

CHINA

A LOOK AT THE DRIVERS BEHIND THE WORLD'S BIGGEST ZINC PRODUCER

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Between 1993 and 2000 Chinese mined zinc production exploded from 775 KT to 2049 KT per year of contained metal. This accounted for 60% of the global increase in mined zinc during this period even accounting for a massive expansion at Red Dog and the development of the Century deposit in Australia. Incredibly, this dramatic Chinese production increase took place without the development of a single new deposit producing over 30,000 tpy zinc. The growth in Chinese zinc production was due almost entirely to the development of a huge number of small mines. Production from these small mines was difficult to estimate in advance – the world had never seen anything like it - and western predictions of Chinese zinc production fell consistently short resulting in overly rosy price forecasts. These in turn led to ill advised investments such as Pasmenco's fatal decision to develop Century.

The foundation for the growth of Chinese zinc production resides in China's zinc endowment which is arguably superior to that of any of the world's great zinc producing countries (Australia, United States, and Peru). Not only does China have great geology for sedex, Irish, MVT, VMS, skarn, and manto type zinc deposits, it hosts world class examples of each of these deposit types. World class deposits include: major sedex deposits (e.g., the 300 million tonne Dongshengmiao in the Proterozoic of Inner Mongolia, or the 80 million tonne Devonian Changba-Lijiagou of Gansu); VMS deposits (e.g., the 40 million tonne Xitianshan in Qinghai); skarn deposits (e.g., the 50 million tonne Dulong deposit in Yunnan); manto deposits. (e.g., those of the 50 million tonne Dachang District of Guangxi); rich MVT deposits (e.g., Huize in Yunnan with 25% combined Zn-Pb); and Irish type deposits (e.g., Fankou, China's largest zinc mine with a reserve of 35 million tonnes at 10% zinc). In addition, the largest zinc deposit in China, Lanping with over 12 million tonnes of contained zinc, may represent a unique type of deposit not found anywhere else.

China has an abundance of zinc but this feature alone does not explain its standing as the world's leading producer. Several additional contributing factors include the low cost structure of Chinese mines, which allows for development of deposits that would be mined nowhere else, and a rural economic setting that promotes development of small mines. A critical question for the global zinc market is whether production of zinc from small Chinese mines can continue to grow at historic rates, increasing pressure on the price of zinc. However, for a variety of reasons, not the least of which is that none of these small mines has a reserve as defined in the western world, production from the small mines should not be sustainable. If this is the case zinc may well turn into the best performer among base metals.