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Minerals Geophysics

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The minerals industry downturn: a Black Swan event or just part of another cycle?

The recently released AIG membership employment statistics (Figure 1) is another brutal metric describing the tough times the minerals exploration industry is going through. Funding for all levels of exploration is down and doesn't appear to have bottomed out. Projections from the majors also suggest a long term slowdown in the consumption of major commodities. The iron ore and coal markets are in clear oversupply whereas copper, the other mainstay, seems to flutter between pending shortages and imminent oversupply. The gold world created a special hell for itself because of its profligate ways during the last decade and now mops around looking for friends as it mutters the punch line of a 1980s American comic Rodney Dangerfield 'I don't get any respect'.

As is often the case in the minerals exploration sector, we seem to be awash with huge amounts of data and commentary that purport to explain current milieu. But, we still struggle to synthesize this information into meaningful trends, whether this is for the industry as a whole or for the individual. One of the industry pundits who specializes in the junior sector is Brent Cook. In a recent article (https://www.explorationinsights.com/pebble.asp?relid=32671) Cook built on an earlier opinion piece about how we arrived at this point in the industry and what we can look forward to. As Cook was an exploration geologist with considerable experience prior to going into the fiscal advice business, his commentary carries both an investor's bent as well as some realistic comments about the geoscience factors that underlies the challenge.

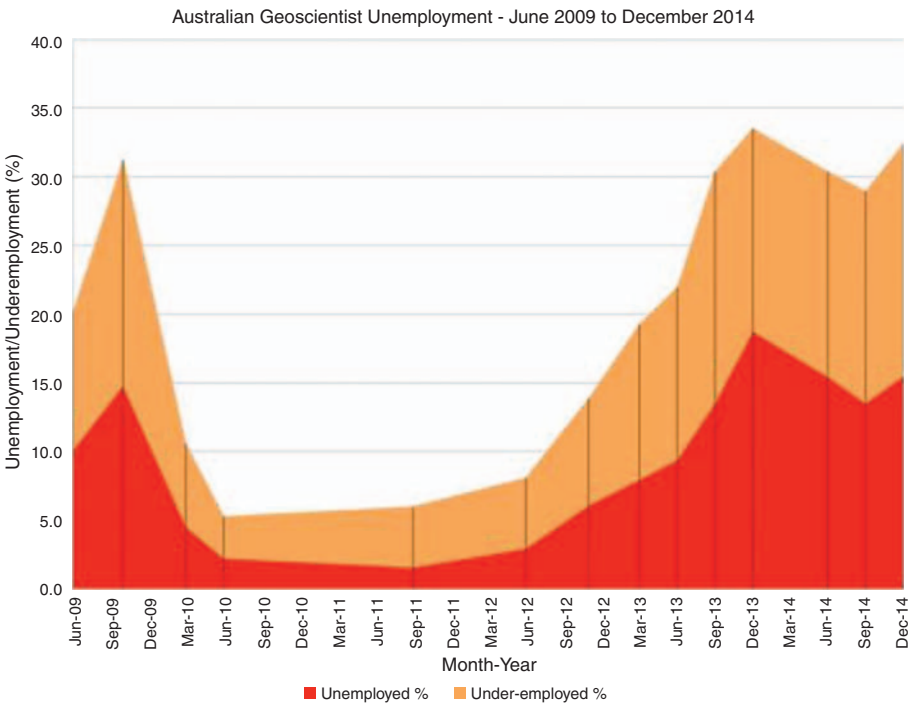

Figure 1. *Results of the 2014 AIG Australian geoscientist employment survey http://aig.org.au/.*

A posting of Cook's piece on the SEGMIN list server mid-July prompted a number of replies which, depending on the reader's perception and time in the industry, ranged from considerable concern at the personal level to advice to the group to 'hang in' and this has all happened before.

In my own take of Cook's commentary I saw some reinforcement of trends that I felt have been emerging for some time, and that suggest there are both repetitive components to the current story (*déjà vu* all over again) but also some decaying components which together make up a damped oscillation that suggest that this cycle looks very different from past ones. Does this mean we have a *defacto* Black Swan event in the making? A Black Swan event is defined as 'a surprise, has a major effect, and is often inappropriately rationalized after the fact with the benefit of hindsight' (shamelessly lifted from Wikipedia). In this case, a surprise could simply be what the majority of pundits see as 'very unlikely'.

Not to be side-tracked too much by definitions, I would suggest that the current scenario has three major components that would certainly have an impact individually but together could well produce a 'surprising' outcome. I define these as (1) the Great Crew Change (a term adapted from the oil and gas business), (2) transition from shallow to deep exploration (necessary in order to follow the targets of merit) and (3) changes to corporate governance (a global event not limited to mining companies).

The first two components have been subject of considerable discussion in our professional societies. Programmes such as the DETCRC and Uncover Initiative in Australia and CMIC Footprints in Canada are major efforts attempting to deal with the transition to deep exploration. As often is the case, we can expect to get part of what we wish for and, with history as a guide, we should expect some clever new technologies to emerge from these programmes. The critical issue might be, however, whether enough of the right people are around to use these technologies. Given that the exploration and mining industry is unlikely to change its cyclical nature, how attractive is this business to young people?

The third component expresses itself in almost all publically traded Western companies in that they are taking much shorter time lines to judge corporate performance. Long term strategic plans are all but gone and it is hard to see this changing in the near-medium term in the mining sector given the ragged balance sheets that many of the majors have inherited from the 'poor choices' made during the past decade. Not only do they need to rebuild their balance sheets but they must re-establish confidence and trust with their shareholders and this, by and large, means conservative fiscal policies, even at the expense of growth. While mining companies don't have to grow, they do, by definition, have to replenish what they mine or they will cease to exist. While some companies are well positioned with good resources that will support decades of production, others are truly burning the candle at both ends. This factor could result in a Black Swan 'surprise' that could see the industry going from 50–60 players to 10 or less in a decade or two; creating a landscape for the mining industry that would look a lot more like the landscape in the oil and gas industry.

Times of turmoil are also inherently times of greater opportunity since much of what was *status quo* gets swept away and new business models are embraced that are seen as 'fresh and relevant'. The geoscientist who can handle this as 'the new normal' will likely fare quite well technically and commercially but may need a good supply of Valium or single malt Scotch.

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