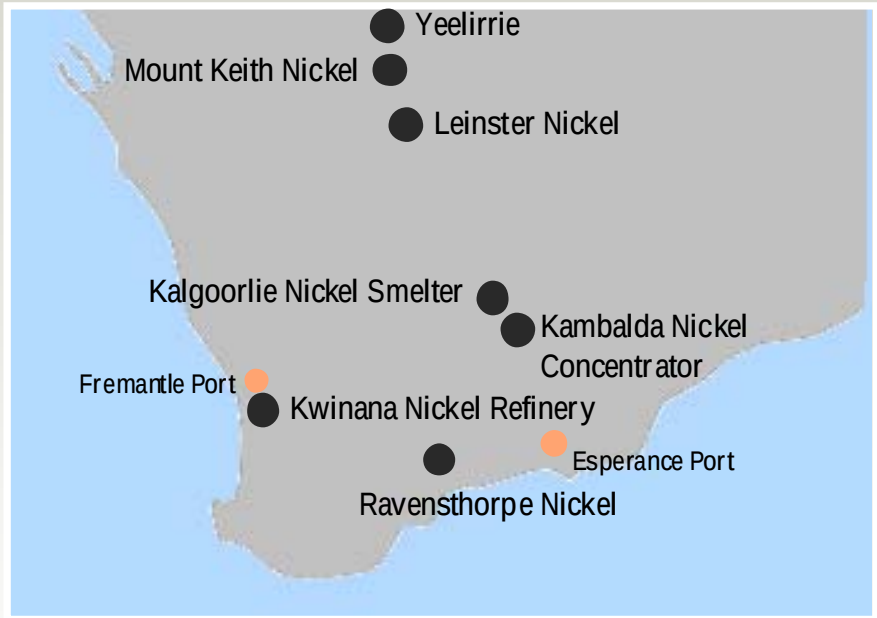
bhpbilliton

resourcing the future

# Yeelirrie: A large undeveloped resource

## Good news

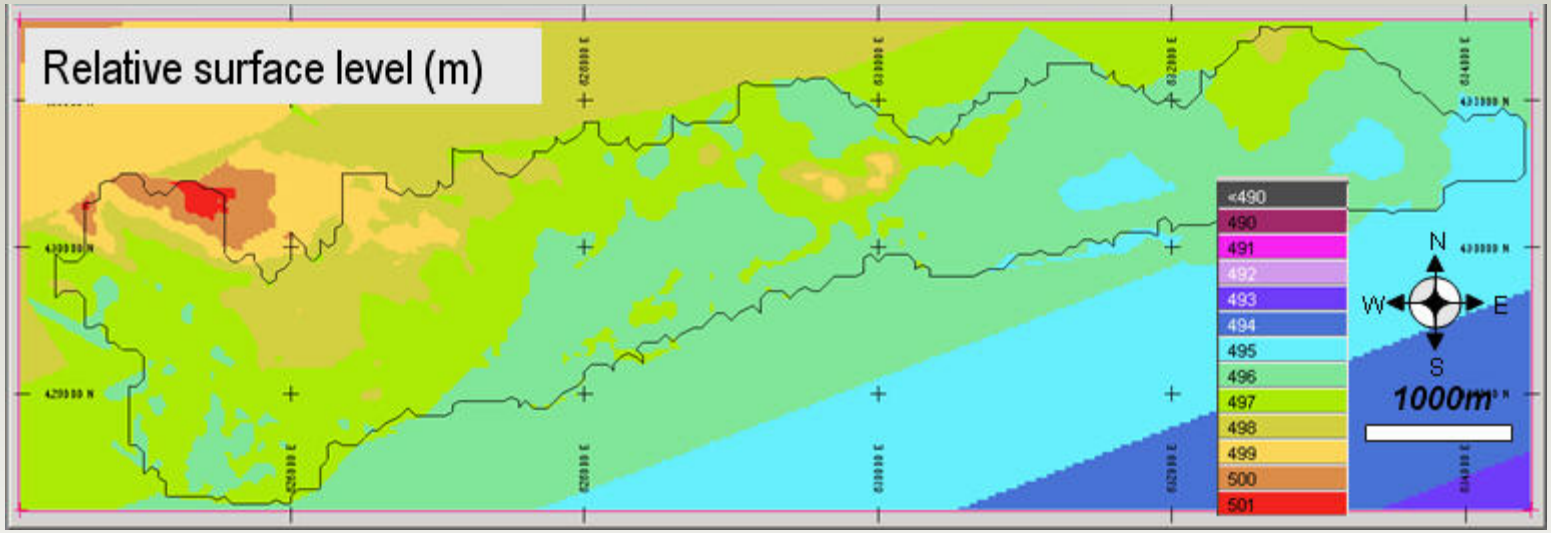
- Australia's second largest undeveloped uranium target
- 130km North of BHP Billiton's Mount Keith infrastructure
- 100% BHP Billiton owned
- Discovered in early 1970's
- State agreement still in place

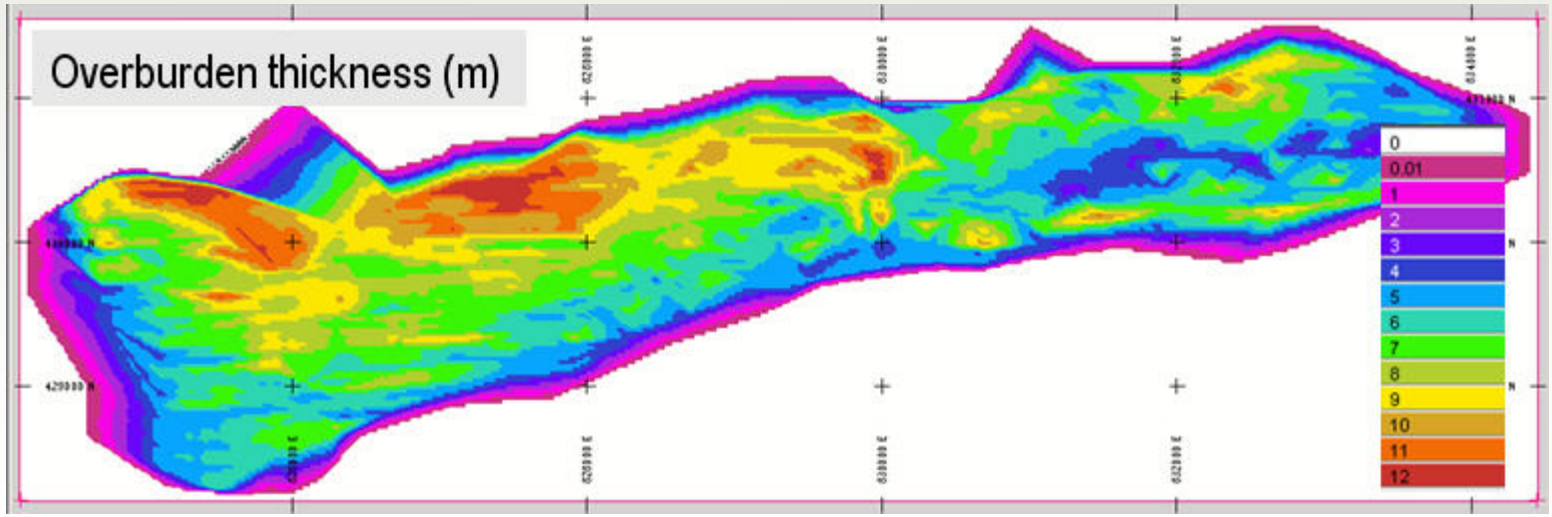



## What's Next?

- Upgrade target to JORC compliant
- Update feasibility study to determine the preferred development path

# Yeelirrie is flat and the deposit shallow

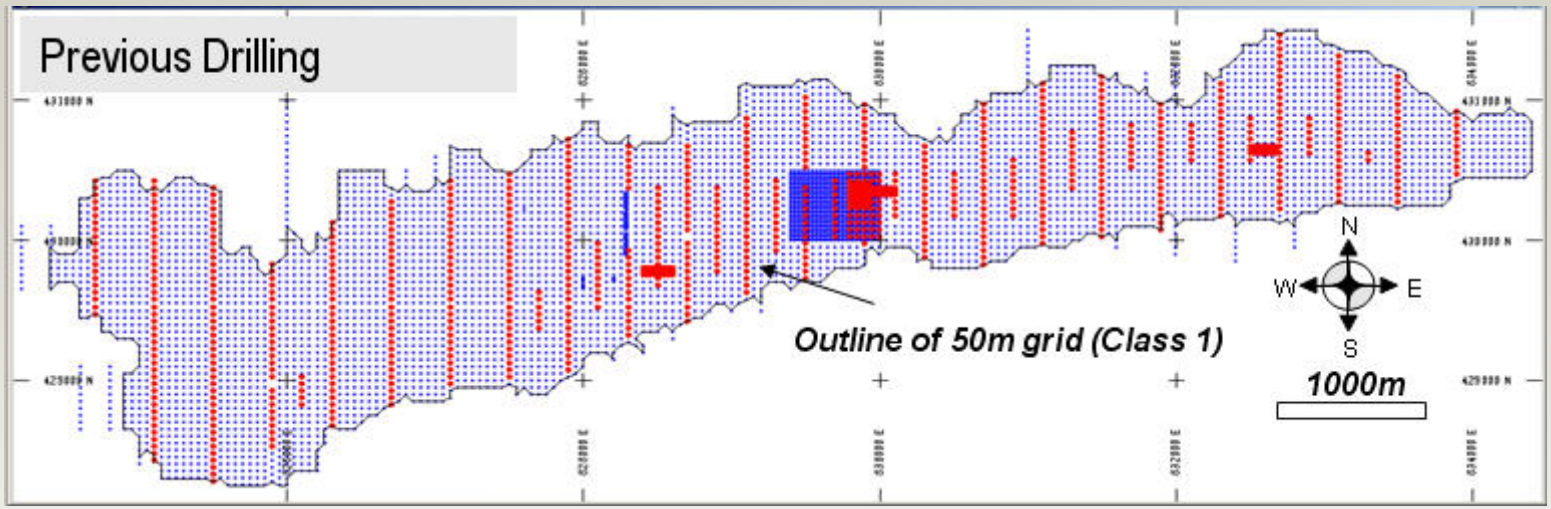


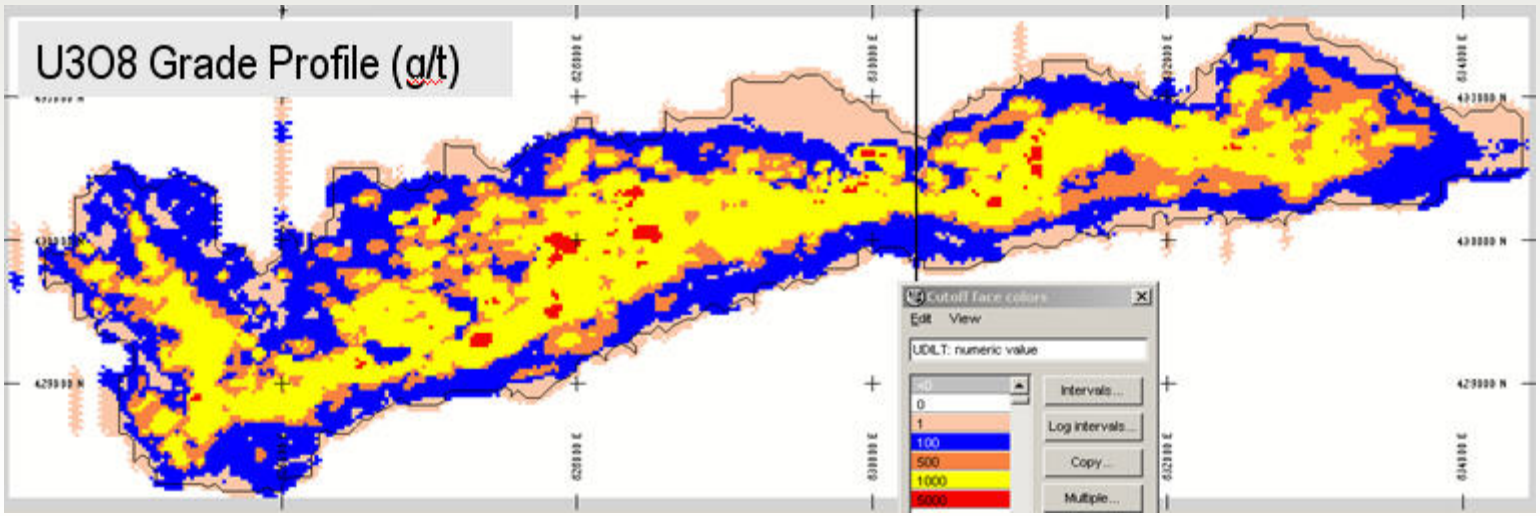






bhpbilliton
resourcing the future

# Yeelirrie is well drilled and has great grades, further work required to develop JORC compliant resource



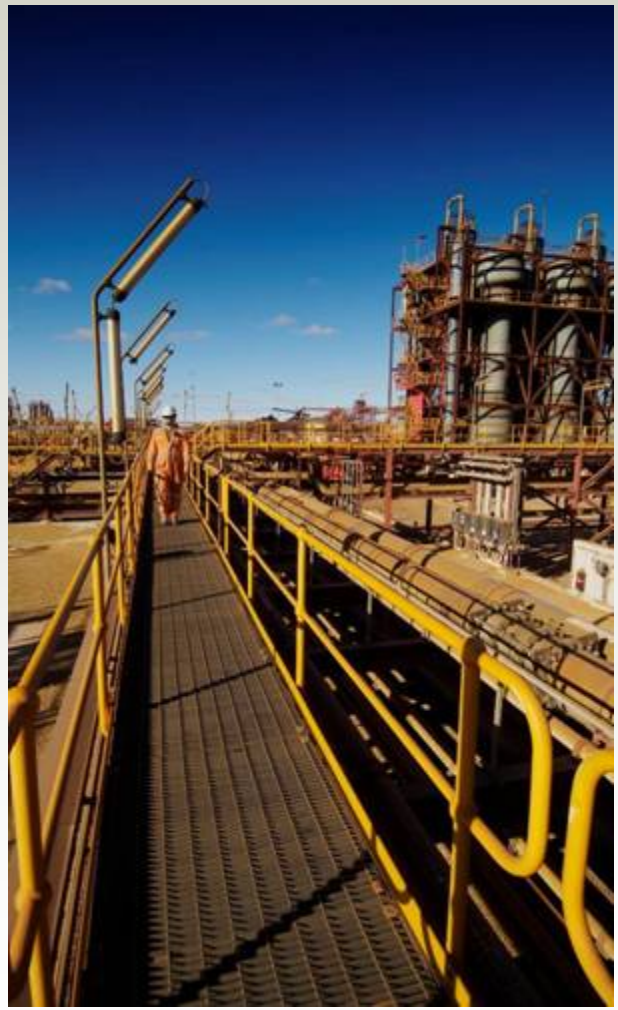






bhpbilliton
resourcing the future

# Key Messages

- We have a strong team managing our uranium business
- Olympic Dam is a unique resource
  - Will support a multi-generational business
- Longer term demand outlook is strong
- Olympic Dam is a good business today
- Yeelirrie is another outstanding long term opportunity
- We have experience in large projects and integrating other businesses




bhpbilliton
resourcing the future