

Available Land Resources



Exploration (5 - 10 years)



Closure & Rehabilitation (1 - 10 years)



**Life Cycle
Of A
Mine**

Assessment & Approval (1 - 5 years)



Operation (10 - 30 years)



Construction (1 - 2 years)





Available Land Resources

The search for minerals can occur on Crown land or private land but is generally prohibited in parks. Having access to as much of the land base as possible is critical to improve the likelihood of finding mineral deposits. Deposits that are large and or valuable enough to be developed are rare. To date, mining activities have disturbed only 0.05% of BC's land base.



Exploration (5 – 10 Years)

The search for mineral deposits, called exploration, is the first step in the mine cycle.

At the preliminary exploration stage, large areas are often evaluated by airborne or ground-based mapping or sampling surveys of the Earth's surface by prospectors and geologists. From maps and existing data, specific areas are singled out for more detailed studies. If valuable mineral potential is indicated, a 'claim' is staked by way of an online computer based application system.

The second stage of exploration involves more detailed surveys including mapping, sampling and diamond drilling (often at great depths) to determine the size and shape of the mineral deposit. In addition, data collection for environmental studies begins at this stage.



Assessment & Approval (1 – 5 Years)

Assessment and approval form the second phase of the mining cycle. Deposit details, and environmental and socio-economic information collected during exploration is used to plan and design the mine.

Such planning includes assessing the potential value of a mineral deposit, and determining if it can be mined economically and in a responsible manner. Development must limit impacts to the environment and bring social and economic benefits to the mining company, local communities, and the Province.

In order to build a mine, the mineral deposit must be valuable enough to pay for the costs of design and construction (capital costs), the costs of mine operation (operating costs), and for mine closure and reclamation costs.

Consultations with government agencies and local communities are intensive during this phase in order to gain their input into project plans and to make sure that their needs and requirements are addressed. Financial, socio-economic, and environmental impacts are evaluated.

In general, it takes two to three years for test work and data collection (environmental baseline studies and feasibility studies) plus one to three years for environmental assessment and permitting.

Throughout the exploration and assessment periods, the company is raising money to support these two expensive and high-risk steps. The investors can be private individuals, venture capitalists or other mining companies. They all monitor the political activities in the jurisdiction where they are considering investing their money to ensure a fair return on their investment.



Construction (1 – 2 Years)

The construction of the mine and associated buildings, as well as necessary infrastructure such as roads, bridges, and airports, takes place during this phase.

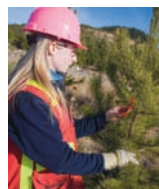
Mine development can take anywhere from 5 to 10 years and often much more. The time needed depends on where the mine is located, how large and complex the development is (including infrastructure needs and availability), and the complexity of regulations and review processes.



Operation (10 – 30 Years)

In preparation for mine operations, recruitment, hiring and training of a wide range of personnel is required.

Mine production involves the extraction of ore, separation of minerals, disposal of waste and shipment of ore minerals. Additional exploration may lead to the discovery of additional mineralization that leads to expansion of the operation during the mine life. These expansions involve the full cycle of studies, evaluations and permitting processes that is required for a new mine development.



Closure & Rehabilitation (1 – 10 Years)

Mine closure is the last phase of the mining cycle. Shutdown and decommissioning involves the removal of equipment, the dismantling of facilities and the safe closure of all mine workings.

Reclamation, which in fact occurs at all stages of the mine life cycle, involves earth work and site restoration including revegetation of waste rock disposal areas. The final stage is monitoring, which includes environmental testing and structural assessments that commonly continue long after the mine is closed.

Mining is a temporary land use. The goal of a reclamation plan is for areas affected by mining activity to host self-sustaining ecosystems that provide a healthy environment for fish, wildlife and humans.

Vancouver is considered a global centre for mineral exploration and mining expertise. There are 850 corporate offices of mineral exploration and mining companies in BC's Lower Mainland, serviced by more than 700 BC-based consultant and supply companies.

For more information on mineral exploration and mining or to learn more about the Association for Mineral Exploration BC and the Mining Association of BC please visit www.amebc.ca or www.mining.bc.ca.

