



ERNEST HENRY

Ernest Henry Mining Sustainability Report 2006



SCOPE OF THIS REPORT

This report details the health, safety, environment and community performance of Xstrata's Ernest Henry mine at Cloncurry from 1 January 2006 to 31 December 2006.

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For a comprehensive review of Xstrata's HSEC performance at its north Queensland operations please also refer to the following reports:

- Xstrata Copper North Queensland Division Sustainability Report 2006;
- Xstrata Copper Mount Isa Mines Sustainability Report 2006;
- Xstrata Townsville Sustainability Report 2006; and
- Xstrata Zinc North Queensland Sustainability Report 2006.





Chief Operating Officer's Message

At Xstrata North Queensland we are committed to providing meaningful employment opportunities, improving our health and safety performance, providing the highest level of environmental management and reaching out to the local communities in which we operate.

In 2006, we continued to improve our sustainability performance across financial, health, safety, environmental and community criteria. This sustainability report details Ernest Henry Mining's performance against its 2006 sustainability targets in what was a very challenging year for the operation.

Ernest Henry Mining makes a significant contribution towards the success of Xstrata in north Queensland and the company's worldwide copper operations. The effects of two cyclones during 2006, however, severely restricted pit access and production and therefore production fell by 14%. This did not stop the operation from continuing its progress towards zero harm, addressing environmental issues and partnering with the local community, and I congratulate the Ernest Henry team for their determination and commitment.

Across our north Queensland businesses our sustainability highlights for 2006 included a 61% improvement in the lost time injury frequency rate, 59% improvement in the disabling injury frequency rate and 10% improvement in the total recordable injury frequency rate, significant environmental performance improvements, particularly in stormwater capture and control, and an increase in our commitment to the Xstrata Community Partnership Program North Queensland to a total value of \$5.87 million.

Our goals have come to fruition not only through successful partnerships with our employees, but also through partnerships with our local communities and other stakeholders. I am very grateful that they too share our passion.

I look forward to presenting future results of our commitment to sustainability in the coming years as we continually progress towards industry leadership in health, safety, environment and community initiatives and partnerships.

A handwritten signature in blue ink, appearing to read 'S de Kruijff', written in a cursive style.

Steve de Kruijff
Chief Operating Officer
Xstrata Copper North Queensland



General Manager's message

As part of the global Xstrata Group, Ernest Henry Mining values its membership and involvement in the local Cloncurry community. We take our social responsibility seriously and we are particularly proud of our training programs that have benefited many of our locally-based employees.

This sustainability report is one avenue for our management and Xstrata to distribute information to the community about our operation, with particular reference to our commitment to the health and safety of our employees. Our commitment to the environment and involvement in the local and wider communities is communicated in a transparent and straightforward format.

Key sustainability and operational results for 2006 include:

- significant improvement in our health and safety performance over the past year; these improvements in safety, including improved housekeeping, continue to be driven by the entire Ernest Henry team;
- our environmental management programs continued to deliver in line with our expectations; we have continued to progressively rehabilitate the site, as well as meet all our site monitoring requirements;
- successful, progressive coordination between our environmental and community relations teams in promoting events such as 'National Tree Day' and 'Mulch Day', assisted by the Cloncurry Council's ongoing commitment to a successful partnership with the Ernest Henry mine. This has seen over 140 cubic metres of mulch used towards domestic and public beautification projects, with over 300 trees planted during 2006;
- further benefits to the Cloncurry community from our continuing social involvement program, as well as our ongoing support of key community events;

- copper head grades 26% lower than 2005 in line with the mine plan developing through the 'halo' of the lower grade ore, harder ores associated with the lower copper grades resulting in a 10% decrease in ore milled and a 35% decrease in copper-in-concentrate production compared with 2005, and reduced gold production for similar reasons;
- the mine plan and operations were affected by two cyclones in the first half of 2006, resulting in a 14% reduction in material mined compared with 2005; and
- continued improvements in the maintenance and operations plan for the concentrator resulting in record annualised plant runtime of 94% of total time.

Although 2006 was a challenging year for Ernest Henry Mining, we maintained our position as an important part of the Xstrata North Queensland copper operations.

It is with great pleasure I present the Ernest Henry Mining Sustainability Report. As the General Manager, I am proud of the Ernest Henry Mining operation in delivering the 2006 HSEC results contained in this report. All team members from Ernest Henry mine should be rightfully proud and can celebrate their contribution to our HSEC performance. Our people are the difference.

We would welcome any feedback about this report. Please email your comments to nqsustainability@xstratacopper.com.au or write to me at Ernest Henry Mining, PO Box 527, Cloncurry, Queensland, 4824.

Cam Schubert
General Manager
Ernest Henry Mining



Our approach to sustainable development

For Xstrata, sustainability is about caring for the environment in all stages of mining and metal production; efficient and responsible use of resources, including energy, water and land; keeping our employees safe and healthy; improving services and facilities in communities where our employees and their families live; helping these communities to build the capacity to sustain themselves as vibrant, self-reliant centres; and providing our shareholders with a highly profitable return on their investment in our business over the long term.

XSTRATA COPPER'S DEFINITION OF PURPOSE

We will maximise value for shareholders by successfully growing and managing an industry-leading portfolio of copper assets that deliver superior returns.

We will achieve this in a safe, environmentally and socially responsible way, in open partnerships between our people and with communities, governments and other stakeholders.

Strategic objectives

- injury-free, safe work environments;
- recognised leadership in environmental performance;
- reputation for social responsibility;
- realisation of the full potential of our people;
- achievement of the full capacity of our physical assets;
- cost competitiveness through the cycles;
- value creation through dynamic growth and continuous improvement; and
- effective implementation of common key systems and strategies.

Values

Our decisions and actions will demonstrate the following values:

- honesty;
- dependability;
- respect;
- confidence;
- ingenuity;
- courage; and
- passion.

Our global perspective

Xstrata is a global diversified mining group, listed on the London and Zürich Stock Exchanges, with its headquarters in Zug, Switzerland. Xstrata's businesses maintain a meaningful position in seven major international commodity markets: copper, coking coal, thermal coal, ferrochrome, nickel, vanadium and zinc, with recycling facilities, additional exposures to gold, cobalt, lead and silver and a suite of global technology products, many of which are industry leaders. The Group's operations and projects span 18 countries: Argentina, Australia, Brazil, Canada, Chile, Colombia, the Dominican Republic, Germany, New Caledonia, Norway, Papua New Guinea, Peru, the Philippines, South Africa, Spain, Tanzania, the USA and the UK. Xstrata employs approximately 43,000 people, including contractors.

Enduring Value – A Framework for Sustainable Development

Xstrata Copper is a signatory to *Enduring Value – the Australian Mineral Industry Framework for Sustainable Development*. This framework was developed and launched by the Minerals Council of Australia (MCA) in October 2004 to give practical effect to the International Council on Mining and Metals' (ICMM) sustainable development principles.

The key role of *Enduring Value* is to translate the principles of sustainable development into practices that ensure industry operates in a way that meets community expectations and maximises the long-term benefits to society by effectively managing Australia's natural resources.

As a signatory to *Enduring Value*, Xstrata Copper has obligations to include progressive implementation of the ICMM Principles, public reporting of site level performance at least annually and assessment of the systems used to manage key operational risks (using either internal or external assessment as appropriate).



Contributing to our economy

Ernest Henry is a mining and metals processing operation that forms a major part of Xstrata's operations in north Queensland. With almost 600 employees, and 175 of these residing in Cloncurry, the mine is a significant contributor to the local economy.

Ernest Henry mine is a copper-gold mining and metals processing operation that forms a major part of Xstrata's operations in north Queensland. The mine is a significant contributor to the local Cloncurry economy. Ernest Henry mine spends around \$50 million which generates an economic benefit of \$60 million in the region. Our Cloncurry-based workforce also contributes to the local economy through its household and recreational expenditure.

Ernest Henry mine contributes to the local and north Queensland economies through:

- employment of almost 600 people at its operations, including contractors and casual employees;
- an annual wages bill of around \$39 million, most of which is spent in north Queensland;
- apprenticeship and youth training opportunities of more than \$800,000;
- \$136 million spent on purchasing regional goods and services;
- \$1.2 million paid in annual rates to local council;
- \$2.1 million paid to local council to support infrastructure and roading capital;
- annual contributions of more than \$500,000 directed to community partnerships, donations, sponsorships and community programs (XCPP & EHM);
- almost \$16 million in rail, power and water charges; and
- more than \$3.3 million paid to governments in taxes and charges.

OUR PRODUCTION

The Ernest Henry mine copper-gold deposit is the third largest copper ore body in Australia after Olympic Dam and Mount Isa. It is located 38 kilometres north-east of Cloncurry near Fort Constantine Station. The final pit will be 1.5 kilometres in length and a width of 1.3 kilometres, with an overall depth of about 570 metres. The pit is being mined in 16 metre-high benches which have an average wall slope of 70 degrees.

In 2006, copper head grades were 26% lower than 2005 in line with the mine plan developing through a 'halo' of lower grade ore. The harder ores associated with the lower copper grades resulted in a 10% decrease in ore milled and a 35% decrease in copper-in-concentrate production compared with 2005. Gold production was somewhat lower for similar reasons. In addition, the mine plan and operations were impacted by two cyclones in the first half of 2006. Material mined at Ernest Henry mine was 14% lower compared with the prior year.

In 2006, 59.2 million tonnes of material was mined, producing 10.3 million tonnes of ore and 0.084 million tonnes of copper in concentrate. The value-added concentrate is produced on site. The concentrator is a single line plant using contemporary equipment, designed to treat nine million tonnes of primary ore a year, which equates to treating nominally 1,200 tonnes per hour.

Tailings are pumped to an engineered tailings storage facility for long-term containment. The concentrate is either transported by road to Mount Isa where it is smelted and refined at Mount Isa Mines' copper refinery in Townsville or exported through the Port of Townsville. In addition to copper, more than 100,000 ounces of gold was produced in 2006.

Production facts

Copper Stream (Ernest Henry Mining)	
2006 production	59.2 million tonnes of ore mined 10.3 million tonnes of ore milled on site 83,965 tonnes of copper in concentrate
Gold Stream (Ernest Henry Mining)	
2006 production	105,563 ounces of gold in concentrate



Caring for our people

The health and safety of our employees, contractors and the community is critical to the business success of Xstrata Copper. We believe that all work-related incidents, illnesses and injuries are preventable.

HEALTH AND SAFETY

Overcoming challenges

Ernest Henry mine continues to be a hybrid operation with locally based and fly-in fly-out, full-time employees, contractors and casual employees. Our key challenge during the year was to ensure that all our employees have the correct knowledge, tools and environment to work safely on site. With almost half our employees having never worked on a mine site before joining us, ensuring a positive and proactive safety culture is equally important to providing education and training for our people.

One of our strategies for overcoming this challenge was to develop a stronger focus on risk management at all levels of the organisation. This ensures that all our people attempt to prevent accidents before they occur by identifying and controlling hazards in their workplace.

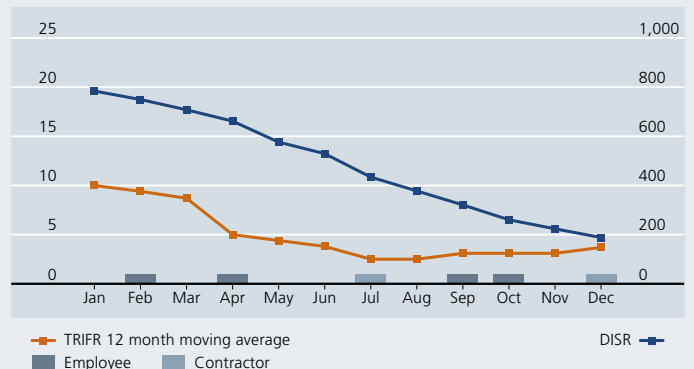
Our culture of performing safe work observations supports our risk management focus. With employees from all organisational levels observing people at work and providing constructive safety feedback, we have built upon our culture of looking out for each other when it comes to safety.

Performing safely

During 2006, our safety performance improved in a number of key areas. The disabling injury frequency rate (DIFR) graph shows the number of disabling injuries lost per million hours worked. This year, our DIFR decreased from 10.5 at the start of the year to 3.7, with the number of disabling injuries reducing from 17 in 2005 to six in 2006.

DIFR Graph

Ernest Henry mine – 2006



« (Previous page) Mine Emergency Response Team members practice their skills at mock exercises held weekly as part of on-site emergency response training.

HEALTH AND SAFETY PERFORMANCE

2006 Targets		Performance	2007 Targets	
Ernest Henry Mining				
Zero fatalities		✓	Zero fatalities	
TRIFR < 9.9		✗ (11.1)	TRIFR < 12.0	
Train a greater percentage of the site team as PASS champions		✓ (20% to 35%)	Achieve self-sufficiency in PASS	
Upgrade orientation and induction process		→	Complete orientation and induction process upgrade	
Train key Emergency Response Team personnel as instructors in a number of emergency response disciplines		✓	Align emergency response systems with Xstrata NQ Emergency Management Framework	
			Establish entry level traineeships for school students	

✓ Achieved ✗ Not achieved → Action continues into 2006

The disabling injury severity rate (DISR) shows the number of days lost due to injury per million hours worked. During 2006, this figure reduced from 794 to 188. This is equivalent to having an extra four to five people on site. This significant decrease shows the importance of preventing injuries, as well as early incident reporting to ensure the best possible treatment is provided.

■ Disabling injury performance 2006

In 2006, our total recordable injury frequency rate (TRIFR) was 11.1, down slightly from 12.4 in 2005. A key aspect of our improvement in safety performance in 2006 was the increased focus on communication between all levels of the workforce. The improvements identified by our people have been recognised and rewarded through the Positive Attitude Safety System (PASS) process and our quarterly Innovation Awards. PASS is a communications tool developed to improve the flow of safety information through the workforce and to encourage safety improvement at the front line. The communication process has been supplemented by a daily information sheet which keeps the workforce informed of safety issues and improvements across the site. In 2006, we dramatically increased the number of trained PASS champions and PASS facilitators among our workforce.

Our hazard identification and risk management processes were also strengthened during the year. Risk assessment training was conducted across site to support the creation of a new job safety analysis process. Senior managers on site were also given greater responsibility for managing risks in their areas through the implementation of the CURA risk management database. New risk assessment techniques were introduced on site, including bow-tie risk assessments, which focus on identifying and correcting issues in our work processes.

■ Emergency management

Our emergency management resources were improved this year with the appointment of a full-time fire and emergency services officer. This has allowed a greater focus on maintaining and improving our fire protection systems, as well as providing the emergency response team (ERT) with more professional training. In 2006, the ERT embarked on a highly structured, intensive training regime to improve their performance. A typical ERT training day begins with a physical fitness program supervised by physiotherapists. Team members undergo regular fitness tests and have fitness programs specially designed for

them. Following physical training, the team undergoes theoretical and practical training in one of a number of disciplines. Over a 12-month period, the team learns medical skills, fire-fighting, road accident rescue, vertical rescue skills and search and rescue techniques. These skills are honed in intense drills in hot weather conditions to ensure the team is prepared for any scenario.

Occupational health and wellbeing

Our on-site health management was boosted this year by the arrival of two full-time injury management coordinators and a clinical nurse, all of whom are registered nurses. Physiotherapists from Mount Isa also visit the site two days a week to provide treatment for our workforce. The health team is supported by new equipment in the clinic to allow a more rapid diagnosis and treatment of injuries and illnesses. In some cases treatment can be administered without the need to leave site.

We have also focused on improving the health and wellbeing of all our employees. Fitness programs including sporting and gym activities are supported by the SmartFuel healthy eating program run by Sodexo. Staff seeking to give up smoking are also supported by the Quit Smoking program. About 40 employees started the program in 2006, with almost 90% still smoke-free by the end of the year including some who had smoked for 30 years. Participants reported improvements in their general health including lower blood pressure and a greater appreciation of smell and taste. The long-term aim is for 60% of smokers at Ernest Henry mine to give up smoking permanently.

MANAGING OUR HUMAN RESOURCES

The key to the ongoing success and sustainability of our business is the alignment, commitment and capability of our employees.

The Xstrata North Queensland Operations Human Resources Strategy, and accompanying initiatives, supports this requirement through the development of individual capabilities and organisational culture. This includes ongoing safety 'toolbox' talks, awareness and educational reflections regarding incidents, improvements and innovations. We encourage employees to further develop their professional skills related to the workplace, by taking study leave, attending conferences, pursuing training opportunities, and joining the Emergency Response Team. Additionally, annual sessions to personnel regarding Equal Employment Opportunity ensures all employees are treated equally, with inclusion throughout the workplace.



case study

LOW COST INNOVATIONS REDUCE INJURY RISK

Relatively simple safety solutions that cost less than \$500 to develop and implement were the winners of Ernest Henry Mining's 2006 innovation awards.

« The goanna bar jig, an innovation from Ernest Henry mine to prevent manual handling of heavy dozer blade protectors.

Contract boilermaker, Greg Doolan, from the heavy maintenance crew developed a lifting jig to prevent manual handling of heavy dozer blade protectors. Using existing on-site resources, Greg built a prototype consisting of a custom-cut piece of steel that fits around a new dozer blade. A lifting lug was welded onto the lifting jig to enable it to be lifted using a crane or forklift. The jig could also be applied to hydraulic excavators, shovels and graders.

Ernest Henry Mining Senior Safety and Training Advisor, Matt Grant, said crew members appreciated the benefits of the lifting jig.

"In the past it's always taken at least two people to lift the blade protectors, and its position on the side of the dozer bucket not only made lifting difficult but increased the potential risk of back injury," Matt said. "Now the lifting can be done by one person using the crane or forklift and the process is much quicker."

Matt said manual handling injuries comprised 25% of all injuries at Ernest Henry.

Greg was also responsible for a second award-winning innovation which cost less than \$500 to develop – a drop-down platform to eliminate working at heights on Caterpillar excavators.

To change excavator arch hoses, maintenance crew members need to climb outside the machine's handrails and try to keep their balance while undoing the hose. Greg's innovation involved converting one of the handrails around the side of the machine into a drop down platform. Now the crew member simply undoes a couple of bolts and the platform falls down to provide a solid platform.

A third innovation award winner – a purpose-built bench for cutting and stripping oil filters – was developed by one of the mine maintenance crews. The bench enables the filter to be held in place while the maintenance fitter cuts it open for inspection, preventing oil spills which are a safety and environmental hazard.

Developing vocational skills

Xstrata north Queensland works closely with key stakeholders in the community to provide real and meaningful vocational career pathways for individuals, in careers that reflect the needs of our business. Our vocational skills development program aligns to a number of key initiatives:

■ Training opportunities for school students

Ernest Henry mine awarded two bursaries to students from Cloncurry State School to help prepare them for possible careers in mining. We are establishing an entry level traineeship in 2007, with accreditation to a Certificate I national competency in resources and infrastructure operations, which will provide an opportunity for candidates who may face barriers to entering employment in the mining industry.

■ Fostering apprentices

Five Ernest Henry mine apprentices from the electrical, mechanical and fitter/welder disciplines completed their first year of trade school at TAFE in 2006. Two new electrical apprentices will commence with our operations in 2007.



Ernest Henry Mine's Senior Environmental Advisor, Mick Hawkins, undergoes a periodic health assessment with one of the full-time Registered Nurses at the mine.



Caring for our environment

We believe that superior environmental performance results in increased efficiency, lower risk and higher overall performance of our operations, and is critical in maintaining our licence to operate.

Xstrata is committed to the highest standards of environmental management and performance. We limit the environmental impacts of our operations through the efficient use of natural resources and the reduction of input materials and waste, and through contributing to the conservation of biodiversity. We believe that effective environmental performance encourages greater efficiency and higher standards of performance at our operations and minimises risks to our business, contributing directly to our long-term success.

OVERCOMING CHALLENGES

The main environmental challenges for Ernest Henry mine are:

- planning for mine completion;
- maximising the efficient use of water;
- modelling groundwater drawdown and recharge; and
- developing sustainable caps for the tailings dam and waste rock dumps.

ENVIRONMENTAL COMPLIANCE

During 2006, we closely monitored our compliance with conditions in our environmental authority and water licences. No major non-

compliances were identified. During the year we hosted a joint Environmental Protection Agency (EPA) and Queensland Resources Council tour of our operations. This tour was part of a wider north Queensland tour for EPA personnel who were not usually exposed to mine site conditions.

We recorded two Category 3 (significant) environmental incidents during 2006. Both incidents involved concentrate spills from road trains transporting copper concentrate from the mine to the Mount Isa copper smelter. Around 18 tonnes of concentrate was spilled on the side of the highway in the first incident, while 22 tonnes of concentrate was spilled in the dry river bed of the Corella River in the second incident. A soil survey, completed after both incidents, confirmed all copper concentrate was recovered. No personal injury or long-term environmental harm resulted from these incidents.

A comprehensive incident investigation and bow-tie risk analysis was undertaken as a consequence of these incidents. The main actions arising from these were the completion of an audit on the haul route between Ernest Henry Mine and Mount Isa identifying “black spots” and communicating these to the concentrate haulage drivers and the development of a competency based Safe Behaviour Training package for concentrate haulage drivers.

« "Aerva Javanica" more commonly known as a Kapok Bush which is found in the local area.

ENVIRONMENTAL PERFORMANCE

2006 Targets	Performance	2007 Targets
Ernest Henry Mining		
Complete mine completion plan	✓ Finalised plan with cost estimates for all major rehabilitation activities	
Complete tailings dam rehabilitation trial	→ Completed all modelling for tailings trial and integrated the capping site into the tailings dam design	Continue trial until completion
Maintain tailing underflow densities at 65% solids	✓ Average tailings densities of 63.8%	Maintain tailing underflow densities at 65% solids
Raw water consumption < 520 litres per tonne of ore treated	✗ (543 litres per tonne)	Raw water consumption < 520 litres per tonne of ore treated
Reuse > 85% of pit and bore water	✗ Raw water reuse 61.4%	Reuse > 85% of pit and bore water
		Rehabilitate 60 hectares on south waste rock dump
		Maintain or improve EPA Category 2 performance rating
		Review groundwater drawdown model
		Raise the northern and southern tailings dam to provide additional 20 million tonnes of capacity

✓ Achieved
 ✗ Not achieved
 → Action continues into 2006

Emissions to air

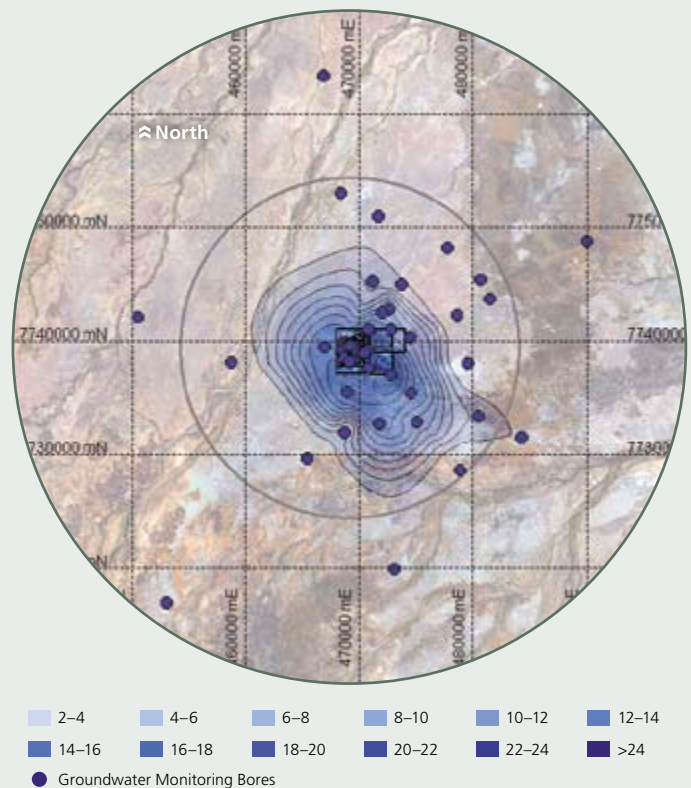
In 2006, we continued to monitor dust deposition rates and copper concentration up to 15 kilometres from the mining leases. There was no identified increase in dust deposition rates outside the Ernest Henry boundary. Ernest Henry mine continued to focus on dust control within operational areas of the pit, concentrator and maintenance workshops to allow safe production.

Surface and groundwater management

Ernest Henry mine continued to pump groundwater from a series of dewatering bores around the Ernest Henry pit. Groundwater water levels and quality are measured at 75 bores surrounding the mine. We commenced a review of our groundwater model to refine the current drawdown predictions. This review will focus on both the groundwater level response during the dewatering phase and also groundwater recharge after mining activities are completed. Drawdown is a recognised and known environmental impact that was identified prior to mining in the Environmental Impact Assessment Stage (EIS). Groundwater levels are within expected parameters of modelling from 1999. In 2007, Ernest Henry mine will continue to monitor groundwater levels closely and monitor and investigate future groundwater drawdown and recharge.

Groundwater quality surveys were also undertaken on our neighbouring properties to confirm that water quality had remained unchanged since the development of Ernest Henry mine. This information is shared with our neighbouring pastoralists to assist them with property planning.

Significant improvements in water management at the village sewage treatment plant have been implemented. Greater quantities of treated water can now be used for irrigation which has significantly reduced the risk of the evaporation dams overflowing and has compensated for the increased occupancy in the mine village.

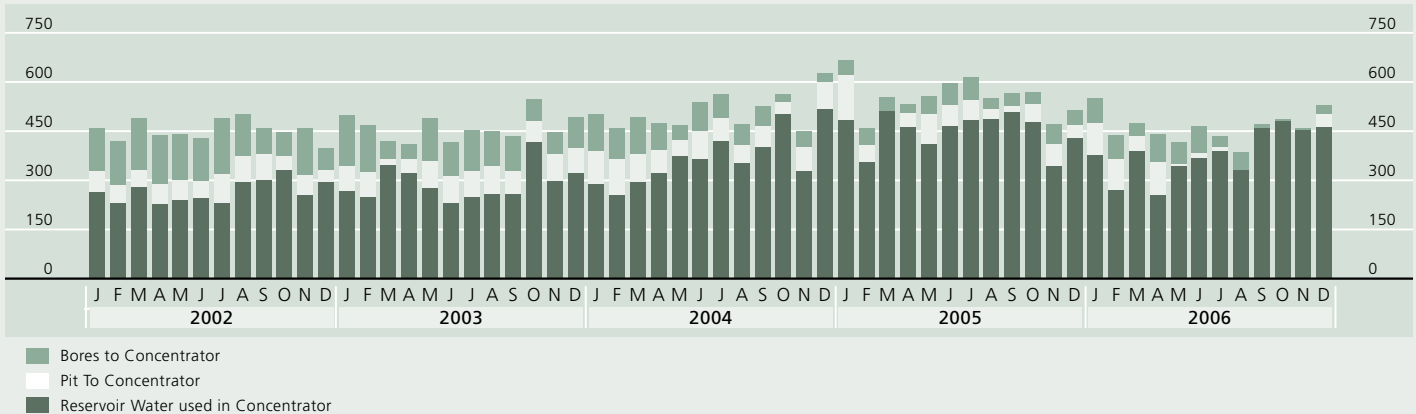


Ernest Henry mine's Groundwater Drawdown map (in metres).

Caring for our environment

Water Usage

ML (megalitres) per month



Water use

In 2006, 61% of Ernest Henry mine's dewatering water was beneficially used. We dewatered 3,567 megalitres of pit water from a series of bores and in-pit pumps, with 1,698 megalitres recycled or reused primarily as raw water in the concentrator and as a dust suppressant. A further 1,381 megalitres was directed to our evaporation dams. As a result, we only drew 4,578 megalitres of our allocated 6,500 megalitres from Lake Julius.

Modifications to the tailings thickener produced significant improvements in water management in the concentrator, allowing higher densities to be achieved. The concentrator achieved a 7% improvement in water efficiency during 2006 and allowed easier management of the tailings dam.

At Ernest Henry the mine construction dam was de-silted and the capacity increased in 2006. This will allow us to be more efficient in capturing water dewatered from the pit for utilisation in the concentrator.

Protecting biodiversity

Ernest Henry Mining continued to undertake aquatic ecological health assessments at downstream locations. These included the sampling and analysis of freshwater mussels, sediments and water quality in Gypsy Creek and selected control sites around the Cloncurry region. Results indicated that the ecological health of downstream locations had not deteriorated since the establishment of the mine.

We undertook many terrestrial fauna assessments in mine rehabilitation and other areas of significance. These surveys identified many species located on rehabilitated land on the north waste rock dump rehabilitation trial and at off-site reference sites. Species identified on our rehabilitated land included the Striped Faced Dunnart, Long-tailed Planigale and Eyrean Earless Dragon. Ernest Henry will continue to rehabilitate land during 2007 and monitor flora and fauna in these areas, with the aim of achieving a native Mitchell grass ecosystem, similar to areas directly adjacent to Ernest Henry.

Mine completion and rehabilitation

Ernest Henry Mining has finalised a mine completion plan with cost estimates for all major rehabilitation activities. This plan takes into account the Xstrata HSEC Standards and all legal obligations. To help in the development of this plan we held a mine completion workshop (the multi-disciplinary group comprised mining, environment and community relations personnel from Xstrata Copper's Australian operations) in 2006 which focused on:

- identifying and communicating the mine completion objectives;
- brainstorming alternative post mining land use options;
- land use (self sustaining native vegetation);
- identifying all major changes to the life of mine which may affect mine completion; and
- identifying technical challenges to the success of disturbed land rehabilitation.

During 2007, we plan to rehabilitate 60 hectares of disturbed land in the south waste rock dump. This will involve placing a half metre of topsoil over the site and actively seeding native grasses and shrubs, with the aim of achieving self sustaining native grassland. The dominant species will be Mitchell and Flinders grass, similar to species directly adjacent to the mine site. This area will triple our level of rehabilitated land and demonstrate our commitment to progressively rehabilitate disturbed land wherever possible.

We also continued with modelling various tailings dam capping designs. This modelling will be used to clarify the capping methodology to be used and the thickness of the cap. The two capping methodologies under consideration are a water shedding cap design and a capture and release capping design. The major variables that will aid in the capping methodology decision are the availability of capping materials, capping material characteristics, that is particle size distribution, and the climate. The north west corner of the south tailings dam has been identified as the preferred location for the trials. This area has been incorporated into the tailings design. Capping trials will be constructed during 2007.

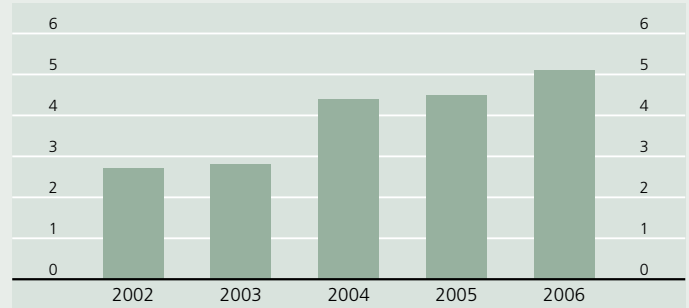
case study



« Michelle Guthrie conducting a pre-start check, paying particular attention to tyre condition.

Average tyre life at Ernest Henry mine

Hours ('000s) – Ernest Henry mine



Average tyre life hours (Information courtesy of Klinge & Co. Pty Ltd.)

ENVIRONMENT BENEFITS FROM LONGER TYRE LIFE

Xstrata is committed to using its resources more efficiently and reducing waste – increasing tyre life is one step towards achieving this. Since introducing a program in 2000 to extend vehicles' tyre life at Ernest Henry mine, average tyre life has doubled. In 2006 average tyre life was 5,091 hours, compared to 2,300 hours in 2000. With a current worldwide shortage of tyres, and world haul truck tyre prices exceeding US\$80,000, the economic and operational benefits of conserving tyre use by extending individual tyre life are significant.

Working closely with vehicle operators and management, Ernest Henry's tyre management contractor, Klinge, has implemented a program of continuous improvement to increase tyre life across the board. Initiatives include visual inspections, vehicle operator awareness training, road and ramp construction advice, and software tracking of tyre movements. Every day tyre pressure is checked to ensure tyres are not running outside their safe operating perimeters and a visual inspection is conducted to assist in planning tyre rotations.

New vehicle operators undergo an operator awareness program and all operators participate in one-on-one tyre awareness talks that highlight the operational tyre damage that can occur and the best way for operators to avoid incurring that damage.

Simple measures such as maintaining correct ramp gradients and the camber of corners on our haul roads, and advising on the correct type and size of sheeting material for use on the roads and windrows (safety embankments), also contribute to longer tyre life.

Klinge's Total Tyre Control software program tracks all tyre and rim movements which assists in the monitoring of rim testing.

Ernest Henry Mining Senior Environmental Advisor, Michael Hawkins, said the environmental benefits of increasing tyre life included waste reduction and better utilisation of a scarce resource. "Since the introduction of the program there has been a significant reduction in the amount of tyres we have needed to dispose," said Mr Hawkins.

Managing environmental risks

Ernest Henry mine continues to maintain our area specific environmental aspects registers. These aspects registers are used to monitor controls that are implemented to minimise environmental risks. They also identify where additional controls can be implemented to further reduce environmental risk at the mine.

■ Waste rock

In 2006, Ernest Henry mine continued to characterise and selectively handle all waste rock in the pit to minimise the risk of acid mine drainage after mining is completed. Waste rock that is likely to cause acid mine drainage is encapsulated within the centre of the waste rock dump, while benign competent waste rock is used on the outside surface of the waste rock dump. We are also continuing to stockpile benign competent waste rock to aid in the capping of the tailings dam and encapsulation of the waste rock dumps at mine completion.

During 2006, the remainder of the reactive black shale was removed from the Stage 7 pit. This material was clay encapsulated in specifically constructed cells with the aim of minimising any water flowing through the cell. This will reduce the risk of the shale oxidising and causing acid mine drainage.

Ernest Henry mine uses a laser survey tool, I-site 3D, to monitor the stability of the waste rock dumps and the tailings dam. This tool accurately surveys the waste rock dumps and tailings dams on an annual basis and can identify movement in the walls, assisting us to demonstrate that the waste rock dumps and tailings dams are geotechnically stable and resistant to erosion. We continued to manage tailings produced from our concentrator.

In 2007, we plan to further raise both the northern and southern tailings dam walls which will provide an additional capacity of 20 million tonnes.

■ Waste

General waste from Ernest Henry mine and mine village is contained and disposed of on site within licence guidelines and with EPA permission. We use a scrap metal contractor to transport our waste aluminium cans to a recycling depot in Townsville. The income generated from this recycling activity is passed onto the local Lions Club of Cloncurry. Our hazardous waste is managed by a licensed contractor and transported to Townsville for recycling or disposal.



Caring for our community

Xstrata Copper believes that the wellbeing of our employees, their families and the communities in which we operate is crucial to maintaining our social licence to operate our business.

Our ongoing funding of educational, environmental, social, community, health, arts and cultural initiatives is a key part of our social responsibility. The Xstrata Community Partnership Program North Queensland is fundamental to our commitment to engaging with local communities and fostering opportunities to ensure their wellbeing.

XSTRATA COMMUNITY PARTNERSHIP PROGRAM

Launched in December 2004, the Xstrata Community Partnership Program in north Queensland is making a difference to the communities in which Xstrata operates. In 2006, \$225,000 was injected into program initiatives in Cloncurry and the surrounding communities. In 2007, funding will increase to \$281,000.

Funding is directed towards the following areas:

- enterprise and job creation;
- education;
- environment;
- social and community development;
- health; and
- arts and culture.

The program is complemented by individual site donations. Strict guidelines mean that donations are made to groups rather than individuals to ensure the community benefits as a whole.



Girl Guides assisted Ernest Henry mine on National Tree Day.

« Cloncurry's St Joseph's Primary School Kids (from left) Kayne Tapp, Robert Mitchell, Andre Fretwell and Kristine Adcock enjoy playing ball sports under their school's new shade shelter. Photo by CARENDA JENKIN – Courtesy of The North West Star.

SOCIAL RESPONSIBILITY PERFORMANCE

2006 Targets	Performance	2007 Targets
Ernest Henry Mining		
Continue to expand the benefits of the Xstrata Community Partnership Program in north Queensland	✓	
Publish site sustainability report	✓	Publish site sustainability report
Build on 2005 success with additional initiatives and ongoing transparency of donations	✓	Build on 2006 success with additional initiatives and ongoing transparency of donations
Deliver one north Queensland publication for the north Queensland operations, reflecting unity of business and community relationships	✓	
Continue to champion all Ernest Henry mine employees as advocates of community relations	✓	Continue to champion all Ernest Henry mine employees as advocates of community relations
Improve our communities by listening, learning and facilitating with relevant community stakeholders where appropriate	✓	Improve our communities by listening, learning and facilitating with relevant community stakeholders where appropriate
		Complete community attitude survey in Cloncurry
		Deliver indigenous training opportunities

✓ Achieved ✗ Not achieved → Action continues into 2006

The Xstrata Community Partnership Program North Queensland will continue to build on its many successes in 2006, which included a range of new partnership projects in Cloncurry. A selection of these projects across the six categories included:

Education

■ Supporting school students

Cloncurry State School joined the Xstrata and Queensland Minerals Council Hub School Partnership, with two students signing up to the Xstrata scholarship program in 2006. Xstrata employees from various disciplines also donated their time and expertise to Cloncurry State School's bi-annual accreditation process which involves reflection on the curriculum and relative merit grades being achieved by students on the State curriculum.

■ Sporting equipment storage

Demonstrating its commitment to encouraging a healthy community, Xstrata provided \$30,000 towards a new storage shed and sporting equipment at the Cloncurry State School.

Environment

■ Mulch Day

During 2006, Ernest Henry Mining, in a unique relationship with its scrap steel transport merchant, arranged for previously empty trucks returning from Townsville to arrive fully loaded with mulch to support local landscaping and beautification projects. Partnering with the Cloncurry Shire Council, the mulch was distributed on designated 'Mulch Days' by Xstrata and council employees to residents in return for a donation. The proceeds were donated to the local Girl Guides association for their work on beautifying Cloncurry.



Xstrata Copper has contributed to the support of Childcare Services in Cloncurry from 2005. Pictured is Ernest Henry Mine's Community Relations Officer, Nicole King, with Ethan and Jenna MacNamara.

Social and community

■ Landscaping Cloncurry

Xstrata donated \$20,000 to Greening Australia and to the Cloncurry Shire Council to promote a green corridor for Cloncurry. With the help of a proposed 'Green Army' of volunteers, the beautification movement has targeted Ramsay Street, the railway crossing, McIlwraith pump house site/pick up point and footpath, Chinaman Creek Dam and the airport for landscaping and improvements in conjunction with the Council Tourism Advisory Committee.

Caring for our community

■ A selection of Cloncurry's ongoing XCPPNQ initiatives in 2006 are listed on this page.

Project	Partner	Description	Funding and timeframe	Status/update
Enterprise and job creation				
Promoting Cloncurry tourism	Cloncurry Shire Council, Cloncurry Historical Society, Queensland Sport and Recreation, the Outback Queensland Tourism Authority and the North Queensland Area Consultative Committee	Two Xstrata employees represented Cloncurry / Mount Isa at the Sydney Caravan and Camping Expo where they promoted the Overlander's Way	\$150,000 from 2005 to 2007	More than 1,400 people visited the Overlander's Way display where they received tourist information
Cloncurry Tourism Development Plan	Cloncurry Council, Main Roads and Road Tek	Established destination signage along the tourist drive between Cloncurry and Mount Isa, known as Fossickers Way	\$35,000 (ongoing 2007)	Signage designed, constructed and placed at historic, geographical and recreational places of interest
Social and community				
Indigenous youth worker	Police Citizens Youth Club; Mitakoodi Aboriginal Housing Cooperative	Provided funding for an indigenous youth worker	\$75,000 from 2005 to 2007	Youth Centre now open and regularly attended. Youth crime statistics have dropped
PCYC equipment purchases	Police Citizens Youth Club	Provided funding for equipment purchases such as disco equipment	\$30,000	Equipment to run regular blue light discos and boxing equipment purchased
Cloncurry Skate Park	Lions Club of Cloncurry, Cloncurry Shire Council, local police	Provided funding for construction of a skateboarding park for youth	\$20,000 in 2005	Skate park opening in early 2007
Arts and culture				
Live theatre production in Cloncurry and Mount Isa	Queensland Arts Council	Partnership with QAC brought live theatre productions of 'Wallflowering' and 'Urban Wonderland' to the Cloncurry community	\$225,000 from 2005 to 2007	Two theatre productions have been brought to Cloncurry and another is planned for 2007
Ernest Henry Cloncurry Arts Council Art Show	Cloncurry Arts Council	Provided funding to support the staging of the art show	\$5,000	150 people attended the art show



Cloncurry Hospital staff, Lesley Laffey and Joanne Crump, using the I-Stat machine purchased through the XCPPNQ.

Health

■ Consolidated health service

In 2006, Xstrata contributed \$10,000 towards supporting the Cloncurry Hospital's transition to a Queensland Health Multi-Purpose Health Service (MPHS). The MPHS will deliver a one-stop-shop for acute, chronic and aged care hospital services, as well as referral centre for dental, physiotherapy and occupational therapy.

■ Ambulance equipment

Xstrata donated \$3,000 in 2006 to assist with the upgrade of the 'LifePak 12' Defibrillator monitoring equipment for the Cloncurry Ambulance. This ensures the latest diagnostic equipment is available for the support of the whole community.

Arts and culture

■ Sound of chamber music

Xstrata sponsored the five-day Australian Festival of Chamber Music's Xstrata Copper Outback Tour. The orchestra performed across the Mount Isa and Cloncurry region, including a performance inside the Ernest Henry mine heavy vehicle workshop, the Xstrata Copper Sportsman's Dinner at the Cloncurry Shire Hall, and the City versus Country football match at John Flynn Place.



THE CURRY

A group of 15 young people in Cloncurry discovered a powerful way to get their voices heard when they participated in a film-making project sponsored by Xstrata in partnership with Job Futures Mount Isa. They were selected to make a short film which would reflect what they thought of their town, what it was like being a young person in Cloncurry and what messages they would like to communicate to a wider audience. The result was 'The Curry' – an eight minute short film written, filmed and acted by the students.

The project was the brainchild of Job Futures Youth Support Coordinator, James Charles, and Ernest Henry Mining Superintendent Employee Services and Community Relations Andrew Uphill. They were inspired by the Big Screen Film Festival which visited Cloncurry in 2005 as part of Xstrata's partnership program. The festival included a digital film-making workshop for youth which proved very successful.

Working with Cloncurry State School and St Joseph's School, 15 young people were selected to take on the film project. The students received a condensed course in video and audio skills, scripting and production

with the assistance of QPIX, and set out producing their film within one week. The result was an inspiring and honest examination of their life in Cloncurry, their desire for more facilities and greater opportunities, and the realisation that it was up to them to create their future.

The film premiered at a special film night, reminiscent of a Hollywood launch, attended by friends, teachers, families and community members. The audience response was overwhelmingly positive.

James said the project had been a great success and extremely rewarding for the students involved.

"The project not only provided film making skills, it demonstrated to the students the value of teamwork and that they had a voice and could use it to influence their future," he said.

Following the premiere, Ernest Henry Mining General Manager, Cam Schubert, presented two digital cameras to the schools, to enable more budding filmmakers to take up the challenge in the years to come.

Since its premiere, the film has featured in the Australian Film Commission's Big Screen Tour of north west Queensland.

DONATIONS AND SPONSORSHIPS

In addition to the Xstrata Community Partnership Program North Queensland, Xstrata spent more than \$478,000 in 2006 on sponsorships, donations and other community support initiatives. In Cloncurry we supported the following events:

- major sponsor of the Cloncurry Merry Muster;
- major sponsor of the Cloncurry Stockman's Challenge;
- major sponsor of the Cloncurry and District Agricultural Show Association;
- major sponsor of the Cloncurry Arts Council Inc; and
- donations to welfare, health care, education, sporting, cultural, environmental, indigenous and arts initiatives.



EHM's Nicole King with Main Roads Les Crossman and Melissa Barlow, community partners with the Tourism Destination Attraction signage, proudly displaying the Cloncurry Parrot logo.

Caring for our community



Youth Support has been strongly supported by the Xstrata Community Partnership Program North Queensland. PCYC members (from left) Ben Olsen, John Kendall, Inspector Owen Page, Inspector Ian Claridge, Brett Jenkins, Trish Stokes, Raylene Davis and Cathy Perkins.

COMMUNITY ENGAGEMENT AND COMMUNICATION

We seek to engage with community groups throughout our business life cycle, share open and honest information about our activities, and respect the interests of the community in which we operate.

Our community engagement and communication program during 2006 included:

- an annual community information session to share information on Ernest Henry Mining's operations and allow questions from community members;
- regular meetings with key local stakeholders to discuss emerging issues, facilitate cooperation between the mine and the community and resolve any issues;
- annual presentation and providing ongoing information to local landowners on critical issues such as environmental and social issues that have potential to affect pastoral properties that adjoin the mine. Information was provided on matters such as dust particulate fallout, water drawdown from deep water bores and the open pit operation;
- maintaining regular contact with partners in the XCPPNQ to discuss progress of initiatives and offer advice and assistance when sought;
- regular surface tours of Ernest Henry mine, run in conjunction with the Mary Kathleen Memorial Park and Museum to promote Tourism;
- representation on local committees and membership of community development organisations; and
- production of a local newsletter, 'Curry Capers', which was mailed to the local Cloncurry community, and a fortnightly internal newsletter 'Zingari Express', which was distributed to all employees on-site.

Consultation with our stakeholders enabled us to identify community priorities, target initiatives and deliver maximum benefits to our community.

Fostering indigenous partnerships

Xstrata continued its partnership with the McKeon Alliance, an initiative that helps keep us informed of issues affecting Native Title and opportunities to partner with the indigenous community.

Ernest Henry Mining continued to engage with the Mitakoodi-Juhnjar Aboriginal Corporation, an Aboriginal Cultural Heritage Body, appointed under the Aboriginal Heritage Act. In 2007, training opportunities will be introduced, aligned with nationally accredited Certificate I in resources and infrastructure operations, which will facilitate opportunities for indigenous people who wish to enter the mining industry.

Valuing feedback

Following our successful community perception survey in 2005, we developed an action plan for implementation in 2006 to address issues of concern – renewing our focus on youth issues and recreation in Cloncurry.

Xstrata will conduct a follow-up community attitude survey in 2007 which will allow us to determine where our efforts have been successful and to identify emerging areas where future resources may be best targeted.

■ Handling complaints and enquiries

Ernest Henry Mining received no complaints regarding its operations in 2006.

Glossary

AQC – Air Quality Control centre

The centre monitors sulphur dioxide emissions and weather conditions and directs the operations of the Mount Isa Mines smelters to control sulphur dioxide concentrations within license limits.

Biodiversity

An abbreviation of “biological diversity” that means the variability among living organisms from all sources, including land based and aquatic ecosystems of which they are a part. These include diversity within species, and of ecosystems.

Completion Plan

A formal document detailing a costed conceptual outline of how the operation will be completed, taking into account the options available to deal with prevailing social and environmental issues.

DI – Disabling Injury

Calculated as lost time injuries plus restricted work injuries (LTI + RWI).

DIFR – Disabling Injury Frequency Rate

Disabling injury frequency rate = $DI \times 1,000,000/\text{hours worked}$.

DISR – Disabling Injury Severity Rate

Disabling injury severity rate = $(LTI \text{ days lost} + RWI \text{ days lost}) \times 1,000,000/\text{hours worked}$

EMS

Environmental Management Systems.

EPA

Environmental Protection Agency.

EPP air goal

Maximum levels for air quality indicators to be progressively achieved as part of achieving overall Environmental Protection Policy objectives.

Fatality

A death resulting from an occupational injury or disease/illness and identified within the reporting period.

Gj

Gigajoules (a thousand million joules).

Greenhouse gas

Any gas that absorbs infra-red radiation in the atmosphere, causing the warming of the earth's atmosphere.

HSEC

Health, safety, environment and community.

IEE

Itron Enterprise Edition.

ISO

International Standardisation Organisation.

ISO14001

The International Standardisation Organisation's standard for environmental management systems.

LTI – Lost Time Injury

An occupational injury or disease that results in days away from work on any rostered shift subsequent to that on which the injury occurred. A fatality is also recorded as an LTI.

LTIFR – Lost Time Injury Frequency Rate

Lost time injury frequency Rate = $LTI \times 1,000,000/\text{hours worked}$.

ML

Megalitres (1 megalitre = 1,000,000 litres or 1,000 kilolitres).

µg/dl

Micrograms per decilitre.

µg/m²/day

Micrograms per square metre per day.

NOHSEC

National Occupational Health and Safety Commission.

Particulate emissions

Controlled discharges from stacks containing microscopic solids in the form of dust or smoke.

PAS

The Panel Assessment Study into the impact of sulphur dioxide emissions from the Mount Isa Mines smelters – established by Mount Isa Mines in cooperation with the Queensland EPA in 1997.

PASS

Positive Attitude Safety System.

PM₁₀

Particulate matter less than 10 microns in size.

Raw water

Untreated water extracted from groundwater, dams or rivers.

Recycled water

Recycled water is water:

- that has been used at least once in a process within the operation or at another operation; and
- that would otherwise be part of a waste stream; and
- if not re-used, would require the input of raw water.

Rehabilitation

In this report, rehabilitation is defined as disturbed areas that have been prepared for rehabilitation and seeded.

RWI – Restricted Work Injury

An occupational injury or disease that results in a person being physically or mentally unable to perform all or any part of his/her normal assignment during any rostered shift subsequent to that on which the event occurred.

Social Involvement Plan

A plan produced by each Xstrata commodity business to set out engagement with local communities detailing the range of initiatives to be undertaken and the resources, financial and otherwise, dedicated to this area of the business.

Tailings and tailings dams

The fine fraction of waste rock remaining after the mining and on-site processing of mineral resources. This consists of finely ground particles and traces of process reagents and chemical residues. Tailings are piped into engineered impoundments known as tailings dams, which are developed, operated, monitored and maintained to prevent seepage and water contamination both during and after mining operations.

TRI – Total Recordable Injuries

A measure that includes:

- lost time injuries (including fatalities);
- restricted work injuries (RWI); and
- medical treatment injuries (MTI).

TRIFR – Total Recordable Injury Frequency Rate

Total recordable injury frequency rate = $(LTI + RWI + MTI) \times 1,000,000/\text{hours worked}$.



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