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The Uninvited Guest

When we wrote our last note a month ago we never dreamed the gold price would be trashed so thoroughly in the last week of 2011. Once again the bears have been fed and, importantly, the market has been cleansed. Any and all weak "longs" have been shaken out, setting the stage, finally, for the real bull market. We also suggested that mine supply of gold would soon enter a long-term decline, a contention some readers objected to. We will see, but it's a depleting business. In most areas reserves and ore grades have been declining for most of the past fifty years. Whatever the price, if there's no ore there's no production. There are three main reasons we expect mine supply to start declining, but the ore situation is the main one.

1) Ironically, gold's on-again/off-again monetary role discouraged, rather than encouraged, gold miners. In order to maintain the myth that the dollar, and latterly the Euro (don't laugh), were better than gold, Western Central Bankers have sold gold, overtly or covertly, to suppress the price. They sold a lot, the better part of 500 million ounces over 50 years. The Gold Pool, operated in the 1960s by Western Central Banks to keep the price at \$35, was hugely damaging to the gold mining industry because its activities kept the price at sub-economic levels for ten years beyond where it would have been in a free market. Those mines that did survive the era did so by ravaging their good grade. When the Pool gave up and the price broke free in the 1970s (and appreciated over 15 times) almost no new mines were built because a) the industry had gutted itself (mine supply actually fell in the 1970s) and b) the industry was not helped by threats of Central Bank overhangs, IMF auctions, US Treasury auctions, constant propaganda about demonetization and, of course, the decade-ending Paul Volcker credit crunch. Underground (UG) gold production, which accounted for perhaps 80% of mine supply at that time, peaked early in the decade and never recovered.

The 1980s and 90s saw huge change in the industry. The new price of \$300, while not enough to resuscitate the UG industry, was quite enough to stimulate the construction of open pit mines, particularly as the advent of new equipment sharply increased their

efficiency. Open pit mines are more civil engineering projects than mining projects, but their production levels are prodigious. However, most open pit mines were built on or near the carcasses of old UG mines, alluvial operations or garimpero workings. Does anybody remember Bulolo Gold Dredging or Cripple Creek? In the twenty years from 1980 to 2000 gold industry production (and reserves) went way up (more or less double) while UG production continued to slide. Overall gold production peaked in 2000 at almost double 1980 levels. But production has been pretty flat in the decade since then and reserves have resumed their decline, notwithstanding much higher prices.

The industry, of course, has been steadily chewing through reserves, mining much of the low-hanging fruit. Today UG production may account for a mere 15% of gold supply with the rest coming from pits. But pits are getting deeper by the week and waste-to-ore ratios get tougher every week. Ten to one waste-to-ore ratios are not uncommon. Most pits are well past their "best before" date and it is a matter of a few years, rather than a few decades, before some of them hit the wall.

Since we have not been finding many major new orebodies for a long time we find ourselves at another inflection point. Most of the "new" names on the Toronto Exchange are old mines with a new suit of clothes. The Prospectors and Developers Convention in Toronto, which used to draw hundreds of and dozens of prospectors operating companies (such as Noranda, Kerr, Falconbridge, Phelps Dodge, Dome and Teck) now draws only a handful of prospectors (there are very few left) and thousands of slick promoters. Now companies generally dream of getting bigger by making acquisitions rather than exploring far-away places (the MBA approach instead of the engineer approach) but it's pretty thin pickings in the acquisition market.

After fifty years, net Central Bank selling of gold is now a thing of the past. There is now meaningful net buying. That's bullish for the price, but not necessarily for supply. As in the 1970s, mines will probably see



higher prices as an opportunity to process ever lower grades in order to stretch out life.

2) Costs are the second force to inhibit future production. To obtain increases in gold reserves it's likely the industry will have to, once again, look to depth. Go underground. It won't be easy. It is true that some open pit mines have orebodies which extend to depth, and some are being developed as underground mines. But gold production will be lower and costs prohibitive. Even if there were lots of fresh gold reserves (as emphasized, there are not) mine supply is likely to start declining because of the costs situation.

Over and above the usual complement of engineers, geologists and surveyors, UG mines need all sorts of skill sets: raise miners, drift miners, longhole miners, shrinkage miners, shaft sinkers, ventilation experts, mechanics (a million dollar jumbo drill has a diesel engine plus mechanical, electrical, hydraulic and compressed air systems), rock mechanics experts, blasting experts (a blasting error last spring led to the possible closure of a mine in Val-d'Or), knowledge of cementing, pumping, compressing and, if a mine is deep, a knowledge of seismic activity.

There may be a glut of lawyers, accountants and public sector employees, and there may soon be a glut of traders who churn away in a zero sum game with their counterparts in one acre trading rooms, but there is no glut of the above mining skills. It will take many years to rebuild the UG mining business. And it will be costly. Anybody who believes operating costs as expressed by many mining companies today

presumably believes in the tooth fairy, but future costs will dwarf today's. And then we have capital costs, shafts, development, that sort of thing. In an earlier era most UG mines were built by established mining companies, but today the big boys don't really care and it's a tough learning curve for the little guys. When it was easy to raise money these costs didn't bother entrepreneurs, but as the truth emerges about how much money yields so little in way of return, financing could be a problem. The capex to increase gold production, or even to keep it at current levels, is a real disincentive to the industry.

3) The third negative for future gold production is geopolitical. Taxes, regulations. South America and West Africa have been, and remain, the most promising areas to find and produce more gold. However, taxes are going up in several countries and the contagion is likely to spread. The religiously-inspired unrest in West Africa is also a worry. Romania increased taxes before a mine (on old Roman workings) was even built. Pristine Canada doesn't play around too much with income taxes, but payroll taxes (the "burden") is now almost 30%. That's the company's share, the employee gets hit too. South Africa's gold mining industry, once the world's biggest, has had a decade of encroachment.

So we will stick with our suggestion that 2012 will see the beginning of a long-term decline in mine supply of gold. We will also suggest 2012 will, finally, see the Euro blow up. Notwithstanding all the calming platitudes we will soon hear (again) from the same demagogues in Davos, chickens will come home to roost. And (again) gold will be the uninvited guest.

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Toronto, Ontario January 18, 2012

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