



# Collapse in metal values: Related mine closures

by Hiroshi Kubota and Ian Gordon

This comment relates recent mine closures and layoffs to the fall in metal prices beginning in 1997. Both regional differences in mine closures, and the incidence of mine closures and layoffs by metal type are discussed.

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This comment provides a rough account of the way metal producers throughout the world have reacted to the collapse in metal prices beginning in mid-1997. It is the result of an investigation based around a keyword search of the Metal Mining Agency of Japan<sup>1</sup> databases, mostly compiled from information gathered through the Agency's 13 overseas offices. The original data was drawn from a wide variety of overseas newspapers, journal articles and company reports, as well as international mining-related publications.

The following discussion focuses on the number of reported incidents of mine closures and layoffs, rather than the actual amount by which production decreased. In this respect, mine closures and layoffs which have been announced for the future have been included, but those which are due to the mine reaching the end of its natural production life have not. The first half of this comment discusses the regional picture while the second half illustrates the incidence of mine closures and layoffs by metal type.

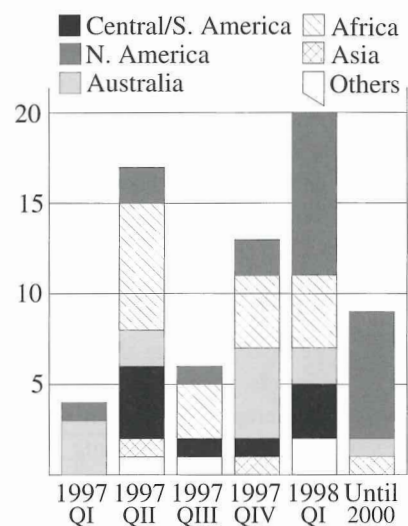
## Number of incidents by region

The regions with the majority of layoffs and mine closures are South Africa, Australia, USA and Canada in that order (see Figure 1). One of the main explanations for this relates to relative production costs; South Africa having one of the highest total production costs averaging about USD340/oz in 1997 (GFMS Gold, 1998). This is mainly due to higher wage levels for black labor and the increased costs associated with deeper-level gold mining. Even with restructuring and rationalization measures (e.g. the dismantling of JCI Ltd.), the falling gold price has meant that the task facing mine management has become more and more arduous. This worsening situation resulted in a large number of mine closures and layoffs. For example, according to the South African Mining Association 46 000 people were laid off in 1997, with 50 000 expected to lose their jobs in 1998. However, most large-scale operations have yet to be seriously affected, with the above

number of dismissals chiefly attributable to the closure of small/medium scale operations and high-cost deposit areas of large-scale miners; in addition to mergers, and cost reduction measures such as outsourcing.

In Australia, gold, nickel, and comparatively high-cost copper mines are faced with closure or the danger of closure. Similar to South Africa, high production costs, averaging USD 338/oz (GFMS Gold, 1998), have meant that mine closures have not been uncommon in Australia. On the other hand, in contrast with South Africa, one cannot overlook the self-defense effect provided by "hedging" against the falling gold price. In Western Australia, the center of the Australian gold industry, 50 out of more than 350 companies represent 90 per cent of production. The majority of the top 50 companies have adopted some form of hedging strategy.<sup>2</sup> In addition, the Australian dollar lost roughly 4 per cent in value

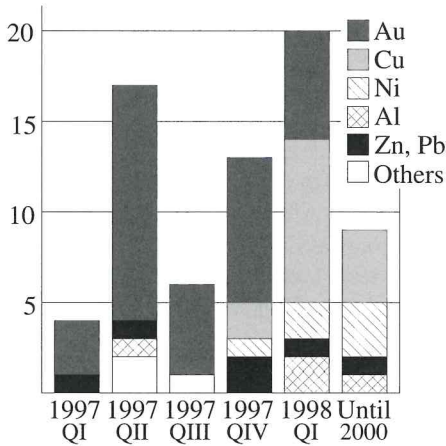
Figure 1. Mine closures/layoffs by region



Sources: MMAJ Overseas Office Reports; newspapers articles, mining related databases (including *Mine Search* by Metal Economics Group) and various international mining publications (including *Metals Bulletin*, *Mining Journal*, *Metals Week* etc.).

Note: Mines producing multiple varieties of minerals in particular have been included.

Figure 2. Mine closures/layoffs by metal



Sources and note: As in Figure 1.

against the USD during the collapse of the gold price, somewhat alleviating the impact of the fall.

In the USA, production is being cut and operations are being temporarily suspended at high-cost copper mines, while at gold mines attempts to rationalize have seen layoffs. Examples include the 80 per cent curtailment of production and personnel cut at BHP's Pinto Valley copper mine, and plans to lower production through reduced operations at Cyprus's Bagdad and Sierrita copper mines. Also, the gold producer Newmont dismissed 500 workers, and Homestake Mining Co. announced that they will also be cutting production.

Canada's high-cost copper and nickel producers are also planning the suspension of operations, dismissals and other measures, in attempting to reduce costs. For example, Inco is dismissing over 1 000 employees mainly from copper and nickel mines in the Sudbury region, whilst Boliden announced that they will suspend operations at the Gibraltar mine. On the other hand, the Gonzague Langolis lead/zinc mine was reopened in July 1997, and the reopening of some aluminum smelters (e.g. Alcoa's smelter at St. Croix, U.S. Virgin Islands) are presently being considered.

### Incidents by type of mine

Turning to the types of mines affected by closures and layoffs (see Figure 2), gold naturally represents the largest number, followed by copper. Although these figures may be only reflecting the relative number of mines and production facilities, it is thought that the high number of closures of small-scale gold mines and deposits is due particularly to their comparatively high costs.

After reaching its peak value in 1996, the price of gold has continued to fall. The incidence of layoffs and mine closure affecting gold mines in 1997 have been greater than for other metals, reaching peak levels in mid-1997 when the value of gold reached its lowest level since 1993. This trend has continued since.

Copper prices, on the other hand, began to fall only in the second half of 1997. The number of mine closures and production curtailments have begun to increase from around the end of 1997, when copper prices dropped below the most recent lowest levels of June 1996.<sup>3</sup> The figure is expected to grow further into 1998.

Although metal mines (particularly gold) continue to experience layoffs and closures, producers have announced that a number of mines will also be reopened. Among the reopening mines, lead and zinc mines represent the largest percentage (54 per cent), influenced by the continued rise of zinc prices during the first half of 1997. However, after zinc prices began to fall during the second half of 1997, some mine reopenings were postponed (such as Anvil Roth's Faro lead/zinc mine in Canada), and there was an increase in the number of mine closures and layoffs at lead and zinc mines.

### Concluding remarks

The recent collapse in metal prices has jolted the mining industry on a global scale. Beginning with the conspicuous gold price crash in the first half of 1997, and more recently the falling copper and zinc prices, the sorry state of metals has continued into early 1998 leading to more mine closures, suspensions, lay-

offs, postponements of new projects in various mine regions across the world. However, the effect on each of these regions has differed in relation to production costs, and other factors like the use of hedging by Australian producers. The recent trend has also seen the privatization and reform of the formerly stated managed mines and production facilities, such as in China.

This situation can be contrasted with 1982-1983 when, faced with dropping commodity prices caused by the surplus stocks and lower economic growth, many of the major developing nation producers maintained high production levels. For example, while copper production in Chile rose slightly from 1081 thousand tons (kt) in 1981 to 1257 kt in 1983, curtailed production in the USA saw production fall from 1538 kt in 1981 to 1038 kt in 1983 (WBMS). The December 1982 *Amex Bank Review* reported that although mine closures and lower production measures were being introduced, it would take two years before the mining and metal production industries were scaled down to meet the lower demand (*Mining Journal*, Vol. 300, 1983). However, although the current situation is bleak, the relatively short period it is taking for production to decrease after commodity prices dropped this time, may indicate that the current market has the strength to recover more quickly.

### Notes

1. The Metal Mining Agency of Japan (MMAJ) is a national agency under the jurisdiction of the Ministry of International Trade and Industry (MITI established to implement policy related to the mining industry. The Mineral Resources Information Center is the division of MMAJ which has the responsibility of collecting and disseminating information on non-ferrous metals around the world.
2. For example, Normandy, one of Australia's major producers adopted a strong hedging position, and reported record results this period.
3. The December 1997 average copper price amounted to USD1762.33/t (WMS, 1997). ■