

Welcome to Volume 2 of the Explorer – Quantec’s newsletter devoted to geophysical services in the Mineral, Geothermal, and Oil & Gas exploration sectors.

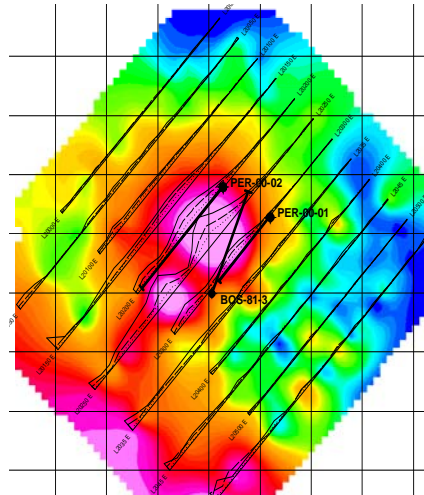
In this issue, we provide several feature articles, including a short review of Exploration in the Shadow of Headframes; an Electromagnetic case history; and a Spartan MT example on Uranium exploration in sedimentary basins.

Also in this issue, we profile Geothermal and Oil & Gas exploration with dedicated articles, and introduce new offices / agents that have recently joined us.

Geophysics at the Forefront of Perseverance Discovery

Quantec Ground Geophysics has more than two decades of experience in helping clients find mines using electrical, electromagnetic, gravity, magnetic and other conventional data according to our high standards of premium data quality.

In the following example, we briefly review some of the work conducted by Quantec Ground Geophysics – a full paper is available on our web site for interested readers.



**TEM Plan View of Channel 18
Anomalies acquired by the Quantec
Ground Geophysics services group.**

The Matagami camp in NW Quebec was flown in the early 1980’s using the Questor Input system. But, with new technology and greater depth of exploration with the MegaTEM™ system, Noranda felt the area should be re-surveyed to determine if there were any previously undetected mineral occurrences. MegaTEM™ outlined numerous targets.

Previous ground surveys from 1981 were inconclusive, and Quantec Ground Geophysics was contracted in 2000 to provide ground follow-up with 3D transient EM (TEM) over the MegaTEM™ targets and the Daniel JV anomaly.

Quantec delineated targets in both surface and borehole surveys. The borehole results indicated that a discovery would have been made previously if these data were acquired initially. For full conclusions and details, please see our web site (www.quantecgeoscience.com).

In The News

QUANTEC enters into a strategic alliance with TerraCorp in Brazil; and a new agent, Yatendra Agrawal, in India.

QUANTEC launches new website.

QUANTEC talks to Mining Journal about deep seeing technology.

SUPREME RESOURCES — Titan 24 program commenced on TAS Copper/Gold/Silver claim.

METALCORP identifies several high priority drill targets from Titan 24 survey at Big Lake property.

THREEGOLD RESOURCES announces more promising results for copper, zinc, silver & gold on Lemieux Dome Project.

DENISON uses Titan 24 survey to discover new R Zone uranium mineralization at Wheeler River Property, Athabasca.

Where We'll Be

Quantec regularly travels the globe to keep in touch with our fellow geoscientists. See you at one of the following:

SAGA Biennial Meeting & Expo,
Swaziland
Sept 13—18, 2009

Geothermal Expo, Reno
October 4—7, 2009

SEG Conference, Houston
October 25—28, 2009

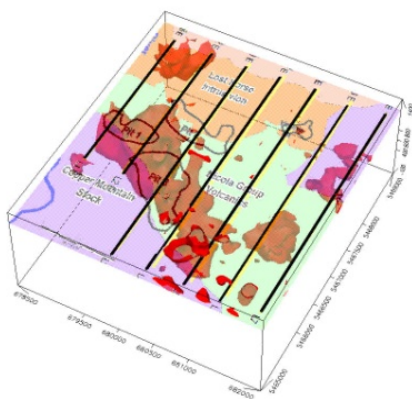
Quebec Exploration, Quebec City
November 23—26, 2009

And as a **SPECIAL BONUS** for visiting us at an upcoming trade show, your name will be entered into a draw for the chance to win a Quantec iPod prize pack.

Case Study Corner

Copper & Gold Exploration: The Shadow of Headframes

In the last few years, many companies have purchased abandoned mines or are exploring in the “shadow of headframes”. This gives ready access to economic mineralization that was either “missed” with previous generations of geoscience technologies, or represents ground not yet fully evaluated. Today, new deep geophysical technologies are helping with investigations near and in mines - assisting not only in exploration but also in ore delineation and mine development, including ground condemnation.



3D Perspective of IP Results and Titan 24 Survey Lines at Copper Mountain, Canada

Brownfield work is challenging and not everyone can do it. Cultural noise, scheduling, electrical noise, remoteness and resistance to new technologies are traditional obstacles that have been overcome through deep electrical imaging and Distributed Acquisition Systems. DAS technologies have a large multi-channel, fixed receiver array, sensitive electronics, advanced processing and noise removal, and other characteristics that result in improved depth of penetration, data quality and detectability. More than 500 brownfield (and greenfield) sites have been surveyed over the past 7 years with our Titan DAS technology.

In this review, we describe the components and capabilities of DAS systems, and specifically, Titan 24 Deep Earth Imaging for brownfield work, including near mine and minesite applications. Four case studies are presented, including two from porphyry copper environments in western Canada; a gold project from Bulgaria; and another gold project from Newfoundland, Canada. These case studies represent the state-of-the-art in geophysics for brownfield work, and are a unique and novel application for today’s DAS technologies.

For more information, please visit:

www.QuantecGeoscience.com

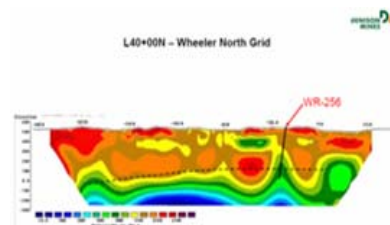
Uranium Exploration in Sedimentary Basins

Denison Mines has a 60% interest in the Wheeler River joint venture and is operator. The project is favorably located along strike from the McArthur River deposit and is underlain by many of the same geological features.

Work during 2008 was successful in discovering a new zone of unconformity hosted mineralization. This mineralization represents the most significant new discovery in the Athabasca Basin in several years, as it has many geological similarities to the McArthur River mineralization.

Quantec Geoscience performed a Deep Earth Imaging survey using Titan 24 IP Only (for DC resistivity and IP measurements) in the winter of 2007.

Subsequently, Denison and its partners announced the discovery of unconformity uranium mineralization in drill holes on the Wheeler River “R” zone”. The unconformity uranium mineralization was initially intersected in drill holes targeted at resistivity lows detected by the Titan 24 IP / Resistivity survey in the Athabasca sediments above basement conductive zones.



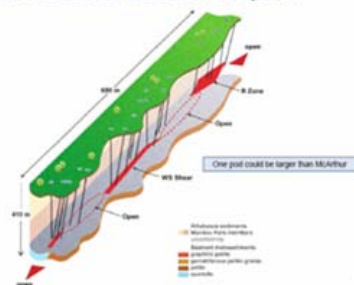
Resistivity section showing “R” zone highlighted in vicinity of drillhole trace.



Simplified geology from Wheeler River showing geologic model of fault-associated Uranium at Unconformity surface.

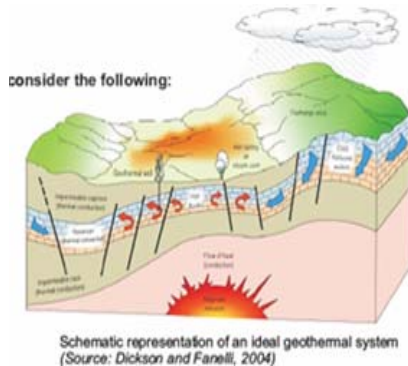
In the past, Titan has been proven successful at detecting alteration zones related to known unconformity uranium mineralization at Shea Creek and Wheeler River “M” zone. Titan has now been proven successful in helping with the discovery of new unconformity uranium mineralization at the Wheeler River “R” zone.

Plenty of Room at Wheeler River for a New World Class Uranium Deposit



Simplified geologic model showing “R” zone with other Uranium zones at Wheeler River.

Geothermal Exploration: Pathways to the Future



Simple schematic of a Geothermal system

In April, Quantec Geoscience attended the Canadian Geothermal Resource Conference in Vancouver, Canada. As the Geothermal industry is only now developing in Canada, the conference was attended by 110 or so people with interests in various aspects of geothermal energy, including exploration and production.

There are two key components in considering geothermal environments or regimes. Porosity is required to host heated fluids and a heat source is required. Quantec is now putting our proven geophysical methods to work to amend the progression between utilizing traditional methods of mapping Geothermal sites, and the host of geological peculiarities that are typically encountered.

Current environments of interest are the Ring of Fire (geothermal convection cell), Conductive Sedimentary Basins (common in Australia, for example) and Enhanced Geothermal Systems in which wells are drilled and the rock is fractured to create the required porosity.

Quantec has developed relationships with a number of key clients, including Petratherm, Eden Energy, Hot Rock, Greenearth Energy Ltd., and Panax in Australia with additional clients in the United States and elsewhere.

Services consist of Spartan MT along with TEM, gravity and magnetics provided by the Quantec Ground Geophysics team who focus on conventional geophysics.



Oil & Gas Exploration: Quantec's Presentation

Quantec Geoscience will be attending an upcoming Non-Seismic workshop in London during the first week of October 2009. Below, we have included the abstract for our paper presentation.

Seismic methods are the dominant geophysical method employed in the search for oil and gas worldwide today. However, there are a number of key scenarios in which seismic methods may not deliver the results that explorationists expect.

Common scenarios include exploration in regions of volcanic cover and beneath salt domes— which degrade seismic results due to energy dispersion. They may also include other specialized situations such as prospecting in ice-covered terrains – an application that will become more important as the search for oil and gas in the North accelerates.

MT also has a “small footprint” and is applicable in environmentally sensitive areas where seismic acquisition is not possible, or feasible.

Reliable and productive exploration in these challenging terrains requires additional input from deep penetrating geophysical methods that can serve both to augment seismic results and to provide new information.

One technique of interest is ground-based magnetotellurics (MT) which probes the earth to depth using passive electromagnetic fields generated by lightning strikes, solar flares and ionospheric resonances.

Depths of investigation may be from near surface to 10+ km or more, depending on reading intervals. MT has been used very effectively in exploration, par-

About Quantec

Quantec Geoscience provides geophysical services in the earth science industry with a focus on data acquisition, interpretation and survey execution. Committed to employing innovative processes and advanced technology, Quantec continues to build its reputation of being a pioneer in the geophysics industry.

With over 20 years of operations and 2500 projects completed globally, **Quantec** is the global leader in providing deep exploration solutions.

Contact **Quantec Geoscience** today to find out more about our award winning technology and how it can add value to your exploration program.

Leaders in Deep Exploration.

Photo Gallery



ticularly in Russia and East Asia where the method has been relied on since the 1950s and 1960s. With the challenges in prospecting outlined above, explorationists around the world are also taking a renewed look at MT for resolution of a variety of challenges associated with seismic data.



This paper provides an in-depth look at an MT prospecting system which acquires full tensor data to depth. The system has a number of advantages in exploration, including providing flexible survey logistics (200 m stations for detail, or 500 m or 1000 m stations for reconnaissance), excellent depth of exploration; random locations that allow recording sites to be positioned over optimal geology or topography, etc., and tensor measurement to provide highly accurate data.

Finally, we look at several case histories from the literature and other sources which illustrate the benefits of MT in the search for economic oil and gas reservoirs. Benefits include complementary data to seismic, data acquisition in areas that are problematic for seismic, data acquisition at a lower cost than seismic, imaging of structure, alteration and geology to depth, direct detection of hydrocarbon traps, discriminating targets (such as saltwater), and others.

For more details on the Non-Seismic workshop, please visit: www.pesgb.org.uk/pesgb/S4/pesgb_non_seismic_geophysics_table.htm

Update on Latin America

Quantec Geoscience provides extensive survey coverage to regions in Latin America through its offices in Chile, Peru, Argentina, and our newest office, Mexico.

Latin America supports Titan 24 and Spartan MT work; both of which are key means of imaging to depth for a variety of mineral types.

They also perform Quantec Ground Geophysics work – comprising conventional surveys such as TEM, FEM, Electrical, Magnetics, Gravity, etc.

To learn more about Quantec in Latin America, feel free to visit during one of the following trade shows in 2009:

[XXVII Convención Internacional de Minería](#)

28/10/2009 - 31/10/2009
World Trade Center, Boca del Río
Veracruz, México

Quantec Growing Again

Quantec is pleased to announce the opening of a new office in Mumbai to serve India; Yatendra Agrawal is the new office manager. Yatendra has broad experience in the earth science sector and will be supporting Quantec's Sales and Marketing efforts in the sub-continent.

The company has also partnered with TerraCorp in Brazil with the objective of providing Deep Imaging geophysical surveys throughout Brazil. For contact information for both groups, please see our Contacts page on the web.

Meet Quantec's People

This issue, we profile **Kevin Killin**, one of Quantec's senior geophysicists and newly appointed Interpretation Manager.

Kevin has specialized knowledge of Titan 24 (DCIP & MT) interpretation geared towards VMS, Porphyry Copper and precious metals, making him a key member of Quantec's Interpretation group. His Titan 24 experience encompasses various environments, including the Canadian Shield, Africa, Bathurst, Red Lake, Sudbury, and Matagami camps.

Acquisition, processing, quality control and interpretation of magnetic and conventional IP data for Kimberlite and precious metal exploration also top Kevin's list of skill sets. In addition, he also has specialized technical knowledge of airborne survey techniques.

Kevin's previous experience awarded him excellent knowledge of geophysical processing, modeling and interpretation packages, including many proprietary packages and techniques.

Kevin is truly a leader in industry and at Quantec.

Premium-Quality Data Acquisition: More than Just Numbers From a Black Box

Quantec prides itself on delivering premium quality data for all client programs.

We have numerous proprietary methods which we bring to every project so that our clients have every opportunity to succeed and extract meaningful results from their data.

Since this is a key topic, we will be discussing data quality in future issues of The Explorer.

