

FAST SURVEY COMPLETION FAST DATA DELIVERY HIGH-QUALITY DATA



SkyTEM for Mineral Exploration

Recent data from the mineral resource exploration industry indicate discovery rates are declining and discovery costs are rising steeply. This, plus the struggle for exploration stocks to attract investment, adds to the challenge of exploration success.

There is little doubt the mineral exploration industry is in a state of flux. It is widely believed that most economic near-surface deposits have been discovered and to find the next mine requires new tools and larger budgets. Many more giant mineral deposits undoubtedly exist but they are likely to be buried beneath surface cover. The “tyranny of depth” as described by Neil Williams, Geoscience Australia.

This century requires exploration tools that can fill exploration needs while delivering both cost effective and time-saving solutions

SkyTEM has engineered the next generation of airborne geophysical electromagnetic systems designed specifically to deliver these solutions.

This flyer provides case studies to illustrate the economic and technical benefits gained from fast acquisition and delivery of high quality data that can serve to reduce exploration costs while maximizing exploration objectives.

Noram Ventures discovered highest grade of graphitic carbon:

The press release stated "the discovery was made on the basis of a SkyTEM survey conducted in 2012 and includes the highest grades found to date that are coincident with the strongest and most discrete SkyTEM conductive zones."

Xcalibur Airborne Geophysics paper:

"One needs exceptional quality airborne data from low-flying state-of-the-art systems to resolve the subtle kimberlite signatures. We thank SkyTEM for the good data.... It is a real pleasure to work with such data!"

Geoforce paper about uranium mapping:

SkyTEM "has a self-response below the natural noise level, and there is therefore no requirement for drift correction or levelling of the data. A recent SkyTEM survey at Pells Range has yielded results consistent with mapped geology and extensive regional drilling. The survey clearly identified a palaeochannel system within the Moogooloo Sandstone which is associated with known uranium mineralisation, and has provided clear targets for follow-up drilling."

SkyTEM for Mineral Ex



Cost Efficiencies Form Near Real-time Advanced Deliverables

By taking full advantage of the rapid increase in acquisition speed and delivery of advanced products within 24-48 hours of acquiring the data, exploration budgets can be reduced in several ways. The ability to acquire over 1,000 line kilometres of data per day combined with Fast data delivery allows exploration managers to consider flying an area regionally, with wide flight line spacing and greatly reduced helicopter hours. Results from each days flying can be reviewed and geological trends and anomalies identified. Areas of interest can be

strategically targeted for infill lines or extended flight lines thereby reducing time in the field while maximizing exploration objectives. This is all done in one mobilization with crew and helicopter still on site as data is delivered.

The combination of speed of acquisition combined with tactical selection of flight lines contributes not only to efficiency and economic benefits but also to providing exploration management with near real-time data to make appropriate management decisions.

Truly Versatile – Smaller and Smarter

As conventional HTDEM system focus on increasing the depth of investigation, an easy way to increase dipole moment (NIA) is to increase the transmitter loop area or number of turns of the loop. This has led to increasingly heavier arrays with additional weight leading to larger, more powerful helicopters being required to maintain flight performance characteristics and safety margins. Recent SkyTEM R&D has reduced the size and weight of systems while at the same time increasing the dipole moment (NIA) and the resulting depth of investigation (DOI). All SkyTEM systems are now available on a single 341m² rigid and light weight frame platform. This basic building block is then fully customizable for dipole moment and survey

speed to suit specific exploration targets or manage safety risks such as hot climates or steep terrain. Just as flight line planning can be modified in the field given near real time data delivery, system specifications can also be modified and customized to maximize exploration results. For example, within a day or less all SkyTEM systems can be changed – from Multi Moment to Single Moment with a focus on late time gates and greater depth of investigation to focus on deeper targets after completing a regional mapping survey, or, to a lighter configuration for flying in rugged terrain at high altitudes if the target area spans from valley floor to the tops of a mountain range.

Mel Best, Bemex Consulting:

"I had the opportunity to perform QA/QC checks on SkyTEM's preliminary data and found it to be consistent and of high quality. SkyTEM maintained excellent communication with me throughout data acquisition and delivered the data electronically in a time fashion as required in the contract"

Frank Fritz, Consulting Geophysicist:

"SkyTEM completed an extensive survey over rugged terrain in the SW US while holding closely to the survey specifications. The data quality was maintained as very good to excellent. The combined two frequency system mapped the project geology from the very near surface to 300+m depth. Several geologic features that were unknown were mapped quite well. In addition

Exploration



Some clients may require ultra high-resolution hydrogeological or geotechnical information as well as geological information over different tenements in the area, and rather than deploying two systems, a configurable platform would prove more cost effective. In order to survey such widely differing exploration

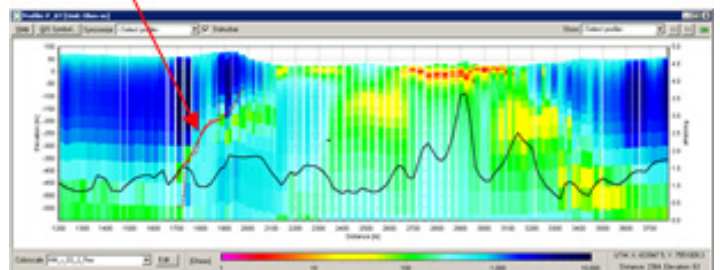
objectives, other contractors may have to utilize different technologies (FFDEM, for example) to achieve the same result as SkyTEM. In addition, comparison of results obtained by these differing systems often makes for a more complex interpretation task.

Best of Both Worlds: High Dipole Moment (NIA) and High Signal to Noise Ratio (SNR)

TMAC Resources conducted a SkyTEM survey in the summer of 2015 over their Hope Bay and Elu gold mining project areas in Nunavut. The survey required the acquisition of 15,000 line kilometres of data to supplement previous exploration carried out on the Greenstone belt. The depth to known mineralization was in the order of 500 m or more so a high powered SkyTEM system was configured to operate with an NIA of 1,000,000. In the figure, the SkyTEM resistivity data (blue) is in good agreement with an area of known mineralization at a depth of approximately 500 m.

The near surface was also well resolved and the shallow conductive feature (red) is interpreted to be an aquifer. The presence of readily available water in the area can be of benefit to future mine operations, or an environmental/social concern.

Resistivity data for TMAC Resources



FAST SURVEY COMPLETION FAST DATA DELIVERY HIGH-QUALITY DATA

Select list of mineral exploration clients:

- Rio Tinto
- BHP Billiton
- First Quantum Minerals
- Golder Associates
- Aurora Minerals Group
- Nuna Minerals
- Oban Mining
- Soquen
- BHPB Iron Ore
- Sociedade Mineira de Catoca
- Alba Minerals
- Boliden
- TMAC Resources
- Geoscience BC
- Avannaa Resources
- Anglo American
- Graphite One
- Spar Resources

The SkyTEM Method – Advanced Technology at a time when it is needed most

The 21st century has seen the introduction of the next wave of powerful HTDEM systems. Launched in 2004 SkyTEM was developed specifically to map one of the most challenging of targets, buried aquifers. The company has its roots in solving demanding problems through innovation and the fresh thinking applied to the challenge resulted in the engineering of a very different HTDEM method for resolving these especially difficult to image targets.

Not just a “bump-finder” SkyTEM is able to leverage this recent innovation and delivers images of subtle changes in lithology from the very near surface to depth and at a dramatic increase in data acquisition speeds. SkyTEM is recognized and praised by scientists and governments worldwide as the technically unsurpassed HTDEM technology for mapping water resources.

For over a decade SkyTEM's high quality data has been used as the foundation for a wide range of earth studies and is now applied globally for mineral exploration as the sector recognizes the exploration and economic advantages.

SkyTEM introduced the first system capable of operating in MultiMoment mode that combines high resolution near surface data (previously only available with helicopter frequency domain (HFDEM) systems) with the ability to map at depths of 400 m or more. This patented innovation allows for discrimination between weak geological contrasts giving a more complete and accurate interpretation of geology while increasing confidence in modelling deeper geological structure by illuminating any links between surface and depth.