

In Michigan the Empire Mine was originally opened in 1907 and operated until 1926; it was reopened in 1963 and is now a part of the present operation which has an estimated life in excess of 50 years. These properties are typical of most iron ore mines which last so long that their operations are altered and extended by advances in technology.

No miner has more than a beginning knowledge of the ore body he is going to mine before mining commences. He gains most of that **knowledge as mining progresses and exposes the ore body.**

Yesterday morning, I believe, Senator Hansen alluded to a concern that the proposed law would be too inflexible to cover the unknown conditions. During this same time the miner will be subjected to and influenced by advances in mining and beneficiating technology.

The lack of relatively full knowledge of the ore body and the influence of continuing technological change makes it difficult, even impossible, to foresee the conditions which will be encountered during mining and the conditions which will exist at the completion of mining.

Therefore, it is impossible to develop an adequate mining plan to be filed and approved before surface mining operations are commenced that will fit actual conditions at the end of the operation. The requirement of a mining plan in advance of mining and of posting a performance bond during possibly 50 to 100 years of a mine's life is in our judgment entirely unsuited to the characteristics of this type of mining.

The authority given to the Secretary of the Interior in the proposed legislation to establish regulations and from time to time to revise those regulations creates a very dangerous situation for an operation with a long life such as an iron ore mine.

A mining company would not know when the regulations would be changed or what conditions its mine would face at the end of its life and therefore many uncertainties would be created concerning the profitability of an operating mine and the calculated return on investment on a new mine.

In any event, the result of these regulations would be the addition of costs which would render the situation less competitive with foreign mines. Modern iron ore mining, treatment and pelletizing operations require very large investments which in the case of one or two such mines have exceeded \$300 million.

The heightened risk that unknown costs of large magnitude might occur as the result of these regulations could discourage investment in iron ore properties in the United States and even encourage domestic companies to invest in foreign iron ore ventures.

It is our conclusion that the conditions created by iron ore mining in Michigan and Minnesota are not such as to require the kind of regulation proposed in S. 3132; that the longevity and changing technology of iron ore mining make it impossible to plan reclamation in advance which is reasonably adapted to the end conditions; and finally, that the prerogative of the Secretary of the Interior to establish regulations for reclamation and to change them at any time imposes unknown costs on a mine operator that will make him less competitive with foreign iron ores.