

Deep imaging

New technology lowers cost of discovery

by Mike White and Rob Gordon

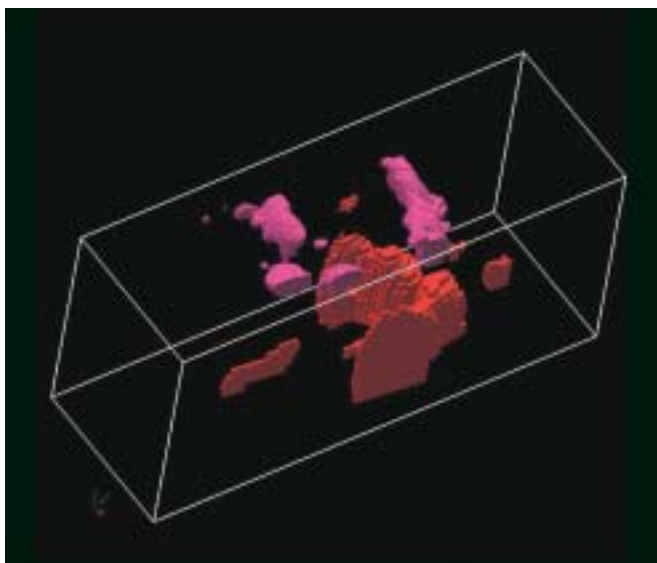
Mining and exploration companies wanting to capitalize on the current up-tick in the gold price and potential future improvement in other commodities must overcome the short-term difficulty of raising funds. Companies that can demonstrate timely and cost-effective methods to improve chances for exploration success are more attractive to potential investors. One junior, **Tribute Minerals Inc.** of Toronto, has demonstrated that new exploration technology can provide a significant edge, for both scientific discovery and fund-raising efforts.

The investment climate for resource-based companies has significantly improved in the past year, a welcome change after five miserable years. Three factors had all contributed to the decreased

km and in some cases 2 km. (This is well past the 300 m previously possible using most traditional geophysical technology.) The accompanying figures show deep Titan 24 structural information and conductive bodies from recent work on Tribute's Dixie gold property in the Confederation Lake Belt, 40 km southeast of Red Lake, Ont. and **Goldcorp's** Red Lake property.

In addition to 3D earth modelling, virtual reality laboratories and quantified petrophysics, this technology is slowly being accepted as the new standard for exploration practices. Today, 3D subsurface earth models significantly increase the chances for drill success, and make it easier to show shareholders exactly what their return on investment may be. Quantec and its customers can now take years of historical data and compile them into one up-to-date model that allows for quick and decisive decisions about what to do next.

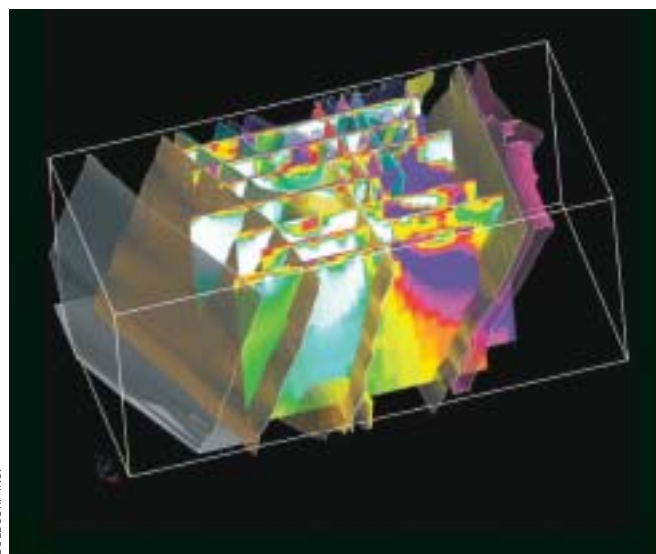
Advanced explorers such as **Barrick Gold Corp.**, **Goldcorp Inc.** and **FNX Mining Co. Inc.** are all making use of 3D visionariums on a regular basis. Mining companies can choose the most prospective areas by integrating all spatial data into one common shared model of the earth, and using advanced hyperspectral methods. Communication of subtle details in all data sets ensures that the decision-making process is optimised and better justified. One of the most significant benefits is the ability to use both historic and new



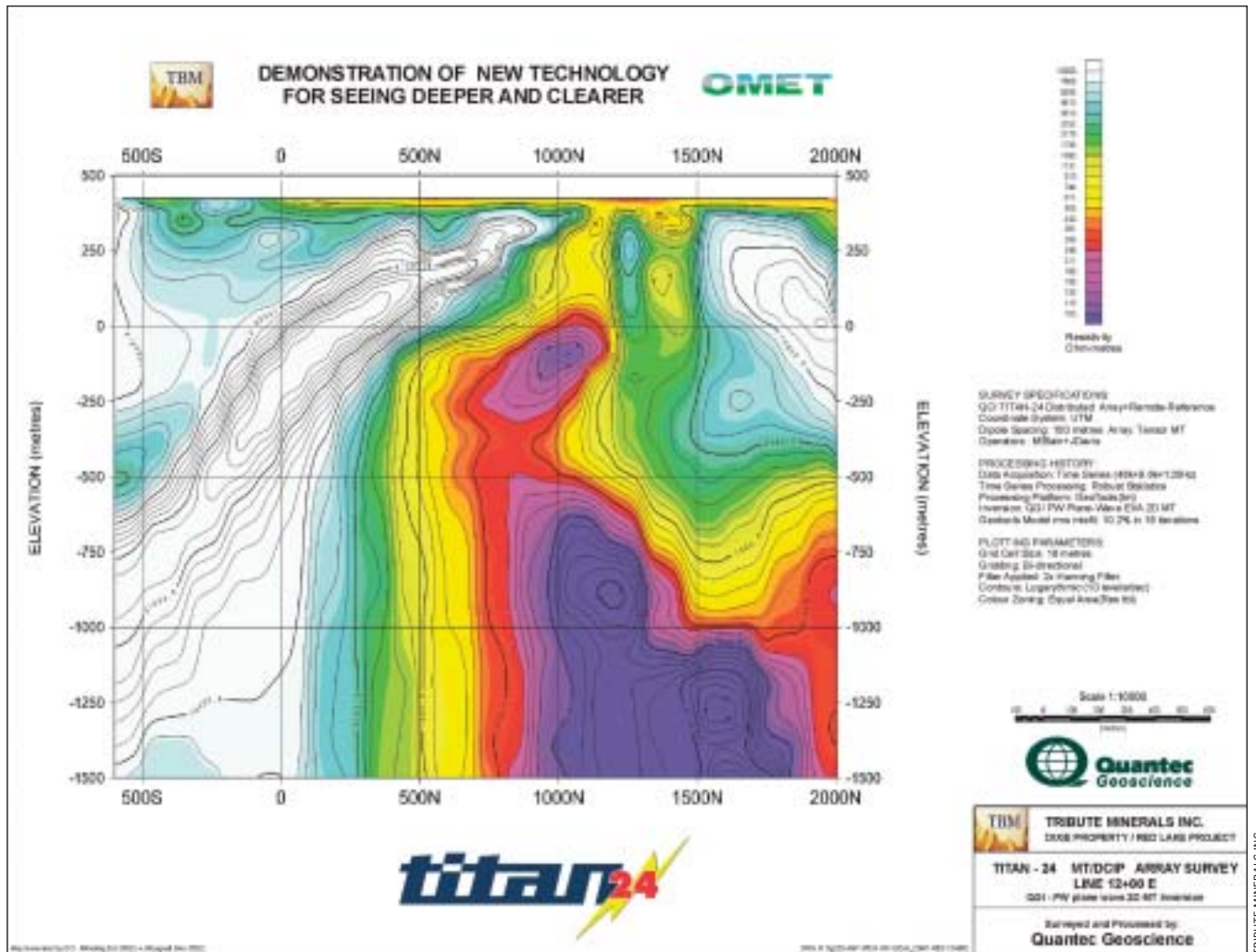
Deep conductive features are shown in red, and chargeability features in purple at Tribute's Dixie gold property.

interest within the sector: the decreased rate of discovery, the high cost of discovery, and the extensive time line to discovery. Today's rejuvenated market has not forgotten the past, and has adopted a new attitude towards exploration. Investors don't want to wait for discoveries, and they want discoveries to come cheap.

New technology such as **Quantec Geoscience Ltd.**'s new Titan 24 system provides a means to explore from surface to great depths with greater accuracy than ever before. Titan is the most advanced electrical earth imaging technology to date, able to provide accurate images from surface to depths of greater than 1.5



3D earth model showing projected geology and deep structural information at Goldcorp's Red Lake property.



Tribute Minerals' deep anomaly on the Dixie property, Confederation Lake Belt, northwest Ontario

data to accurately extend and predict new reserves and resources. Juniors like Tribute can explore with the sophistication of the seniors, in part thanks to the investment of seniors like Barrick and **Noranda Inc.** that went into developing much of this technology.

Over the past year, four companies—Goldcorp, FNX Mining, **Falconbridge Ltd.** and Tribute—participated in an Ontario Mineral Exploration Technology (OMET) program demonstrating the Titan 24 technology. The results were impressive. For example, in a blind test at Falconbridge's Kidd Creek mine property, 45 of the 50 targets identified by the technology were proven to be mineralized by Falconbridge drilling.

This has increased the interest in a 'monster' anomaly indicated from surveys on the Dixie property, seen in the section illustrated. Of all the deep surveys completed to date, Tribute's anomaly is the most impressive based on its sheer size and the extent of known high-grade massive sulphide mineralization nearer to surface. Tribute plans to drill the anomaly while searching for more, using the Titan technology. Without the Titan "pictures" for direction, Tribute would not have been able to explore deep, a practice previ-

ously reserved for the major mining companies because of the associated high costs. The Titan 24 allows juniors to revisit established mining regions and see down 700 m with multi-technique, and as deep as 1.2-1.5 km.

"We are thrilled with the capabilities we have," says Ian Brodie-Brown, president of Tribute. "The technology places us in an excellent position and keeps us at the head of the pack by providing more efficient means of exploring our properties' potentially great returns, all while keeping a tight grip on the risk. By thoroughly imaging our ground packages before we drill, we are saving thousands, if not millions of dollars."

Maximum value and better returns can be expected for shareholders and investors in companies that work with these advantages. Tribute has realised the advantages and is actively applying this new technology in its exploration and development. **CMJ**

Mike White is vice-president with IBK Capital in Toronto, and Rob Gordon, MBA, P.Eng., is director of marketing and sales with Quantec Geoscience Ltd. in Toronto.