Kingsgate
Consolidated Limited

ABN 42 000 837 472

SUSTAINABILITY report 2003

Contents

Overview and summary

Who we are
Kingsgate Consolidated Limited ('Kingsgate') is a successful Australian gold mining and exploration company. The company is publicly owned and its shares are traded on the Australian Stock Exchange under the code KCN.

Through its wholly-owned subsidiary, Akara Mining Limited, the company owns and operates the Chatree gold mine, Thailand's only modern gold mine. The mine has low cash costs, is financially strong and is the principal contributor to Kingsgate's earnings.

Our Vision
Kingsgate's vision is to own, develop and operate high quality mineral resource projects. We are continually assessing new opportunities. The strength of our relationships, our experience in Asia and our operating expertise will provide the opportunities for growth.

Our People
Only through our people can we achieve our goal of developing and operating high quality mineral resource projects. We will employ and retain highly skilled people and are committed to their continued development, safety and well-being.

Sustainability
Kingsgate will conduct its operations to the highest standards and with due regard for the economic, social and environmental considerations for the benefit of all stakeholders. Kingsgate believes that superior environmental and social performance is integral to the successful development of the company.

Chatree mine
Chatree gold mine is located on the eastern edge of the Chao Phraya Basin in gently undulating terrain about 280 kilometres north of Bangkok. The area is well served with infrastructure including good access and national grid power. The mine produces gold using open pit mining techniques and well proven processing technology. Chatree applies environmental world best practice in several key areas of the operation. The mine is managed by Akara Mining Limited, a wholly owned subsidiary, and commenced commercial production in November 2001.

Chatree Key Data 2003

Reserves (30 June 2003)	
Ore reserves (oz)	989,000
Mine life (years)	8
Production	
Tonnes milled	1,324,057
Gold produced (oz)	154,484
Silver produced (oz)	484,170
Cash cost ($US/oz)	94
People employed (30 June 2003)	
Thai citizens	170
Expatriates	11
Long term contractors	164
Short term contractors (Expansion)	79
Total	**424**

Reporting period
This report is for the financial year ending 30 June 2003. All data for 2003 relates to the period 1 July 2002 to 30 June 2003 unless stated otherwise.

Managing Director's introduction

Welcome to Kingsgate's first sustainability report

As a relatively young operating company we have not previously produced a public environmental report, but we believe that our ongoing success has to be measured on the basis of the three pillars of sustainability: economic achievement, environmental performance and social contribution and responsibility. Consequently with a new Sustainability Policy to guide us, we are embarking on our future seeking that multi-dimensional success.

Currently, the principal contributor to Kingsgate's earnings is the Chatree gold mine in Thailand, an operation that has been developed to the highest standards, better than most Australian mines. We have not compromised and have implemented world's best practice in several key areas of the operation including environmental management systems, tailings storage and treatment, and environmental auditing and review.

This approach has paid off and performance in most areas of the operation is better than comparable mines throughout the world. I am especially pleased that our safety performance in particular has been outstanding – in 2003 the milestone of more than 2.0 million hours was reached without a lost time injury and the Lost Time Injury Frequency Rate (LTIFR) was 1.1, significantly better than the industry average of 6 for Australian open cut mines.

We have introduced policies in all key areas of our operations including health, safety, environment and more recently sustainability. These will help guide our efforts in ensuring the safety of our employees, protection of the environment and an equitable distribution of the benefits from mining.

Mining operations can generate substantial social and economic benefits for local communities, provinces and national governments. Not only do they create employment, training and knowledge transfer opportunities but substantial payments are made in the form of wages, taxes, royalties, and also payments for goods and services all of which have a major benefit on the local economy. We believe that mining developments should result in the sharing of those benefits for all stakeholders.

Kingsgate aims to continue stakeholder engagement and seek input from the community regarding initiatives for social programs and wealth generation. Our objective is to ensure that wealth generating opportunities created by the mine are sustainable well into the future. We look forward to generating significant progress in this regard under the banner of 'Success Together'.

As our first report, we acknowledge that there are gaps in the information presented and that the metrics are in some cases best estimates. We have used Australian protocols for reporting where Thailand protocols do not exist (eg. greenhouse emissions) and included data for the previous year where we have it. We will improve and, over time, trends will become more apparent and help guide us in further improvements.

I would like to thank all the management and staff of the Kingsgate Group for making the Chatree operation the success that it is today in a financial, environmental and social sense.

We welcome your feedback on our efforts to date and encourage you to return the feedback form accompanying this report or to contact us at any of the offices listed in the report.

Steve Reid
Managing Director and CEO

Highlights for the year

Chatree completed its first full year of operation and achieved all major operational targets – gold production in excess of 150,000 ounces, cash costs of $US94/oz and throughput of 1.3 million tonnes.

The exploration effort was intensified with promising early results and good potential for adding to reserves and mine life.

The Environmental Management System (EMS) was completed and fully implemented throughout the site. External certification will be sought in 2004.

Kingsgate developed and introduced a Sustainability Policy to help guide its environmental, social and economic initiatives.

Safety performance was outstanding with a Lost Time Injury Frequency Rate of just 1.

External environmental auditing after the first full year of operations has confirmed the mine is operating to best practice and in compliance with its statutory requirements.

There were no major environmental incidents during the year.

Our environment

Environmental management

Kingsgate is committed to best practice environmental management and has demonstrated this commitment by:

– Becoming a signatory to the Australian Minerals Industry Code for Environmental Management (2000).

– Implementing an Environmental Management System (EMS) based on ISO 14001, the international standard for such systems.

– Implementing world best practice in cyanide destruction after extracting gold.

– Constructing a Tailings Storage Facility that incorporates leading design features.

– Carrying out an extensive range of internal and independent external environmental auditing programs.

Environmental Management System (EMS)

Kingsgate delivers best practice environmental management at the Chatree gold mine through the implementation of an Environmental Management System (EMS) based on ISO 14001, the international standard for such systems. It describes control strategies for potential environmental impacts, while enabling continual improvement and the implementation of best practice environmental management. It documents the organisational structure, responsibilities, practices, processes and resources for implementing and maintaining environmental management.

The operator of the mine is Akara Mining Limited ('Akara'), a wholly owned subsidiary of Kingsgate. Akara is committed to, and responsible for, environmental considerations at all stages of Chatree gold mine planning, from project initiation to decommissioning.

Initial environmental aspects and impacts relevant to Chatree were identified through an extensive environmental impact assessment process. The continual refinement of aspects and impacts is achieved by implementing a risk assessment and management program, which is based on the Australian Standard (AS/NZS 4360:1999) for risk management. The program is delivered through workshops to review and rank risks, interviews with key personnel, and review by Kingsgate and Akara management.

Environmental Management Plan (EMP)

A site specific Environmental Management Plan has been developed for Chatree. The EMP facilitates compliance with relevant licenses, legislation and targets for the site and was implemented during the first year of production. The plan was updated in 2003 to meet the needs of the processing plant expansion. Specific procedures exist to aid the implementation of the EMP, such as revegetation trial procedures for the Tailings Storage Facility and waste rock emplacement trials. A site specific environmental monitoring manual also exists to help the local environmental team monitor the performance of environmental management programs.

The implementation and overall management of environmental issues at Chatree is undertaken by the on-site environmental team under the supervision of the General Manager and with the assistance of environmental consultants. Objectives and targets are set to ensure compliance with licence conditions and to drive continuous improvement of environmental management at the mine. Targets are set by local management in consultation with senior management from Kingsgate and Akara. Review of objectives and targets is conducted on an annual basis upon completion of the Chatree environmental monitoring report.

Monthly reports are provided to the Chatree General Manager and the Kingsgate Board of Directors to ensure regular review and assessment of potential environmental impacts and environmental management strategies. Further checks and balances are employed by the Kingsgate Board by commissioning an annual independent external environmental audit of Chatree operations.

Training and improvement

Akara is committed to active, effective and dynamic employee workplace training and self-advancement programs to ensure the highest possible standards in environmental management. Training involves a combination of in-house environmental awareness workshops for all personnel, ongoing training on-site of environmental personnel by local and foreign consultants, and off-site training for environmental personnel at conferences and workshops.

Continuous improvement is driven by a corporate and staff awareness of environmental responsibilities. Identification of areas where improvement can occur is carried out through a corporate and site based monthly and annual review of environmental monitoring results and environmental management programs. Where an immediate response is required, management directives are made to the appropriate department. Longer term improvement programs are documented in an annual site environmental improvement plan.

Auditing and review

Environmental reviews and independent auditing are regarded by Kingsgate as key feedback and quality control mechanisms that facilitate continual improvement of environmental management programs and systems.

The first major review of the environmental management program was conducted during December 2002, when results from the first full year of monitoring were analysed in the annual environmental monitoring report. The review consisted of an assessment of compliance with licence requirements and the practicality, relevance and performance of specific environmental management strategies. The information obtained from the review is used to set targets for the following year and where necessary to make adjustments to the environmental management program. This type of review will be conducted on an annual basis at the end of each calendar year.

Other mechanisms for environmental performance assessment are through:

– Internal and external environmental audits.

– Monthly review of environmental monitoring results by the Chatree environmental management team. Results of the review are reported to the Kingsgate Board of Directors in the monthly report.

– Environmental incident reporting.

– Communication with stakeholders and maintenance of a complaints register.

Environmental auditing of Chatree is conducted to assess compliance with licence conditions, relevant legislation, EMS objectives and best practice environmental management. The auditing program is based on regular internal and external environmental audits.

As a further commitment to world's best practice, external accreditation of the EMS will be sought during late 2003. This will represent another significant milestone for the mine on top of the already accredited Quality Assurance System under ISO 9001.

Audit results
Internal audits consist of the auditor completing a checklist where a result of either compliance or non-compliance is achieved.

External audits are undertaken by independent environmental consultants to identify areas of non-compliance and also to recommend changes to improve environmental performance where appropriate.

A summary of Chatree's environmental audit program for 2002 is shown in the table below. With the exception of the three following minor issues the mine is operating in compliance with its statutory requirements:

i) At times, the concentration of total cyanide has exceeded the limit of 20mg/L that applies to tailings discharged to the Tailings Storage Facility. Further discussion of this issue is provided under 'Protecting Water Quality' following this section.

ii) In 2002 there were some delays in monitoring compounds in semi-consolidated and consolidated tailings material. This has since been rectified.

iii) There were minor inconsistencies in Chatree's environmental management provisions which resulted from design changes and subsequent expansion of the processing plant. The provisions and related documents were updated in 2003.

Environmental Audit Program for the Chatree gold mine

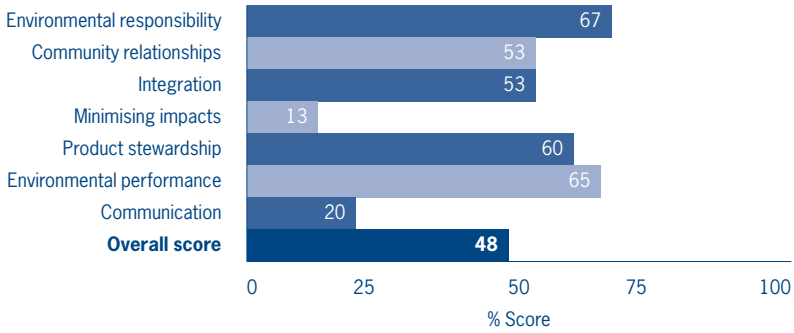
Audit Type	*Audit Scope*	*Auditor*	*Frequency*
Internal environmental audit	Compliance with environmental management objectives and plans	Chatree Environmental Coordinator	Quarterly and annually
External environmental compliance audit	Compliance with license conditions, applicable laws in Thailand and the Chatree gold mine Environmental Policy	Independent Australian environmental consultant	Annual
Minerals Council of Australia	Compliance with the Australian Mineral Industry's Code for Environmental Management	Independent Australian environmental consultant	Annual
ISO 9001	Compliance of Quality Assurance Program with ISO 9001	Independent International consultant	Annual
ISO 14001 certification audit	Compliance of the Chatree gold mine EMS with ISO 14001	External certification body	Late 2003, then as required to meet certification
OHSAS 18001 certification audit	Compliance of the Chatree gold mine Safety Management System (SMS) with OHSAS 18001	External certification body	Late 2003, then as required to meet certification

Code for Environmental Management
Kingsgate is a signatory to the Australian Mineral Industry's Code for Environmental Management. Essentially, the Code requires signatories to commit to and demonstrate continual improvement, and to annually audit and report their performance against the Code.

The Code is divided into seven principles and a company's performance is scored against a number of criteria under each principle.

An independent external consultant conducted the first assessment of Chatree's performance against the Code principles in February 2003. The results are summarised in Figure 1.

Figure 1: Code for Environmental Management – audit results



Kingsgate achieved an overall score of 48% (compared with an average score of 55% for companies reporting under the Code in 2002). For a new operation we consider that this an acceptable result with quite high scores in some areas and low scores in others. The low scores relate primarily to areas where the company is performing satisfactorily but does not have sufficiently well developed and documented formal procedures in place to demonstrate progress. This situation is being corrected.

– In the case of Minimising Impacts, the company did not have documented procedures in place (at the time of the audit) for exploration activities including risk assessment and also had not completed its detailed closure plan. These are scheduled for completion by December 2003.

– In the case of Communication, even though communication with the community and stakeholders is widespread, it is informal and had not been recorded in many cases. The publication of this report indicates our progress in this area and, as it has in other areas, assisted in modifying our practices.

Water

Water use and ecoefficiency
Chatree gold mine obtains its water from surface runoff storage ponds and from water bores that intersect underground water sources. To promote water efficiency and conservation, Chatree re-uses and recycles water wherever possible.

The primary consumer of water is the ore processing plant. Approximately three-quarters of the water used for processing is recycled from the Tailings Storage Facility (TSF) and on-site storage dams. Make-up water is pumped from local groundwater bores which dewater the pit areas ahead of mining.

Accurate water usage data is not presently available. However, flow meters are currently being installed on the groundwater bore lines to facilitate reliable measurement and management strategies in the future.

Protecting water quality
To protect the quality of surface and underground water in the vicinity of the mine, Chatree employs world best practice in the treatment, handling and storage of tailings residue.

Tailings Storage Facility
The Tailings Storage Facility (TSF) design was based on the Nevada (USA) Department of Environment Protection (NDEP) guidelines for tailings management. These guidelines exceed current practices for tailings storage in many of the world's major gold mining centres including Australia and South Africa.

Accordingly, Chatree's TSF was constructed with a soil liner throughout the basin area with an underdrainage system incorporating 60 kilometres of polyethylene (HDPE) drainage pipe. Furthermore, the design exceeds the NDEP guidelines with respect to seepage control because the Chatree site is underlain by a natural low permeability clay layer, and an embankment cut-off trench was extended into the underlying clay to effectively form a secondary liner.

Key aspects of the Tailings Storage Facility include:
- Double lining of the basin area (using compacted soil and the natural clay stratigraphy) acting as dual barriers to water leakage.
- Full basin underdrainage to collect and recycle degraded water.
- Detoxification of tailings prior to discharge into the TSF.
- Continuous recycling of tailings water to achieve a zero discharge TSF.
- A water management system designed to handle extreme storm events.
- Embankment design to withstand extreme seismic events.

Treatment process
In addition to the design of the TSF, Chatree uses several safeguards to maximise the effectiveness of the treatment process and to minimise the risk to local water sources:
- The mine uses a world best practice cyanide destruction process before discharging plant water to the facility.
- Collecting and recycling water ensures there is minimum water in the facility at any time.
- The performance of the system is extensively monitored to test stability, seepage and the quality of surrounding ground and surface water.
- Compliance criteria are stricter than comparable mines in Australia and are based on total cyanide concentrations not Weak Acid Dissociable (WAD) concentrations as is the case for most mines.
- No contaminated water is discharged from the site.

The INCO cyanide destruction process used at Chatree is a best practice process which is used at only a small number of gold mines in the world. All tailings discharged from the process are fully contained in the Tailings Storage Facility, where any remaining cyanide breaks down under the influence of sunlight, carbon dioxide and other factors.

Under Thailands' compliance criteria, a discharge limit of 20 mg/L of total cyanide applies to tailings discharged from the cyanide detoxification plant to the TSF. During the early months of the project when only oxide ores were being processed, total cyanide levels in tailings discharge were well below the compliance limit. However, since processing primary ores, concentrations above 20 mg/L have been recorded on some occasions. However, there has been no environmental impact as the cyanide is fully contained within the TSF and breaks down after reaching the facility as outlined above.

Having a discharge limit for total cyanide is unusual. Usually, Weak Acid Dissociable (WAD) cyanide is specified for discharge criteria. The results of testing carried out on Chatree tailings after detoxification indicate that with total cyanide concentrations of 20 mg/L, the WAD cyanide concentrations on the same samples are 2 mg/L, which is a safe level for ecosystem protection and well below the tailing discharge levels of almost every gold mine in the world.

Land

Incidents and compliance

Chatree holds all necessary licenses, permits and agreements to operate under the Thailand jurisdiction. The mine has operated in compliance with all its license conditions with the exception of some minor issues (see audit results) and there were no major threats to the environment during the year.

Environmental incident reporting is used by Chatree as a tool for learning and ensuring that action is taken to prevent impacts and recurrence. The protocol for incident reporting is included in the environmental induction program undertaken by all staff and contractors prior to working at the mine. Individuals witnessing or involved in incidents are required to submit an incident report promptly to their supervisor.

Environmental incidents are classified into five levels at the mine:

Environmental Incidents

Category	*Definition*	*2003*	*2002*
Level 1	Low severity	3	5
Level 2	Minor severity (one-off occurrence)	0	0
Level 3	Minor severity (repeated occurrence)	0	0
Level 4	Medium occurrence (effects can be reversed)	0	0
Level 5	High severity	0	0

Three environmental incidents, all classified as Level 1 – low severity occurred in 2003. The incidents included a minor oil spill from a truck's sump, the discharge of clean water from a water storage pond, and a low volume (approximately 200 litres) spill of carbon slurry from a carbon-in-leach tank.

Complaints

Chatree maintains a complaints register in which the nature of any public complaint, the response and the outcome are recorded. Communication channels for complaints have been established with mine management through one of the staff members who is part of the local community, or through local community leaders who are in contact with the Personnel and Coordination Superintendent and the Thailand authorities.

Since the commencement of gold production, one complaint has been received from a neighbouring landholder. The complaint resulted from groundwater pumping for pit dewatering that periodically caused dewatering of the neighbouring landholder's bore. Consultation with the landholder was undertaken immediately and arrangements were made to provide water to the landholder.

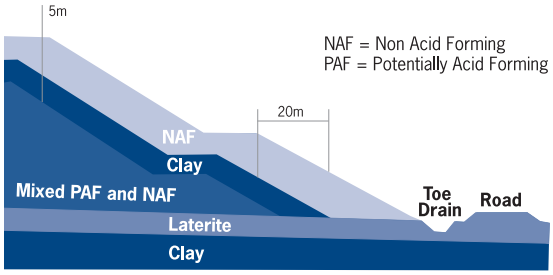
Waste rock

Waste rock from the Chatree open pits is stored in conventional waste rock dumps within the mine lease. Specific management strategies have been devised to ensure environmental impacts associated with the emplacement and storage of waste rock are minimised.

Prior to the commencement of mining, waste rock is characterised to determine its potential to generate acid at some time in the future. The waste is classified as non-acid forming (NAF) and potentially acid forming (PAF), along with the rate and magnitude at which it is likely to occur. The allocation is carried out sufficiently in advance of mining to allow adequate planning and storage of acid generating material.

After excavation, PAF and NAF material are selectively placed in the waste rock emplacement. A compacted clay layer is used to cover the PAF material to minimise the potential for water or oxygen ingress. The clay capping is subsequently covered with NAF material so that the clay layer will not have the opportunity to dry out, which could increase the potential for oxygen diffusion and water infiltration. This waste rock management strategy is in accordance with world's best practice in the management of PAF materials.

Figure 2: Section through waste rock dump showing treatment of PAF material



Waste rock emplacement is designed to ensure that it is geotechnically and erosionally stable in the long term. The emplacement will be progressively revegetated as areas become available. Trials to establish the most suitable vegetation species are presently underway.

The performance of waste rock management strategies are regularly reviewed and the potential impacts of waste rock are monitored as part of the extensive water quality monitoring program at the site.

Rehabilitation

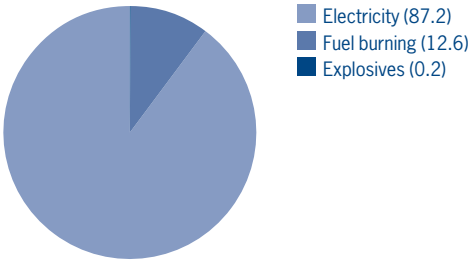
Chatree strives to minimise its environmental impacts and limits ground disturbance to the minimum necessary to conduct its operations.

It is Chatree's policy to progressively rehabilitate disturbed ground as it becomes available.

Considerable research is underway into various rehabilitation options as part of the development of a draft closure plan for the mine. Presently, land use options are being tested to determine possible final land use types, which will ultimately be presented to local stakeholders for their input.

The waste rock emplacement trials are one example of the current research. These trials are being undertaken on a purpose built waste rock emplacement, where both capping design and vegetation cover type are being tested.

Figure 3: Contributors to CO_2 emissions for Chatree 2003 (%)



Waste management and recycling
Chatree gold mine is located in a part of Thailand where extensive recycling facilities are not readily accessible. This has created the challenge of developing a waste management program that is sustainable for the life of the mine, while not impacting on local aesthetics and infrastructure.

Recycled solid wastes

Scrap steel (kg)	7,943
Mill drums (No)	1,836
Plastic (kg)	1,154
Aluminium cans (kg)	30.5
Paper (kg)	4,436
Used tyres (No)	67

Chatree's waste management and recycling program is based on a tiered strategy of:

– Waste segregation – all wastes generated are segregated into groups to facilitate re-use and/or recycling.

– Recyclable materials are re-used on-site where possible.

– Recyclable materials not used on-site are sold to recycling contractors for collection.

– Remaining wastes are placed into a small scale, on-site land-fill.

The program has resulted in approximately 85% of wastes being re-used or recycled during 2003.

Air

Energy use and greenhouse
Thailand is a signatory to the Kyoto protocol but, as a developing country, the requirement to decrease energy consumption and minimise emissions is not as strong as in developed nations. However, this has not prevented Chatree from using the best available technologies to promote energy efficiency and minimise greenhouse gas emissions.

Energy usage and greenhouse emissions have been recorded at Chatree since operations began and protocols are presently being developed for the analysis and interpretation of the data. Once these are better understood, the operation will conduct more formal energy audits and explore initiatives for saving energy.

Energy use and greenhouse emissions are tabulated at the back of the report.

Emissions to air are produced from electricity use and the consumption of diesel fuel from mining operations. The major consumer of electricity is the processing plant, with minor amounts associated with various administrative activities.

Greenhouse emissions are calculated using Australian protocols (Greenhouse Challenge, Factors and Methodologies, Australian Greenhouse Office) as Thailand has not yet developed greenhouse emission factors.

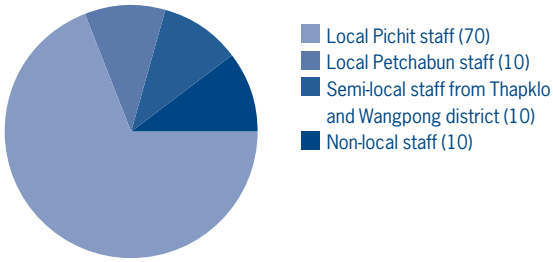
The mine is yet to develop the most appropriate means of determining efficiency but overall energy usage and emissions will increase in the future in line with planned and potentially new expansions to mining and processing facilities.

Air quality and dust monitoring
An extensive monitoring program is undertaken at Chatree to ensure that all aspects of the operation are carried out to the highest environmental standards. Monitoring within and adjacent to the mine covers noise, vibration, air quality and climate.

Specific strategies to minimise impacts on air quality include the use of water trucks on unsealed roads, water sprays and avoiding specific activities on windy days.

Our social contribution

Figure 4: Local employment (%)



People

As at 30 June 2003, the Chatree operation employs 181 people, 94% of whom are Thai nationals. An additional 164 long term contractors are employed in service functions and a further 79 are contracted on a major plant expansion. The contractors are local and national Thai companies, and the vast majority of their employees are Thai.

Where possible, local community members are employed and local contractors are commissioned to undertake work at the mine or on exploration tenements. The long term contractors carry out open pit mining, as well as providing employee transport to and from site, cooking and eating facilities, managing stockpiles and operating the first aid centre at night.

Workforce as at 30 June 2003

Chatree employees	
Local Thai employees	125
Other Thai nationals	45
Expatriates	11
Total employees	181
Contractors	
Long term contractors	164
Short term contractors	79
Total workforce	**424**

Kingsgate believes that open, harmonious relationships in the workplace are conducive to high levels of employee satisfaction, productivity and quality standards. To facilitate such relationships, Chatree has introduced several employee relations policies including an Open Door Policy, Employee Relations Policy, Employee Committee Policy and Harassment Policy. In recognition of these policies and its work with employees, the Chatree mine recently received the 2003 Prime Minister's 'Best Practice Award for Employee Welfare' for the production and construction industry.

Although modern mining methods and practices are new to the local community, the workforce has adjusted well and the labour turnover rate for the mine was a relatively modest 12.6% in 2003.

Mine management encourages participation in employee functions. The mine sponsors a local soccer competition on a pitch built by the mine. A tennis court with lights has also been built by the mine and is available for use by employees and members of the local community. The Chatree gold mine Social Club runs employee functions with money raised from recycling.

Safety performance

Safety in the workplace is integral to Chatree's operational and sustainability policies and the mine strives for an incident free environment for all employees and contractors. We are doing this through the development of appropriate policies, codes, procedures and training.

In 2003 safety performance was far superior to similar gold operations in Australia. More than 2.0 million hours were achieved without a lost time injury and the Lost Time Injury Frequency Rate (LTIFR) was 1.1, significantly better than the industry average of 6 for Australian open cut mines (Minerals Council of Australia statistics).

The 2 million hour record ended in January 2003 when a contract exploration driller injured his foot. In a separate incident, tragically, an exploration drilling contractor fell from a tree and subsequently died from his injuries. The accident was not work-related.

Safety performance

	2003	2002
Lost time injuries	1	0
Total injuries	25	21
LTIFR*	1.1	0
Total IFR*	27.1	18.4

*per million hours worked

Emergency response
Kingsgate, through the Chatree mine takes a pro-active approach to managing emergencies. The mine has formed an Emergency Response Unit with representation from all areas of the minesite. The Unit trains regularly in a range of emergency procedures including:
– Fire fighting
– First aid/CPR
– Casualty transfers
– Elevated rescues/ropes and knots
– Emergency response to chemical spills
– Law as it affects rescuers
The skills developed within the Unit are made available to the local communities through co-ordination with the appropriate provincial authorities.

Occupational health
Chatree strives to measure and minimise occupational health risks at the mine site and has instituted a regular monitoring program to test noise, vibration and air quality effects on employees and the surrounding communities.

Specific testing is also carried out on employees working in certain sections of the operation including blood analysis for gold room and laboratory personnel, and radiation monitoring for some plant operators.

Training and development
Chatree's workforce is drawn from local communities with no experience in modern mining methods. Consequently, over the past two years the mine has implemented an extensive range of training programs for its employees. The program has been enormously successful as evidenced by the safety, environmental and production statistics for the mine. Performance in all aspects of the operation has been comparable to Australian mines and is a credit to the inherent skills and diligence of the Thai people.

The mine has provided basic training in all aspects of the operation but also in other areas such as cyanide and reagent handling, risk assessment, first aid, computers and cross cultural management.

Environmental training plays an important role in securing continuous improvement. Consequently, an extensive environmental training program has been developed and implemented at Chatree mine.

The program is in its developmental stages but has two main components.

i) The first is for the mine's environmental team and comprises ongoing training by external environmental consultants together with on-site training by a local consultant for implementing the Chatree EMS.

ii) The second component involves the mine's environmental team in turn providing environmental training to all other mine employees and contractors.

The program promotes staff awareness of the Chatree EMS as well as providing training on specific environmental needs of the individual's department.

This process of training and follow-up assessment encourages staff commitment to environmental performance, which will invariably lead to continual improvement of environmental performance.

Community

Community development

Community development results from the initiatives of a wide range of stakeholders including business, local and national government, and community organisations. In Thailand, Kingsgate's activities contribute to a wide range of community initiatives. In all our projects we seek to strengthen our relationships with stakeholders and introduce programs for sport and other social activities.

Even though our community programs are not yet well developed, Chatree gold mine has a positive social impact on the local and regional community. It provides a range of opportunities for direct and indirect employment, increased access to health and education, construction of roads and water delivery infrastructure, sporting infrastructure, and financial contributions to local communities through religious centres and sporting events.

Potential negative impacts are also present, such as impacts from dust, noise, vibration and water resource usage. These potential impacts are mitigated through an extensive environmental management program discussed elsewhere in this report.

The relationship with the local community is the responsibility of all employees. This is reinforced in Chatree's Code of Conduct, which is provided to all employees and contractors upon commencing employment.

Akara Mining's Vice President is responsible for stakeholder consultation at a national level and for ensuring consistency and continuity at the regional and local levels through co-ordination with the Chatree senior management.

Chatree's Personnel and Coordination Superintendent holds over-arching responsibility for community relations. He is the primary point of contact for all stakeholder consultation and liaison at the local and regional levels. Where appropriate, he is joined by other staff from the mine including the Environmental Coordinator. They meet regularly with community leaders at meetings/social functions which provide a forum for community concerns and viewpoints.

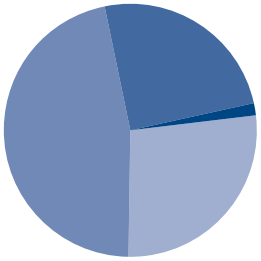
Kingsgate recognises the important role of religion in the local community and provides regular donations to assist with religious programs and for up-keep of the temples.

Community recycling scheme

Members of the local community initially purchased the salvage rights to the mine's land-fill which contained small amounts of waste that could not be recycled. They collected and sold as much material as possible. However, the Environmental Group now manages recycling and funds raised from the sale of recycled materials go into a Social Club Fund for employee social activities. These include buying sports equipment for the company-provided tennis/badminton/soccer courts which are used by employees and their families as well as local communities.

Our economic contribution

Figure 5: Expenditure by Region ($USM)



Economic contribution

Chatree gold mine has a positive economic and social impact on the local, regional and national community. It provides direct and indirect employment, opportunities for local wealth generation, royalties to the Government of Thailand, increased access to health and education, and upgrading of local infrastructure.

Chatree seeks to promote economic independence in local communities and concentrate on assistance to small business. The largest financial opportunities are usually contracts with the company on mine related services but Chatree's long term aim is to diversify local enterprises beyond mining activities. Where the potential exists, we encourage and support improvements in the subsistence economy.

Kingsgate aims to continue stakeholder engagement and seek input from the community regarding initiatives for wealth generation. Our objective is to ensure that wealth generating opportunities created by the mine are sustainable long after decommissioning and closure.

Mining developments can generate substantial economic benefits for local communities, provinces and national governments. Not only do they create employment, training and knowledge transfer opportunities but substantial payments are made in the form of wages, taxes, royalties, goods and services all of which have a major benefit on the local economy. We believe that mining developments should result in the sharing of benefits for all stakeholders.

In 2003, Chatree spent $US25.8 million on goods and services of which 27% was spent in local provinces and a further 46% in the rest of Thailand.
In addition, $US1.54 million was paid in royalties and $US 0.22 million in taxes and duties.

The local economy benefited from local enterprises supplying services such as catering, cleaning, transport, construction and equipment hire. In addition, company policies (such as renting family accommodation in local towns rather than building separate accommodation quarters) encourage assimilation and boost the local economy.

Business performance

Operations

The mine met all its production targets during the year and gold production totalled 154,484 ounces at a cash cost of $US94 per ounce. During the year ore was sourced from the Tawan and Chantra pits. Mining volumes increased in preparation for the process plant expansion due for completion early in 2004. Mining operations are carried out by a Thailand contractor and the agreement has worked well since inception for the benefit of all parties.

Plant throughput exceeded capacity partly due to softer ore from the upper levels of the Chantra pit. The plant is currently undergoing an expansion to increase capacity from 1.2 to 1.8 million tonnes per year.

2003 Value added and distribution ($USM)

Economic Value Added		*Value Distribution*	
Gold and silver sales	54.9	Wages and salaries	0.9
		Royalties and duties	1.7
		Payments to suppliers	19.1
		Reinvestment in Thailand	
		– Community investment	0.2
		– Plant and equipment	3.1
		– Exploration and evaluation	4.4
		Debt service/interest	13.6
		Dividends paid to shareholders	11.4
		Retained cash	0.5
Value Added	54.9	Value Distribution	54.9

The future

At 30 June 2003 Chatree completed its first full year of gold production and met all its operational, financial and social targets. However, the mine continues to look for opportunities to add value to the business. A plant expansion is currently underway and is on schedule for completion in the first quarter of 2004, exploration activity has been stepped up with pleasing results to date and we recently introduced a sustainability policy to help formalise our relationships with local communities.

Much work needs to be done in all of these areas but we know what we must do. Pursuing these initiatives will lead to new challenges that must be met through continual improvement, innovative practice and clarity of purpose.

Mine life and exploration

Exploration drilling at Chatree recommenced in 2002, after concentrating on successfully commissioning and establishing smooth production capability at the mine. We are allocating additional resources to the exploration effort in the immediate vicinity of the mine.

Progress to date has been extremely pleasing – in May 2003 we announced the first reserve estimate (402,000 oz) for Prospect A. In July 2003 we discovered an extension to the H orebody in the Tawan pit.

Exploration drilling at the H orebody has shown that the mineralisation extends along strike in a south-westerly direction. Geological and mine planning activities are currently underway with a view to bringing forward the production of this near-surface material into the second half of 2003.

Chatree is continuing near-mine exploration drilling at Prospects A, K and B and a revised regional exploration program is also underway. We are reviewing our exploration budget in light of this recent exploration success.

Following the addition of Prospect A reserves, the mine life now stands at approximately eight years after allowing for increased throughput associated with the plant expansion.

Sustainability objectives and targets

Environment and Safety

Objective	*Action to achieve target*	*2003 performance against Target*	*Target for 2004*
Review Environmental Management System	Review environmental performance data	Review completed in December 2002 and adjustments made to the Environmental Plan	Review and update again after project expansion
Obtain certification of the Chatree Environmental Management System (EMS) under ISO 14001	Ensure the EMS is fully implemented during 2003	EMS is fully implemented	Seek external certification
Obtain certification of the Chatree Safety Management System (SMS) under OHSAS 18001	Ensure the SMS is fully implemented during 2003	SMS is fully implemented	Seek external certification
Publish the first Public Environment Report	Publish Public Environment Report during October 2003	Expanded to more comprehensive Sustainability Report – this report constitutes completion of the task	Produce second Public Sustainability Report by October 2004
No people hurt at work	Zero injuries	Not achieved – 1 lost time injury	Zero injuries

Social and economic benefits

Introduce sustainability and incorporate into employee activities	Develop and introduce sustainability policy to all Chatree employees	Completed	Incorporate sustainability into employee job descriptions and activities
Formalise and improve community relations activities	Prepare a Community Relations Policy and plan	No target set in 2003	Prepare policy and introduce to employees
Achieve operational production and cost targets	Produce >150,000 oz of gold at <$US100/oz	Produced 154,484 oz at $US94/oz	Produce >125,000 oz at <$US145/oz
Optimise plant and throughput rates	Undertake plant expansions to increase CIL and grinding capacity	First expansion (CIL) completed on time and budget	Complete second expansion (grinding) on time (Q1/04) and budget. Achieve throughput rate of 1.8Mtpa following expansion
Enhance mine life	Increase reserves and resources	Increased reserves by 402,000oz	Increase reserves and resources

Tables and data

Land Management

Land	*Area (ha)*	
Mining Leases	292	
Rehabilitation (ha)	*2003*	*Project to Date*
Area of land disturbed	N/a	242
Area of land rehabilitated	3.5	5.1
Area of land available for rehabilitation	0	0

Energy Use and Greenhouse Emissions

Energy Use	*2003*	*2002*
Electrical power (MWh)	40,220	28,565
Diesel fuel – mobile sources (litres)	2,277,107	1,419,673
Gasoline / petrol (litres)	N/a	N/a
Liquid Petroleum Gas (LPG) / Propane (kg)	281	60
Explosives (tonnes)	472	N/a
CO_2 Emissions (tonnes)	*2003*	*2002*
From power generation	42,271	30,022
From mobile equipment	6,126	3,820
From LPG	18	4
From explosives	77	N/a
Total	48,492	33,846

Material Inputs and Outputs

Inputs		***Outputs***	
Water (ML)		Water (ML)	
Raw water	418	Discharge to surface waters from non-process sources	0
Recycled water	1,005		
Total water	1,423		
		Landfill (m^3)	
		Landfill	300
Energy Use		CO_2 Emissions (tonnes)	
Grid demand (MWh)	40,220	From electricity generation	42,271
Diesel fuel – mobile sources (litres)	2,277,107	From mobile sources	6,126
LPG (kg)	281	From LPG	18
Explosives (tonnes)	472	From explosives	77
Ore			
Tonnes	1,324,057		
Chemicals (tonnes)		Products & Waste (tonnes)	
Cyanide	911	Gold (ounces)	154,484
Hydrochloric acid	203	Silver (ounces)	484,170
Lime	2,581	Milled tailings	1,324,057
Carbon	54	Waste rock to surface dumps	1,728,165

N/a – not available

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Further information

Sydney, Australia
Steve Reid
Managing Director and CEO

Kingsgate Consolidated Ltd
Level 17, 33 Bligh Street
Sydney, New South Wales, 2000

Tel +61 2 9223 5273
Fax +61 2 9223 9775
Email: info@kingsgate.com.au

Bangkok, Thailand
Surapol Udompornwirat
Executive Vice president

Akara Mining Ltd
21 Floor
1 Soi Phaholyothin 9
Phaholyothin Road
Samsen-nai, Phayathai
Bangkok 10400

Tel +66 2 617 0771
Fax +66 2 617 0773
Email: akaramin@loxinfo.co.th

Chatree Gold Mine, Thailand
Phil MacIntyre
General Manager

Yaowanud Chandung
Environmental Coordinator

99 Moo 9, Khao Chet Luk
Thapkhlo, Phichit 66230

Tel +66 56 614 195
Fax +66 56 614 190
Email: admincgm@chatree.com

The following are available on request:
Code of Business Conduct
Sustainability Policy
Environmental Policy
Safety Policy
Annual report
Quarterly reports

Kingsgate website
To access electronic versions of this and other Kingsgate reports, please visit Kingsgate's website at www.kingsgate.com.au