

BHP BILLITON LTD  
Form 6-K  
December 17, 2003

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SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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FORM 6-K

REPORT OF FOREIGN ISSUER

PURSUANT TO RULE 13a-16 OR 15d-16 OF

THE SECURITIES EXCHANGE ACT OF 1934

For the Date of 30 September 2003

BHP Billiton Limited

ABN 49 004 028 077

Level 27, 180 Lonsdale Street

Melbourne Victoria 3000

Australia

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F  Form 40-F

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934

Yes No

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b):

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Date 30 September 2003

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**BHP BILLITON HEALTH, SAFETY, ENVIRONMENT & COMMUNITY REPORT 2003**

Please find attached the 2003 Health, Safety, Environment and Community Report of the BHP Billiton Group. A more expansive, pdf version of that Report will be posted on the Group's website [www.bhpbilliton.com](http://www.bhpbilliton.com).

**Karen Wood** Company Secretary

## *Our New Approach to Reporting*

In early 2003, we commissioned an independent survey to find out in which formats our stakeholders would prefer to receive our Health, Safety, Environment and Community (HSEC) Report.

The object of the exercise was to enable us to report in a way that would allow stakeholders to quickly review our performance, while also having the opportunity to easily access greater amounts of detail as required.

In response to this feedback, we are providing expanded information on our website while reducing our printed report to this smaller summary version. This is the mix preferred by the great majority of our stakeholders. A brief summary of our HSEC performance is also included in the Company's Annual Report.

This printed Summary Report provides an overview of our HSEC performance. The adjacent diagram shows where you can access all the available information on the website.

### **Global Reporting Initiative**

The full HSEC Report on our website has been prepared in accordance with the Global Reporting Initiative (GRI) 2002 Sustainability Reporting Guidelines. It should be recognised that, due to the size and complexity of our business, judgements have had to be made regarding the extent of information that can be presented in relation to each GRI indicator. Please contact the Company if you would like further information.

A GRI content index has been independently prepared by URS Corporate Sustainable Solutions, outlining how each specific indicator of Part C of the GRI Guidelines has been addressed.

Both the full HSEC Report and the GRI index are available in PDF format.

### **About this Report**

BHP Billiton is a Dual Listed Company comprising BHP Billiton Limited and BHP Billiton Plc and their subsidiaries. The two entities continue to exist as separate companies but operate as a combined group known as BHP Billiton.

Throughout this Report, the terms BHP Billiton, the Company and the Group refer to the combined group. The statistics in this report cover the facilities owned and operated by BHP Billiton during the 12-month period to 30 June 2003. Joint venture projects where we are not the operator are excluded unless expressly stated. The Report identifies where information has been provided to facilitate year-to-year comparison of our performance without BHP Steel, which commenced trading on the Australian Stock Exchange as a separate listed company in July 2002.

All dollar figures in the Report are US unless otherwise indicated.

For the full version of our Health, Safety,  
Environment and Community Report 2003,

log onto [www.bhpbilliton.com](http://www.bhpbilliton.com)

*4 Front cover main photo: Marcelino Melo Jr, Casthouse crew member, Mozal Aluminium Smelter, Mozambique  
The supporting images reflect our journey towards sustainable development – our products, our people, our stakeholders, our future*

Message from the Chief Executive Officer

*4 Chip Goodyear, Chief Executive Officer*

At BHP Billiton, we take a long-term view of our business. A key aspect of our strategic framework is our health, safety, environment and community (HSEC) performance – because we value our people, we respect our host communities and we believe that excellence in HSEC is good for our business.

I am very pleased to advise that we have made steady progress against many of the targets in our HSEC scorecard. However, we also recognise that there is much work to be done, and this report outlines a number of our key work programs.

While pleased about our achievements, I am deeply saddened to report that three people lost their lives in our controlled operations during the year. These people lost their lives in the course of earning a living and helping our operations achieve their objectives. But none of our achievements is worth the loss of a life, and we will continue to seek opportunities to improve our safety performance and eliminate fatalities from the workplace.

Environmental performance across the company continued to be sound, reflecting our systematic approach to managing environmental risk. Management plans focusing upon driving eco-efficiency gains have been developed in the areas of energy usage, greenhouse gas emissions, water and waste.

In line with our HSEC Policy, efforts have continued towards improving our engagement with our host communities. Our community contributions, supporting community programs and capacity building, this year amounted to US\$42 million or 1.4 per cent of our pre-tax profit, which once again exceeded the target of 1 per cent. In addition, US\$12.5 billion was contributed to regional economies from expenditure associated with sustaining our operations.

During the year, we have been active in the International Council on Mining and Metals (ICMM) work program, contributing to the formulation of the Sustainable Development Framework, a guiding set of principles now endorsed by all member companies. We have also committed to implement the World Bank Guidelines on Involuntary Resettlement and the US-UK Voluntary Principles on Security and Human Rights.

We have been pleased over the past year to receive external recognition of our performance in the areas of community partnerships, sustainable development and public reporting. Internally, our Employee HSEC Awards program has been highly successful in recognising excellence in HSEC performance and transferring those improvement ideas across the organisation.

The full HSEC Report on our website has been prepared in accordance with the Global Reporting Initiative 2002 Sustainability Reporting Guidelines, and represents a balanced and reasonable presentation of our organisation's economic, environmental and social performance.

The leadership team at BHP Billiton is committed to our journey towards sustainable development and Zero Harm. We understand that our leadership efforts are fundamental for success, and we will support and drive this relentlessly. This journey, however, is not ours alone. It is all about partnerships with our stakeholders – our employees, contractors, shareholders, business partners, suppliers, customers, government and non-government organisations and host communities.

Together, we have the will, the resources and the skills to be successful.

Chip Goodyear

**Chief Executive Officer**

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We are continuously improving our reporting systems and endeavour to present useful and accurate information. While every effort has been made to ensure the accuracy of the information, including the figures, in this Report, the data are derived from our many operations around the world and, in some cases, grouped data are not strictly comparable.

Anyone seeking to rely on information in this Report or seeking to draw detailed conclusions from the data should contact the Company for verification and assistance.

Your comments on the contents of our HSEC Report would be greatly appreciated. A Feedback Form is available as part of the full HSEC Report on our website at [www.bhpbilliton.com](http://www.bhpbilliton.com)

BHP Billiton Limited. ABN 49 004 028 077.

Registered in Australia. Registered Office (from 6 October 2003):

BHP Billiton Centre, 180 Lonsdale Street, Melbourne, Victoria 3000  
Australia.

BHP Billiton Plc. Registration Number 3196209.

Registered in England and Wales. Registered Office:

Neathouse Place, London SW1V 1LH United Kingdom.

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HSEC Targets and Scorecard

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### BHP Billiton HSEC Targets (Baseline 1 July 2001 to 30 June 2002)

Legend: = Target exceeded or ahead of schedule = Target achieved ( $\geq 95\%$ ) or on track = Target behind schedule = Target not achieved

**MANAGEMENT SYSTEMS** All sites<sup>1</sup> to undertake annual self-assessments against the BHP Billiton HSEC Management Standards. = Systems in place and audits or self-assessments completed at 99 per cent of required sites in FY03. Audits were also conducted at three non-operated sites (not required by the target). All sites<sup>1</sup> to achieve and maintain ISO 14001 Certification. = All sites requiring ISO 14001 are accredited or have been recommended for accreditation by their ISO auditor. **Legal Compliance** Zero fines and prosecutions. = Nine fines in FY03 totalling US\$166 944. **Risk Management** Risk registers to be in place at all sites and within BHP Billiton businesses and Corporate. = Risk registers in place at all required sites, and Customer Sector Group and Corporate levels. HSEC risk incorporated in Enterprise-Wide Risk Management framework. **SAFETY** Zero fatalities = Three fatalities in controlled activities.<sup>2</sup> 50 per cent reduction in Classified Injury Frequency Rate<sup>3</sup> (excluding First Aid treatments) at sites by 30 June 2007. = 20 per cent reduction in Classified Injury Frequency Rate in FY03. **HEALTH** All sites<sup>1</sup> to implement a baseline survey on occupational exposure hazards and establish occupational hygiene monitoring and health surveillance programs. = 97 per cent of required sites implemented baseline surveys. In addition, 91 per cent of employees requiring medical health surveillance completed the medical examination. Annual reduction in percentage of people potentially exposed above occupational exposure limits.<sup>4</sup> = FY03 was the baseline year in determining exposure data. 20 per cent reduction in incidence of occupational disease by 30 June 2007. = FY03 was the baseline year in determining incidence rates. **COMMUNITY** All sites<sup>5</sup> to prepare public HSEC reports at a local level (including incidents, community complaints, and relevant site-specific emissions) on an annual basis. = HSEC reporting initiatives are in place at 97 per cent of required sites or businesses. All sites<sup>5</sup> to have a community relations plan in place. = Community relations plans in place at 95 per cent of required sites and at 21 sites that were not required to meet this target. No transgressions within the Group's activities of the principles embodied within the United Nations Universal Declaration of Human Rights. = None reported. Aggregate contribution to community programs, including in-kind support, of a target of 1 per cent pre-tax profits, calculated on a three-year rolling average. = Expenditure totalled US\$42 million, being 1.4 per cent of pre-tax profits on a three-year rolling average. 2 4 BHP BILLITON HSEC SUMMARY REPORT 2003

### BHP Billiton HSEC Targets (Baseline 1 July 2001 to 30 June 2002) continued

Legend: = Target exceeded or ahead of schedule = Target achieved ( $\geq 95\%$ ) or on track = Target behind schedule = Target not achieved

**ENVIRONMENT** Zero significant incidents (i.e., rated 3 and above on the BHP Billiton Consequence Severity Table). = Zero significant environmental incidents. **Energy and Greenhouse** All sites with emissions greater than 100 000 tonnes per year of carbon dioxide equivalent<sup>6</sup> are required to have energy conservation plans with specific targets in place. = Energy conservation plans in place at 88 per cent of required sites and at nine sites that were below the emissions threshold. All sites with emissions greater than 100 000 tonnes per year of carbon dioxide equivalent<sup>6</sup> are required to have greenhouse gas management programs. = Greenhouse gas management programs in place at 85 per cent of required sites and at eight sites that were below the emissions threshold. Aggregate Group target for reduction in greenhouse gas emissions per unit of production of 5 per cent by 30 June 2007. = FY03 intensity reduction achieved was 6 per cent, which exceeded the long-range target (although data can fluctuate on an annual basis). **Water** All sites with fresh water consumption greater than 500 ML per annum<sup>7</sup> to have water management plans in place. = Water management plans in place at 98 per cent of required sites and at 24 sites that were below the threshold. Aggregate Group target of 10 per cent reduction in fresh water consumption per unit of production by 30 June 2007. = FY03 intensity reduction achieved was 1 per cent. **Waste** All sites<sup>1</sup> to have waste minimisation programs in place. = Waste minimisation programs in place at 100 per cent of required sites and at 18 sites that were not required to meet this target. Aggregate Group target of 20 per cent reduction in waste (excluding recycled and mining-related materials, such as waste rock, tailings, coal reject and slag) per unit of production by 30 June 2007. = Increases in waste intensity reported in both general waste and hazardous waste categories. The level of new project development impacted the amount of general waste generated. **Land Management** All sites<sup>5</sup> to have land management plans in place to protect and enhance agreed beneficial uses. = Land management plans in place at 96 per cent of required sites and at 21 sites that were not required to meet this target. **Product Stewardship** Life cycle assessments prepared for all major BHP Billiton minerals products by 30 June 2004 (incorporating participation in industry programs as appropriate). = This target is being monitored at the commodity level and is on track.

**Notes** 1. Excludes exploration and development projects, sites being divested, closed sites and offices (numbering 57 sites in total). 2. Controlled activities are work-related activities where BHP Billiton directly supervises and enforces HSEC standards. 3. A classified injury is any workplace injury that has resulted in the person not returning to their unrestricted normal duties after the day on which the injury was received. 4. Target modified to reflect adoption of BHP Billiton exposure standards (see Health Performance Summary in the full HSEC Report). 5. Excludes petroleum platforms, exploration and development projects, closed sites, and offices with no significant community or land management issues. 6. Forty sites have emissions greater than 100 000 tpa carbon dioxide equivalent and, combined, account for 98 per cent of the Group's greenhouse gas emissions. 7. Forty-one sites have freshwater consumption greater than 500 ML per annum and, combined, account for greater than 91 per cent of the Group's consumption. BHP BILLITON HSEC SUMMARY REPORT 2003 4 3

HSEC Governance

## Introduction

Clearly, strong governance in both the financial and non-financial arenas is a critical aspect of running a successful corporation. Our approach to corporate governance is outlined in our Annual Report and on our website at [www.bhpbilliton.com/bb/investorCentre/annualReports.jsp](http://www.bhpbilliton.com/bb/investorCentre/annualReports.jsp)

This section outlines our approach to HSEC governance.

## Structure and responsibilities

At every level of the organisation, our line managers, supported by functional personnel who provide specialist advice, are responsible for HSEC matters. Executive remuneration is directly linked to the financial and non-financial performance of the Company.

As shown in Figure 1, the Company's peak HSE governance body is the HSE Committee, which is a subcommittee of the Board. Further details on the HSE Committee can be found on our website at [www.bhpbilliton.com/bb/aboutUs/governance.jsp](http://www.bhpbilliton.com/bb/aboutUs/governance.jsp)

HSEC standards across the Company are coordinated and monitored through the BHP Billiton Executive Committee.

The peak functional group is the HSEC Forum, which is involved in setting direction for the HSEC function, identifying priority issues, monitoring HSEC performance and building consensus for the way forward.

**Figure 1.** HSEC Organisation Structure

## Policy, Standards and Systems

The Company has combined health, safety, environment and community matters in one policy and one set of management standards. The Standards cover the entire life cycle of our assets, from exploration through to construction, commissioning, operation, decommissioning, closure and rehabilitation. Wherever we operate, HSEC aspects are addressed in our decision-making processes, alongside other business considerations. This means that, while we strive to deliver strong financial returns to shareholders, we fully recognise and deliver on our wider responsibilities to our stakeholders.

The BHP Billiton Charter, HSEC Policy and HSEC Management Standards are mandatory at all our sites and operations, under a hierarchical management system where systems and documents must meet and support the requirements of those of higher levels, as shown in Figure 2. Where we have no operational responsibility but have an equity stake or significant BHP Billiton assets involved, the Standards are made available to the operator so that comparable HSEC management standards can be applied. In addition, the Standards require operations to evaluate the social and environmental performance of our contractors and suppliers.

**Figure 2.** Hierarchy of Systems and Documents

Our HSEC Management Standards include a requirement for an auditing process to ensure that our Charter, HSEC Policy and Standards are being applied and to verify performance. The audit program is a triennial peer review process, with audit teams drawn from operations personnel, line management and external sources. During any year, those sites not audited complete a self-assessment against the Standards. Both the formal audits and self-assessments result in the development of performance improvement plans that facilitate progress to full

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compliance with the Standards. Conformance against the HSEC Management Standards is reported in the Audit and Self-Assessment section on page 14.

The full HSEC Management Standards and performance requirements are available on our website at [www.bhpbilliton.com/bbContentRepository/Policies/HSECMangementStandardsIssue2.pdf](http://www.bhpbilliton.com/bbContentRepository/Policies/HSECMangementStandardsIssue2.pdf)

The HSEC Management Standards were revised during the year, resulting in a consolidated, yet more comprehensive, set of 15 standards. The following new documents have also been prepared:

Fatal Risk Control Protocols    Hearing Conservation Guidelines    Health Surveillance Guidelines    Health Exposure Assessment Guidelines    Energy and Greenhouse Guideline    Energy and Greenhouse Gas Management Plan Template    Human Rights Self-Assessment Toolkit.    4    4 BHP BILLITON HSEC SUMMARY REPORT 2003

### **Business conduct**

The BHP Billiton Guide to Business Conduct applies to all our employees and contractors, regardless of their job or location.

The Guide seeks to provide direction and advice on conducting business and interacting with governments, communities and business partners. It also states our position on a wide range of ethical issues, including conflict of interest, financial inducements and bribery, insider trading and political contributions. Managers and supervisors are held accountable not only for their own actions, but also for the actions of their staff.

Resolution of business conduct issues is encouraged at the local level. If this is not possible, the issue can be raised with regional points of contact or helplines based in southern Africa (Johannesburg), Europe (London), Australasia (Melbourne) and South America (Tintaya, Peru). For issues related to fraud or bribery, the Fraud Hotline is contacted. The final level of management review is the Global Ethics Panel.

4    *The Guide to Business Conduct is available on our website at [www.bhpbilliton.com/bb/peopleAndEmployment/globalBusinessConductGuide.jsp](http://www.bhpbilliton.com/bb/peopleAndEmployment/globalBusinessConductGuide.jsp)*

Part of the Global Community

### **Our stakeholders**

We are committed to maintaining and promoting transparent dialogue with stakeholders in the resources industry and remaining responsive to the global community's concerns. We recognise the importance of accountability to stakeholders and are aiming for a higher level of engagement and interaction, particularly with the communities in which we operate.

Our Charter, HSEC Policy, Management Standards and Guide to Business Conduct all promote a commitment to acting with honesty, integrity and fairness in our interactions with all our stakeholders. Maintaining comprehensive stakeholder relationships is a critical part of our journey towards sustainable development.

### **Financial community**

During the year, we continued to participate in key external benchmarking initiatives that attempt to measure BHP Billiton's sustainable development performance against others in our sector.

Over the period, we maintained our inclusion in the UK FTSE4Good Index and our position in the Dow Jones Sustainability Index. One of the leading proponents of socially responsible investing, Storebrand in Norway, ranked us 'best in class' for our environmental and social performance out of 21 companies researched.

### **Forum on Corporate Responsibility**

The BHP Billiton Forum on Corporate Responsibility (FCR) brings together representatives of our senior management team, the leaders of several key non-government organisations and community opinion leaders to discuss and debate social and environmental matters relevant to the Company. Members of the FCR have an opportunity to provide advice and to challenge the views of our senior management on broader

sustainable development issues. The Company is not bound by the advice of the FCR, and the FCR does not necessarily endorse the Company's decisions.

### Building global links

We are committed to proactive involvement in a number of initiatives to contribute to improving the sustainability of the industry. Our individual businesses are also actively engaged through their sectoral organisations at national and international levels.

The major externally developed, voluntary initiatives<sup>1</sup> that we are involved in or are progressively implementing include:

Australian Minerals Industry Code for Environmental Management (1996)	Global Reporting Initiative (2002)	International Council on Mining and Metals Sustainable Development Framework (2003)	ISO 14001 Environmental Management Systems (2002)
Mining Certification Evaluation Project – Australian regional initiative (2002)	United Nations Global Compact (2002) (please refer to our letter to the United Nations, included on our website <a href="http://www.bhpbilliton.com">www.bhpbilliton.com</a> )	United Nations Universal Declaration of Human Rights (2001)	
US-UK Voluntary Principles on Security and Human Rights (2003)	World Bank Guidelines on Involuntary Resettlement (2003).		

For further details, see the full HSEC Report on our website.

1. The date in brackets indicates the year in which we commenced our involvement or commitment. BHP BILLITON HSEC SUMMARY REPORT 2003 4 5

### Performance Summaries

The Company's performance in the areas of health, safety, environment and community (HSEC) is driven by our commitment to people, the environment, our host communities, and the pursuit of operational excellence to achieve great business outcomes for our shareholders.

Figure 3 illustrates our 'Road to Zero Harm'. This shows how the things we do contribute towards creating a workplace where Zero Harm is possible.

This section presents the key aspects of the Company's HSEC performance in 2002/03, with comments on performance trends and some of our improvement activities. During the period, the organisation was recognised with awards by external groups and organisations for its HSEC performance. These are summarised inside the back cover of this Report.

### Figure 3. Road to Zero Harm

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## PERFORMANCE SUMMARIES

### Health

*4 Our operations provide personal protective equipment as a measure to reduce potential exposure*

### Background

People are central to the success of our business. Accordingly, understanding the potential for health risks and establishing suitable mitigation measures are integral to our journey towards Zero Harm.

Some of the potential health risks present in the organisation include:



inherent occupational health risks associated with the nature of our operations, such as noise, dust, hazardous materials and gases and vibration communicable diseases present in some of the countries in which we operate, including HIV/AIDS and mosquito-borne diseases travel-related risks ergonomic exposures relating to work requirements general suitability for job criteria and fitness for work.

### Performance

Establishing a baseline understanding of potential health exposures and performance across the organisation was a focus of our health programs during the year.

97 per cent of sites reported undertaking a baseline survey on occupational exposure hazards and establishing associated monitoring programs, 91 per cent of those employees requiring medical health surveillance completed the medical examination. Personal protective equipment (PPE) compliance in the Company was, on average, 94 per cent. This is an area where we continually seek improvement and are encouraging operations to implement formal audit programs of PPE compliance. Currently, 70 per cent of operations have formal audit programs. We will endeavour to increase this over the coming year.

### Key issues

Noise is the most significant occupational exposure in our business, with 51 per cent of our employees potentially exposed above the noise exposure limit (85 dBA 8-hour time-weighted average). Additionally, data indicate that, without the use of PPE, 20 per cent of our site-based employees are potentially exposed to hazardous substances above action levels (50 per cent of the occupational exposure limit) but below the occupational exposure limit and 16 per cent of employees are potentially exposed above the occupational exposure limit. These employees are protected from exposure through our PPE programs at every site. (See Figure 4.) While every effort is made to protect all employees potentially exposed to any adverse health effect through the use of PPE, the drive is to progressively reduce potential exposure over time.

### Figure 4.

Percentage of Employees in Potential Exposures\*  
2002/03

\* I.e., would be exposed if not wearing PPE.

During 2003, there were 226 new cases of occupational illnesses reported throughout the Company. While half of these were due to noise exposure, there were also a significant number of new cases of respiratory disease and repetitive trauma diagnosed. (See Figure 5.)

### Figure 5.

New Illnesses by Type  
2002/03

The full year health reporting has provided comprehensive data that indicate the extent to which we are potentially exposing employees to workplace hazards.

This requires that we continue to be vigilant in protecting employees from these exposures while we seek ways to reduce the exposure from our processes and work environments. The illness data collected provide clear baseline information from which to measure the success of our efforts to reduce exposure to harm and potential development of illness.

Our health targets will ensure that we continue to look for opportunities through engineering, design and other initiatives to minimise the potential adverse health effects associated with work in our operations. (See Case Study, page 17.) BHP BILLITON HSEC SUMMARY REPORT 2003 4 7

Safety

4 *We are seeking to create a mindset where people believe it is possible to work injury free*

### **Background**

The safety of our employees and the communities in which we operate is an integral part of our business. Our goal is Zero Harm. To this end, we are seeking to create a mindset where people believe it is possible to work injury free regardless of where they are in the world, what role they undertake or in which business they work. (See Case Studies, page 18.)

Across the organisation, we manage safety risks through our risk-based HSEC Management Standards and other dedicated systems. The key risks include:

mobile equipment and related interactions, including light vehicles and surface and underground mobile equipment underground ground control encompassing ground stability and ground support hazardous materials storage, handling, production, transport, recycling and disposal handling and processing of molten materials plant and equipment safeguarding and isolation working at heights.

### **Performance**

In 2003, we saw a significant improvement in our overall safety performance; however, we must remain vigilant.

We deeply regret that three people lost their lives in our controlled operations during the year. While this number of fatalities was significantly lower than last year (13), each death that occurs has a profound impact on our people and their families. Our resolve to attain our goal of zero fatalities is stronger than ever, and we will relentlessly pursue opportunities to achieve this. We are also monitoring, and have established processes to learn from, significant incidents (including fatalities) that result from activities related to our business but not directly within our management control (i.e., not at controlled operations). There were 16 fatalities within this category during the reporting period. (The Company broadly aligns reporting criteria with the US Occupational Safety and Health Administration Standards.) Figure 6 presents fatalities at controlled operations from 2000/01 to 2002/03. We received five health and safety related fines totalling US\$129 372. These are detailed in our full HSEC Report. A 20 per cent reduction in our Classified Injury Frequency Rate from 6.51 in 2001/02 to 5.18 in 2002/03, was a promising achievement during the period, reflecting efforts dedicated to safety improvement. (See Figure 7.) A classified injury is any workplace injury that has resulted in the person not returning to their unrestricted normal duties after the day on which the injury was received.

### **Figure 6.**

Fatalities (controlled operations)  
2000/01 to 2002/03

### **Figure 7.**

Classified Injury Frequency Rate\*  
2001/02 to 2002/03

The Classified Injury Frequency Rate was introduced as a measure in the 2001/02 reporting period. The 2001/02 Lost Time Injury Frequency Rate was 2.24.

### **Key issues**

Our strategies for safety improvement focus on people and systems, with emphasis on:

leadership effectiveness behaviours and awareness rigorous standards and procedures for managing key risks.

A significant step we have taken to support our drive to eliminate fatalities from our operations is the development of Fatal Risk Control Protocols in nine key areas. (See Case Study, page 18.) The Protocols were written by experienced teams drawn from across the Company.

This initiative followed a review of our fatal and high potential incidents over the last ten years, from which we identified a number of common risks to our people – risks that require the development of sound practices to eliminate incidents that have the potential to cause fatalities. 8  
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Safety continued

Figure 8 provides an analysis of the fatal and high potential incidents by cause for the 2002/03 period.

**Figure 8.**

Significant Incidents  
by Cause  
2002/03

The Fatal Risk Control Protocols cover the following nine areas:

Light Vehicles    Surface Mobile Equipment    Underground Mobile Equipment    Underground Ground Control    Hazardous  
Materials Management    Molten Materials Management    Equipment Safeguarding    Isolation    Working at Heights.

These Protocols are mandatory at all our controlled sites and operations. They establish minimum performance expectations for managing risk in each of the nine areas.

The safety improvement road map (Figure 9) is our guide to safety excellence. The diagram illustrates how, as the maturity of our organisation increases, our safety improvement initiatives become all encompassing. The most mature organisations understand that the behaviours of their people are the key to their success.

**Figure 9.**

Safety Improvement Road Map

Environment

4 *We are focusing on increasing our understanding of environmental issues*

**Background**

BHP Billiton owns and operates a diverse range of businesses in different countries and ecosystems around the world. These businesses, by their nature, have the potential to affect the environment.

Potential significant environmental impacts that we manage through our HSEC Management Standards, HSEC risk assessment and management programs and other dedicated systems include:

greenhouse gas and other gaseous emissions    reductions in water quality    impacts on land associated with land disturbance  
alterations to biodiversity, either directly or indirectly as a result of our operations    indirect impacts encompassing any of the above as a result  
of the products and services we purchase, lease or provide. (See Case Studies, pages 19 and 20.)    BHP BILLITON HSEC SUMMARY  
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Environment continued

**Performance**

Our focus for the past year has been on a number of fronts: working to establish environmental management systems and eco-efficiency plans at sites; increasing our understanding and refining our approaches to issues such as climate change, biodiversity and eco-efficiency; and improving our Company-wide environmental information systems to track performance.

A summary of our environmental performance is presented in Figure 10. Performance aspects of note include the following.

All of the sites requiring ISO 14001 certification of their Environmental Management Systems either received or were notified that they had been recommended for certification. Environmental management plans (with reduction targets aimed at driving eco-efficiencies) for land management, water use and waste management have been established at over 95 per cent of required sites. Greenhouse gas management programs have been developed at 85 per cent of required sites, and energy conservation programs at 88 per cent of required sites. No significant environmental incidents (level 3 or above in the BHP Billiton Consequence Severity Table) occurred. Environmental fines during the reporting period totalled US\$37 572, details of which are included in our full HSEC Report. Environmental spending for the reporting period was US\$134 million, which includes costs for rehabilitation, remediation, environmental monitoring, environmental research and development and other environment-related activities. These costs exclude expenditure associated with the operation and maintenance of pollution control equipment and the like. Financial provisions for site closure, rehabilitation and remediation activities according to United Kingdom Generally Accepted Accounting Principles (UK GAAP) amounted to US\$2025 million.

**Key issues**

**Resource use**

*Land*

At 30 June 2003, land newly disturbed was 3540 hectares compared to 4520 hectares for the previous year. The reason there was less newly disturbed land was primarily a result of our open-cut Queensland coal operations not needing to disturb any further land for mining during the year. The area rehabilitated was 1790 hectares, a slight decrease from 2230 hectares last year. (See Figure 11.)

Total land requiring rehabilitation reduced from 82 910 hectares to 77 160 hectares, mainly due to a clarification of the estimate of land requiring rehabilitation at our Escondida operations from the previous year.

Accidental discharges of hydrocarbons to land and water totalled 104 600 litres during the reporting period. This total consisted of a number of small-volume spills, including hydrocarbons released from primary containment facilities but captured in secondary containment facilities.

**Figure 10.** Summary of Environmental Performance 1999/00 to 2002/03 1

Unit 1999/00 2000/01

2001/02 2002/03

	1999/00	2000/01	2001/02	2002/03
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**Land Use**

Land disturbed

Hectares 4 170 4 930 4 520 3 540

Land rehabilitated

Hectares 2 090 2 120 2 230 1 790

Land requiring rehabilitation 2

Hectares 77 770 81 320 82 910 77 160

**Resource Consumption**

Fresh water  
Megalitres 154 000 160 300 147 100 132 630

Recycled water 3  
Megalitres 64 100 99 700 543 000 175 350

Energy  
Petajoules 382 390 396 292

#### Waste Disposal 4

Hazardous waste  
Tonnes 103 900 93 800 80 700 79 940

General waste to landfill  
Tonnes 288 700 213 700 107 400 115 280

#### Air Emissions

Oxides of sulphur (SO<sub>x</sub>) 5  
Tonnes 78 500 89 900 56 330 50 020

Oxides of nitrogen (NO<sub>x</sub>) 5  
Tonnes 118 600 112 300 55 750 49 640

Fluoride  
Tonnes 1 713 1 795 1 680 910

Greenhouse gases 6  
Tonnes CO<sub>2</sub>-e 62 600 000 57 100 000 60 020 000 47 070 000

1. In the summary text of each performance category, information has been provided to facilitate year-to-year comparison of performance without BHP Steel. 2. Rehabilitation requirements assuming immediate closure of all operations. Escondida re-estimated its land area requiring rehabilitation in 2002/03. 3. Recycled water: Not all sites reported recycled water in 1999/00 and 2000/01. 4. Waste: Excludes recycled materials and mining-related materials such as waste rock, tailings, coal reject and slag. 5. Transport and logistics operations were divested during 2001/02. 6. Greenhouse gases (1999/00 and 2000/01): Different methodologies of reporting were used prior to the BHP Billiton merger. **10** 4 BHP BILLITON HSEC SUMMARY REPORT 2003

Environment continued

#### Energy

Total energy consumption was 292 petajoules, a decrease from 396 petajoules last year. This was primarily due to the demerger of BHP Steel, which contributed 131 petajoules in 2001/02. While energy consumption rose during the year due to production increases at a number of our operations, this was partially offset by improvements at our manganese and chrome operations, and initiatives in improving energy efficiency such as the Energy Smart Program at our EKATI Diamond Mine. (See Case Study, page 19.) The trend for the Company is shown in Figure 12.

#### Figure 12.

Total Energy Use  
1999/00 to 2002/03

The major sources of energy use are from purchased electricity, natural gas, and coal and coke, as shown in Figure 13.

#### Figure 13.

Energy Use by Type  
2002/03

The overall energy intensity index<sup>1</sup> for the Company is illustrated in Figure 14.

**Figure 14.**  
BHP Billiton  
Overall Energy Intensity  
2001/02 to 2002/03

*Water*

Availability of fresh water is an important global environmental issue.

Total fresh water consumption for the reporting period was 132 630 megalitres, a decrease from last year's total of 147 100 megalitres. Recycled water reduced from 543 000 megalitres in the previous reporting period to 175 350 megalitres. The reduction in the amount of fresh water consumed and water recycled was mainly due to the demerger of BHP Steel, which consumed 26 300 megalitres of fresh water and recycled 415 600 megalitres of water in 2001/02.

Figure 15 presents the water consumption for the Company.

The overall fresh water intensity index<sup>1</sup> is presented in Figure 16.

**Figure 16.**  
BHP Billiton  
Overall Fresh Water Intensity  
2001/02 to 2002/03

***Gaseous emissions***  
*Greenhouse gas emissions*

Our greenhouse gas emissions for the year totalled 47.1 million tonnes of carbon dioxide equivalent (CO<sub>2</sub>-e), a reduction from last year's 60.0 million tonnes of CO<sub>2</sub> equivalent. The primary factor in the reduction of emissions was the demerger of BHP Steel, which contributed 13.4 million tonnes of CO<sub>2</sub> equivalent in 2001/02.

Greenhouse gas emissions for the past four years are presented in Figure 17.

**Figure 17.**  
Greenhouse Gas Emissions  
1999/00 to 2002/03

1. The Intensity Index has been developed as a Company-wide performance indicator on environmental aspects such as energy use, greenhouse gas emissions and fresh water consumption. The index concept allows performance from different business groups or sites, all of which may have different operating conditions and product mixes, to be added together to form an overall indicator per unit of production. The baseline for the Intensity Indices is 2001/02 and, as such, has a value of 100. BHP BILLITON HSEC SUMMARY REPORT 2003 4 11

PERFORMANCE SUMMARIES

Environment continued

The sources of greenhouse gas emissions are presented in Figure 18.

**Figure 18.**  
Sources of Greenhouse Gas Emissions 2002/03

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The overall greenhouse gas intensity index<sup>1</sup> for the Company is presented in Figure 19. The intensity reduction achieved for the year was 6 per cent, however it should be noted that data can fluctuate on an annual basis.

### **Figure 19.**

BHP Billiton Overall Greenhouse Gas Intensity 2001/02 to 2002/03

#### *Oxides of sulphur and nitrogen*

Oxides of nitrogen (NO<sub>x</sub>) emissions for the reporting period were 49 640 tonnes, compared to 55 750 tonnes last year. Oxides of sulphur (SO<sub>x</sub>) emissions totalled 50 020 tonnes, compared to 56 330 tonnes last year. The Company's overall performance for NO<sub>x</sub> and SO<sub>x</sub> are presented in Figure 20 and Figure 21 respectively.

The reduction in NO<sub>x</sub> and SO<sub>x</sub> emissions is mainly due to the demerger of BHP Steel. The purchase of diesel with low sulphur content by our sites also contributed to the reduction of SO<sub>x</sub>.

### **Figure 20.**

NO<sub>x</sub> Emissions to Air 1999/00 to 2002/03

### **Figure 21.**

SO<sub>x</sub> Emissions to Air 1999/00 to 2002/03

#### *Fluoride*

There was a significant decrease in fluoride emissions, from 1680 tonnes last year to 910 tonnes this year. This was due to substantial improvements in emission control at our aluminium smelters, including the environmental upgrade of potrooms B and C at Bayside, South Africa. The Company's fluoride emissions are presented in Figure 22.

### **Figure 22.**

Fluoride Emissions to Air 1999/00 to 2002/03

#### *Waste*

Total general waste (consisting of domestic and construction wastes) disposed of to landfill during the reporting period was 115 280 tonnes, an increase against the previous year's total of 107 400 tonnes. The increase was mainly due to construction associated with expansion activities at some of our sites.

Hazardous waste (excluding recycled materials, overburden, tailings and slags) generated in the reporting period was 79 940 tonnes. This consisted primarily of waste oil, chemical wastes, hazardous baghouse dusts and other hydrocarbon wastes.

Indicative trends of waste disposed of by the Company are presented in Figure 23.

### **Figure 23.**

Waste Disposal 1999/00 to 2002/03

#### *Biodiversity*

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Biodiversity initiatives were undertaken in a number of areas over the past year. We have assessed each of our sites to determine whether any of our operations are within protective categories I to IV of the World Conservation Union, formerly the International Union for the Conservation of Nature (IUCN). We have several sites adjacent to protected areas; and the Minerva natural gas project, which has been given full authorisation, has horizontally drilled underneath the Port Campbell National Park in Victoria, Australia (Category II National Park Recreation).

Through the ICMM, we also actively participate with other interested organisations in a joint program of work in the area of mining and biodiversity, including development of principles and related reporting criteria. As an ICMM member company, we have undertaken not to explore or develop mines in World Heritage Properties.

1. The Intensity Index has been developed as a Company-wide performance indicator on environmental aspects such as energy use, greenhouse gas emissions and fresh water consumption. The index concept allows performance from different business groups or sites, all of which may have different operating conditions and product mixes, to be added together to form an overall indicator per unit of production. The baseline for the Intensity Indices is 2001/02 and, as such, has a value of 100. **12 4 BHP BILLITON HSEC SUMMARY REPORT 2003**

Environment continued

### *Climate change*

We are working on activities related to climate change in a number of ways.

In addition to our 5 per cent greenhouse gas intensity reduction target, we are committed to working with customers to improve energy efficiency in the downstream consumption of our Energy Coal products. We are assessing opportunities to use the Kyoto Protocol's Clean Development Mechanism to reduce emissions and promote sustainable development. Carbon pricing sensitivity analysis is considered in our decisions for new projects and investments that would emit more than 100 000 tonnes of CO<sub>2</sub> equivalent per year. We are also funding research into geological sequestration of CO<sub>2</sub> and the development of low-emission coal technologies.

### *Product stewardship*

During the year, we continued our work and participation in product stewardship activities. For example, our Base Metals Customer Sector Group (CSG) is conducting Life Cycle Assessment studies for copper in conjunction with the International Copper Association and for zinc with the International Zinc Association. Additionally, they are taking a primary role in the efforts on lead stewardship through their involvement in the Green Lead project.

Our Stainless Steel Materials CSG has completed a Life Cycle Assessment with the Nickel Development Institute. Our manganese business, in association with research institutes and universities, has embarked on an initiative to promote a selenium-free manganese product and our Australian coal businesses have participated in the Australian Coal Association Research Program project, Coal in a Sustainable Society.

Community

*4 We recognise the importance of assisting in the development of communities wherever we operate*

### **Background**

The Company owns and operates a diverse range of businesses in different countries and cultures around the world. We track a range of social issues relevant to sustainable development, including:

human rights of our employees, contractors, suppliers, and the communities in which we operate community development (See Case Study, page 21.) indigenous communities that own the land impacted by our operations or live nearby ethics and business conduct indirect social impacts incorporating issues such as community dependency on our activities.

### **Performance**

During the year, our community performance continued to progress well on a number of fronts:



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Total community contributions of US\$42 million equated to 1.4 per cent of pre-tax profit (three-year rolling average), which exceeded our target of 1 per cent. This amount includes our contribution to community programs at joint venture operations. The main areas of focus for community programs were community welfare (31 per cent) and education (29 per cent). (See Figure 24.)

### Figure 24.

Contributions to Community Programs by Category 2002/03

97 per cent of our sites have produced public HSEC reports, which meets our target. These reports are available on our website at [www.bhpbilliton.com/bb/sustainableDevelopment/operationsHSECReports.jsp](http://www.bhpbilliton.com/bb/sustainableDevelopment/operationsHSECReports.jsp) 95 per cent of our sites have community relations plans in place or were covered by a regional development plan developed by the business group. Complaints were received by 62 per cent of our sites. Of the 361 complaints, 22 per cent were related to dust, 22 per cent to noise and 17 per cent to odour. There were 55 substantive calls to the Business Conduct Helpline and Fraud Hotline. A breakdown of these calls is included in Figure 25. Several cases required involvement of the Global Ethics Panel.

### Figure 25.

Business Conduct Helpline and Fraud Hotline Categories of Calls 2002/03

### Key issues

During the period, we adopted the World Bank Guidelines on Involuntary Resettlement and the US-UK Voluntary Principles on Security and Human Rights, so that our policies and systems are in line with the International Council on Mining and Metals Sustainable Development Framework and key stakeholder expectations. (See Case Study, page 21.)

## 4 BHP BILLITON HSEC SUMMARY REPORT 2003 13

### PERFORMANCE SUMMARIES

#### Community continued

A new employee Matched Giving Program was piloted in South Africa, the United Kingdom and Australia. The program aims to strengthen local communities by supporting and encouraging employees who volunteer, fundraise or donate to not-for-profit organisations.

The pilot Matched Giving Program was well received, with over US\$300 000 being contributed to 274 not-for-profit organisations. For example, more than 36 000 hours in personal volunteering were matched with cash donations to organisations where the employees offered their time.

In conjunction with Oxfam Community Aid Abroad, we ran the second Corporate Community Leadership Program in Orissa, India. With the aim of increasing understanding of social issues relating to our operations, the program involved 12 employees from across our businesses.

#### *Employee Relations*

##### *Employee profile*

The average number of permanent employees across the Company (including BHP Billiton's owned and operated facilities and share of unincorporated joint ventures) was 34 800, compared to 51 000 reported in the previous period. A regional breakdown of employees is presented in Figure 26. The demerger of BHP Steel accounted for a reduction in employees of 12 270, with the sale of transport and logistics businesses accounting for another 1380. About 98 per cent of employees at operated sites or corporate offices work full-time. The average turnover rate of employees at operated sites and corporate offices was 5 per cent. A total of about 32 000 contractors were employed at operated sites.

### Figure 26.

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### Regional Geographic Breakdown of Total Number of Employees 2002/03

All sites report the age of their youngest worker and the corresponding minimum working age in their jurisdiction. The youngest employees were 17 years of age. All Company employees earned greater than the stipulated minimum wage in the countries in which they worked.

#### *Freedom of association*

While fully recognising the right of our employees to freely associate and join trade unions, we have a number of sites where we have a mix of collective and individual arrangements. Prospective employees are made aware of employment arrangements prior to joining the Company. A total of 22 400 employees, or about 60 per cent of the workforce, were covered by collective bargaining agreements at operated sites and offices. The Company has a policy to consult with employees on major organisational changes.

#### *Diversity*

The Company is committed to developing a diverse workforce and to providing a work environment in which everyone is treated fairly and with respect. Harassment of any form is unacceptable. An example of the ongoing policies or programs we undertake to address employment diversity issues is our Employment Equity Policy in South Africa, which ultimately aims to achieve representation at all levels in our businesses consistent with the demographic profile of South Africa. (See Case Study, page 22.)

In the year ending June 2003, about 8 per cent of full-time employees at operated sites/offices were women.

#### *Human rights*

During the year, a Human Rights Self-Assessment Toolkit was developed and distributed to all Company sites to assist them in appraising their potential exposure to human rights issues. The self-assessment will form part of the HSEC audit process.

Three sites reported human rights issues during the year. At the Tintaya copper mine in Peru, pending issues are being addressed by the Mesa de Dialogo, a dialogue process established with representation from the five communities in the Espinar region. Two issues in South Africa are currently being resolved. One relates to squatters dwelling on a mine property and the other to the voluntary relocation of a person living in a house on a closed mine site.

#### *Indigenous employment and training*

Indigenous employment is an important issue at a number of our sites. Some sites have set specific targets for indigenous employment and are publicly reporting their progress against these targets.

Indigenous employment strategies are in operation at Iron Ore, Western Australia and Groote Eylandt Mining Company (GEMCO), Northern Territory in Australia; New Mexico Coal in the US; and EKATI Diamond Mine in Canada. In addition, many sites operate training programs to increase proficiency in general literacy or technical skills. (See our full HSEC Report on the website.)

#### *Audit and Self-Assessment*

A total of 34 HSEC audits were conducted during the year to assess the level of implementation of the HSEC Management Standards. The audit program involved 99 personnel from both HSEC functional roles and operational roles (13 of whom participated in audits last year) and eight external auditors (two of whom are members of the HSE Committee of the BHP Billiton Board).

The average overall conformance to the Management Standards based on the sites audited is 3.4 out of 5. Sites not audited during the year were required to undertake self-assessments against the Standards. The results from these 51 self-assessments have been combined with the audit results to give an overall conformance of 3.6 out of 5 for the organisation. **14 HSEC SUMMARY REPORT 2003**

#### *Economic*

The data in this section deal with the economic affairs of the BHP Billiton Group. The Company has an annual turnover of US\$17.5 billion, and an enterprise value of US\$35 billion (30 June 2003). The Company's diversification by operating assets across geographic regions is illustrated in Figure 27.

**Figure 27.**

Diversification by Geographic Region (Net Operating Assets) *At 30 June 2003*

Our shareholder base is widely diversified, with approximately 39 per cent of shares held in Australia, 30 per cent in Europe, 18 per cent in North America, 8 per cent in South Africa and 5 per cent in Asia.

Globally, the Company spent in the order of US\$12.5 billion sustaining its businesses. The breakdown of this figure by category is shown in Figure 28.

**Figure 28.**

Total Allocated Expenditure by Category *2002/03 (US\$ million)*

Figure 29 shows these data broken down by region. This section helps to quantify the regional economic contributions of the Group.

We have confirmed our support for the Extractive Industries Transparency Initiative regarding disclosure of payment of taxes and royalties. We will work with our host governments that participate in this process to ensure public reporting of these payments. In the interim, we have presented these data on a regional basis in Figure 29.

**Figure 29.**

**Expenditure by region (US\$ million)<sup>1</sup> 2002/03**

Regional	and Royalties	Income Tax Services 2	Employee Payments Contributions 4	Dividends 3	Totals	Resource Rent Tax	Goods and Community	Shareholder
Africa								
317	2 036	14	72	2 439				
Australia and Asia								
1 241	5 061	10	396	6 708				

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Europe

89 207 <1 270 **567**

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North America

95 913 5 162 **1 175**

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South America

88 1 476 13 <1 **1 577**

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**Global total**

<b>1 830</b>	<b>9 693</b>	<b>42</b>	<b>900</b>	<b>12 466</b>
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1. The data in this table have been rounded and cover operated assets and the Group's share of unincorporated joint ventures. 2. Due to the way that we currently document the sourcing of all imported materials and services, we have not been able to allocate all expenditure on goods and services. (note: these data have not been audited). Additional unallocated expenditure on goods and services totalled US\$1302 million globally. 3. Shareholder dividends are based on a shareholder register analysis dated 30 June 2003 and total dividends payable FY03. 4. Cover both operated assets and our share of joint ventures.

**Auditor's Verification Statement**

Environmental Resources Management (ERM) was requested by BHP Billiton Limited to assess and comment upon the accuracy of the data used in the full Health, Safety, Environment and Community (HSEC) Report for the period 1 July 2002 to 31 June 2003. ERM undertook this assessment by reviewing the on-site data collection process, the data management and collation process, and the synthesis of this data into the tables, graphs and statements that are presented in the full HSEC Report. A number of minor errors were detected in the site data and immediately corrected. ERM believe that the material presented in the full HSEC Report, which is abbreviated in this Summary Report, is a fair and reasonable representation of actual company performance on reported HSEC issues across the operations managed by BHP Billiton.

ERM's complete verification statement is available in the full HSEC Report on the BHP Billiton website.

David Snashall

Principal Danny Ptak

Senior Auditor BHP BILLITON HSEC SUMMARY REPORT 2003 4 15

**Case Studies**

The full HSEC Report on our website contains the following case studies, which present examples of HSEC issues, initiatives, projects and programs across the Group. In this Summary Report, we present a selection in abbreviated form, as highlighted below.

**Health**

**1. Developing a hierarchy of control approach to managing our occupational health exposure**  
**2. Health programs in southern Africa help provide care for HIV/AIDS patients**  
 3. Malaria control programs in Mozambique and Brazil are proving effective  
 4. Cardiovascular assessment at Tintaya studies potential high-altitude health risks to employees' children  
 5. Large-scale occupational health study at Cerro Matoso includes a pioneering epidemiological monitoring program

**Safety**

**6. In our drive to achieve zero fatalities, new Fatal Risk Control Protocols set minimum performance expectations for managing critical safety risks at sites**  
**7. Taking a safety-conscious approach to tapping the riches of the Sahara**  
 8. The road to Zero Harm at the

Mozal 2 expansion project 9. Construction of Dendrobium ventilation shaft sets new safety and environment standards 10. Building safety assurances into the construction and operation of a new drillship underpins an excellent safety performance in the Gulf of Mexico

## Environment

**11. Developing new coal technologies to meet the world's energy needs in a sustainable way 12. Greenhouse gas intensity reduction strategy is producing results 13. Consultative process is addressing community concerns about mining beneath Appin township and Marhnyes Waterhole 14. Rehabilitation program at Beenup is restoring the mine site as a self-sustaining environment of native vegetation, wetlands and pasture** 15. Revive our Wetlands program aims to protect and revitalise 100 of Australia's most important wetlands 16. Waste management program at Cerro Matoso delivers environmental benefits and more 17. Yabulu refinery maintains an environmental assessment and management program to preserve local ecosystems 18. Energy Smart Program exceeds target at EKATI Diamond Mine 19. Ingwe develops innovative solution to stormwater run-off during mine site rehabilitation

## Environment continued

20. Trials show grazing can be a sustainable use of rehabilitated mine land in Australia's Bowen Basin 21. Minerva development project applies an integrated approach to managing environment and community issues

## Community

**22. Acquisition of Tabaco village in Colombia provides lessons for future resettlement projects 23. Pakistan community program focuses on education to improve quality of life** 24. Corporate Community Leadership Program examines impact of community development activities in India 25. Reversing resettlement in northern Peru benefits local families 26. PNG Sustainable Development Program Company begins planning community programs 27. Pering mine meeting the challenges of closure 28. Gag Island nickel project remains on care and maintenance 29. Cerro Matoso's support for a central educational resource in Montelíbano, Colombia, enhances learning for thousands of students 30. Mozal program supports small and medium enterprises in Mozambique 31. The San Isidro Foundation implements a Zonal Planning System to define areas of need for community programs 32. Planned diamond exploration in the Kalahari Game Reserve is unrelated to relocation of indigenous people 33. At the Area C project in Australia, an agreement with the traditional owners has enabled unique archaeological sites to be excavated and relocated 34. Tintaya addresses community concerns through formal consultation processes with stakeholders 35. BMA Community Partnerships Program is based on extensive research of community needs

## General

**36. Escondida: contributing to the progress of Chile 37. Establishing the foundations for facilitating the black economic empowerment process in South Africa's resources industry** 38. HSEC considerations are integral to our Enterprise-Wide Risk Management strategy 39. New study indicates potential for improving the environmental performance of stainless steel made from our nickel and chrome products 40. Green Lead project aims to achieve Zero Harm from lead exposure 41. Mining industry stakeholders look at developing a system for independent certification of environmental and social performance **16 HSEC SUMMARY REPORT 2003**

Health Developing a hierarchy of control approach to managing our occupational health exposures

*Across our Company there are a variety of site-based exposures that have the potential to cause long-term health effects. The most appropriate approach to these risks is to reduce exposure to the individual. Personal protective equipment (PPE) has been a customary form of protecting employees from adverse exposures. However, in applying a hierarchy of control, our goal is to reduce the potential exposures in an absolute sense.*

*4 Alan Emery, Engineering Manager, conducting a safety talk 80 metres underground at Khutala Colliery, South Africa*

The target for our operations is to reduce exposures over time through a hierarchy of control approach. A long-term aim would be to create a work environment where PPE is not required.

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Noise is a significant exposure in our industry. The application of engineering processes may significantly reduce exposure. Our Iron Ore operation at Port Hedland, Australia, has recently installed fibreglass insulation in the crusher plant and fully enclosed the blower units in the beneficiation plant, significantly reducing noise levels.

In underground coal mining, noise and dust are constant sources of adverse exposure. At our Khutala coal mine in South Africa, specific attention has been given to enclosing the cabins of operators, markedly reducing noise and dust exposure. Another exposure is that of diesel particulates. Our Illawarra Coal operation in Australia has been sponsoring a study of this exposure, and a filter mechanism to reduce diesel particulate exposure has now been developed.

A further example of employing the hierarchy of control approach to reduce exposure is at our copper oxide plant in Tintaya, Peru. By applying world's best practice engineering processes, the emissions of sulphuric acid mist have been significantly reduced.

A preventive approach to managing our health issues will focus on the design phase of new operations, to ensure potential health exposures have been minimised as much as possible. Health programs in southern Africa help provide care for HIV/AIDS patients

*Many of our businesses in South Africa and Mozambique are in areas where the incidence of HIV/AIDS is among the highest in the world. In fulfilling our responsibility to care for our employees, we have developed support programs to help prevent them from acquiring the disease or, in the case of patients, to receive appropriate treatment. In line with our Charter, we are also assisting the broader community to cope with the effects of the epidemic by participating in a range of projects with government, community organisations, NGOs and industry groups.*

### *4 Ethembeni Care Centre, Zululand*

In recognising the severity of this devastating health issue, our sites have put into place various strategies to limit the impact of HIV/AIDS on our employees and our operations. These include supporting educational and awareness programs; promoting healthy lifestyles; and, in collaboration with trade unions, arranging anonymous testing and counselling.

To contain and better manage the problem, operations focus on local recruitment in preference to intakes of migrant workers and encourage private home ownership over high-density accommodation.

In South Africa, the Company contributes to each employee's remuneration package to enable them to become a member of a medical aid fund. Membership has given all employees and their families access to private health care. The medical aid schemes to which our employees belong now provide anti-retroviral treatment and treatment for HIV/AIDS related illnesses. A similar program is in development in Mozambique.

As examples of our community-based projects, our Hillside and Bayside aluminium operations in Zululand support the Ethembeni Care Centre, which provides infected patients with rehabilitation, respite and palliative care. Our Metalloys operation, located in the Gauteng Province of South Africa, has converted its redundant Kotulong hostel complex into a community support centre to enhance the quality of life of infected people. In Mozambique, the Mozal Community Development Trust is supporting an HIV/AIDS prevention initiative (known as the Total Control of the Epidemic program) and the Government's voluntary testing centres in Maputo and surrounding areas. BHP BILLITON HSEC SUMMARY REPORT 2003 4 17

## CASE STUDIES

**Safety** In our drive to achieve zero fatalities, new Fatal Risk Control Protocols set minimum performance expectations for managing critical safety risks at sites

*Following the BHP Billiton merger, a review of safety performance over the previous ten years was conducted across the organisation. The study identified that, of the total fatalities that had occurred within this period, 94 per cent were single fatality incidents. This finding has focused our attention on the key risk areas that have historically contributed to fatalities within the Company. Fatal Risk Control Protocols have now been developed as a key component of our Safety Strategy. We are committed to eliminating fatalities from our operations.*

### *4 Molten materials management*

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In implementing the Safety Strategy, it is vitally important that our people believe it is possible to work injury free regardless of their role or location. Our key strategies in working towards this goal have been in three main areas: leadership effectiveness, behaviours and awareness, and rigorous standards and procedures for managing key risks.

All three strategies focus on our people and systems, with two key objectives:

ensuring that our practices, procedures, conditions, equipment and behaviour all contribute towards creating a workplace where it is possible to work without adverse impact on people, the environment or the community      developing our people to make the right decisions as they go about their work.

Following the review of past fatal incidents, nine key areas were identified that required more stringent controls. These are:

1. Light Vehicles
2. Surface Mobile Equipment
3. Underground Mobile Equipment
4. Underground Ground Control
5. Hazardous Materials Management
6. Molten Materials Management
7. Equipment Safeguarding
8. Isolation
9. Working at Heights.

Protocols have been developed for each of these risk categories. The requirements under each Protocol are classified into three broad focus areas      plant and equipment requirements, procedural requirements and people requirements      in line with our key risks. These Fatal Risk Control Protocols are being implemented throughout the Company, with full implementation planned for completion by June 2005.      Taking a safety-conscious approach to tapping the riches of the Sahara

*In Algeria, we are in the process of completing the Ohanet oil and gas development, together with our joint venture partners and SONATRACH, the state-owned production company. The sheer size and scope of the project poses a wide variety of safety challenges. From the outset, there was senior management commitment from all parties to applying effective safety processes and training, and to involving the whole workforce. As the project moves into the start-up phase, safety remains at the top of the agenda.*

*4 Barry Sweeting, BHP Billiton Construction Manager, Zainch Dimeta Field, Ohanet Project, Algeria*

The Ohanet subsurface and drilling campaign in the southern Sahara involved two seismic acquisition crews and three rigs operating in the field. Simultaneously, the EPC (Engineer/ Procure/Construct) contractor supervised some 25 subcontractor companies. The safety challenge presented by this complex project was immense.

A safety improvement plan was introduced that focused on:

raising safety awareness by ensuring safety is at the top of all agendas      improving communication through regular safety meetings and multi-language communications such as posters      planning for risk mitigation by identifying and assessing risks and devising control measures and safe systems      targeting training and refresher training      audit and inspection programs that enable management to ensure that policy is being translated into practice      disciplinary procedures for non-compliance balanced with safety incentives to encourage safer behaviour and improve performance.

At the end of June 2003, with the majority of work completed, an excellent safety record had been achieved. But we are aware that there is no room for complacency      only continuous improvement as the project moves into its critical start-up phase.      18 4 BHP BILLITON HSEC SUMMARY REPORT 2003

Environment      Developing new coal technologies to meet the world's energy needs in a sustainable way

*Meeting the growth needs of developing countries and sustaining living standards in developed countries will continue to drive fossil fuel energy demand, which is forecast to rise by more than two thirds over the next 30 years. Suppliers of fossil fuels, including coal as the largest power generation source, face the challenge of meeting that demand while responding to concerns about greenhouse gas (GHG) emissions. The future path for coal must be to continue the development of low emissions technology.*



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An eight-fold increase in thermal efficiency over the last century has greatly reduced the amount of coal required per unit of electricity generated. Allied with ultra-low emissions techniques – notably coal gasification and CO<sub>2</sub> capture and storage – technology developments currently being researched have the potential to virtually eliminate GHG emissions from coal-based power. Projects are in place, or are proposed, to move the technologies towards commercial viability in the next decade or two.

As the world's largest coal exporter, we are playing a leading role in realising this potential through a range of activities, such as:

GHG emissions management, including an emissions inventory system throughout the Company; coal-based emissions reduction projects; and investigating collaborative GHG reduction projects in South Africa – industry leadership, including executive roles in the World Coal Institute (WCI) and our foundation role in the Australian Coal Association (ACA) Sustainable Development Program – direct participation in R&D, including research projects conducted by the ACA and Cooperative Research Centres.

In Australia, the Company contributes around A\$3.5 million per annum to coal technology R&D projects.

These activities are contributing to long-term global efforts to ensure environmental sustainability in an energy-hungry world.

#### *4 Capture and storage of CO<sub>2</sub> from coal gasification*

Greenhouse gas intensity reduction strategy is producing results

*In 2002, the Company committed to reducing greenhouse gas (GHG) intensity from operations, per unit of production, by not less than 5 per cent between 2002 and 2007. Significant progress has been made. Initiatives by our Aluminium and Diamonds and Specialty Products businesses reflect our commitment.*

#### *4 The Energy Smart Program at EKATI has reduced the requirement for fuel haulage to the mine*

At our EKATI Diamond Mine in Canada's Northwest Territories, an Operating Excellence team developed the Energy Smart Program in April last year to tackle inefficient uses of energy. Aiming at saving the equivalent of half a million litres of fuel per year, they reached their goal by October. They doubled their target, and achieved it. One million litres of fuel equates to about 12 per cent of the mine's annual power requirement.

To foster an energy saving culture, the team invites fellow employees to contribute ideas, and the response has been overwhelming. Initiatives range from installing motion sensors on lights to recycling waste oil. The Energy Smart Program is being extended so new projects are designed to be energy-efficient from the start.

Greenhouse gases emitted from aluminium smelters derive from various sources, including fuels used in the smelting process and carbon anodes employed in smelting cells. Perfluorocarbons are also emitted from smelting cells during process disturbances called anode effects (AEs), measured in terms of frequency (AE per cell per day), and AE duration measured in minutes.

Our Aluminium operations have focused on the reduction of GHG intensity across all areas and from all sources of evolution. Initiatives have included reduction of process instability through improved control systems. At our Bayside smelter in South Africa, improving potline systems has had a significant effect, with AE frequency reducing from 2.6 to below 1.5 per cell per day and AE duration improving by more than 15 per cent to date. Improvements have also been achieved at our Hillside and Mozal smelters, through new technologies and new capacity being brought online.

BHP BILLITON HSEC SUMMARY REPORT 2003 4 19

## CASE STUDIES

### **Environment continued      Consultative process is addressing community concerns about mining beneath Appin township and Marhnyes Waterhole**

*Our Illawarra Coal operations in Australia undertake underground longwall mining some 500 metres below the surface. The mining can cause cracking in the base of sandstone-bedded rivers and streams, redirecting water flow from the surface to the substrata. Mining beneath Appin and the Georges River has caused concern to some local residents, which is being addressed through a comprehensive consultative process with key stakeholders.*

*4 Geologists at Marhnyes Waterhole, New South Wales*

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A consultation program was initiated in 1998 and expanded in mid 2001. Meetings with more than 100 stakeholders were conducted. Government and environmental groups raised concerns about mining beneath Marhnyes Waterhole on the Georges River, which was scheduled to be commenced by our West Cliff mine in September 2002. The mining was planned several years in advance and the longwall location could not have been modified without significant risk to the viability of West Cliff mine.

A strain-relieving slot was drilled ahead of mining to reduce cracking of the rock bar that creates the waterhole. The slot was successful in limiting fracturing at the waterhole. However, some cracking did occur, with surface water redirected to the shallow substrata. Environmental flows were provided to supplement the river during the period of mining effects and to provide water for aquatic life.

Mining beneath Marhnyes Waterhole is now complete and remediation works are being undertaken. The results to date have been encouraging. Positive feedback has been received from stakeholders, indicating that the community consultation program has helped to build constructive relationships.

However, some concerns remain. Proposed mining areas intersect rivers and creeks across the Illawarra region, and stakeholders have expressed a desire for more input into the mine planning process. Illawarra Coal is reviewing its approach to mine planning and will continue to work closely with stakeholders to address issues relating to mining in the area, within the context of sustainable mining plans. **Rehabilitation program at Beenup is restoring the mine site as a self-sustaining environment of native vegetation, wetlands and pasture**

*Our Beenup titanium minerals mine in south-west Western Australia closed in 1999. A rehabilitation plan was developed in consultation with the government and the local Augusta-Margaret River community. Restoration works under way include retention of the dredge pond as a permanent water body, the creation of seasonal wetlands, recontouring of the site and an extensive revegetation program.*

*4 Beenup rehabilitation program manager Jocelyn Bird checks revegetation progress at the site*

The area to be rehabilitated included 336 hectares of disturbed land, a 50-hectare dredge pond, a large storage area containing material that had been excavated from the pond, and two ponds for storing clay fines.

Several options for rehabilitation were submitted to government and the local community. A key environmental issue was pyrite, a naturally occurring sulphide mineral that, if exposed, can oxidise and form acid.

Following extensive consultation, implementation of the agreed plan commenced in late 1999. The plan allowed the clay fines to be retained in the former dredge pond, which has been established as a permanent water body. Seasonal wetlands have been developed, which encourage the creation of diverse flora and fauna habitat and support functioning ecosystems. The pond and wetlands, together with the extensive use of lime sand, also facilitate long-term management of the pyrite.

A major component of the project has been the reinstatement of surface water drainage across the site. The recontoured pond and the wetlands have been designed to manage drainage and minimise flooding. The revegetation program involves the planting or broadcasting of over 110 million native seeds, representing over 110 plant species, including declared rare flora species.

With rehabilitation nearing completion, the Beenup site has potential for flora and fauna research, environmental education and eco-tourism.

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### **Community Acquisition of Tabaco village in Colombia provides lessons for future resettlement projects**

*BHP Billiton and its joint venture partners, Anglo American and Glencore, became equal owners of the Cerrejon Zona Norte (CZN) coal mine in Colombia in February 2002, when they acquired International Colombia Resources Corporation (Intercor) from ExxonMobil, which held the mine's remaining 50 percent ownership and operational interests. A new company, Cerrejon Coal Company, was formed, combining CZN and Carbones del Cerrejon. Situated within the mining lease is the village of Tabaco. In 1997, prior to the involvement of BHP Billiton, acquisition of the village commenced to enable future expansion of the mine's operations.*

In accordance with Colombian law, a survey was conducted to determine whether the people of Tabaco wanted to sell their possession rights or be relocated. The survey established that there were 213 possession rights, of which 8 were municipal public properties, 151 were unoccupied lands or houses and 54 were occupied dwellings.

Of the possessors, 95 per cent said they did not want resettlement and wanted to negotiate directly. Subsequently, 200 out of 213 possession rights were settled and in August 2001 the remaining 13 possession rights were acquired in accordance with the Mining Law.

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In May 2002, the Colombian Supreme Court ordered that the municipality of Hatonuevo provide primary education and housing infrastructure support for children of this group. While schooling is provided free to students, there are associated expenses for items such as educational materials.

Some months earlier, Cerrejon had approached the municipality and offered to assist with the education of these children.

An assistance program was implemented, and, during 2002, Cerrejon helped meet the schooling expenses of 21 children of former Tabaco residents.

Following a review at the end of 2002, it was decided the funding should be provided directly to the schools attended by the children. During 2003, this has enabled the schools to construct additional facilities and purchase educational materials.

In May 2003, Cerrejon offered land for community use, and it has been indicated that this may also benefit the affected Tabaco families.

Cerrejon has reviewed the processes that it follows when the relocation of a community becomes necessary, to ensure that they are consistent with best practice and focused on the maintenance of sustainable livelihoods. To this end, Cerrejon will adopt relevant World Bank Guidelines for future resettlements. The US-UK Voluntary Principles on Security and Human Rights have also been adopted to guide interactions with communities. **Pakistan community program focuses on education to improve quality of life**

*Our Zamzama gas project in Pakistan is located in the district of Dadu, approximately 500 kilometres north of the coastal city of Karachi in Sindh Province. The area suffers from very low rainfall, lacks basic infrastructure and has limited educational facilities or opportunities. Our community development program is aiming to facilitate the empowerment process and improve the quality of life for the disadvantaged people living in the areas where we operate. Education is considered to be a vital part of this process.*

Initially, a series of consultative workshops were organised to ensure community participation and to assess the critical needs in the area. These revealed that access to quality education, particularly for girls and women, was the primary concern.

Further research in Dadu showed that there were clear opportunities to improve school infrastructure, enhance teaching methodologies and increase the motivation of teachers, children and parents towards education.

As part of its program, the Zamzama community development team has implemented a two-phase project. Two local NGOs were selected to develop an education program, which led to the establishment of five primary schools in the area. With support from the Company, the schools have been provided with infrastructure, furniture and equipment, and trained teachers.

The project has included a number of key components: capacity building (training of local NGOs and school teachers); livelihood opportunities (ensuring that jobs are filled by local people); and participation and partnership (through regular multi-stakeholder consultations).

The benefits are now being realised. The children, especially girls, have been provided with education opportunities. The teachers have benefited from their training, and the parents feel empowered to make an effective contribution to decision-making processes.

The involvement of the community, the government and NGOs is seen as a prerequisite to achieving sustainability of the project, by instilling a sense of ownership and the motivation to take responsibility for maintaining the education program.

### Key achievements

Schools operational

5

Teachers employed and trained

13

Children enrolled

477

Villages benefiting from the schools

60

Partner NGOs engaged

2

Community-based organisations formed

5

School management committees formed

5

People directly involved in the project

23 BHP BILLITON HSEC SUMMARY REPORT 2003 4 21

## CASE STUDIES

### **General Escondida: contributing to the progress of Chile**

*The Escondida copper mine in northern Chile is the world's largest source of copper. The mine plays a significant role in the country's economy, accounting for 20 per cent of the country's copper production. Since mining began in 1990, the Company has contributed to the economy through employment, the payment of taxes and the purchase of goods and services. In addition, the Company has supported local communities through health and education programs and other initiatives.*

#### *4 Township of Antofagasta*

BHP Billiton is the major shareholder and operator of Escondida, which is located in the Atacama Desert, 170 kilometres southeast of the coastal city of Antofagasta. Our efforts to become a valued citizen commenced at the pre-operational stages of the mine in 1983. An important decision was taken to structure the Company in a way that favoured payment of taxes in Chile, rather than back to the countries of earnings consolidation. It was also considered essential that the community should benefit immediately.

Accommodation for employees was built in Antofagasta and there was an emphasis on recruiting local people and purchasing local goods and services.

A community assistance program was developed, which has primarily been implemented by the Escondida Foundation. Areas supported include education, health and indigenous development, with an emphasis on young people. In 2002, the Foundation expanded the program to support employees in their own social responsibility initiatives. Projects have involved over 450 employees and around 3500 beneficiaries. In line with our Group-wide policy of contributing one per cent of pre-tax profit to community development programs, the Foundation has spent US\$13 million over the last six years.

After 13 years of operation, the Company has invested a total of US\$4 billion in the mine and paid US\$1.7 billion in taxes. US\$475 million is spent annually on the purchase of goods and services, mostly in Antofagasta and the Second Region. Production of copper at Escondida is expected to continue for another 40 years. **Establishing the foundations for facilitating the black economic empowerment process in South Africa's resources industry**

*South Africa is a changing nation, as historical and social imbalances are redressed in accord with the Government's Employment Equity Act and, specific to the resources industry, the Minerals Bill and Broad-Based Socio-Economic Empowerment Charter for the Mining Industry. Our South African operations have been playing an ongoing role in facilitating the transformation process through a wide range of black economic empowerment (BEE) programs and initiatives.*

A significant step occurred in July 1998 when we announced our commitment to establish, with other resources companies, a company known as NewCoal, ownership of which would be transferred to a BEE group. This was realised in November 2000, with the sale of 80 per cent of the company to Eyesizwe Coal. NewCoal is now the country's fourth-largest coal producer.

In September 2002, we entered into a further empowerment project with the sale of one of our collieries to Kuyasa Mining, providing the junior miner with a solid base for future development. In addition, we have made significant reserves available to another BEE junior miner, Endulweni Resources.

Our operations are also introducing initiatives to help develop smaller companies, such as the Small and Medium Enterprise Empowerment Program in place at our Hillside and Bayside aluminium operations. The program encourages the participation of local enterprises in Company projects, supported by training and mentorship.

In April 2003, we developed a BEE Procurement Policy for implementation throughout our South African operations, in line with our goal of identifying, developing and promoting the sustainability of BEE business through procurement.

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Within our businesses, our Employment Equity Policy is in place at all operations. Our goal is to achieve representation at all levels consistent with the demographic profile of South Africa. This is in accord with the Employment Equity Act, which is aimed at assisting people in designated groups – black people (Africans, Coloureds and Indians), women, and people with disabilities.

Our ultimate target is to achieve designated group representation across top, senior and middle management levels of 40 per cent. Since last year, steady increases have been occurring across all levels and at 30 June 2003, total representation had reached 26.45 per cent. Further increases are expected as a result of accelerated development schemes and dedicated training and education programs. 22 4 BHP  
 BILLITON HSEC SUMMARY REPORT 2003

**Our Resources at Work**

**Customer Sector Group    Petroleum    Aluminium    Base Metals**

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**Commodity    Oil and**

**Natural Gas    Aluminium    Copper    Gold    Zinc    Silver    Lead**

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**Energy**

Fuel, heating, electricity generation    High-tension power lines, wires and cables    Wire and cables, electrical wiring in buildings, electrical generators and motors    Zinc carbon batteries    Lead-acid storage batteries (car batteries), remote area power storage

**Construction**

Carpets, paints, plastics    Door and window frames, wall cladding, roofing, awnings    Electrical wiring, plumbing pipes and tanks, roofing, light fixtures, treated timbers    Gold leaf for decoration    Roofing, fences, doors, handles, paints, plumbing, nuts and bolts    Solder    Roofing, plumbing, soundproofing, stained glass windows

**Industry**

Electricity generation, transport, furnace fuel    Propellers, body sheet

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(for ships, aeroplanes, vehicles), gearboxes, motor parts, wires, cables,

packaging Wires and cables, electrical wiring in buildings and vehicles, robotics, airconditioning and refrigeration units, scientific instruments Electronics for computers, industrial equipment, aerospace technology, tinted-glass

windows Galvanising and corrosion protection, car bodies, carburettors, tyres Photographic paper and film, medicines, super conductors Lead foil, radiation shields, toxic waste storage containers,

dyes, solder

**Household appliances**

Plastic components,

packaging Components for TV sets, radios, refrigerators and airconditioners Electrical appliances, telephone cables, microwave equipment, radio and TV sets Electronic

technology Door handles and other household components, brass fittings Electronic and electrical appliances such as radios and TV sets (soldered connections)

**Personal use**

Electricity, fuel for vehicles, fuel for cooking and heating, clothing fabric, plastic toys, pens Beverage cans, bottle tops, foil wrap, foil semi-rigid containers, kettles and saucepans, cutlery, tennis racquets, softball bats, indoor and outdoor furniture, bicycles Ornaments, telephones,

cooking utensils, home heating systems, decorative applications,

coins Jewellery, watches, currency, dentistry, decoration for dinnerware and ornaments Medications, zinc cream, TV sets, computer

parts, toys Jewellery, watches, dinnerware and ornaments, mirrors, cutlery, currency, medallions (e.g., Sydney Olympics medals) Computers, leadlight windows, glass in TV and computer screens for radiation protection

[Additional columns below]

[Continued from above table, first column(s) repeated]

**Customer Sector Group Carbon Steel Materials Diamonds**

**and Specialty Products Energy Coal Stainless Steel Materials**

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**Commodity Manganese Iron Ore Coking Coal Diamonds Titanium Thermal Coal Chrome Nickel Cobalt**

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**Energy**

Dry cell  
batteries Electricity  
generation,  
heating Electricity  
generation  
turbines,

batteries Rechargeable lithium batteries for mobile telephones and laptop computers, jet engine turbines

**Construction**

Steelmaking,  
buildings,  
bridges, tools,  
cranes Diamond grit and powder impregnated rock drilling bits, masonry drilling, machine tool tips and cutting discs Pigment for  
paints, fabric,  
plastics, paper Treated timbers,  
street furniture,  
building  
cladding,  
stainless steel Street furniture,  
building  
cladding,  
stainless steel Tyre adhesives,  
magnets,  
carbide cutting  
tools

**Industry**

Steel alloys Steelmaking,  
transport  
equipment,  
motor vehicles,  
farm machinery Steelmaking Polishing  
compounds  
in fine optical  
surfaces, jewel  
bearings, wire  
drawing dies Titanium metal  
for aerospace  
equipment,  
engines,  
abrasives,  
ceramics,  
robotics Electricity  
generation,  
heating, cement Pigments for paints, food and beverage equipment, vehicles Computer hard disks, surgical implements and implants, jet engines, food and  
beverage equipment, pharmaceutical equipment, vehicles, metal hardening Paints, enamels,  
glazes

**Household appliances**

Refrigerators,  
washing

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machines,  
 ovens Knife  
 sharpeners Paper products, computer and TV screens Electrical  
 appliances Colour TV tubes,  
 kitchen sinks,  
 whitegoods Videotape  
 coatings,  
 heating  
 elements on  
 electric stoves **Personal use**  
 Glass,  
 ceramics,  
 dry cell  
 batteries Food cans, cars,  
 tools, cutlery,  
 jewellery,  
 watches Jewellery Cosmetics and sunscreens, fabric, clothing, jewellery, heart pacemakers, hip replacements, food colouring Bathroom and kitchen  
 fittings Kitchen utensils, coins, mobile telephones, bathroom and kitchen fittings and fixtures **BHP BILLITON HSEC SUMMARY REPORT**  
 2003 4 **23**

BHP Billiton Locations

Corporate Centres **Ref Continent Location**

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1 Africa Johannesburg 2 Australia Melbourne (Global Headquarters) 3 Australia Adelaide 4 Europe London 5 North America Houston 6 South America Santiago

Marketing Offices **Ref Continent Location**

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7 Asia Beijing 8 Asia Jakarta 9 Asia New Delhi 10 Asia Seoul 11 Asia Shanghai 12 Asia Singapore 13 Asia Tokyo 14 Europe Baar 15 Europe Essen 16 Europe The Hague 17 Europe Moscow 18 North America Pittsburgh 19 South America Rio de Janeiro

Aluminium **Ref Continent Site/Asset Description Ownership**

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20 Africa Hillside/Bayside,  
 South Africa Two aluminium smelters 100 % 21 Africa Mozal,  
 Mozambique Aluminium smelter 47 % 22 Australia Worsley, Australia Integrated alumina refinery/bauxite mine 86 % 23 South  
 America Alumar, Brazil Alumina refinery and aluminium smelter 36 46% 24 South America MRN, Brazil Bauxite mine 14.8 %  
 25 South America Paranam, Suriname Alumina refinery and Lelydorp bauxite mine 45 76% 26 South America Valesul Aluminio,  
 Brazil Aluminium smelter 46 %

Base Metals **Ref Continent Site/Asset Description Ownership**

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27 Australia Cannington,  
 Australia Silver, lead and zinc mine in north-west Queensland 100 % 28 North America Highland Valley  
 Copper, Canada Highland Valley Copper  
 mine in British Columbia 33.6 % 29 North America Selbaie,  
 Canada Open pit operation producing zinc and copper concentrate and by-products including gold and silver. Due to close in January 2004.  
 100 % 30 South America Escondida,  
 Chile One of the largest copper mines in the world 57.5 % 31 South America Antamina, Peru Large copper-zinc mine 33.75 % 32  
 South America Cerro Colorado,  
 Chile Copper mine in northern Chile, producing  
 cathode copper through a SXEW  
 leach operation 100 % 33 South America Tintaya,  
 Peru Produces copper concentrate and copper cathode within the Skarn Belt of south-eastern Peru 100 %

Carbon Steel Materials **Ref Continent Site/Asset Description Ownership**

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34 Africa Samancor  
 Manganese,  
 South Africa Integrated producer of manganese alloys and ferroalloys 60 % 35 Australia Queensland Coal,  
 Australia World s largest supplier of high-quality metallurgical coal for steel production 50 80% 36 Australia Boodarie Iron,  
 Australia Hot briquetted iron plant 100 % 37 Australia GEMCO  
 Australia Producer of manganese ore (part of Samancor) 60 % 38 Australia Illawarra Coal,  
 Australia Four underground coal mines 100 % 39 Australia WA Iron Ore,  
 Australia The Pilbara iron ore mines rank among the world s best long-life iron ore assets 85 100% 40 Australia TEMCO,  
 Australia Producer of manganese alloys (part of Samancor) 60 % 41 South America Samarco,  
 Brazil An efficient low-cost producer of iron ore pellets 50 %

Diamonds and Specialty Products **Ref Continent Site/Asset Description Ownership**

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42 Africa Johannesburg,  
 South Africa Technology Centre 100 % 43 Africa Richards Bay Minerals,  
 South Africa World s largest producer of titanium slag 50 % 44 Australia Brisbane,  
 Australia Mineral Exploration Office 45 Australia Melbourne,  
 Australia Mineral Exploration Office 46 Australia Newcastle,  
 Australia Technology Centre 100 % 47 Europe Antwerp, Belgium Diamonds marketing 100 % 48 North America EKATI,  
 Canada Diamond mine in the Northwest Territories of Canada 80 % 49 North America Integris Metals,  
 US Metals distribution 50 % 50 North America Vancouver,  
 Canada Mineral Exploration Office

Energy Coal                      **Ref Continent Site/Asset Description Ownership**

35 Australia Queensland Coal,  
 Australia Marketing agent for energy coal  
 output 38 Australia Illawarra Coal,  
 Australia Marketing agent for energy coal  
 output 51 Africa Ingwe,  
 South Africa Largest coal producer in  
 South Africa 100% 52 Australia Hunter Valley  
 Energy Coal,  
 Australia New 12-Mt/a mine (Mount  
 Arthur North) being developed 100% 53 Asia PT Arutmin,  
 Indonesia Marketing agent for 75% of coal output 54 Asia PT Kendilo,  
 Indonesia Infrastructure for third party trading 100% 55 North America New Mexico Coal,  
 US Mine-mouth operations including  
 new underground mine 100% 56 South America Cerrejon Coal,  
 Colombia Largest coal producer in Colombia 33%

Petroleum                      **Ref Continent Site/Asset Description Ownership**

57 Africa Algeria ROD and Ohanet developments 36.04 45%58 Asia Zamzama, Operator of gas development 38.5%  
 Pakistan 59 Australia North West Shelf One of Australia's largest resource projects, producing liquids, LNG and domestic gas  
 8.33 16.67%60 Australia Bass Strait The Bass Strait operations produce oil, condensate, LPG, natural gas and ethane 50% 61 Australia  
 Griffin Operator of oil and gas project offshore WA 45% 62 Australia Minerva Gas field under development  
 in the Otway Basin 90% 63 Australia Laminaria/  
 Corallina Oil production in the Timor Sea 25 32.6%64 Europe Liverpool Bay Operator of oil and gas development in the Irish Sea  
 46.1% 65 Europe Bruce/Keith Oil and gas production in the UK North Sea 16 31.83%66 North America Gulf of Mexico Interests in  
 five producing assets in the Gulf of Mexico; development activities and exploration interests 4.95 50%67 South America Bolivia Oil and  
 gas production 50% 68 South America Trinidad Operator of the Angostura oil field development 45% Various Exploration  
 Exploration interests in South Africa, Brunei, Brazil, Australia, US, Trinidad and the UK

Stainless Steel Materials

**Ref Continent Site/Asset Description Ownership**

69 Africa Samancor  
 Chrome,  
 South Africa Integrated producer of chrome ores and ferrochrome comprising mines and chrome alloy plants at three major sites in South  
 Africa 60 % 70 Australia QNI Yabulu  
 Refinery,  
 Australia The Yabulu refinery is one of the world's major laterite nickel-cobalt processing plants 100 % 71 South America Cerro  
 Matoso,  
 Colombia Integrated ferronickel mining and smelting complex in north Colombia 99.8 %

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**BHP Billiton Employee HSEC Awards Program**

The BHP Billiton HSEC Awards recognise those employees who openly embody the values expressed in our Charter and go beyond what is required in their day-to-day jobs to care for their fellow employees, the community and the environment. For details of all recipients, see our full HSEC Report on the website.

**Individual**

**Excellence** Personally selected by the Chairman of the Judging Panel, the Rt Hon Sir Ninian Stephen

**Boet du Plessis, Middelburg Mine, Mpumalanga, South Africa**

*Boet is involved in helping disadvantaged people in the local communities. He presently runs 15 projects that support physically and mentally disabled people and destitute groups.*

**Health**

**Excellence**

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### **Penelope Taylor (team representative), Boodarie Iron, Port Hedland, Western Australia**

*Penelope and an Operating Excellence team developed a solution to a significant dust problem in the briquetting press area of the Boodarie Iron plant.*

#### **Highly Commended**

Anselmo Gregorio (team representative), Mozal Aluminium smelter, Maputo Province, Mozambique    Manuel Muro (team representative), Tintaya Copper Mine, Espinar, Peru    Avril Robson (team representative), Samancor Manganese, Mpumalanga, South Africa

#### **Environment**

##### **Excellence**

### **James Keenan (team representative), EKATI Diamond Mine, Northwest Territories, Canada**

*James is sponsor of an Operating Excellence team that developed the Energy Smart Program, which helped save a million litres of diesel fuel per year.*

#### **Highly Commended**

Márcia Sanna Moreira Neves (team representative), Mineração Rio do Norte SA (MRN), Pará, Brazil    Maurício Macedo Santos (team representative), Alumar Smelter and Refinery, Maranhão, Brazil    Albert van der Westhuizen (team representative), Bayside Aluminium Smelter, Kwa-Zulu Natal, South Africa

#### **Safety**

##### **Excellence**

### **Scott Lowe, BHP Billiton Energy Coal, Melbourne, Australia**

*Scott developed and implemented a Fatal Risk Peer Review Program for the Energy Coal Customer Sector Group, which is to be implemented on an annual basis.*

#### **Highly Commended**

Chris Faure (team representative), Samancor Manganese, Gauteng, South Africa    Philip Forster (team representative), BMA Blackwater Mine, New South Wales, Australia    Ian Long (team representative), Mozal Aluminium Smelter, Maputo Province, Mozambique

#### **Community**

##### **Excellence**

### **Bongani Mqaise (team representative), Bayside and Hillside Aluminium Smelters, Kwa-Zulu Natal, South Africa**

*Bongani and his colleagues were instrumental in developing Ethembeni Care Centre to provide care to people with HIV/AIDS in Zululand.*

#### **Highly Commended**

Humera Malik (team representative), Zamzama Gas Field, Islamabad, Pakistan    Rick Peters (team representative), GEMCO, Groote Eylandt, Australia    Norah Segoati (team representative), Johannesburg Head Office, Gauteng, South Africa

External Recognition (2002/03)

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Banksia Environmental Foundation Award for Leadership in Sustainability in the Australian Minerals Industry Australian Prime Minister's Award for Excellence in Community and Business Partnerships *The Australian Financial Review Magazine* Award for Corporate Partnership of the Year Association of Chartered Certified Accountants (Australasia) Award (joint) for Best Environment Reporting Australasian Reporting Awards Award for Best Environmental Report Australasian Reporting Awards Commendation Award in OHS Reporting KPMG South African Reporting Award for Best Sustainability Report

**BHP BILLITON CHARTER** WE ARE BHP BILLITON, A LEADING GLOBAL RESOURCES COMPANY. **Our purpose is to create value through the discovery, development and conversion of natural resources, and the provision of innovative customer and market-focused solutions.** **To prosper and achieve real growth, we must:** actively manage and build our portfolio of high-quality assets and services, continue the drive towards a high-performance organisation in which every individual accepts responsibility and is rewarded for results, earn the trust of employees, customers, suppliers, communities and shareholders by being forthright in our communications and consistently delivering on commitments. **We value:** **Safety and the Environment** An overriding commitment to health, safety, environmental responsibility and sustainable development. **Integrity** Doing what we say we will do. **High Performance** The excitement and fulfilment of achieving superior business results and stretching our capabilities. **Win-Win Relationships** Having relationships which focus on the creation of value for all parties. **The Courage to Lead Change** Accepting the responsibility to inspire and deliver positive change in the face of adversity. **Respect for Each Other** The embracing of diversity, enriched by openness, sharing, trust, teamwork and involvement. **We are successful in creating value when:** our shareholders are realising a superior return on their investment our customers and suppliers are benefiting from our business relationships the communities in which we operate value our citizenship every employee starts each day with a sense of purpose and ends each day with a sense of accomplishment.

Chip Goodyear  
Chief Executive Officer

January 2003

### WORKING RESPONSIBLY AT BHP BILLITON:

**OUR HEALTH, SAFETY, ENVIRONMENT AND COMMUNITY POLICY** At BHP Billiton, we are committed to sustainable development. Health, safety, environment and community responsibilities are integral to the way we do business. We commit to continual improvement in our performance, efficient use of natural resources and aspire to zero harm to people and the environment. **Wherever we operate we will:** **Develop, implement and maintain management systems for health, safety, environment and the community that are consistent with internationally recognised standards and enable us to:** identify, assess and manage risks to employees, contractors, the environment and communities strive to achieve leading industry practice meet and, where appropriate, exceed applicable legal and other requirements set and achieve targets that include reducing and preventing pollution develop our people and provide resources to meet our targets support the fundamental human rights of employees, contractors and the communities in which we operate respect the traditional rights of indigenous peoples care for the environment and value cultural heritage advise on the responsible use of our products. **Seek opportunities to share our success by:** working with communities to contribute to social infrastructure needs through the development and use of appropriate skills and technologies developing partnerships that focus on creating sustainable value for everyone. **Communicate with, and engage, employees, contractors, business partners, suppliers, customers, visitors and communities to:** build relationships based on honesty, openness, mutual trust and involvement share responsibility for meeting the requirements of this Policy. **We will review regularly and report publicly our progress and ensure this Policy remains relevant to the needs of our stakeholders. We will be successful when we achieve our targets towards our goal of zero harm and we are valued by the communities in which we work.**

Chip Goodyear  
Chief Executive Officer

January 2003

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### About BHP Billiton

BHP Billiton is the world's largest diversified resources company, with a portfolio of high-quality, long-life assets and a significant pipeline of growth projects. The Company has some 34 800 employees, working in more than 100 operations and offices in 26 countries.

Headquartered in Melbourne Australia, the Group has primary listings on the Australian and London Stock Exchanges, and has a business model created around seven Customer Sector Groups (CSGs). These are based on customer-oriented groupings of commodities.

Each of the CSGs is a substantial business in its own right, and several are leaders in their respective fields. The CSGs are Aluminium, Base Metals, Carbon Steel Materials, Diamonds and Specialty Products, Energy Coal, Petroleum, and Stainless Steel Materials.

Our key markets include downstream refiners and processors of raw materials, such as steelworks, smelters, petroleum refiners, thermal power stations and diamond cutters.

A key aspect of the Company's strategic framework is our health, safety, environment and community (HSEC) performance – we are committed to the journey towards sustainable development and Zero Harm.

### Contact Us

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### SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BHP BILLITON LIMITED  
/s/ KAREN WOOD

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Karen Wood  
Title: Company Secretary  
Date: 30 September 2003