

MIRARCO's 3D Modelling Expertise Utilized To "Discover Abitibi" Greenstone Belt

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Laurentian University's Mining Innovation, Rehabilitation and Applied Research Corporation (MIRARCO) and Mineral Exploration Research Centre (MERC) recently completed the modeling of a number of past and current gold and volcanogenic massive sulphide (VMS) producers in the Abitibi greenstone belt of northeastern Ontario. This area, encompassing the Timmins and Kirkland Lake camps, was greatly mined in the past and supplied a great deal of mineral resources. As part of this project, sponsored by the Discover Abitibi Initiative, MIRARCO integrated company-donated models and datasets within the context of the regional geology. They newly created models will help exploration professionals relate their datasets to those of successful producers in the belt.

This 19 model collection of gold and VMSs deposits are available to the public through the Ontario Geological Survey in the traditional analog product, showing long and perspective views of the deposit models, and, for the first time, in digital format. The collection includes models donated by industry project partners and in some cases deposits digitally modelled for the first time from scanned, historical sections and mine plans.

The distribution CD contains two digital versions of each model. A light version, which can be viewed with the included Raider3D™ viewing software, allows any user with a computer to quickly see what is included in each model. Full rotation, zooming and panning is supported. With the full 3D FracSIS™ model, the ability to interact with the models, to superimpose selected parts of the geological data set, and to quantify dip and dip direction becomes a powerful tool. It is possible to visualize a single map unit, the drill holes cutting it as well as the geochemical data related to it. The data can also be integrated with third party datasets to increase the value of this data release.

Compiling the data in digital format provides exploration professionals with initial models that can be used to enhance the understanding of their own datasets. It is also expected that the integration of the data into digital models will foster a better appreciation of the potential of the Abitibi greenstone belt as a host for mineral exploration and development.

The analog and digital products are published and available through the Ministry of Northern Development and Mines (MNDM) Ontario Geological Survey. For ordering information, visit www.mndm.gov.on.ca/mndm/mines/ims/pub/releases/da/da13e.pdf or contact their Publication Sales office at pubsales@ndm.gov.on.ca. The MERC / MIRARCO publications from this initiative are listed at www.mirarco.org/publications.php. As part of MIRARCO's NOHFC funded Northern Advanced Visualization Network (NAVNet), these datasets will also be displayed in the Timmins Library.

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