

# **A New Chapter in Mining**

### **Island Copper**

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# Thank You.....

The Mayors and Councils of Port Hardy would like to thank BHP Minerals for their 25 years of contribution to the town and citizens of our area.

For more than two years, BHP Minerals has been helping its employees prepare for the shut down of the Island Copper Mine.

"We wanted no surprises," says John Stevens, Island Copper's human resources manager. "We want people to plan effectively for the closure.

"From our point of view, we're doing everything we can to help people."

Stevens notes that many of the workers want to stay with the company. A number have been hired by other BHP operations around the world.

About 20 are working on the NWT Diamonds exploration project. If the diamond mine goes ahead, there may be jobs for local people, but that would be about three years away without any guarantees.

Jim Excell will be soon heading up the NWT Diamonds project. Although the mine isn't expected to be operational before 1997/98, Excell will be urging the construction contractors to consider hiring former Island Copper employees who may be out of work.

The company is taking every opportunity to help employees get jobs with other mining companies in Canada.

With the average length of service being 14 years for hourly and 15 years for staff employees,



John Stevens, Island Copper Mine Human Resources Manager, shows Ken Loft how to use the choices career path computer program. "BHP is doing a fantastic job trying to help prepare people to apply for other jobs," says Loft. Gazette photo by Rob Giblak

Stevens says it has been a good, steady workforce.

The mine, its unions and the federal and provincial governments established an industrial adjustment committee, the first of its kind in Canada.

The committee has supported a number of initiatives to help employees. The company offered personnel profile interviews to all employees. More than 420 took part in answering the survey and more than 300 took part in an interview to discuss future goals and training options.

"It was really encouraging to see the numbers seeking help," says Stevens. The committee devised two training strategies - block training for groups and enhanced educational programs for individuals. The company pays 100 per cent of the tuition upon successful completion of courses.

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"The employees have taken part in a myriad of programs. I'm confident many of them will get

# Training nets masters degree

Betty Rebus is one of the four Island Copper employees who is taking a masters degree program under BHP's retraining initiatives.

"Actually, I think it's a good program. It's an excellent opportunity," says the accountant who has been with BHP for seven years.

She studies during her spare time and once a month goes to Vancouver for courses.

BHP will reimburse her for the cost of tuition upon completion but she has to pay the travel and accommodation expenses.

Rebus chose Asia Pacific International for her degree in hopes of working with BHP or a similar company. "I thought it would be helpful in furthering my career with BHP if possible. Even if we stay in B.C., there is a lot of trade with the Pacific Rim countries."

Although she likes Port Hardy, Rebus said she is prepared to move if that's what her husband, an accountant, and two children support.

Rebus has been very active in Girl Guides but she doesn't think the closure of the mine result in the program's demise.

Rebus says the Girl Guides will lose some leaders as a result of the closure of the mine, but they will also lose some girls, so it will have little net effect.



Island Copper chief accountant Betty Rebus is taking her MBA from Asia Pacific International during her spare time. Gazette photo by Rob Giblak

jobs in outside industries."

Focus on Mining

Levels of upgrading went from learning to read and write to taking doctorate degrees. Many took courses such as first aid and welding. Even diving was considered since it could help someone become employed in aquaculture, says Stevens.

"We encouraged practical skills, not courses for the sake of taking courses."

Employees are also given the opportunity to do a computer program called Choices. Considered one of the best in Canada, the program provides employees with options for specific career paths.

"It only takes an hour and it gives out ideas about possible careers."

Spouses were encouraged to become involved with the career counselling and other courses of a general application, such as resume writing, financial planning and entrepreneurial options.

The company and the senior governments are jointly funding a transition/placement centre to help laid off employees find jobs anywhere across Canada.

The centre, funded 50 per cent by BHP and 50 per cent by the federal and provincial governments, will provide telephone, typing and photocopying services as well as help in writing resumes.

Every six months, the company sends out a newsletter, reinforcing the training options. Also, BHP has given a guarantee of three-months written notice for anyone being laid off.

Stevens then sits down with the employees warning them before they receive the lay-off notice and offering any help.

The company will pay the referrals to North Island College of anyone needing career counselling. Another counselor has been contracted to help employees deal with personal issues.

"If they are going through anything, they will get help if they want it."

Stevens says BHP is offering the help because "it's the right thing to do." As a foreign company, it would be even less acceptable to do something wrong.

"I'm happy to talk with anyone who doesn't thing the company is doing everything possible."

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# Closure plan waiting for final approval

Island Copper Mine began formal planning for closure in 1988 at which time it was required by its reclamation permit to submit a closure plan by December, 1994.

At the end of January, 1995, officials from BHP Minerals went to Nanaimo to meet with the Vancouver Island Mine Development Review Committee and presented the closure plan.

The report discussed closure strategies for the waste rock dumps, open pit, acid rock drainage and water management and the marine environment.

The review committee then travelled to Port Hardy in late March for a tour of the facility, at which time the panel expressed its opinions and concerns about the plan.

The committee voiced no concerns over the planned reclamation of the site, since efforts have been successful since 1978.

Achievements of the reclamation program at Island Copper has been recognized four times, twice with the B.C. Reclamation Award and twice with the Citation for Metal Mining.

Concerns over the flooding of the pit were of a relatively minor nature and were limited to location of the flooding channel and timing of the flood.

The mine is now waiting for a formal response from the committee on its final approval of the plan.

Should the plan receive approval of the committee, there would be a series of public meetings where anyone could voice concerns.

After these meetings, assuming there are no changes the current closure plan would be implemented to its completion.



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# More than 260 hectares of new land created by 540 million tonnes of rock

The beach dump at Island Copper Mine consists of more than 540 million tonnes of waste rock from the open pit, creating approximately 260 hectares of new land.

The flat area created by the beach dump currently serves as a storage site for marginal ore and till stockpiles, limiting the reclamation of the area. These stockpiles will be moved prior to mine closure, and the area will be recontoured, tilled and revegetated.

By October 1994 more than 56 hectares of the dump surface had been reclaimed and in 1995 another 25 hectares is scheduled to be done. The remaining 174 hectares will be reclaimed in 1996/97.

More than half of the beach frontage on Rupert Inlet has been graded down to the low tide mark and allowed to recolonize naturally. In addition, four bays were sculpted into the face of the recontoured section creating additional and varying habitat for marine organisms.

Three more bays are scheduled for construction during reclamation including one with a flooding channel for use in the creation of a meromictic lake by flooding of the open pit.

The rate and progression of colonization of the intertidal zone has ben monitored and compared to a reference site west of the dump.

A section of the beach dump, recontoured in 1991, showed all the same organisms that were present on the reference site.

In 1990, a 1,220 metre long plastic concrete wall, 81 centimetres wide and up to 30 metres deep, was constructed along the original shoreline as a seepage barrier to allow mining of the south wall and extending the life of the mine by five years.

The project won the Colorado Consulting Engineers' Council 1992 Engineering Excellence Award for Special Projects.



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The area created by the dumping of waste rock into Rupert Inlet covers more than 260 hectares, and encompasses two small former islands. After reclamation the shoreline should be a haven for small sea creatures and plants alike.





Focus on Mining

# larine environment monitoring

Since the beginning of development at Island Copper Mine in 1969, the focus of environmental concern has been on the marine environment.

The company's application for a permit to discharge tailings into Rupert Inlet led to the first public inquiry of a mining proposal in B.C., held in December, 1970.

Subsequent to the inquiry, a permit was granted to discharge tailings into Rupert Inlet. Since then, more than 320 million tonnes of tailings have been discharged into Rupert Inlet. The permit, issued in January, 1971, set limits on the physical and chemical parameters and biological toxicity of the discharge.

It also required the company to retain an independent agency to assist in establishing an environmental monitoring program and preparing annual reports for submission to the Ministry of Environment.

As a direct result of these efforts, the mine has never been subject to any environmental

violations or fines since it opened.

The monitoring program and the independent agency have evolved and changed over the years; however, the program and committee continues to date and will do so for two years after the mine shuts down and tailing discharges cease.

The 25 years of marine monitoring has shown little impact beyond the predicted physical disruption of benthic organisms (those organisms that live on the bottom of the inlet).

This disruption was caused by the rapid deposition of tailings on the bottom of Rupert Inlet. Research and monitoring has shown that benthic organisms recolonize the tailings bed once rapid deposition ceases and the tailings bed stabilizes.

The monitoring program consists of a variety of weekly, monthly, semi-annual and annual tests of the marine environment.

Core samples from Rupert Inlet, Holberg Inlet and Quatsino Sound are taken on a regular





quickly reinhabit the shoreline once it has been reclaimed.

basis to determine the amount of tailing deposition,

Clams, mussels, crabs, seaweed and eel grass are collected from the same areas and are tested for metals, weighed and measured and cataloged to monitor any adverse effects over time.

Seawater quality and plankton levels have also been closely monitored in many areas of the inlet system.

There has been no measured change in the dissolved oxygen level in the water, nor in the temperature, nor in the copper and molybdenum levels of the water in the 25 years of monitoring. Zinc levels in the water have actually decreased during that time.

The level of primary productivity in the inlet system showed an increasing trend over the 25 years of monitoring. This is demonstrated in that the plankton community has not suffered any adverse effects from the tailings discharge.

Run-off water from the open pit is directed to a water management pond where it is treated until it meets environmental standards and then slowly released into the inlet.

The released water from the water management plan is sampled weekly and sent to a research lab where it is put Island Copper photos by Ian Horne

through various tests to make sure it is safe.

Routine monitoring of on-land rock dump drainage showed the first indication of acid rock drainage in 1985. Over the past nine years several monitoring programs and research projects were developed and undertaken, including two masters thesis projects by UBC students.

Acid-base accounting and kinetic testing on all major rock types classified the rock according to its acid generating potential. An exhaustive water quality monitoring program has permitted the development of a water quality model for Island Copper's on-land dump drainage.

# Meromictic lake considered

With the demise of the BHP Minerals landfill proposal and no other definite proposal for the site, Island Copper Mine is planning to flood the open pit.

The original concept was to open a navigable channel to Rupert Inlet and create viable marine habitat in the flooded pit.

The Department of Fisheries and Oceans reviewed this proposal and concluded that the pit should be filled with seawater but that access to the inlet should be prevented.

This led to the concept of closing the channel after flooding and creating a meromictic lake. Meromictic means the water in the lake does not completely circulate within itself; the water column is stratified in two or more stable layers.

Meromictic lakes are a common feature worldwide and are found to occur naturally in British Columbia.

In both the marine inlet and meromictic lake concepts numerical modeling showed that the water column below about 30 metres becomes anoxic over time (depleted of

oxygen) because of the bacterial respiration and lack of mixing with oxygenated surface water.

Anaerobic bacteria, naturally occurring in seawater increase in number as the oxygen is consumed. These bacteria include sulphate reducing bacteria, which generate hydrogen sulphide as a byproduct of their metabolism.

Hydrogen sulphide then rapidly oxidizes, consuming any oxygen in the water column or binds with heavy metals to form metal sulphide precipitates (metal particles).

The formation of a deep anoxic water column, containing dissolved sulphide, prompted the idea of passively treating acid rock drainage by discharging it into the bottom of the flooded pit.

Acid rock drainage from the on-land dumps will be directed into the flooded pit. All drainage and runoff from the north dump will be collected in the existing ditching system and directed to a collection point at the southeast corner of the pit.

A pipeline using a gravity feed injection system will float on the surface of the water to a point above the deepest area of the pit. It will then turn 90 degrees downward and extend to the bottom.

A simple diffuser at the end of the pipe will maximize mixing of the injected water with the surrounding seawater. Discharging acid rock drainage at the bottom of the flooded pit will ensure maximum dilution in seawater and reaction between metal ions and sulphides.

With the passive treatment, discharge from the flooded pit will meet current discharge levels for the water management pond.

The geology and geochemistry of the pit walls were studied to determine whether continued oxidation of exposed sulphides would impact surface water quality of the flooded pit.

The studies concluded that the estimated accumulated reaction products on the rock surfaces were not expected to overcome surface water alkalinity at any time.

# Acid-rock drainage system recycles

In an effort to limit the amount of acid rock drainage into Rupert Inlet BHP has been collecting all surface water drainage and diverting it to a water management pond.

Since 1990, the water has been recycled through the mill as process water, and occasionally, and only when it meets discharge compliance criteria, water is released into an exfiltration pond on the beach dump and then slowly exfiltrated into Rupert Inlet.

Water is only released to the exfiltration pond when the water level gets too high, normally only during the rainy season.

According to Ian Horne, Island Copper's Chief of Environmental Control, the amount of run-off water that is actually released into the inlet is relatively small.

The released water from the water management plan is collected weekly and sent to a research lab where it is put through various tests to make sure it is safe.

After closure of the mine, the water will be collected in erosion free ditches and directed to the head of the pipeline injection system which will then discharge the water at the bottom of the meromictic lake that is to be created in the pit.

 Routine monitoring of on-land rock dump drainage showed the first indication of acid rock drainage in 1985. Over the past nine years several monitoring programs and research projects were developed and undertaken, including two masters thesis projects by UBC students.

Acid-base accounting and kinetic testing on all major rock types classified the rock according to its acid generating potential. An exhaustive water quality monitoring program has permitted the development of a water quality model for Island Copper's on-land dump drainage.

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INNING



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# Local idea used as international model for moveable conveyor/crusher design

A moveable conveyor/crusher that was first employed for the Island Copper open pit in 1984 has become the design on which similar operations in other parts of the world are modeled.

The concept of having a moveable conveyor/crusher in an open pit operation was never considered because it was thought to be too large of a machine for such a role.

The advantages of having the machine in the pit and conveying the crushed ore to the processing plant, over transporting the ore by truck up the huge elevation change, were enormous and brought about the design of the current machine.

"The design was the result of the cumulative experience and knowledge of everyone at Island Copper," said Dick Robertson, Engineering Manager at Island Copper.

When copper prices dropped sharply a few years ago the system kept the Island Copper operation financially viable at a time when many other operations were closing.

"The in-pit conveyor/crusher

# Mining may be in future career plan

Vic Unrau is biding his time about the future.

The multi-purpose in-pit worker says he's going to ride out the end of the mine.

"The kids are all grown up. I'm not worried."

He and his wife may return to Williams Lake where they have five acres in the hills near a proposed mine.

They would set up their RV and if the mine opens build a house.

"With the environmental regulations, it's getting difficult to open new mines."

He notes that the increased price of copper has led to old mines being reopened and more job opportunities.

Gibraltar was making money at 90 cents a pound and the copper prices have topped \$1.35 now. sharply reduced the amount of energy to move the material out of the pit," said Robertson.

The parameters and criteria for the machine were set at Island Copper, and the machine itself was designed in Germany.

The finished product came in pieces from Japan to Vancouver where it was assembled and tested and then barged to Port Hardy.

Since its introduction there have been no major problems with the machine, and only a few minor modifications have been made.

"It has become the model for similar machines in other mining operations, and they have incorporated many of the changes that we have made over the years," said Robertson.

A local contracting company, which designed a log hopper for the machine, has been contracted by other companies in the U.S. to build a similar hopper for similar crushers.

"The hopper they designed has proven very durable and efficient, so other companies wanted the same," said Robertson.



Vic Unrau gets ready to walk through the conveyor tunnel to look for any problems. Unrau plans to stick around until the mine closes, and then he may look for mine work elsewhere. Gazette photo by Rob Giblak

# The moveable conveyor/crusher designed and used by Island Copper allowed the mine

The moveable conveyor/crusher designed and used by Island Copper allowed the mine to keep running while copper prices were low. The design has been so successful it has been copied by many other mines.

# Loss of workers causes problems for management

Island Copper's relocation assistance is a mixed blessing.

BHP has been helping its employees find jobs both within and outside of the company.

In some months there may be half a dozen employees leave to go work in other mines, according to John Stevens, manager of human resources.

"Now we're having to grapple with getting the job done while people are leaving."

It's a bigger issue in the ranks of staff, 20 of whom have left for other jobs.

When some of your most experienced and skilled managers leave, it can make the job of finishing up mining a little more difficult, says Stevens. Some staff are being brought in from other BHP operations for short-term assignments.

There is some hiring being done to supplement the hourly workforce as well.

On the other hand, it's difficult for some of the employees to grapple with the issue of whether to go to a new job and forego severance pay or stick it out until the end.

"Personally, I think it's more important to get a job," says Stevens. "That's what severance is for - to tide you over until you find work."

However, he can appreciate the fact that some employees don't want to give up 20 years worth of severance.

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PRODUCTION

# Island Copper Mine: 1971 - 1996 years as friends and neighbors

### A brief history

Utah Construction and Mining Company, which later became Utah International Inc., acquired the mineral rights to the Island *Copper property on northern Vancouver* Island in 1966. Mine, concentrator and port facilities were constructed and the first shipment of ore was made in December 1971 by the operating subsidiary, Utah Mines Ltd. Utah International Inc. merged with General Electric in 1976. The Broken Hill Proprietary *Company Limited (BHP) of Melbourne*, Australia acquired Utah International Inc. in 1984 and operates the mine under subsidiary BHP Minerals Canada Ltd.

Island Copper is Canada's third largest copper mine and produces copper concentrate containing payable gold and silver, and molybdenum concentrate containing by-product rhenium. Many of the mining and milling techniques developed at Island Copper have been copied by the international mining community; and many Island Copper personnel now lend their skills to other BHP properties. Island Copper scheduled a planned closure early in 1996 on depletion of the ore body.

The ore body originally contained 355 from million tonnes of ore averaging 0.41 per cent copper and 0.017 per cent molybdenum and has been mined using conventional open pit truck-and-shovel methods. More than one billion tons of material has been moved at a maximum rate at peak production in 1982 of 155,000 tonnes per day. At closure, mining will have produced an oval-shaped open pit 2,408 metres long, 1,067 metres wide and more than 402 metres below sea level - surpassing the Dead Sea as the deepest surface point on earth.

Special features of the mine operations include an in-pit, semi-transportable gyratory crusher-conveyor which conveys ore through a 914 metre tunnel to the concentrator. The system, installed in 1985, brought cost efficiencies which allowed Island Copper to weather a subsequent decline in copper



Some of Island Copper's veteran employees pose for a goodbye photo in front of the mine's killer whale logo. Left to right: Welder Dan MacAulay, longest serving member of the Operating Engineers Union; production manager Bill Hogan; engineering manager Dick Robertson, the mine's longest serving employee; assay lab technician Ian Murphy, longest serving member of the Office and Technical Employees Union; and, seated, Mary Welchman, Island Copper's paymaster.

prices. The crusher established an international standard and was the prototype for the unit at BHP's Escondida Mine in Chile.

Most of the mine's waste rock has been deposited in adjacent Rupert Inlet, forming a one-kilometre wide landfill along the south wall of the pit. In 1990, a 1,220-metre long plastic concrete wall, 81 centimetres wide and up to 30 metres deep, was constructed along the original shoreline as a seepage barrier to allow mining of the south wall and extending the mine's life by five years. The project won the Colorado Consulting Engineers Council's 1992 Engineering Excellence Award for Special Projects.

The concentrator employs six primary semiautogenous grinding mills and five secondary ball mills with production averaging 521,200 tonnes per day in fiscal 1993. The ground ore in slurry is processed through banks of flotation cells employing reagents which float off the copper and molybdenum.

Mining and milling operations are supported by sophisticated maintenance, metallurgical laboratory, environmental laboratory and warehousing facilities. Infrastructure includes a 138 kilovolt line supplying 70 megawatts from B.C. Hydro; an 86-centimeter pipeline conveying water from the Marble River 21 kilometres south of the mine; and a deep-sea dock accommodating vessels up to 35,000 deadweight tons.

To May 1995, Island Copper produced 5.1 million tonnes of copper concentrate containing 1,217,500 tonnes of copper, 1.1 million ounces of gold and 11 million ounces of silver. The mine produced 66,500 tonnes of molybdenum concentrate containing 28,000 kilograms of rhenium.

In its peak production year, 1988, Island Copper produced 260,300 tonnes of copper concentrate and 4,490 tonnes of molybdenum concentrate. In its final year of operation, production is estimated to be 106,000 tonnes of copper concentrate and 530 tonnes of molybdenum concentrate. Copper and molybdenum concentrates are sold to custom smelters in Japan and South Korea. Molybdenum concentrate is sold through domestic brokers to markets in the United States, Europe and South America.

Island Copper's environmental program comprises a number of major elements. A comprehensive water management program controls runoff from waste rock dumps, maintains pit dewatering and recycles mine water through the concentrator. The marine tailings disposal and oceanographic Page 10

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# Island Copper Mine: 1971 199 the Mine Managers



Morton E. Pratt Mine Manager: July 1,1969 - October 9,1974. Retired in 1983, Mr. Pratt passed away on November 8, 1988 in Tucson, Arizona.



Robert N. Hickman Mine Manager: October 9, 1974 -December 31, 1976 Mr. Hickman now is Senior Vice President and Group General Manager, New Business Development, BHP Minerals, based in San Francisco, California



Glen F. Andrews Mine Manager: January 1,1977 -December 1, 1982 Mr. Andrews now is Senior Vice President and Group General Manager, BHP Copper, based in San Francisco, California



John C. Hannah Mine Manager: December 1, 1982 -September 1, 1988 Mr. Hannah now is Group General Manager, BHP Australia Coal, based in Brisbane, Australia



Chris M. Brown Mine Manager: September 1, 1988 -September 16, 1990 Mr. Brown now is Manager Strategic Development, BHP Iron Ore, based in Perth, Australia



Sergio Fuenzalida Mine Manager: September 16, 1990 -February 15, 1992 Mr. Fuenzalida now is Vice President Marketing, Minera Escondida, Santiago, Chile



Ed Pettigrew Mine Manager: February 16, 1992 -March 1, 1993 Mr. Pettigrew now is Mine Manager, Navajo Mine, Fruitland, New Mexico



Jim Excell Mine Manager: March 1, 1993 - Present Mr. Excell also was appointed Manager, NWT Diamond Project, effective June 1, 1995, based in Vancouver, British Columbia

### History continued

monitoring system is a model for similar systems around the world. Land and beach reclamation began in the early 1970s and will continue through mine closure, providing a productive habitat for large numbers of deer and Canada geese. Island Copper has received four environmental performance awards from the British Columbia Ministry of Energy, Mines and Petroleum Resources and the Mining Association of British Columbia.

Early in 1995, discussions were begun with the regulatory authorities on a final closure plan which is expected to include removal of all physical infrastructure, final replanting of land

areas and the flooding of the open pit with seawater from Rupert Inlet. The resulting lake then would be closed off from the sea.

At its peak in 1980, Island Copper employed 900 men and women from countries around the world. The work force was scheduled to remain at 450 people until the end of in-pit operations in mid-1995. At its peak, the mine generated a payroll of approximately \$28 million annually and paid more than \$3 million in municipal and regional taxes.

As closure approached, the company implemented two programs to assist employees in job retraining and educational upgrading and in identifying future career opportunities. An Industrial Adjustment Committee with representatives from management, unions and governments was established in January 1993 to recommend programs and monitor the impacts of mine closure. The company also implemented an early retirement program.

BHP also has benefited from the expertise built up over 25 years of operation by transferring many Island Copper personnel to company operations in Chile, Australia, Mali, New Guinea and the Northwest Territories of Canada. However, many other employees plan to retire or to pursue new careers in Port Hardy and other Vancouver Island communities.













# Island Copper exports skills

ANTOFAGASTA - Chile is like a home away from home for Brian Welchman.

The BHP electrical superintendent/consulting engineer sees a dozen or more former Port Hardy residents on a regular basis at the Escondita Mine.

"There's quite a contingent of ex-Island Copper employees here. It's like Old Home Week."

The former Port Hardy mayor has been working in South America off and on for about seven years.

He has been consulting on a number of BHP projects in a variety of countries.

"There are a lot of skills from Canada working in South America, mainly the engineering, management and maintenance business."

Welchman attributes the valued skills to conditions at Island Copper.

"The ore grade at Island Copper was not high and as they say, 'A poor mine makes good miners.'

"The mine struggled to make a dollar and over the years we had to be innovative."

The in-pit conveyor/crusher set an international standard and a number of maintenance and operational devices developed at the mine were advancements.

"It's not that we're particularly smarter. We just had to wrack our brains,"

Because of that reputation for innovativeness, the former employees can be found around the world in places like New Guinea, Indonesia and Australia.

Chile is a fascinating place. In the desert parts of the country there has been no recorded rain for 100 years.

Living and working 10-12,000 feet above sea level Welchman often finds himself out of breath.

"I can't play soccer here. About five per cent of the people have a problem but most of us acclimatize within a few hours. You just have to breath deeper and more regularly."

Although the travel and challenges are exciting, Welchman says "it's not all gravy."

Dealing in other languages, doing without Hockey Night in Canada and being away from friends and family take its toll.

"You have to adjust without your other half being there. It takes good understanding, flexibility and communication."

The fax machine has been a real blessing - telephone calls home are limited to once a week.

Welchman recommends working two to four years in a foreign country if only as a learning experience.

"It's a real advantage to be able to see other cultures, to know how well off we are in Port Hardy. It's hard to beat our part of the world."

Chileans have better family relations and church-going habits while Canadians have a better work ethic.

"No culture is perfect, we all have different ways, but somewhere in the middle is the ideal."

Jack and Mary McLeod are two former Port Hardy residents who Brian Welchman bumps into in Chile.



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BHP electrical superintendent Kim Welchman has been working in Mali, Africa. As well as his work at the mine, BHP had him install electricity in village huts. When the switch was flipped, the villagers were amazed and very appreciative.

# Hello operator, give me...

Long distance relationships are no picnic, according to Mary Welchman.

"Unfortunately, it's a way of life for a lot of people," says the Island Copper Mine paymaster.

Welchman's husband, Brian, works for BHP Minerals in Chile while her grown son, Kim, works for the company in Mali. Both are electrical superintendents.

"Jobs in Canada are drying up and Brian's not ready to retire yet. For Kim, it's obviously a career move."

490 Pioneer Hill Drive, Port McNeill

When the shutdown of Island Copper Mine was announced, Kim showed a willingness to go to other BHP operations even thought it meant being apart from his wife, Barb, and their children.

"Mali just isn't somewhere for children because of the sanitation and he wouldn't work where the family would live anyway."

However, it may make things better knowing that another transfer could lead to a better location.

"I think it would be easier. He might even get a job in Australia. You have to put in your time."



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# FOCUS ON MINING

Focus on Mining

# Watching it wind down

Andy Gauthier has a unique motive for wanting to stay until the end of Island Copper.

"I would like to be a part of the shut down," says the 17year veteran.

Having helped start a mine in Alberta, he wants to see how one is decommissioned.

"It has been a good place to work. I've met a lot of interesting people."

He plans to keep mining even if it takes him to the Yukon.

"I hate to leave Port Hardy after all of this time but when there's no work you've got to go.

"I'm not old enough or rich enough to retire."

Gauthier is a CP 1 operator in the mill.



CP1 operator Andy Gauthier wants to be around to push the button when the Island Copper mill shuts down in January. He helped commission a mine in Alberta. Gazette photo by Rob Giblak

# Laborers looking for jobs

Steve Janusz realizes that without a trade, it's harder to find employment.

"The trades have a better chance at other jobs. Without a trade to build on its a bit tougher."

Had he started earlier than October, Janusz might have taken a trade.

However, the grinding operator at Island Copper is hoping to get on at the Port Alice Pulp Mill or Pacific Coastal Airlines, where he formerly worked.

His rescue, first aid and fire fighting skills may help him to be more employable.

"I hope to stay in the region," says the 10-year resident of Port Hardy who plays ball, golf and curling.



Grinding operator Steve Janusz is one of the more recent employees of Island Copper. Janusz is hoping to find a job with another mill or business in the area.

Gazette photo by Rob Giblak



Bruce Deans is one of the several hundred Island Copper employees who took advantage of retraining.

"The company was really good for offering to pay the courses," says Deans, who took several.

"I took the extra courses just to get a leg up on the next guy." Deans has completed the industrial first aid course, a 10-day effort

requiring 70 hours of class time and about 40 hours of study. The welder also upgraded his pressure ticket, learned computers and studied basic small engine repair.

"I hope it opens a few doors. I have a few job prospects so I'm not that worried."

Deans and his wife, Leanne, who also works at Island Copper, are building a house in Port Hardy because they plan to stay. Although it's taking a bit of a chance, they're confident of being able to find work.

Deans imagines that most of the mine employees are wondering what to do next. "A lot tended not to believe at first that the mine would actually be closing."

He took it seriously and decided the time invested in retraining would be worth it in the long run. The skills will come in handy with the changing job market, he says.

# Mechanic waiting patiently

Ian Reid is going to take his time looking for a new job.

"There's nothing keeping me here. Who knows, I may be here forever... but it's highly unlikely."

Reid arrived at Island Copper five years ago and was told there would be six years of work. Although he was almost laid off in the last round, if he makes it to January he will be happy.

With a daughter due to graduate from high school in 1996 and a wife working fulltime, Reid is going to apply to mines in B.C. and Alberta.

"I've had a whole bunch of additional resumes made up. It seems like there's more work appearing all the time."

Although some old mines have been reactivated, Reid isn't optimistic about new mines opening.

He said the province is slowing the approval process down too much because of environmental concerns.

The heavy duty mechanic says the forest industry is another option he may consider. Although the equipment is different, the principles are the same.

"It depends on experience. People will cross over, usually with no trouble."

# Settling for less

Crusher operator Richard Lum has not decided what he's going to do in the future.

However, with a house in Vancouver, he's leaning in that direction.

"There are few full-time, high paying jobs anymore. There's no such thing as a \$20 an hour job in the city - it's all \$10 or \$12 part-time jobs."

The 17-year Island Copper employee says he would eventually like to return to mining.

Although three Interior mines have reopened in the last year, Lum says if the price of copper drops, they will probably all shut down again.

Focus on Mining 100'l

maybe in the forest industry."

Boguski has been eight years

in Port Hardy, five of them with

the mine. Although he wanted to believe

the rumors that the mine was

going to continue, he can't any-

"It's pretty obvious. It's going

### Page 19

# Looking out for himself

Ernie Wong has probably taken more courses through Island Copper's educational enhancement program than anyone else.

Even before BHP announced the mine closure, the lead hand heavy duty mechanic did homework and read up on his trade.

"Whatever is available, I take them. I look after myself first."

Wong believes there is a lot of demand for mechanics on small and large automotive and heavy equipment.

He's hoping to be hired to do fleet maintenance for commercial vehicles.

Unless another mine is started near Port Hardy, Wong plans to move to the Lower Mainland where his younger children can attend university.

"For the last 19 years the mine has been good to me and helped me raise a family of four."

Wong is going to stay until the end in order to collect severance.



Ernie Wong is a strong believer in taking any training courses offered by the mine to help him with future job prospects. Gazette photo by Rob Giblak

# Millwright looks to forest industry

more.

to shut down."

Gary Boguski isn't able to finish his millwright apprenticeship with Island Copper.

About half way through the four year program, Boguski is hoping to pick up where he left off after the mine closes.

"I want to stay in Port Hardy and I want to stay working,

s bright

Luis Diaz has a lot of irons in the fire and he's hoping the flames are hot enough in Port Hardy,

ture i

"I'd like to stay but it depends on the work possibilities."

The millwright at Island Copper is also a certified heavy duty mechanic.

"It may open up a few possibilities. If not, I have to go where the pay check is."

Diaz started with BHP in 1975 and apprenticed as a mechanic.

He went to Finning for awhile

but returned to the mine in 1981 and apprenticed as a millwright. "I was looking for a new chal-

lenge and I wanted to stay in the mechanical field."

Diaz says some employees are still in denial that the mine is going to close. People should take advantage of the retraining and seek advice on such things as resume writing and being interviewed, says Diaz.

"The future is bright, especially if you prepare. If you want a job, you have to hustle."



Telephone 681-4321 Fax 681-5305

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Wed., May 31, 1995

# BHP in the Northwest Territories Great Canadian Diamond Rush

Bob Lowery is a pioneer in his field.

The former Island Copper employee was among the first wave of BHP employees to be hired to set up the diamond exploration camp in the Northwest Territories. "It's exciting. We're in the middle of the Great Canadian Diamond Rush and BHP is the chief player."

Lowery, a plant operator, electrician Brian Bliss, equipment operator Viti Grudzingkas and mechanic Ron Klatt, all of Port Hardy, were the second group from Island Copper to join the NWT Diamonds Project.

The first group set up buildings and high tech tents joined by an Arctic corridor, a heated hallway to protect workers from the incredible cold that reaches -50 without the wind chill. Trailers were added last winter and Lowery helped build the pilot milling plant inside the big building.

Most of the crew in the camp built for 180 are drilling contractors and the same with the satellite camps of 30 and 50. There are about 20 former Island Copper workers on the project.

TRANSPORTATION

When the camp was being set up, everything had to be ferried in by helicopter from 40 kilometres away. With a longer air strip now, supplies and workers are brought in by airplane. The North Island residents leave Port Hardy early in the morning usually on a Thursday and fly to Vancouver, Yellowknife and then north to the camp for their 14-day shift. The next morning, the workers in camp fly in the opposite direction, arriving in Port Hardy Friday afternoon on a somewhat shorter trip.

On-site transportation is governed by environmental concerns. Winter roads are made by packing down snow, which protects the delicate tundra. Once spring arrives and the ground starts to show through, driving is halted. The only movement allowed in the short summer is on the few permanent roads close to Koala Camp. "There's as little damage as possible," says Lowery.

WEATHER

Because winter white outs can happen without warning, the



BHP NWT Diamonds plant operator Bob Lowery shows his winter gear to Mrs. Whitney's grade 2/3 class at Robert Scott School, which includes his twins Kyle and Katie. Lowery showed a video explaining the diamond exploration program and pictures of animals and equipment, such as the Kasborough rescue vehicle (below). The students asked a lot of questions about wildlife and the environment.



remote exploration camps have fully equipped huts. Visibility in a storm is less than five feet and sometimes you can't even see your hand in front of your face.

Because of that, the tracked vehicle used for transportation contains survival gear, two-way radios and a global positioning system. "It's the same as BHP operations everywhere. Safety is the main issue."

DIAMONDS The reason BHP is in the desolate barren lands is for diamonds. After Canadian prospector Chuck Fipke's 12-year search yielded fruit in the Lac de Gras region 250 kilometres north of Yellowknife, he contacted BHP, one of the world's largest mining companies. In 1991, BHP found diamonds in the first hole drilled.

The discovery sparked the Great Canadian Diamond Rush as the number of NWT claims staked rose from 800 to 11,000 in just two years.

Bulk sampling for diamonds is much different than the core samples taken for copper/gold mines. Large samples are brought to the mill, where the diamonds are washed out through the the screening process. Measured in carats per tonne, the process has to be very exacting.

### WILDLIFE

Working 12-hour shifts, seven days a week, Lowery says he mainly works, sleeps, eats and explores the tundra. He fishes for the abundant char and trout found in the many small lakes. Ptarmigan, arctic fox and arctic hare are quite common.

There are also wolverines, caribou, who migrate past the camp (some stay year-round), ravens (year-round) and barren land grizzly. Although there are very few grizzly bears, the company set up an electric fence to keep them out of the camp, to protect the workers and the bears. The most plentiful wildlife are the bugs. The stages of summer are characterized by the waves of bugs - mosquitoes, black flies and then horse flies. Workers need to wear a net hat or body suit to keep the bugs out of the eyes and mouth during summer. The animals climb to higher ground with the constant breeze providing relief.

Since no one lives on the barren land and little human activity has ever occurred, BHP is doing the most intensive research on the environment to date. "They've already done more studies than the government has in 10 years. It's basically

untouched," says Lowery. By establishing thorough baseline environmental data the

line environmental data, the company can put the area back to its natural state when the mines are finished. Since the kimberlite pipes are generally found under small volcanic crater lakes, the open pits will be filled with water after the estimated 25 years to finish mining. APPROVALS

Lowery says he doesn't anticipate a problem with the environmental review because no chemicals are used in the milling process and the area will be returned to its natural state. Although the company has a policy of hiring locally anywhere in the world it works (the site is on traditional Dogrib Dene land) Lowery says trained workers will still be needed. "The people they bring in will be good at their jobs."

Lowery notes it's getting harder and harder to start new mines. "It boggles the mind how the influence of some people is almost shutting mining down." A mine like NWT Diamonds will disturb less land than the District of Port Hardy, which will never be returned to its natural state.

Lowery has watched the number of mines in B.C. quickly decline, as illustrated by the number of teams at mine rescue competitions - 24 in 1988 compared with 10 last year.

Lowery's wife, Kathie, agrees everyone should help protect the environment, starting at home. "I pat attention to packaging and cut down on junk. The environmentalists don't practice what they preach."

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# **NWT Diamond Project** waiting for approvals

YELLOWKNIFE - Within three years, BHP Minerals is hoping to start construction of Canada's first diamond mine.

However, there are still a lot of obstacles to overcome and the project is in no way guaranteed to proceed, according to Karen Azinger, manager of external affairs for the NWT Diamonds Project.

"We're hoping to have government and joint venture approval on-stream by the end of 1997.

"It would be the first commercial diamond mine in Canada if all goes according to plan."

The project is 51 per cent owned by BHP Diamonds Inc. and 49 per cent owned by a Canadian joint venture called the Blackwater Group.

Exploration is on-going while the project goes though the government approval process.

The mine is the subject of an Environmental Assessment Review Process, the highest level of environmental review in Canada.

Scoping hearings were held in eight communities at the end of March and beginning of April. Guidelines for the environmental impact statement were to be issued by the end of May.

The company expects to submit its plan in June. The process is expected to take 12 to 18 months, says Azinger.

Meanwhile, exploration is continuing on the property, which has been found to contain five kimberlite pipes.

Kimberlite pipes are the result of small volcanic eruptions. Originating about three times deeper than regular volcanoes,

by the time the kimberlite reached the surface it would have been cooler. In some places, the kimberlite erupted through diamond bearing layers, bringing them to the surface.

BHP has found five such kimberlite pipes on the NWT property. It is proposing to mine them using open pits, and possibly underground methods near the end of the mine's life.

About 1,000 people would be employed in the two-year construction phase and 650 in operating the mine for about 25 years.

The exact extent of the diamond deposits is still being determined. However, the future is bright, says Azinger.

commercially viable under current regulations and tax regimes."



Brian Bliss, an electrician from Port Hardy on the BHP NWT Diamond Project, poses in his arctic wear in front of the pump shack that draws water for the Koala Camp. Moisture often crystallizes in the air in winter, causing a haze over the flat, barren lands.

### **NWT friendship** 'We've said that the mine is YELLOWKNIFE - Jo Hillman is enjoying Canada's North, especially the people. The former Island Copper employee joined her husband, Jay, in

Yellowknife with her assignment being to set up and administrate the new NWT Diamonds office in the Northwest Territories capital.

**Hillmans enjoy** 

'We're enjoying it. People are really friendly and very helpful, whether in government or the private sector."

Their daughter, Kate, stayed behind to finish grade 12 at Port Hardy Secondary.

Hillman has made friends with people from all parts of Canada now living in Yellowknife, a city of 17,000 that is the essentially a government town.

"A lot of people have been here 12 to 16 years. We really enjoy it here and we would stay.

"Everybody's pretty excited about BHP's work. It would be an enormous employment opportunity as Canada's first diamond mine."

Hillman says the winters aren't really that bad, with the help of parkas and winter boots. "You get used to dressing appropriately to go out. It's a bit of a nuisance. You just have to be careful.'

This year, winter wasn't that bad but the year before there were six weeks of -45 degrees Celsius. At the height of winter, there is only four hours of light, and the sun doesn't rise much above the horizon.

Having lived in Labrador in 1973, Hillman knew what to expect. "At least here we can drive out. We're not totally isolated."

They have to take a lot of survival gear for the 17-hour trip to Edmonton, although there are a lot of trucks in the winter.

Travel in the winter is by ice roads. Getting out of the vehicle on a frozen lake is quite an experience as you see all the cracks in sevenfeet or more of ice.

Spring comes suddenly to the North. In the span of a day or two, the landscape bursts into a sea of green as the trees suddenly bud.

The many small lakes quickly thaw but Great Slave Lake takes a number of weeks to open.

Summers are pleasant, except for the bugs. Residents wear t-shirts boasting of the world's largest mosquitoes to go along with their jackets that include netting to cover the face.

Housing is expensive because of the rocky landscape and short building season. There are a lot of activities, such as curling, hockey, cross-country skiing and, the big attraction, snowmobiling.

The city has a wonderful wave pool, museum and legislature building with a unique design.

There are a lot of waterfalls and a unique landscape of mounds of rock interspersed with trees.

# **Glennon family adapts** to mining camp situation

Wendy Glennon actually doesn't mind that her husband, Mike, is working for BHP Minerals in the Northwest Territories.

"So many families work out of camps. It's pretty commonplace." This way he's home for two weeks straight which means he has more for their two children.

"He spends a lot of time with our son, who's a preschooler, while I'm at work."

Glennon says being apart also has its challenges, like having to fill the roles of mother and father, such as handing out discipline.

"We're adjusting pretty well."

As for working with the NWT Diamonds project, Glennon says that other miners from Port Hardy paved the way for the likes of her husband.

"It's something different. They're making history up there.'

There are some minor drawbacks, according to Glennon. "His golf game is suffering a little."



The Glennon family, Christy, Carter, Wendy and Mike are finding some advantages to having two weeks straight together.

# Ore deposits difficult to assess

By Bruce K. McKnight

Focus on Mining

FOCUS ON MINING

Mineral deposits are rare, elusive and difficult to find because they are hidden. That's what makes this government's current approach to land use unworkable when it comes to the mining industry.

Land use planning and resource allocation for minerals should be dealt with by a separate mineral-specific process which parallels and overrides other land use planning.

Why should minerals be treated any differently than other natural resource material? Where mineral deposits occur, their utilization in almost every case will provide the greatest human benefit of any alternative land use per unit of area. British Columbians simply can no longer afford to have mineral deposits alienated from development.

Mineral resources are the rarest and most elusive of our natural resources. While land use planners may say an area can be assessed by a geological mineral survey in advance of it being alienated by the planning process, their thinking is flawed.

The flaw is not in the quality of the assessment, nor in the calibre of assessor, it is in the necessity to rely on current science, technology and economics in making the assessment. There are numerous examples of revamped geological theories, new technologies and changed commodity demands rendering previously non-prospective land highly attractive. On occasion this geological reversal can be brought about by contrarian thinking or even good old fashioned luck.

Consider these examples:

The Highland Valley region was examined for decades by prospectors and miners who followed small copper veins using the technology of the late 1800s and early 1900s. An assessment in, say, 1950 would have likely concluded that the area had been thoroughly explored and it would be safe to allocate the land as non-mining. Today, Highland Valley Copper is one of Canada's largest and most profitable copper mines, directly and indirectly employing thousands of workers and generating millions of dollars per year into the B.C. economy and government coffers. Technology and

economics made the difference.

The NWT Diamond Play is based on transplanted geological theories from southern Africa and Australia along with a lot of perseverance and risk money. The diamonds are being found largely in granitic terrain which until just recently had been thought un-prospective for any category of minerals. Because of this, when Inuits land claim negotiators (using conventional geological advice) claimed their mineral lands, they largely ignored the granites and focused on greenstone belts which are known to host gold and base metal deposits. They largely missed the diamond terrain.

The Hemlo Gold Camp in northwestern Ontario, which had been unsuccessfully explored for decades, was found literally "under the noses" of people beneath a transcontinental highway and railway. It could easily have been "written off" for mining but it now contains three of Canada's largest gold mines and is a major driver of the economy of northwestern Ontario.

Despite our best science, prospecting odds are not good. It is estimated that out of 10,000 prospects examined, only two would become operating mines, for a ratio of 1 in 5,000. Putting it another way, it is now estimated to cost an average of \$50 million to find an orebody in Canada. I think it is fair to say that nobody (including government geologists, prospectors, mining companies or investors) knows where mineral resources will be found nor their potential value to society. All that we do know is that they surely won't be found where we are not allowed to look and their value in those areas will be zero.

Real land use conflicts, that is real problems of resource use conflicts or unmitigatable impacts on the ground rather than in peoples' heads, are rare. The simple reason is because only a tiny fraction of our province is impacted by mining.

Consider these statistics, British Columbia has an area of about 94.98 million hectares. Since modern mining began here 140 years or so ago, about 76,000 ha or just 0.08 per cent of the land has been disturbed by mining and most of that has been reclaimed. That 's about the same area as the Coquihalla Highway or about one quarter of the area of the GVRD. The provincial Mines Branch estimates that B.C. currently has 25,000 ha of unreclaimed mining lands; that's about 0.025 per cent of B.C., about the size of Prince George.

Part of the perception of widespread land use conflicts may come from the large amounts of land needed for exploration.

About 5.4 million ha are currently covered by mineral claims and keep in mind that is probably a 10-year low. About 15 million ha of B.C. are off limits to prospecting and mining and



Prospectors and other mineral explorationists need access to virtually all available land for exploration (which the public probably doesn't understand nor like); but mines need access to far less than one per cent of the land for actual mining (which the public probably doesn't believe). Our problem and the dilemma for land use planning is we don't know which one per cent.

Most exploration has no more impact on the land than that of a hiker taking photographs and picking blueberries.

## A separate land use strategy for mining

In the past couple of decades, mining has been at best ignored, but more typically damaged, by land-use decision-makers including the recent approach using multi-stakeholder negotiations.

It is exceedingly difficult or perhaps impossible for multistakeholder groups (mediated or not) to reach consensus through negotiations on contentious land use issues unless the issues are so general as to be meaningless. Almost every land use battle

in this province was between forestry and conservation interests: Every land alienation decision made because of the forestry concerns resulted in prospecting and mining also being banned which makes no sense socially, environmentally and certainly not economically. Surely we can be more creative than simply shutting out exploration and potential mining from areas we have decided not to log. Mining does not fit with conventional land use planning as applied to visible resources. The standard approach to dealing with mining's differences has been to ignore them. This policy has been a demonstrated failure because mining has lost and the economy has lost but without an off-setting gain to other resources values - a lose-lose situation.

A wiser land use policy would be to recognize the unique differences and values of mining and to design planning and resource allocation methods to ensure mining is recognized for the tremendous value it brings to society.

Bruce K. McKnight is vicepresident, corporate affairs, of Westmin Resources Ltd.



A remote excavator removes ore from an underground mine at Westmin's Myra Falls mine near Campbell River in Strathcona Park. Mining provides the best return for the amount of area disturbed of any of the resource industries.

Wed., May 31, 1995

Focus on Mining





# The Westmin Legacy ...we're proud of our contribution.

### **A Strong History**

Westmin Resources Limited is a Vancouver-based exploration, development and mining company with interests in base and precious metals, coal, and industrial minerals. The mining industry has a rich history in the province of British Columbia and Westmin Resources has played a key role in this field for nearly 30 years.

### **People and Technology**

Using leading edge technology, our highly skilled employees work together to delineate and mine top grade resources while improving recovery rates and minimizing costs. Westmin recognizes the importance of new developments in the field, and provides comprehensive training to ensure that our staff is kept abreast of emerging technologies. We also welcome innovative ideas, as seen in our participation in B.C. Hydro's Power Smart Program, which in just three years has already resulted in impressive accomplishments in energy management and savings.

### **Quality Products**

At Westmin, we feel that quality is the key to sustainable growth for our company. The result we have for our customers is reflected in the superior value we provide. We strive to meet new challenges and exceed expectations in order to ensure satisfaction.

### **Contributing to the Economy**

Now that the labour dispute of 1993 and 1994 is over, Westmin is once again making a significant contribution to the North and Central Island economy. Myra Falls Operations has a direct employment of about 400 employees. When combined with indirect and induced employment, our operations create approximately 1300 jobs, of which, over 1000 are generated locally within the region. This makes us the number two private sector employer in the area.

> Our Myra Falls Operation generates export revenue of about \$100 million per year, a payroll of \$25 million and about \$12 million in local purchases. We and our employees also contribute more

than \$13 million per year in direct taxation to three levels of government, which will rise as our profitability resumes.

The future of the operations looks very solid with operating costs per tonne down 30% within the past four years and our ore reserves at their highest level ever. We expect to be making a major contribution to the local economy until well into the next century. In addition, Westmin operates the Premier Gold Operations in Northwestern British Columbia and has active outside exploration sites in Alaska and Yukon Territory, as well as, producing coal properties in Alberta.

### **Responsible Mining**

One of our objectives is responsible mining. Underscoring all of Westmin's activities is a solid business ethic based on integrity of conduct and respect for our investors, employees and the community. We have established high standards of environmental management so as to protect and preserve the surrounding Strathcona Provincial Park. Responsible mining also means a safe workplace. Our most important resource is our employees and we are therefore committed to occupational health and safety. Moreover, we take pride in ensuring that our operations are clean, secure and efficient.

### **Dedicated to the Community**

Our dedication to the community is perhaps best demonstrated by our significant province-wide involvement in the B.C.'s Children's Hospital's Mining for Miracles Telethon and our annual sponsorship of the Westmin Nordic open ski race. Westmin also offers educational opportunities through such programs as Shad Valley and through our "Partners in Education Agreement" with Campbell River's Carihi Secondary School as well as supporting community events and various cultural, business and sporting activities. During our open houses and site tours, we invite local residents, tourists and numerous school and college groups to become acquainted with our methods and practices in order to establish and maintain active lines of communication between Westmin and the community.

### **Accomplishing Goals**

Leading the way with a competitive edge, we are working together to accomplish our goals and effect positive change. Westmin... we are proud of our long-standing role in the mining tradition and look forward to a bright future for our employees, our investors and our community.

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