



PRAIRIE CREEK MINE DEVELOPMENT PROJECT DESCRIPTION

The Prairie Creek Mine was fully permitted and built to 90-95% completion by May 1982. Since acquiring the property, Canadian Zinc Corporation (CZN) has applied for and received many permits to conduct exploration. Six of these have been subjected to Environmental Assessment (EA). As a result, the property has undergone considerable assessment, and many environmental management plans have been developed.

CZN recently applied for operating permits for the mine (Water Licence and Land Use Permit) comparable to those previously issued for the Project in 1980-1982. CZN has also applied for permits to operate transfer facilities roughly mid-way along the winter road, and at the Liard Highway.

Mineralization is hosted by dolostones and shales. It occurs in a near-vertical vein and a near-horizontal lense, and consists mainly of galena and sphalerite, with non-economic quartz and carbonates. The currently defined resource is 3.57 million tonnes grading 9.7% lead, 11.9% zinc, 141.5 g/tonne silver and 0.3% copper, which will allow a mine life of approximately 14 years.

CZN intends to adopt similar mine development plans as previously envisaged, but has incorporated additional environmental management approaches to ensure a modern mining operation. Conventional mining, milling and flotation will process approximately 1,000 tonnes of ore per day, and produce up to 140,000 tonnes of lead and zinc concentrates annually. The concentrates will be bagged and stored in a concentrate 'shed' ready for transport off-site. The chemicals that will be used for flotation are not hazardous and will not include sodium cyanide.

Mill wastes will include barren rock (gravel), and final tailings (sand). Three-quarters of the gravel and all of the sand will be used in a backfill mix with cement. The mine is already built and water flows from it. CZN plans to completely fill the mine with the backfill mix so that water does not flow out. The remainder of the gravel will be placed in a pile in the Harrison Creek valley with barren mine rock. When the mine is not available for backfill, the tailings will temporarily be stored on surface, and reclaimed later for backfill. Ultimately, all tailings will be placed underground.

The existing large pond will be converted into a water storage pond and a temporary storage pad for dry tailings. The pond will be subdivided into two cells, and fill will be placed to stabilize the backslope. A new plastic liner will be laid to ensure it doesn't leak. The pond will receive mine, mill and sewage water, which will be recycled to the Mill. Excess water will be treated in a new plant. Treated water will be polished in the existing Polishing Pond to ensure strict limits are met before discharge to the environment. Regular water sampling will occur to confirm water quality targets are met.

The infrastructure needed for mine operations mostly already exists and will require only relatively minor refurbishment. This applies to the Airstrip, Administration and Mine 'Dry' building, Maintenance Shops, Tank Farm, Sewage Treatment Plant and Airstrip. Site water management structures for all site runoff are also in place, including ditches and the Catchment Pond. The pond has a gate weir which can be closed in the event of a spill on site. A maximum flood level was recently re-assessed and found to be less than that used to determine the height of the site flood protection dike. The corresponding creek flow would be more than 20 times the maximum monthly flow ever recorded in Prairie Creek.

Some infrastructure is obsolete and will be replaced with better equipment. For example, old diesel-fed power generating sets will be replaced by smaller, more fuel-efficient models with lower emissions, and a new incinerator will replace an old model. The kitchen and some of the accommodation trailers will be replaced with a new kitchen/diner/accommodation block. A concentrate shed will be built. Construction and mine and mill commissioning will take 9 months.

Personnel needs are estimated to be approximately 220 staff in total, only half of this number being on site at one time. Personnel will work a rotating schedule of three weeks on site followed by a three week break. Rotations will be by air. CZN will target to have First Nations people as 25% of the workforce, and meet or improve this percentage with training. All staff will be required to take health, safety and environmental protection training, and will receive a comprehensive benefits package. The Prairie Creek Mine will be an important source of jobs and economic stimulus for local communities and the region. Business opportunities will exist for catering, transportation, and the provision of supplies.

The existing winter road will be used to haul out the mineral concentrates annually, and haul in operating supplies, mainly fuel and cement. Concentrate bags will be transported by flat-bed trucks. A wheel-wash will be employed to prevent the tracking of material off-site.

The Tetcela Transfer Facility (TTF) will be built at approximately Km 84 on the winter road, and will be accessed from the mine site in early winter to provide temporary storage for up to 50,000 tonnes of bagged concentrates. The facility will consist of two steel-framed structures with fabric covers. The use of the TTF will allow CZN to commence the haul of concentrates from the mine before the remainder of the road and ice bridge over the Liard River are open. A contractor truck fleet will collect the bags from the TTF when the whole road is open, while CZN trucks are hauling other bags to the Liard Highway. A second transfer facility, the Liard transfer Facility (LTF), will be located near the highway to act as a transfer/marshalling yard for both the outgoing concentrates and for incoming supplies. The concentrates will be taken to the Fort Nelson rail terminal. The transfer facilities will only operate in winter.

After mine closure, the site will be reclaimed so that the environment is protected in the long-term. The rock pile in Harrison Creek will be covered with a compacted clayey soil in order to promote runoff and limit infiltration. The Mill will be removed by salvaging as much as possible. Inert demolition waste will be buried in the rock pile before it is covered. Any hazardous material will be taken off-site. The same applies to all other buildings and facilities, unless a longer term use for some buildings and infrastructure for other activities is desired.