

# Porgera Mine

## Responsibility Report



At Barrick's Porgera Mine, responsibility is our guiding principle. We work to:

- Generate productive, rewarding employment
- Provide a safe work environment
- Contribute to sustainable economic development
- Protect the environment

### Who Are We?

The Porgera Joint Venture operation is located in Enga Province in the highlands of Papua New Guinea, about 130 kilometers west of the established town of Mount Hagen, 600 kilometers northwest of Port Moresby, and about 680 kilometers by road from the coastal port of Lae from which all materials are freighted. The mine is at an altitude between 2,200 and 2,700 meters in extremely rugged, isolated and mountainous terrain. Barrick holds a 95 percent ownership in Porgera Mine. The Porgera deposit is currently being extracted using both open pit and underground mining methods.

**Our Core Value:** At Porgera, as at all Barrick operations, we are guided by our commitment to responsible behavior. In practice, this translates into bringing long-term benefits to the communities where we operate, and fostering a culture of excellence and collaboration among our employees and contractors.

**Our Commitment:** Corporate Social Responsibility is the commitment of business to contribute to sustainable economic development – working with employees and contractors, their families, the local community and society at large to improve the quality of life, in ways that are both good for business and good for development. At Porgera, we are committed to making a positive difference in the communities in which we live and work.

# Environmental Responsibility

At Barrick's Porgera Mine, environmental stewardship is integrated into the mining life cycle.

Respect for the environment is at the heart of our management approach to environmental protection and stewardship. Barrick's Corporate Social Responsibility Charter drives this approach. The environmental management system in place at Porgera helps us achieve our Charter goals of protection and stewardship, and performance indicators help us measure how well we have done.

We recognize that there may be significant impacts to the existing natural environment, both temporary and long-lasting, due to the presence of our mining operations. As a result, we use the precautionary approach throughout the life of the mine by first assessing potential impacts, then evaluating how to avoid, mitigate or control those impacts. Controls typically include putting into place multi-layers of environmental protection and robust environmental management systems that include advanced planning against possible future events.

Ongoing environmental monitoring provides the Company with feedback on the effectiveness of its environmental controls. Our environmental specialists routinely monitor the land, air and water on, and adjacent to, the property. Monitoring results are reviewed, areas for improvement are identified and, as required, performance and site activities are adjusted to ensure environmental protection. As well, corporate environmental audits are conducted regularly, usually every two years, to review the effectiveness of the mine's environmental management system.

Environmental performance data tables are available on the Barrick website at [www.barrick.com](http://www.barrick.com).

**Tailings and Waste Rock Management:** The Porgera Mine is located in extremely rugged mountainous



terrain, subject to seismic activity, high rainfall and landslides. In such conditions construction of a tailings impoundment would be very difficult and the risk of an engineering failure high. The rivers of the region are fast flowing and turbid and have the capacity to transport large quantities of sediment. Therefore the PNG Government, during the planning and development phase of the mine, approved riverine disposal as the most appropriate method for treated tailing and soft incompetent waste rock. Competent rock is stored in stable waste dumps. Since acquiring Porgera in 2006, Barrick has been assessing alternatives for riverine tailings disposal at our site.

The mine follows a government approved Environmental Management and Monitoring Program. We continue to operate in full compliance with legal and other requirements. Trace metal levels in the river are significantly below the compliance levels defined by the PNG Government at our downstream compliance monitoring station.

**Materials Management:** Safe transport, storage and handling of fuels and chemicals are a priority at Porgera. Spill prevention measures, such as double-walled tanks, alarms and lined or bermed containment

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structures, minimize the risk to the environment from these materials. If accidental releases of fuels or chemical solutions occur, they should be safely contained and not impact the environment nor leave the mine site. We are committed to effective clean-up and remediation should any spill escape containment.

**Solid Waste Management:** Porgera has developed a waste management program to ensure reuse, recycling and proper disposal of waste products. Efforts include the recovery of used oil, tires and batteries, and off-site, permitted disposal of hazardous wastes.

**Water Management:** Mining requires water for ore processing and dust suppression. Specific water conservation activities at the site include the use of instrumentation to measure and control use, and the recycling of water through the mine's processing systems. Our main water supply for the mine is the Waile Creek Dam, located approximately seven kilometers from the site. The reservoir has a capacity of approximately 717,000 cubic meters of water and is fed by gravity to the plant area. Water for the grinding circuit is also extracted from Kogai Creek, which is located adjacent to the grinding circuit.

**Cyanide Management:** Cyanide is used at Porgera as an effective agent for freeing gold from ore. The Cyanide Code was developed by an international multi-stakeholder group to establish safe and responsible cyanide management standards for the manufacture, transport, use and disposal of cyanide. Barrick, as a member of the multi-stakeholder group, committed to certify it mines which use cyanide as Cyanide Code compliant. Porgera is working towards certification.

**Energy Management:** Energy at the Porgera Mine is obtained from electricity and also from the burning of fossil fuels. With power being one of our largest on-site costs, good business dictates that we strive to maximize energy efficiencies, and we are currently engaged in several energy efficiency optimization efforts. Because greenhouse gas emissions are related to both direct and indirect energy use, energy efficiency efforts, which result in decreased energy consumption and/or increased energy efficiencies, will help reduce greenhouse gas emissions.

Porgera's principal source of electric power is supplied by a 73-kilometer transmission line from our gas fired Hides Power Station. The station has a total output of 62 megawatts. A back up diesel power station is located at the mine.

**Wildlife and Habitat Stewardship:** Porgera has developed a number of stewardship programs to protect animals from the hazards of mining activities, and to mitigate impacts to habitat around the mine site.

**Land Status:** Land disturbance is an unavoidable consequence of mining. Through careful planning, we aim to keep to a minimum the area affected by mining activities. During operations, when disturbed land is no longer required for the mining process, it is reclaimed by re-contouring and re-vegetating the area.

# Health and Safety Responsibility

The health and safety of our employees and contractors is the top priority at Porgera Mine.



We are committed to eliminating or controlling workplace hazards for the protection of our workers. We believe that everyone is responsible for workplace safety. Health and safety training programs are in place for managers, employees and contractors at Porgera. These programs provide all employees and contractors with a clear understanding of their rights, responsibilities and accountabilities in creating and maintaining a safe workplace for all.

Barrick Safety and Health System was introduced to Porgera in 2006, during the integration of the former Placer Dome sites. The Safety System consists of eight elements which are being phased in over time throughout the Company. The key to the success of the system is a commitment to leadership and a common vision of workplace safety. Courageous Leadership training for all personnel began in 2006. The results from Courageous Leadership training continue to build as new workers are oriented into the system and refresher courses designed to sustain the momentum continue to roll out.

Emergency response training is provided regularly to the Emergency Response Team and other workers. It includes mine rescue, hazardous materials handling, fire-fighting, crisis management and incident command training. Emergency response drills assist mine employees, and the Emergency Response Team, to assess their readiness to respond to an actual emergency.

Health & Safety performance data tables are available on the Barrick website at [www.barrick.com](http://www.barrick.com).

# Social Responsibility

Social responsibility at Porgera involves sharing the benefits of mining with our neighbors and our employees.



At Barrick, we are committed to making a positive difference to the communities in which we work. We recognize that responsible mining creates opportunities to generate greater value for shareholders, while at the same time fostering sustainable development in the communities and countries where we operate. Our Corporate Social Responsibility Charter defines Barrick's overall commitment to the communities where we operate, and to society as a whole. We developed Community Engagement and Sustainable Development Guidelines in 2006 to explain in more detail the principles, standards and approaches to be applied to communities under the Charter. The Guidelines are now providing direction for community interaction and engagement at Porgera. It is our guiding principle to share the benefits of mining with local communities.

Community performance data tables are available on the Barrick website at [www.barrick.com](http://www.barrick.com).

**Local Communities:** The mine supports sustainable development programs for the local communities. Social impacts from our operation include in-migration of outsiders which puts pressure on land and social networks. Population growth has also put pressure on land. In order to reduce these pressures, we are working to relocate indigenous landowners away from the mine property, and provide full, fair and timely compensation for all assets.

Our partnerships with aid and training organizations aim at developing the capacity of local communities to meet their future requirements through specific training (e.g. water treatment operators, community radio staff training) and more generic training (e.g. general business skills).

Illegal mining activities within the Special Mining Lease have been an ongoing problem for a number of years. A comprehensive risk assessment with an action plan is in place and includes:

- Construction of secure fencing to exclude trespassers from active mining areas.
- Increased security contracts awarded to local landowners.
- Awareness program for Local and National Governments, involving site visits.
- "Hearts and Minds Campaign" operated by the Mobile Police Squad, who have received Human Rights Training, with oversight by an independent observer.

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There have also been a number of instances of lost production due to disruption of the power supply by vandalism of the pylons on the Hydes Transmission Line. A comprehensive risk assessment with an action plan is in place and includes:

- Expanded Community Assistance Program to respond to Community Project Requests.
- Increased Community Affairs presence on the ground with more Village Liaison Officers appointed.
- Continued dialogue with the disputing parties to better understand the impact of loss of power to the community.

As another aspect of our sustainable development program we preferentially purchase from local and regional businesses as often as possible.

**HIV/AIDS Program:** In 2007, Barrick and the government of Papua New Guinea (PNG) signed a new agreement for the implementation of a program in support of PNG's strategy to combat the spread of HIV/AIDS. Titled "HIV Prevention and Control in Rural Development Enclaves", the program is supported by a grant from the Asian Development Bank and administered by the PNG's National Department of Health. The program is focused on controlling the spread of HIV/AIDS in rural areas by strengthening primary health care services for the communities surrounding Porgera. The program includes HIV prevention, diagnosis, and treatment as well as the provision of voluntary counseling and testing. Barrick has an HIV/AIDS policy and is actively involved in HIV/AIDS awareness programs for our employees. We also have ongoing HIV/AIDS projects in the communities surrounding Porgera and along the Hides Transmission Lines.



**Our Employees:** Each employee acts as an ambassador for the Company. Therefore, recruiting, motivating and retaining the best people are critical success factors for our operation. We do this by offering our employees educational opportunities, skills development, attractive salaries and culturally targeted benefits. We respect and value the men and women who work for us at Porgera, and are committed to fair employment practices, and a workplace in which all individuals are treated with dignity and respect and are free from harassment and discrimination. Good salaries and a comprehensive benefits package are provided to all employees.