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COMMENTARY/ROBERT GORDON

Greater opportunities

The right environment is here to make new mineral discoveries because flow-through financing has put enough money in place to explore, with advanced technology, many high-potential properties.

Knowledge of the geological environment continues to grow because of advances in technology since the last major round of flow-through financings. And there is evidence that the large amount of money going into the high-risk drilling aspect of mineral exploration will provide a major mineral discovery.

My uncle's father penned the line "The quick brown fox jumped over the lazy dog" and won the speed-typing championship of the world back in the 1930s. This summer is a good time to take a breath and reflect on how advanced technology has changed the way the world does business — not simply the advancement of typewriters to computers but of technology that can help us explore more efficiently.

Imagine if computers existed, but for some reason, perhaps through lack of communication or perhaps resistance to change, you did not embrace the technology. If you still used a typewriter, could you be as efficient? There has been a high rate of advancement in technology across all industries worldwide, and mining is no exception. Adapting autoclave technology for mine process, three-dimensional visualization and modelling or deeper penetrating geophysical information, and other improvements in technology have contributed to more efficient mining.

With regard to exploration, each major advancement in technology, particularly geophysical, has aided in new discoveries. Our scouring of the top 200 metres has been relatively

efficient for more than 2,000 years. The good news is that the likelihood of making new discoveries at depths greater than 200 metres is increasing as a result of the ability of the latest geophysical subsurface imaging capabilities. At the 2004 Cordilleran Roundup in Vancouver, B.C., Freeport-McMoran Copper & Gold Chairman James Moffett left a packed audience with the words "the next major world-class orebody will not be found by digging a trench."

A slow market is in fact perfect timing to roll up the sleeves and confidently move forward with exploration because it gives us the time required to do things properly. Rarely have we had an environment that promotes good science and proper project management, with the required financial resources. This combination allows the industry to embrace the use of advanced technology prior to drilling for higher returns per dollar spent.

This can be accomplished by spending exploration dollars carefully, and more diligently adopting deep-penetrating geophysics technologies to target drilling at depths that are in the realm of "down-dip" extensions and "down-plunge" projections. The earth is a complicated space, and accurate information provided by the latest geophysical techniques at depths greater than those offered by conventional methods not only increases the probability of improved drilling results but also reduces timelines for project execution.

The advancement of ground-based deep geophysical methods, such as the Titan 24 system for imaging the subsurface, provides a means to see deep targets in new, highly-prospective (250 metres to 1.2 km) terrain, where the targets can be fully incorporated into

sophisticated three-dimensional earth models. However, from the perspective of project execution, it is important to budget the time and cost required for using such advanced geophysics technology in the initial stages of fund raising and project planning. In the case where these activities are not planned, such costs and time for advanced geophysics could end up competing with drilling budgets, instead of enhancing the effectiveness of drilling activities. So awareness is critical. An appreciation of current technology capabilities by decision-makers could significantly improve the return on their investments in exploration activities and ultimately improve shareholder value.

Overall, we can look optimistically to the future. Current trends of improvement in standards of living and technological advancements are not seen to be changing, and the associated population growth will require exploration activities on an unprecedented scale. Recent news about Rio Tinto discovering a deep copper porphyry in Arizona with its top buried at 1,400 metres not only confirms the potential value of deep assets to companies but also the need for deep earth imaging. Something of equal or greater value buried at 350, 500 metres or even 800 metres should not be overlooked when exploring in favourable geological environments, and now with the stars aligning, we have a greater opportunity to find these new orebodies, thanks in part to the recent availability of advanced deep-earth imaging technologies. After all, nearly all of us have advanced from typewriters to computers by now. Or have we?

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