Submission by Larry Swartz of Fort Simpson-Prairie Creek Mine EAO8O9-OO2

1-Mining and the environment

2-Employment alternative

3-It is no longer necessary for us to mine.

How does Mining Affect the Environment

Mining activities require the clearing of large areas of land. The chemicals used in the mining process often escape into the environment causing large scale pollution. Let us consider the question 'how does mining affect the environment' in this article.

Mining refers to the process of extracting metals and minerals from the earth. Gold, silver, diamond, iron, coal and uranium are just a few of the vast array of metals and minerals that are obtained by this process. In fact, mining is the source of all the substances that cannot be obtained by industrial processes or through agriculture. Mining reaps huge profits for the companies that own them and provides employment to a large number of people. It is also a huge source of revenue for the government. Despite its economic importance, the question that how does mining affect the environment is a pressing environmental issue.

Effects of Mining on Environment

Effect on Land

Deforestation: Mining requires large areas of land to be cleared so that the earth could be dug into by the miners. For this reason, large scale deforestation is required to be carried out in the areas where mining has to be done. Besides clearing the mining area, vegetation in the adjoining areas also needs to be cut in order to construct roads and residential facilities for the mine workers. The human population brings along with it other activities that harm the environment.

Loss of Biodiversity: The forests that are cleared for mining purposes are home to a large number of organisms. Indiscriminate clearing of the forests lead to loss of

habitat of a large number of animals. This puts the survival of a large number of animal species at stake. The cutting down of trees in itself is a big threat to a number of plants and trees growing in the forests.

Pollution: Despite measures being taken to release the chemical waste into the nearby rivers through pipes, a large amount of chemicals still leak out onto the land. This changes the chemical composition of the land. Besides this, since the chemicals are poisonous, they make the soil unsuitable for plants to grow. Also, the organisms that live in the soil find the polluted environment hostile for their survival.

Effect on Water

Pollution: Chemicals like mercury, cyanide, sulphuric acid, and arsenic and methyl mercury are used in various stages of mining. Most of the chemicals are released into nearby water bodies that leads to water pollution. In spite of tailings (pipes) being used to dispose these chemicals into the water bodies, possibilities of leakage are always there. When the leaked chemicals slowly percolate through the layers of the earth, they reach the groundwater and pollute it. Surface run-off of just soil and rock debris, although non-toxic, can be harmful for vegetation of the surrounding areas.

Loss of Aquatic Life: Release of toxic chemicals into the water is obviously harmful for the flora and fauna of the water bodies. Besides the pollution, mining processes use water from nearby water sources. The result is that the water content of the river or lake from which water is being used gets reduced. Organisms in these water bodies do not have enough water for their survival.

River dredging is a method adopted in case of gold mining. In this method, gravel and mud is suctioned from a particular area of the river. After the gold fragments are filtered out, the remaining mud and gravel is released back into the river, although, at a location different from where they had been taken. This disrupts the natural flow of the river that may cause fishes and other organisms to die.

Spread of Diseases

Sometimes the liquid waste that is generated after the metals or minerals have been extracted is disposed in a mining pit. As the pit gets filled up by the mine tailings, they become a stagnant pool of water. This becomes the breeding ground for water-borne diseases causing insects and organisms like mosquitoes to flourish.

It is no longer necessary to mine – all the metals that we need are above ground – we are able to recycle and do more with less .

As far as the environment goes all we have to do is take a look at the arsenic problem we have in the north arm of the Great Slave Lake – because of the Giant mine closure in Yellowknife. Also if we take a look at the oil sands project in Alberta which uses the open pit style - to mine the oil out of the sand – this causes water shortages in the Athabasca river, as well as killing the wildlife in the area, seepage of toxins into the soil and water aquifers from the tailings ponds, and the soaring cancer rates of the residents living near the oil sands project. The living conditions of the Dene people living in this area are absolutely appalling.

Dissolution and transport of metals and heavy metals by run-off and ground water is another example of environmental problems with mining.

EMPLOYMENT: It is not only possible but practical for each community in the NWT to become a self-sufficient and sustainable community – thereby creating 100% employment throughout the NWT. (For more information on this please contact Larry Swartz 867 695 2167 – P.O. Box 206 Fort Simpson or lvswartz@yahoo.ca)

We no longer need to mine: Excerpts from “Cosmography” (page 115) and “Critical Path” (page 204 & 205) by R. Buckminster Fuller:

In the widely published and discussed 1974 Club of Rome report about the “limits of growth,” the authors considered the world’s mines to be the only source of metals. They found that humanity had almost exhausted these mines.

So ignorant are our economists that there was no one on the Club of Rome's economics computer team at the Massachusetts Institute of Technology who knew that 70 percent of our steel comes from recirculating scrap metal or that 80 percent of our copper comes from recirculating scrap.

We have reached the point where no more mining need be done. In my tracking of resource curves, I discovered that the average of all metals recirculates every twenty-two and a half years. Some metals come out of their functional-use state very quickly, say in five years while others come to be recycled every fifty years. Each time they come around again, we have gained so much more know-how and can do so much more for so many people with so much less in the way of physical resources per function that ultimately we need not mine any more.

World Gaming takes advantage of the ever-changing world-resource patterns, such as that of steel and other metals scrapped from obsolete buildings and machinery as the latter's designs are make obsolete by the latest military-and-naval-produced hardware. Scrap of the discontinued hardware constitutes new high-grade ore mines existing entirely above ground. As an example: there are no tin mines in the United States. All tin came originally either from England, Malaysia, Bolivia, or Tanganyika. Tin was first used for making bronze, then pewter utensils, then for tinning bathtubs and cans, next for babbitting of machinery bearings, soldering. Outperformed by newer, more effective technologies all of these early tin uses became obsolete, and that tin was recovered. Since 1940 U.S. aeronautical production tooling has involved so much tin in its soft tooling phases that the inventory of ever-remelted tin of the U.S. aircraft industry and its swift-design-change-accommodating "soft-kirksite" tooling's is now (1980) greater than that remaining in the world mines-ergo, the U.S. requires no further purchases of foreign tin. Having originally no tin mines, the U.S. has an above-ground source of tin that is now the world's largest tin "mine." World resource maps showing only the tin-in-the-ground mines are completely misinforming. World war gaming and those economic advisors of leading governments use only the in-the-ground-mine data.