THE AVAILABILITY OF PRIMARY COPPER IN MARKET ECONOMY COUNTRIES

A Minerals Availability Appraisal

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ABSTRACT

The U.S. Bureau of Mines has estimated the potential availability of copper from 204 mines and deposits in market economy countries (MEC's). The evaluated properties have demonstrated resources totaling 436.4 million metric tons of contained copper and account for 90% of the Bureau of Mines reserve base for copper in market economy countries.

Total recoverable MEC copper resources are 340.8 million metric tons, 69% of which is from producing mines and 31% from nonproducing mines and deposits. Chile had the lowest estimated average total cost from producing mines of $0.48 per pound of recoverable copper at a 0% discounted cash-flow rate of return (DCFROR), with estimated average total costs ranging from $0.40 to $0.81 per pound. The estimated average total cost of production, per pound of copper, for producing mines in the United States amounts to $0.57 in January 1988 dollars at a 0% DCFROR, with estimated total costs ranging from $0.36 to $0.85 per pound.

In both real and nominal terms, the United States has, on average, significantly lowered its copper production costs since 1981. Rationalization of the industry and significant increases in productivity have made a strong improvement in the competitiveness of the U.S. copper industry to the extent that the United States should no longer be considered as a marginal producer of copper.

INTRODUCTION

The world copper industry was severely affected by the period of low metals prices from 1982 to 1987. The oversupply of copper and low prices caused producers worldwide to institute rationalizations and cost-reduction measures in order to improve their relative competitiveness and profitability. The U.S. copper industry was particularly hard hit by the drop in consumption associated with the recession of the early 1980's. World copper consumption had begun to decrease after 1979, and dropped even further during the following recession. Copper prices peaked in 1980, then plunged almost 50% in real terms before leveling off in 1984. Despite the slumping copper market, copper production continued to increase in countries such as Chile, and world inventories swelled. The strong