BHP Billiton Aluminium

April 2002



Introduction and Strategy

Mike Salamon



Presentation objectives

- BHP Billiton context
- Aluminium strategy and positioning
- Industry and competitive review
- Aluminium performance
- Prospects



Presentation outline

Introduction & Strategy Industry South America Australia Southern Africa Marketing Finance Conclusion

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BHP Billiton - Diversification Year end 31 December 2001

Revenue - Geographic Origin

EBIT - CSG





EBIT contribution excludes exceptional items

Role of Aluminium in BHP Billiton

- Critical mass and cost competitive
- Cash generative and gearing capacity
- Value growth
- Portfolio balance
- Trading and financing capability
- Base for innovation



Aluminium: Growth in low cost capacity Fiscal Year



Alumina: Growth in low cost capacity **Fiscal Year** Worsley acquisition 4500 Worsley expansion 4000 Billiton acquired 3500 from Shell 3000 ,000t 2500 2000 1500 1000 500 0

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005



Strategy

BHP Billiton Aluminium today

- Embedded growth options mainly exercised
- New opportunities mostly outside existing asset base
- Alumina good industry for low cost players
- Smelting the right projects provide good returns
- Low cost portfolio provides robust growth foundation

And our aims

- Lowest unit cash cost producer of alumina and aluminium
- Greatest rate of profitable growth in industry
- Number 1 or 2 in third party alumina and aluminium
- Top 3 aluminium company in financial performance
- The world's <u>best</u> upstream aluminium company



Value Drivers – The focus of Aluminium

VALUE DRIVERS	STRATEGIC IMPERATIVES	PERFORMANCE MEASURES
What distinguishes us from others	What we have to get right	How the market should judge us
Outstanding assets	"Zero harm"	Safety and environment
–Worsley	Operating excellence	Low cost
–Hillside –Mozal		Productivity improvements
Growth - project inventory	\$1.5bn in 2002-2006	Leveraging future returns
–Brownfield	Mozal 2 & Hillside 3	On time and budget
–Greenfield	Worsley & other	Delivering project value
Customer-centric marketing	Global book Organisational capability Alumina base	Preferred supplier status Creative solutions
Innovation –Strategic analysis and implementation –Marketing	Opportunity identification Commercial judgement Transaction execution	Focus on –Business opportunities –Creative customer solutions



Global cash alumina refining costs in 2003



Global cash aluminium smelting costs in 2003



BHP Billiton Aluminium's growth options



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Industry Environment

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The industry

- Dimensions
 - Demand 33mt of which secondary 8mt

Industry capitalisation
 \$150bn of which
 upstream about 50%

- Characteristics
 - Mature
 - Wide-ranging applications
 - Capital intensity and scale
 - Economic bauxite scarce
 - Power intensity
 - Historically integrated
 - High upstream entry and exit barriers
 - Metal price volatility



The industry – key issues

- Demand
 - Automotive can aluminium trump steel?
 - China Rapid smelting growth and growing alumina deficit
- Supply
 - Power PNW a "once-off"
 - Smelting technology AP 50 and Alcoa's inert anode
 - Recycling Greater growth than primary
 - Environment More value for clean energy
- Industry structure
 - Upstream downstream split



Industry structure – the value chain

- Value chain
 Our view
 - Bauxite and alumina
 - Alumina concentrated
 - Steepening cost curve
 - Bauxite access constraints
 - Smelting
 - Fragmented
 - Terminal market pricing
 - Downstream
 - Inter-material competition & strong buyers in downstream lead to little pricing power

- "Two tier" cost curve providing stranded power rent
- Stay clear of downstream



- Core element of strategy



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Aluminium assets in Brazil



Operating performance



Developments

- Actual
 - MRN bauxite mine
 - From 11.3 to 16.3mt to be completed in 2003
 - Capital expenditure \$190M (BHPBA share \$28M)
 - Valesul smelter
 - Machadinho hydro power station
 - Valesul has 8.8% of investment and 7.3% firm energy take
 - Start-up 2002
- Potential
 - Alumar refinery expansion



Key issue – power for Alumar smelter

- Alumar power contract expires in 2004
- Consortium formed to bid (100% basis) for:
 - Santa Isabel 1,087MW and US\$600M *
 - Estreito 1,200MW and US\$775M
 - Serra Quebrada 1,328MW and US\$825M
- Consortium: CVRD (43.85%), BHPB (20.6%), Alcoa (20.0%), Votorantin (10.0%) and Camargo Correa (5.55%) *
- Won Santa Isabel auction in November 2001
- Estreito and Serra Quebrada auctions in 2002/03



Suriname

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Alumina industry in Suriname



- Joint ventures with Alcoa as follows
 - Bauxite 76% BHPBA and Alcoa 24%
 - Alumina 45% BHPBA and Alcoa 55%
- Production
 - BHPBA 855kt
 - Alcoa 1,045kt



Continuous improvement





Restructuring efforts and continuous improvement processes enhance competitiveness



Key issue - bauxite continuity



Nearby

- + / 10 years at 100% feed
- concessioned to both partners

West Suriname

- sufficient for refinery for 3 decades
- under review by BHPBA and Alcoa
- sufficient for further development

East Suriname

Alcoa concessions

Scope studies prove viability of various options, including import of bauxite from Brazil



Australia

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South West Western Australia





Western Australia refinery production





Worsley performance

- 3.1mt in 2002 and 3.5-3.7mt in 2008
- Bauxite reserves at 1 January 2002
 - Proven and probable 441mt
 - Minimum 40 year mine life at 3.1mtpa
- Employee relations history
 - 1994 onwards staff contracts (98.7% take-up)
 - single class employee relationship
- Liquor burner a social issue
 - To alleviate concerns liquor burner has been closed until technical solution found (next 18 months)



Cash operating costs in constant dollars (2002)





Southern Africa

Mahomed Seedat



Southern African smelters





Primary aluminium smelter capacities



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Bayside improvement plans

- From:
 - Old smelter seen as needing significant capital to stay alive
 - Non integrated marketing / casthouse plan , resulting in poor "net premiums"
 - Low productivity levels 2850 FTE's
- Current:
 - Middle of cost curve
 - Good systems, structures, and people
 - Significantly improved "net premiums"
 - 1070 FTE's
- Vision:
 - Lower 1/3rd of cost curve
 - Vastly improved human capacity
 - World class net premiums
 - <900 FTE's</p>



Business re-engineering

- Capital expenditure
- Training
- Close the gap program





LME cash breakeven



Hillside Aluminium





- First metal produced in June 1995
- All first generation cells have now been changed-out
- Current production capacity : 532 000tpa (466 000tpa)
- Current LME cash breakeven cost of around \$725/ton
- Expansion project officially commenced in April 2002 at a cost of \$450M (\$3400/ton).
- Expansion will increase capacity by 25% (132 000tpa).
- LME cash breakeven will improve to around \$600/ton



LME cash breakeven US\$/t 900 J

Hillside



Hillside Expansion - construction progress





Mozal – New facilities





Mozal







- First metal produced in June 2000
- Specific capital cost of \$3900/ton of installed capacity
- Designed for 250 000tpa
- Currently producing at a rate of 262 000tpa
- Current LME cash breakeven of \$740/ton
- Expansion project commenced in July 2001 at an approved cost of \$859M (\$3270/ ton)
- Production capacity will increase to 534 000tpa
- LME Cash Breakeven will improve to around \$575/ton



LME breakeven MOZAL US\$/t 900 ק 800 LME CASH BREAKEVEN 700 600 500 400 300 200 100 0 02/03 03/04 04/05 00/01 01/02 05/06 06/07 :21 **bhp**billiton

Mozal Expansion - construction progress





AP30 Smelter Comparisons

<u>Smelter</u>	<u>Amps.</u>	<u>Cur.Eff.</u>	<u>D.C.</u>	<u>Fe</u>
	<u>kA</u>	<u>%</u>	<u>kWh/t</u>	<u>ppm</u>
Mozal	333,0	96,8	12 967	668
Hillside 1	330,0	93,8	13 081	1 250
Hillside 2	325,0	96,2	12 920	1 297
4	308,5	93,3	13 451	2 270
5	336,3	94,0	13 160	1 223
6	326,6	94,5	13 181	717
7	332,7	94,4	12 959	745
8	333,8	90,8	13 624	1 220
9	330,9	93,4	13 337	591
10	332.0	93.6	13 429	640

Source : AP30 newsletter



In just 10 years BHPB will have grown its Southern African primary aluminium capacity to 1.4mtpa



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Marketing

Rod Kinkead-Weekes



Marketing – a key component of the organisational structure



BHP Billiton's aluminium operations



Total book > 1.5mt

Aluminium marketing strategy

STRATEGY

- Market diversification to maximise premium returns
- Build on strong physical base...
- plus more active trading (metal and instruments)
- Understand, manage and control risks at all times
- Maximise value from BHPB Group to provide innovative customer solutions



STATUS

- Number 2 in non-integrated primary metal sales
- Metal market rationalization provides opportunity



Primary aluminium - Sales destinations (Equity export)



BHP Billiton's alumina operations





Alumina marketing strategy

STRATEGY

- Supply increasing internal requirements
- Position for further growth in low cost refining capacity (including bauxite)
- Capabilities to supply new markets, e.g. China, Russia
- Provide innovative customer solutions
- Risk and option management systems and controls

STATUS

- Market presence over 30 years
- Readily accommodated acquisition of 56% of Worsley
- Single global book



Attractive low-cost supplier for 3rd party customers



Chinese annual alumina imports – the future?



Market update

- Aluminium
 - Improving demand in Europe, Korea, Taiwan and US, but...
 - the consumer lagging
 - Increasing LME stocks impede price recovery, although...
 - total reported stocks lower than in past recessions
 - Further smelter restarts anticipated; PNW to remain a swing producer
- Alumina
 - Modest recovery in spot price
 - Ongoing strong Chinese consumption
 - Renewed Pacific North West buying



Finance

Alex Vanselow



Net Operating Assets – at 31 December 2001

Reflection of rapid growth over recent years (81% - Worsley, Hillside and Mozal)





Total: USD 4.7b

Capital Expenditure



EBIT – half year to 31 December 2001

Dominated by 3 major assets

Total: USD 192M



EBIT – Half year 2001 versus half year 2000



Aluminium cash costs





Alumina cash costs





Real cash cost index - Alumina





Real cash cost index - Aluminium

Normalised to 1999 LME Price and Exchange Rates



EBIT aluminium price sensitivity





EBIT US\$/A\$ exchange rate sensitivity Fiscal 2003





EBIT Rand/US\$ sensitivity Fiscal 2003





Value drivers – Aluminium

- Reduce costs by > 2% pa real in planning period
 - normalising LME linkages
- Improved EBIT and increasing free cash flow (before cap-ex)
- Deliver minimum \$1.5bn in value adding projects by 2006
 - 15% of Group total
- 2006 forecast nominal EBIT returns
 - LME \$1,350/t (2002 \$) ~ 12%
 - LME \$1,550/t (2002 \$) ~ 18%



Conclusions

Mike Salamon



Conclusions

- Vision
 - To be the world's best upstream aluminium company
- Within this envelope we will:
 - Develop embedded and greenfield growth options
 - Pursue opportunistic M&A
 - Exploit outstanding cost competitive position
 - Pursue innovative marketing ...
 - and finally, be creative across all aspects of our business
- Leading to strong cash flow and financial performance

