



MYRA FALLS OPERATIONS

Campbell River British Columbia





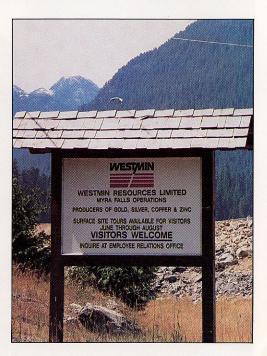
estmin Resources Limited is proud of its modern mining facilities located near the south end of Buttle Lake on Vancouver Island. A 90 kilometre highway from Campbell River provides access to the scenic minesite.

Located in British Columbia's oldest provincial park, Strathcona Park, Westmin is conscious of its responsibility for protecting and preserving this wilderness area. The Company's responsible approach to environmental management

the Myra Falls Operations

and its state-of-the-art environmental protection technology has earned international recognition. Westmin places high priority on the environmental standards of its operations and continues, with various research projects, to improve these standards.

Most of the approximately 575 employees at Myra Falls have made their homes in the region. They work as partners with the community and the environment, enjoying and cherishing the area's beauty. During your stay, Westmin asks that you also help maintain these picturesque surroundings so future visitors may enjoy this natural wilderness park.



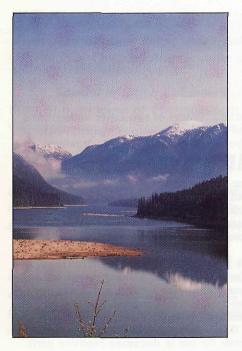


yra Falls Operations consists of two active underground mines (Lynx and H-W), a concentration plant, offices, camp facilities, two hydroelectric generating plants, a tailings disposal area with water treatment ponds and associated facilities.

Copper and zinc concentrates with significant gold and silver values are produced at Myra Falls. After being trucked to Westmin's Discovery Terminal storage and loading facility in Campbell River, concentrates are shipped to smelters overseas where they are further processed into final metal products.

Copper metal is primarily used in the manufacture of wire, tubing and sheet for use in houses, buildings, electrical and electronic products, telecommunication systems and power equipment. Zinc's resistance to atmospheric corrosion makes it an attractive coating for steel and, as such, is used in automobile and construction industries. Zinc is also alloyed with copper to make brass and with other metals for use in diecasting precision parts.





or thousands of years, prospectors have gambled with nature by braving the unknown wilderness in search of futures in gold, silver and other minerals. They knew that earth was the hiding place for the wealth of precious and base metal deposits.

One such group of prospectors was James Cross and Associates of Victoria, who combed the uncharted wilderness in the Myra Falls/Buttle Lake region during the early part of this century. In 1918, they staked the claims covering the H-W, Lynx, Price and Myra Mines. Today, these claims make up a sizable portion of Westmin's Myra Falls property holdings.

Following discovery of the Lynx mineralization, the next challenge was evaluating the deposits beneath the earth's surface.



The Paramount Mining Co. of Toronto started the first development work in the area during the 1920s but inconclusive findings, along with the remoteness of the area and depressed metal prices, resulted in little work being done in the Myra Valley until 1959 when the Reynolds Syndicate acquired the claims. This group then sold the claims to Westmin's predecessor company, Western Mines Limited, in 1961.

In 1966, the Lynx Mine was developed as an open pit operation, producing 860 tonnes per day of copper, lead and zinc ore by late 1967. As mining of the Lynx open pit continued, diamond drilling established underground ore reserves. An internal shaft was sunk to a depth of 335 metres (1,100 feet) with horizontal levels at 45.7 metre (150 foot) intervals. Seeing favourable results, the company decided to bring this underground operation into production. Lynx open pit mining was completed in 1975, however, the Lynx underground mine is still in operation today, producing approximately 10,400 tonnes of ore per month.

Until 1966, when Westmin built the present 40 km (25 mile) highway on the east side of Buttle Lake, the only access to the mine was by boat or barge on Buttle Lake. All people, construction equipment, materials and supplies were transported to the mines via the lake.

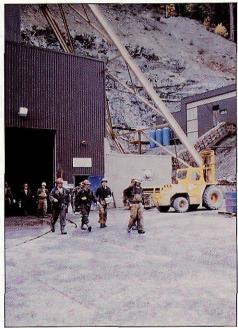
By 1970, further development at the Myra Mine resulted in the excavation of a 670-metre (2,200 foot) decline adit. Once inside, excellent silver and zinc values were found to

of futures"

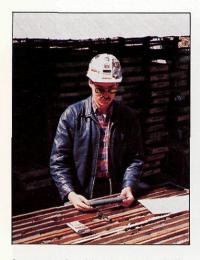
e, excellent silver and zinc values were found to justify production, which continued until that mine was exhasted in 1986.

In 1976, a new aggressive exploration program began to help counter the inevitable decline in the Lynx and Myra ore reserves. In late 1979, this program was successful in locating the massive sulphide deposit now known as the H-W Mine. H-W stands for Harold Wright, first President of Western Mines and a current Director of Westmin Resources Limited.

Following additional drilling, development and feasibility studies at the new mine, a 716 metre, six-compartment shaft was completed. This is serviced by a 49 metre high (160 foot) headframe. In 1985, after completion of a 1.4 kilometre conveyor to the new mill, the mill itself and a number of support facilites, initial production averaged 2,700 tonnes per day. Mill production capacity was later increased to 4,000 tonnes per day in 1989. An intensive exploration and stope development progam is currently underway to meet and sustain new production targets and increase ore reserves.



Geology



Mining is a process of discovery and development. A team, comprised of professionals such as geologists, mine-planning engineers and other technical specialists, locates and maps mineral deposits containing valuable metals such as copper, zinc, gold and silver.

Although it is commonly thought the base and precious metals are found in solid veins of pure metal, they usually occur in chemical compounds known as sulphide minerals, distributed through the rock. Even in a massive sulphide deposit, ore usually contains less than 50 per cent sulphides and less than 15 per cent pure metal.

For example, in high grade orebodies such as some of those at Myra Falls, one tonne (2,204.6 pounds) of rock may contain approximately

2 grams of gold, 33 grams of silver, 50 pounds of copper and 100 pounds of zinc. In many lower grade mineral deposits the metals, which occur as sulphide minerals, are more sparsely distributed, resembling raisins in a cake. Finding ore is almost like finding a needle in a haystack, especially when geologists must rely on mere 50 millimetre (two-inch) diameter drill-hole core samples to serve as their eyes in the earth's great mass.

finding and unlocking

Each year millions of dollars are spent in search of reserves for future mining activity. While the sulphide deposits which make up the orebodies in H-W and Lynx are being mined, further exploration is necessary to maintain the reserve base and prolong the life of the Myra Falls Operations.

An understanding of how orebodies are formed is one of the main tools in the process of discovering new reserves. Specialists must analyze all available data and decide where exploration drilling should be done. The result of exploration drilling is a drill core which is logged in its entirety and sampled at intervals to obtain assay tests of specified zones. These geological and assay results are then compiled by geologists and mine-planning engineers to establish a mine design.

Orebodies in the H-W, Lynx, Myra and Price mines are located within a 457 metre (1,550 foot) thick stratigraphic sequence of volcanic rocks of Permian age known as the Sicker Group. This sequence of rocks is approximately 180 - 200 million years old and consists largely of volcanic flow rocks deposited on the ancient sea floor. Orebodies within the Sicker Group are associated

nature's hidden treasures

with favourable bands of volcanic rock known as rhyolites or an altered variety known as sericite schists.

Three rhyolites are recognized in Westmin's Myra Falls properties. Lynx, Myra and Price orebodies outcropping above the valley floor belong to the "upper" rhyolitic horizon. The "lower" rhyolitic horizon hosts the H-W orebody about 305 metres (1,000 feet) below the valley floor. At the Lynx Mine numerous individual ore lenses typically occur at the top of the rhyolite. H-W Mine ore is at or near the base of the rhyolite. Rhyolites, which are light coloured, are separated by andesites, other volcanic rocks of more basic composition which are often green in colour.

The orebodies trend in a northwest to southeast direction over a known length of 6,100 metres (20,000 feet) for the

Lynx/Myra/Price rhyolitic horizon. The major ore minerals are sphalerite (zinc/iron sulphide), chalcopyrite (copper/iron sulphide) and galena (lead sulphide). These ore minerals occur as either massive fine grained lenses or are disseminated in the rhyolitic or sericite schist.



Mining



People who work underground are given extensive training to handle the sophisticated equipment and unique environment more than 305 metres (1,000 feet) below the earth's surface. Lynx mine operates two shifts a day and H-W Mine operates three shifts a day, both five days a week.

Personnel and equipment are transported to the heart of the mining operations in cages. The cages travel up and down a vertical shaft using a cable system similar to that used in an elevator. The H-W shaft descends 716 metres (2,350 feet) into the earth.

Underground on each level, a network of drifts or tunnels extends from the shaft to reach actual mining areas referred to as stopes. Mining is a continuous process

the treasures of the underground

accomplished by drilling, blasting and removing the broken ore. When ore is removed, about 60 per cent of the waste rock or tailings is used as backfill.

The H-W orebody is a thick massive sulphide deposit which allows for a bulk mining system utilizing rubber-tired diesel equipment. Parts of the Lynx Mine have also been modified to allow some use of this type of equipment.

H-W ore is transferred from stopes to orepasses (chutes) using load-haul-dump vehicles commonly known as scooptrams. Once in the orepasses, ore drops into waiting train cars on level 24 and is trammed to the coarse ore bin. Due to wide variations of stope ore grades, the ore is blended through specific tramming patterns to ensure a more consistent ore grade is received at the concentrator.

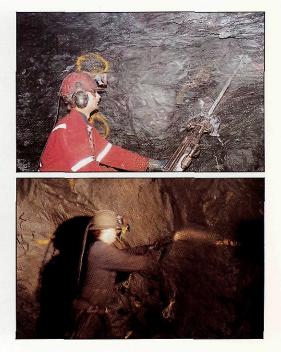
When ore reaches the primary jaw crusher, it is broken down into pieces approximately 150 millimetres (six inches) thick. Ore is then loaded in an 11.5 tonne skip. There are two counter-balanced skips, or giant metal containers, which hoist the ore out of the mine to a 100 tonne storage bin in the headframe.





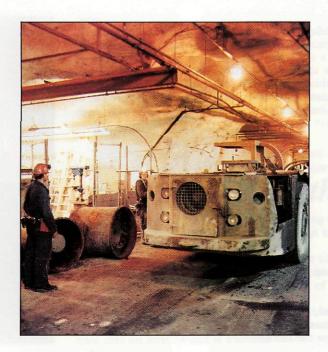
From the storage bin, ore travels on a 1.4 kilometre-long conveyor to a 3,600 tonne course ore bin at the concentrator.

Ore from the Lynx Mine is slushed, trammed and hoisted to an upper tramming level where it is transported to a surface coarse ore bin. Primary crushing of Lynx ore to minus 150 millimetres (six inches) is done on the surface.

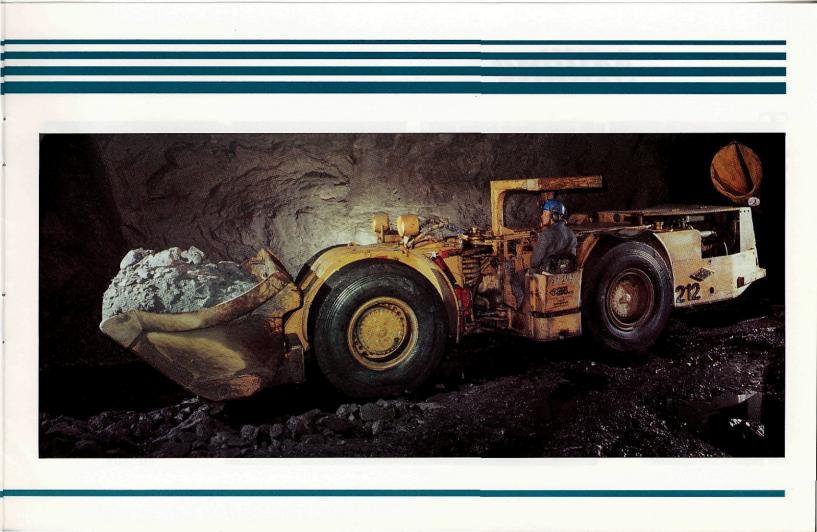


H-W

Underground Maintenance Facility



More than one thousand feet below surface in the H-W Mine is a huge maintenance shop containing five work bays, a lunchroom, a drill repair bay, electrical shops and a warehouse with computer facilities. Over one hundred pieces of equipment operate underground at H-W, including trucks, scoop trams, drill jumbos, longhole drill rigs, a road grader, bulk explosive vehicles, scissorlift trucks for ground control work, various personnel carriers and mobile service vehicles for tradesmen.



The ore from both Lynx and H-W mines, already broken into minus 150 millimetre (six inch) pieces, is taken to the mill or concentrator. The mill is also known as the concentrator because that is exactly what it does: it concentrates the ore minerals and separates them from waste rock.

Milling ____

from waste particles and skimmed off as a bubbly froth. Copper mineral particles are recovered first and then the slurry is recirculated and zinc particles are removed. Gold and sliver are not separated at Myra Falls but are contained within the base metal concentrates and recovered when concentrates reach the smelters.

The milling process begins when ore reaches the secondary crusher. Here the rock is crushed and recycled back to the crusher until it is broken down into small pieces approximately six millimetres (1/4 inch) thick. After crushing, the ore passes through a rod and ball milling process which grinds it into fine particles. These particles are mixed with water forming a slurry.

This slurry, now ready for separation, is then passed through flotation cells where the chemically treated ore particles are separated

the treasure surfaces



Samples are taken regularly to determine the grades of copper and zinc contained in the concentrates as well as the amount of other metals such as gold and silver.

Copper and zinc concentrates are then filtered to remove water before being transported by truck to Westmin's storage facility at Discovery Terminal in Campbell River. Every three to four weeks, Westmin concentrates are loaded onto ships destined for smelters around the world.



Ore crusher



Rod and ball mills



Mill control room



Pressure filtered dryer



Assay lab



Loading concentrate trucks



Discovery Terminal



Concentrates on ship

Environment



S trathcona Park covers an area in excess of 231,000 hectares and Westmin's surface installations cover about 120 hectares or roughly 0.052 per cent of the total park.

The Company takes a responsible approach to all environmental matters. It shares concerns of the public regarding the quality of water and reclamation of land back to its wilderness state. In keeping with Westmin's overall objective, the Lynx open pit will be reclaimed to blend in with the surrounding landscape when mining ceases.

preserving for future generations

In the early 1980s when Westmin requested approval to expand its operations, the Government of British Columbia

established a set of specific guidelines. Two of these were requirements to cease deposition of tailings onto the bottom of Buttle Lake and to reduce the quantity of dissolved metals flowing into Buttle Lake. To do so, surface and group water treatment systems were installed during July and August of 1982. A new on-land tailings disposal system was devised using a "subaerial" technique to produce a seismically-stable, dry-land mass. Since installation, this system has performed to expectations and can be fully reclaimed when mining is completed. As part of the facility, tailings water is now collected by a specially designed under-drainage system. These waters are pumped to the Myraintegrated water management system for treatment.

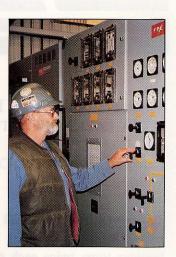
Detailed monitoring, undertaken not only by Westmin but also by Federal and Provincial agencies, has proven that the new combined systems are effective. Currently, Buttle Lake water quality exceeds Federal guidelines for the protection of freshwater aquatic life established in March 1987, and is significantly better than the water quality in 1971 when monitoring commenced.





Studies of the area, completed in late June 1983, by Dr. Pederson of the University of British Columbia, and more recently by Rescan Environmental Consultants, show that previously deposited tailings are having no effect on Buttle Lake. They have not leached and are most unlikely to, because of the oxygen-deficient nature of the lake bottom. This, and other reports, indicate that the tailings do not contribute to metals in the lake and they are now being covered by a natural, organic-rich layer of river sediment.

Power Generation



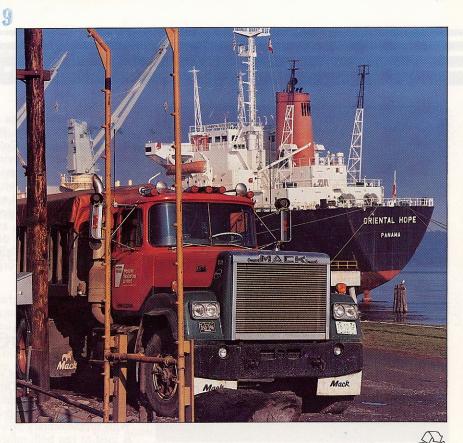
Mining on the scale of the Myra Falls Operations requires considerable electrical power. The Thelwood Hydro plant fed from the Thelwood and Jim Mitchell Lakes, generates eight megawatts, while a second, smaller hydro plant, fed by Tennent Lake, provides the operation with an additional three megawatts. With supplementary power from diesel electric generators a total of 14 megawatts is used to run both mines and the mill.



Westmin Resources Limited MYRA FALLS OPERATIONS P.O. Box 8000 Campbell River, British Columbia V9W 5E2

Telephone: (604) 287-9271

Regular tours twice each day Monday to Friday 10:00 a.m. and 1:30 p.m. **May** — **September**



Arrangements can be made through the Employee Relations Office for special group tours anytime throughout the year.