



ILSG Newsletter #3, 1997

Flambeau Mine Epilogue

Submitted by Gene L. LaBerge

The Flambeau mine has come and gone. That last train load of ore was shipped from Ladysmith via Wisconsin Central Railway on August 25, 1997, marking the end to a very successful mining operation in northern Wisconsin by Flambeau Mining Company. The first ore was shipped in May of 1993, nearly 25 years after the discovery of the deposit in 1968. Ore shipments during the four years of operation totaled 1,895,984 tons that averaged 8.9 % copper (including 400,000 tons of direct smelting ore that averaged up to 30 % copper), 0.10 oz./ton gold, and lesser amounts of silver. Although it was a rather small orebody, the Flambeau mine was one of the highest grade orebodies ever mined. The supergene enriched ore was mined to a depth of 180 feet on the eastern end, and 220 on the western end of the open pit mine that measured 2600 feet long and up to 550 feet wide (Figure 1).

In addition to the approximately 1.9 million tons of ore, mining operations also removed some 8.8 million tons of waste rock from the 34 acre open pit. Following completion of mining in the eastern end of the mine in August 1996, backfilling of that portion of the mine with waste rock admixed with crushed limestone commenced. Mining continued in the western portion of the orebody until early April 1997. Backfilling of the entire pit with the waste rock/crushed limestone mix was then undertaken. Ames Construction Co. brought in additional 50-ton trucks and earth movers for the backfilling operations. By late October 1997 all of the waste rock had been returned to the open pit (Figure 2).

Backfilling proceeded according to plan, with waste rock containing greater than 1 % sulfides being mixed with crushed limestone and returned to the deeper levels of the mine. Therefore, when reclamation is completed, the sulfide-bearing backfill will be well below the water table where interaction with oxygenated groundwater will be minimal. The admixed limestone will mitigate against the development of acid waters in the unlikely event that oxygen does react with some of the sulfides.

The original topsoil (stockpiled in a mound on which the visitors center stood) will be spread over the site during the summer of 1998, and the mine site will then be re-vegetated. Final plans for the site have not been completed, but include possible development of an 18-hole golf course and hiking/cross-country skiing trail with an educational emphasis. Eighty percent of the respondents to a poll

conducted of the 2,000 visitors at the final site tour in August 1997 voted in favor of development of a golf course. Evidently they felt that a golf course would attract additional visitors to the Ladysmith area. Thus, the mine site may be an enduring financial benefit to the community.

In the opinion of this writer, Flambeau Mining Company and its parent organizations, Kennecott Minerals and Rio Tinto, have provided an exemplary model for other mining companies to follow in their efforts to develop mines in Wisconsin, or elsewhere. The openness and willingness of Flambeau Mining Company to meet with the public and to respond to concerns has done much to assuage fears of an environmental disaster, which, at the Flambeau mine, simply did not happen.