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## Mixed Outlook For Zinc –Bearish Short Term and Bullish Long Term

Zinc prices have enjoyed a wild ride from US\$750/t in mid 2003 to US\$4608/t in November 2006; it is currently about US\$2755/t. Price volatility has been high and is expected to continue with the participation of investors and seasonal demand and supply factors. However, the general trend of future prices will be determined by demand-supply balance; with the latter being the key determinant of zinc price.

Global demand has been growing at an average 5% per year (550,000t/y) for the past several years. As for most metals, zinc demand growth is being led by China with annual growth of around 9%, which is expected to decline slowly as their consumption base expands. As zinc is used almost entirely for industrial purposes, the building of infrastructure in Asia and the resulting usage of galvanized steel, brass and alloys, demand is steady and reasonably resistant to substitution. With India following in China's footsteps, zinc demand out of Asia should more than balance off slowing demand in North America, which accounts for only 12% of world zinc consumption. A global growth rate of 4-5% appears sustainable over the next several years, despite economic slowdown in developed world economies.

Smelter capacity is expected to grow at 3-4% per year over the next four years, which is sufficient to meet expected zinc demand growth. About 50% of this new capacity will come from China as it lifts its output to 4.7Mt/y. The problem will be feeding these smelters.

The initial mine supply response to high zinc prices has been relatively quick with recent new production largely from one large new mine, San Cristobal in Bolivia, numerous restarts and a myriad of very small mines in China. Noticeably absent are the smaller to medium new mines. These additions will provide a modest over-supply of zinc in the short term perhaps increasing inventories to about 100 days of supply.

One of the major problems overhanging the zinc industry is that we are going to lose several major zinc mines over the next few years including the third largest zinc mine in the world, Zinifex's Century mine in 2015. Teck Cominco


(Jan 2003) forecast the loss of 1.4Mt of current mine production by 2011; add to this the annual demand growth of 550,000t/y and the problem is huge. Brook Hunt estimates that we need 8Mt of new mine production by 2018; that means replacing 70% of current production in the next 10 years - simply, we do not have the deposits in inventory to do this.

The supply balance chart (left) clearly illustrates the potential large gap between forecast demand and supply opening up in 2012. Brook Hunt lists about 30 small to midsize projects in the pipeline for development over

the next four years with possible aggregate production of 1.1Mt by the end of 2011, balancing off the forecast loss in current mine production, but not fulfilling new demand. Delays in startup due to escalating capital and operating costs and permitting delays has put several of these projects at risk, resulting in the supply deficit happening sooner. The timing of these new projects and any reserve extensions will determine the future price of zinc.

In the closing months of 2007, potential exists for the zinc price to rise as existing warehouse inventories are depleted. However, by the end of 2007 there is expected to be significant new metal supply to create a modest over-supply of zinc that is expected to last until 2010. During this period, zinc prices are expected to soften, with some forecasting prices back to US\$1540/t. But by mid-2010, a significant supply shortfall is expected prices will rise. The rebalancing of the markets is expected to take many years; how large the supply deficit is will be determined by the ability of smaller companies to finance new mines.

Many of the projects in the development pipeline are owned by junior companies, with no revenues. The ability of these companies to finance projects to production is compromised by their inability to access senior bank debt facilities and hence their reliance on the equity markets for project financing. Numerous recent restarts and new mines have been financed by high yield debt instruments ('hybrids') with an equity component. With re-valuation of risk in the aftermath of the sub-prime loan fiasco in the US, there has been a dramatic reduction in liquidity. These recent hybrid financings will be very difficult in today's market. This situation will become even more troubling if zinc prices decline significantly in the near term, reducing positive hedging opportunities to support senior or subordinated debt financings.

Many of the 'probable new mines' are not likely to secure financing in the time frame needed to maintain project timelines. Another of these outcomes is that several of these projects will end up in the hands of the big zinc companies who have the balance sheets to finance the badly needed new production. The lack of quality zinc projects in the development pipeline and the difficulty in securing project financing assures that the upcoming mine supply surplus will be short-lived and followed by a sustained period of high zinc prices. It is expected that this environment will lead to significant industry consolidation of producers and developers. One of the bright spots in this picture is the recent willingness of metal trading and smelting companies to provide capital for developers. This is likely to become more prominent as security of supply becomes paramount. 

Below: Global mine supply imbalances

