

THE WORLD IS RUNNING OUT OF ZINC – ANOTHER URBAN LEGEND DISPELLED

From time to time, some with little knowledge of zinc mining claim the world “will run out of zinc” in the next few decades.

Nothing could be further from the truth.

The fact is that despite greatly increased consumption of zinc produced from ore in recent years, increases in zinc ore reserves and the ore reserve base have grown more than this increased consumption, and there is more zinc available to the world today than at any other time in history.

IF THE DOOMSAYERS WERE RIGHT, WE'D BE RUNNING CLOSE TO EMPTY NOW – BUT THEY WERE WRONG!

The doomsayers take the view that the way you measure the remaining life of zinc ore reserves is to take present reserves and divide that by annual mining production to yield years left. That static, alarmist, analysis is wholly belied by the objective facts.

The International Lead Zinc Study Group (ILZSG)¹ reports 6,798,000 metric tons (“mt”) of zinc mined worldwide in 1994 (ILZSG Bulletin, Feb. 2008, Table 56). According to the U.S. Geological Survey (USGS), in 1994 the world’s zinc reserves² were 140,000,000 mt (Mineral Commodity Summaries, Jan. 1996).

Therefore, assuming that everything had stayed the same from 1995 through 2005, the world would have mined an additional 75,009,000 mt of zinc, leaving reserves of only 74,869,000 mt. In other words, over half of the 1994 reserves would have been erased – forever – and the world would be looking at approximately 11 more years of mining until all the zinc reserves were gone - forever. But that is not what happened.

¹ The International Lead Zinc Study Group (ILZSG) is a non-ferrous metals intergovernmental organization created by the United Nations in 1959 with 29 member countries accounting for about 90% of total worldwide lead and zinc tonnage. The Study Group’s main responsibility is to maintain transparency of production, usage and foreign trades for concentrates and refined metals through statistics, studies and wide-ranging consultation.

² “Reserves” are defined by the USGS as, “That part of the reserve base which could be economically extracted or produced at the time of determination. Reserves include only recoverable materials; thus, terms such as ‘extractable reserves’ and ‘recoverable reserves’ are redundant and are not a part of this classification system.” The USGS also says, “The reserve base includes those resources that are currently economic (reserves), marginally economic (marginal reserves), and some of those that are currently subeconomic (subeconomic reserves).

As distinct proof, the USGS reports that 2005 zinc reserves were not 74,869,000 mt as the doomsayers would have had it, but were instead 220,000,000 mt – a 57% **increase** over the 1994 level and approximately **triple** the doomsday scenario³ (Id., Jan. 2007).

DESPITE INCREASED MINING, RESERVE LEVELS CONTINUE TO INCREASE

Mining actually increased significantly in recent years. In 2006, according to ILZSG, 10,469,000 mt of zinc were mined worldwide – 53% greater than the amount mined in 1994 (ILZSG Bulletin, Feb. 2008, Table 56). Despite this steady increase in the amount mined annually since 1994, reserves still increased by over 50%, wholly undercutting the shortage argument. Thus, the argument that the world was running out of zinc on a static model was wrong, and the notion that the world is running out of zinc because of increasing consumption is wrong, too.

IMPROVED COMMODITY PRICES ARE RESPONSIBLE FOR A GOOD BIT OF THE NEW RESERVES

It is a given that profitable operations make more money available for exploration and development. And it is also a given that mineral commodity prices were depressed for a good bit of the last ten years. For example, in 2002 the average zinc price on the London Metal Exchange was \$778.38 mt (USGS, Mineral Industry Surveys, Zinc, Table 1, Oct. 2003). In 2006, by contrast, the average price was \$3,274.42 (USGS, Mineral Industry Surveys, Zinc, Table 1, Dec. 2007).

As a result of the low price for zinc and other metals, exploration budgets suffered. “Driven by surging commodity prices, 2005 expected expenditures for mineral exploration reached a level not seen in nearly a decade, according to findings in the May 2006 edition of the Society for Mining, Metallurgy and Exploration’s (SME) *Mining Engineering*.” (National Mining Association, Mining Week, May 26, 2006). And this continued in 2006:

“Metals Economics Group’s (MEG) analysis of 2006 worldwide exploration budgets shows an increase to US\$7.5 billion this year – the fourth consecutive yearly increase since the bottom of the cycle in 2002...”

“Years of stagnant and declining metals prices in the late 1990s and the resulting lack of exploration and mine development...” (Commodities Now, Dec. 2006, 1).

³ Moreover, the world reserve base had increased from 330,000,000 mt to 460,000,000 mt.

Additionally, what this clearly shows is that higher price levels for zinc have not resulted in a lowering of zinc reserves, to the contrary. In 2002, the recent price trough for zinc, reserves were 200,000,000 mt (USGS, Mineral Commodity Summaries, Jan. 2003). From then until 2005, despite increased prices and increased consumption, reserves grew, as indicated above.

IMPROVED RECYCLING HAS ALSO HELPED REDUCE DEMAND FOR ORE, AND WILL CONTINUE TO GROW

Zinc in the form of scrap and other secondary materials constitutes an above-ground mine, reducing the demand for natural ore to produce refined zinc. In 1996, 509,000 mt of refined zinc were produced from secondary materials; in 2006 that number had grown to 551,000 mt. (ILZSG, Lead and Zinc Statistics, Table 40, Jan. 1998, Dec. 2007). And, as more zinc comes into the recycling stream because of increased consumption, this number will continue to grow.

SUMMARY

Zinc reserves have increased dramatically in recent years despite increased mining and consumption of zinc, and, until, recently, despite low zinc prices shrinking exploration and development budgets. Some healthy years to restore those budgets plus increased recycling of zinc-containing materials will continue to ensure that the world has plenty of zinc for many, many years to come.