

## UPDATE

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April 19, 2010

**Darnley Bay Resources – Preliminary Airborne Survey Results**

Darnley Bay Resources Limited (“Company”) is pleased to show geophysical images within and surrounding the Darnley Bay Anomaly from the 2,750 line-km Geotech VTEM time-domain electromagnetic and magnetic survey completed on March 23 and the 6,190 line-km Sander AIRGrav gravity and magnetic survey completed on April 3. The data are currently being compiled and processed by the two airborne survey contractors. The images presented here are preliminary and are derived directly from the field data. The final data will have several standard processes applied by the contractors to make corrections, improve data resolution and remove topographic effects, level errors and noise. From these final data, 2D and 3D models will be prepared, and drill targets located and prioritized.

The 2010 images presented herein were derived from the field data, it is quite apparent that the new airborne surveys have generated a wealth of new geological information and will be extremely useful for selecting drill targets, as well as sample sites to explore for mineralized zones on surface. As the data are finalized by the survey contractors, they will be subjected to further analysis and modelling. These results will be made public in due course.

Both surveys collected magnetic data. The helicopter platform of each system and lower flying height provided improved resolution over the 1997 fixed wing aeromagnetic survey. Both surveys also produced a digital terrain model (i.e. topographic relief) generated from the altimeter and GPS data.

Figure 1 shows the Company’s property holdings and the location of the 2010 airborne surveys. Figure 2 shows a map of the flightline coverage provided by the six airborne geophysical surveys carried out by the Company between 1997 and 2010. In summary, they are:

Year	Type	Contractor	Partner	Objective	Line Spacing	Map Colour
1997	Magnetic Vertical Gradiometer	Scintrex	None	Metals	400 m, 800 m and 1,600 m	Pink
2000	Magnetic Horizontal Gradiometer	Goldak	None	Kimberlites	200 m	Green
2005	Magnetic Horizontal Gradiometer	Fugro	Diadem Resources	Kimberlites	200 m	Grey
2005	Magnetic Horizontal Gradiometer	Fugro	Diadem Resources	Kimberlites	160 m	Light Blue
2010	Electromagnetic and Magnetic	Geotech	None	Metals and Kimberlites	400 m	Black
2010	Gravity and Magnetic	Sander	None	Metals and Kimberlites	500 m	Blue

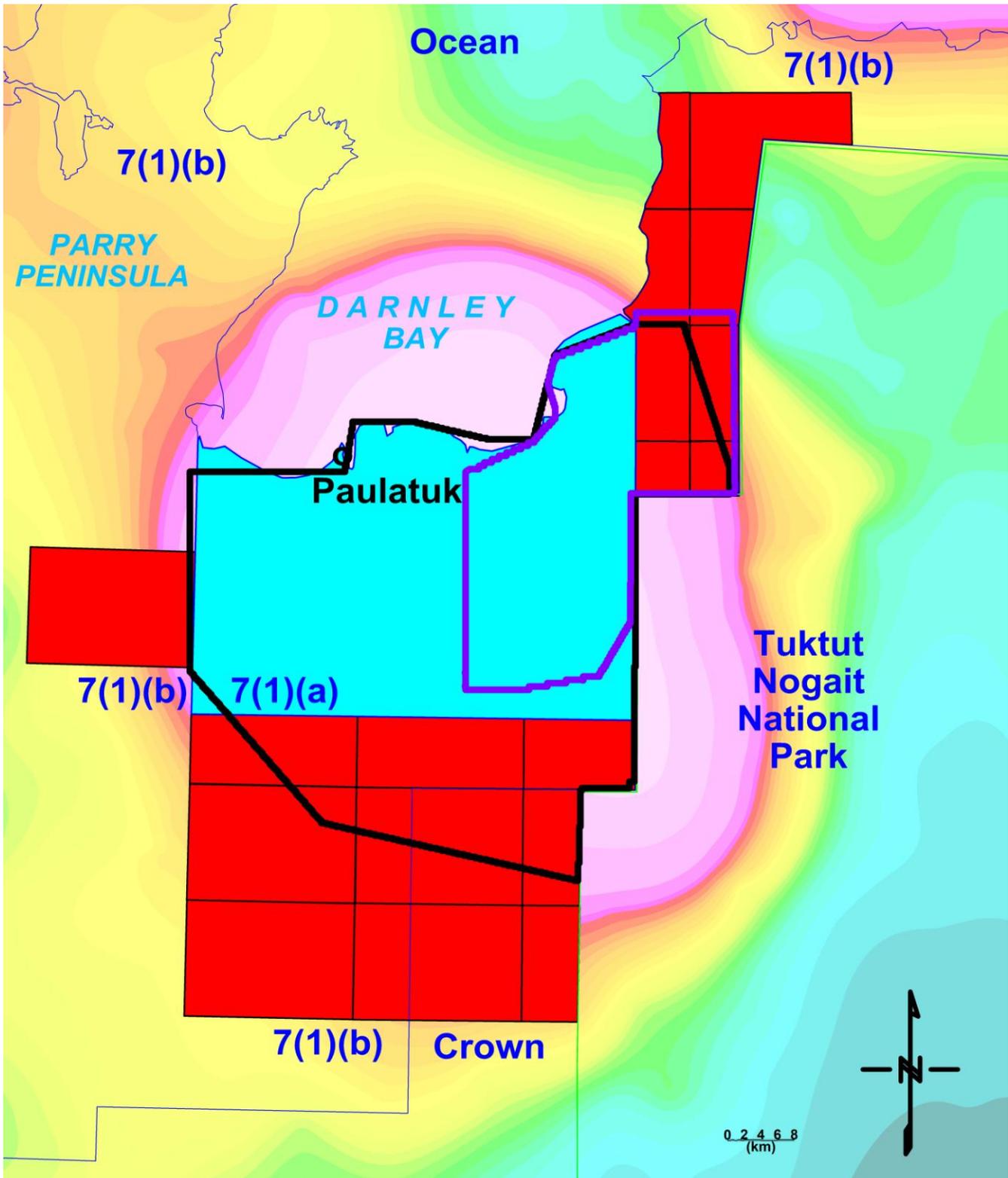


Figure 1. 2010 Airborne Geophysical Surveys and Property Holdings, Paulatuk Area, Northwest Territories.

- Black outline – Sander AirGRAV gravity and magnetic survey
- Purple outline – Geotech VTEM electromagnetic and magnetic survey
- Light blue block – Company’s mineral concession for 7(1)(a) lands
- Red blocks – Company’s prospecting permits in 7(1)(b) and Crown lands
- 7(1)(a) lands – Inuvialuit hold surface and mineral rights
- 7(1)(b) lands – Inuvialuit hold surface and Crown holds mineral rights
- Crown lands – Crown holds surface and mineral rights

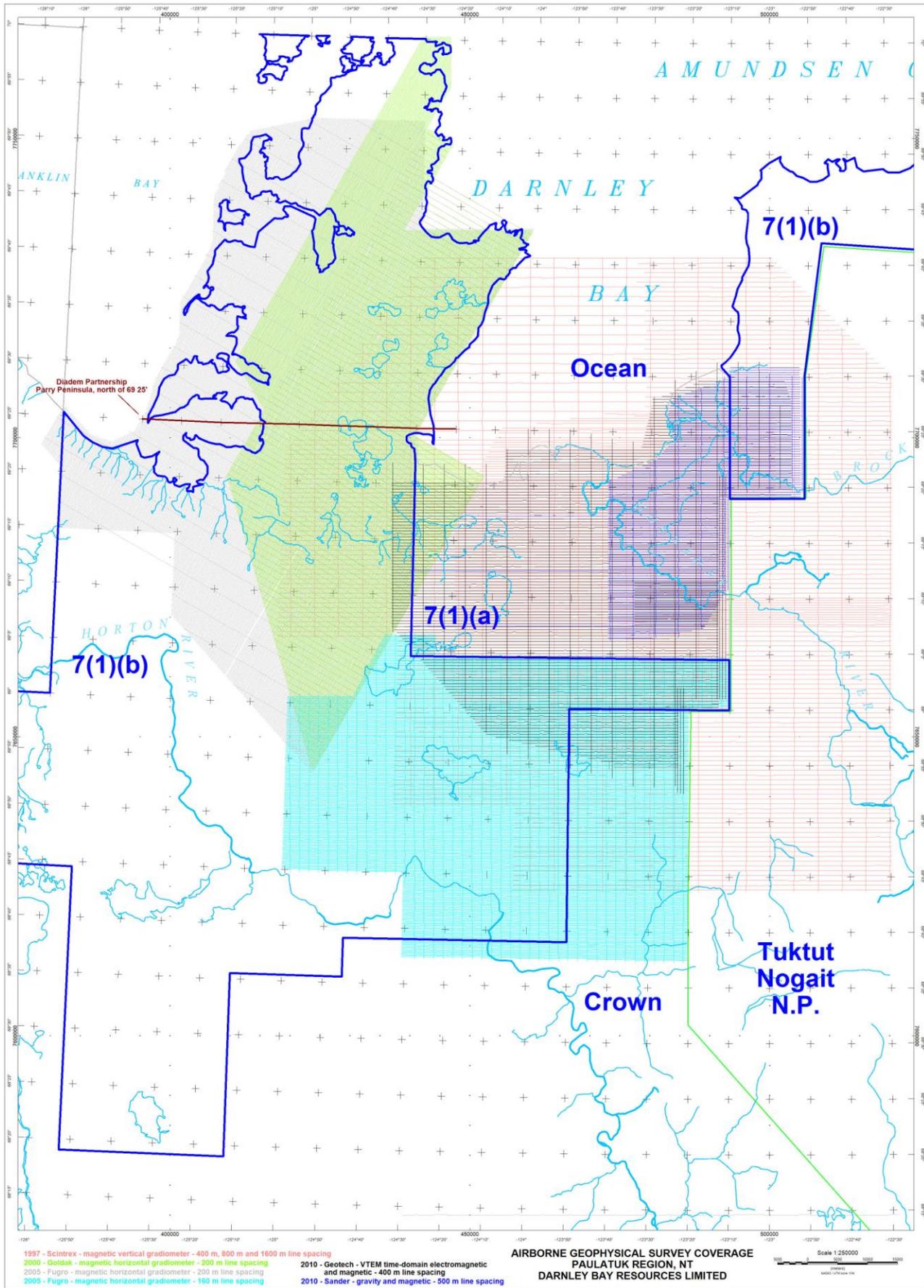


Figure 2. Airborne Geophysical Coverage, Paulatuk Area, Northwest Territories.

The following physical properties were measured by the 2010 airborne surveys:

Electromagnetic survey – conductivity of the rocks by inducing small currents in the ground and measuring where the currents travel and gather. From these data, the more conductive rocks and minerals are mapped.

Gravity survey – density of the rocks by measuring the distortion of the earth’s gravity field. The more basic (mafic) classes of igneous and metamorphic rocks, and most metallic minerals, have higher densities and produce stronger gravity responses.

Magnetic survey – magnetic susceptibility of the rocks by measuring the distortion of the earth’s magnetic field. The susceptibility is usually a direct indication of the amount of magnetite (iron) in the rocks. Some mineral deposits incorporate large volumes of magnetite, and other magnetic minerals such as pyrrhotite.

All three of these methods are amenable to various types of modelling, to depict the geometry and size of a geological body that produces a response and to quantify the physical property. The electromagnetic and magnetic surveys are of sufficient resolution to provide direct indications of sulphide ore bodies and kimberlite pipes. The gravity survey could provide indications of larger ore bodies, which will require closely spaced ground data to precisely delineate an ore body or kimberlite pipe.

### Electromagnetic Survey

The motivation for the VTEM electromagnetic survey was primarily to locate conductive minerals that may reflect sulphide mineralization or kimberlite pipes. It is also a geological mapping tool. The survey area was selected due to its proximity to the Precambrian (Franklin) gabbro-dolerite sills and dykes previously mapped by the Geological Survey of Canada (GSC) to the east and southeast of the Darnley Bay Anomaly, and interpreted to extend into the survey area from the Company’s previous aeromagnetic surveys. These gabbroic rocks are of particular interest due to their potential for hosting nickel-copper-platinum group element (Ni-Cu-PGE) mineralization. They are the only known igneous rocks in the region, other than the kimberlite pipes previously discovered by the Company.

The electromagnetic survey was flown along east-west oriented traverse lines spaced 400 m apart, and north-south oriented control lines spaced 3,800 m apart. Three traverse lines were extended 31 km to the west to provide an overview of the conductivity towards the western side of the Darnley Bay Anomaly. The sample rate along the survey lines averaged 2.4 m. The survey was flown with a helicopter at a nominal height of 75 m, with the magnetic sensor at 60 m and the electromagnetic sensor at 30 m above ground. Approximately 2,753 line-km of data were acquired. The VTEM system measured 31 channels of X-component and 31 channels of Z-component data, both for the dB/dT and B-field. The B-field provides more emphasis on deeper sources. The channels run from “early-time” reflecting the shallowest responses to “late-time” reflecting the deepest responses. The X-component couples best with steeply dipping to vertical conductors, whereas the Z-component couples best with shallow dipping to horizontal conductors.

Figure 3 shows the Z-component data for early, mid and late-time channels from the dB/dT. The images reflect both the strength of the responses, and depict where the currents flow from early to late time. It is immediately apparent that there are a number of conductive horizons and discrete responses that require investigation for mineralization.

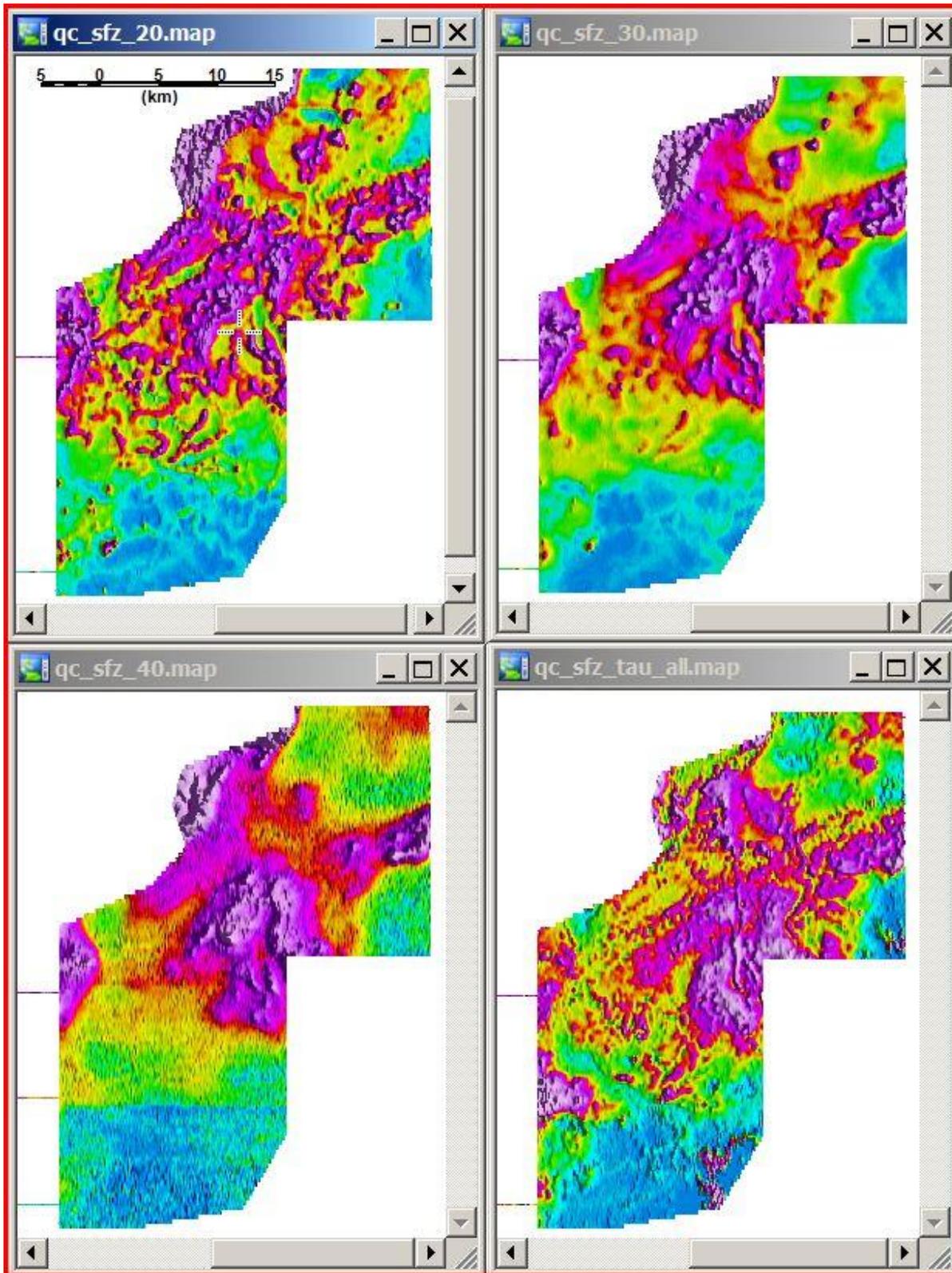


Figure 3. Electromagnetic data, Geotech survey. Red-purple colours indicate the strongest responses and blue colours the weakest responses.

Top left – Z-component channel 20 (early time, shallow depth)

Top right – Z-component channel 30 (mid time, moderate depth)

Bottom left – Z-component channel 40 (late time, deep depth)

Bottom right – Z-component decay constant (range 0 to 98 ms, mean of 1.7 ms)

Figure 3 also shows the decay constant derived from all 31 channels of the Z-component dB/dT data. Figure 4 is provided to illustrate how this decay constant is useful to classify conductors. To determine whether a conductor is “poor”, “moderate” or “good” in mineral exploration terms depends more on how quickly or slowly the responses decay with time rather than simply on the strength of the responses. Some of the areas of high decay constant in Figure 3 are located where the EM channels responses are moderate to weak, particularly in the southern part of the survey block, characteristic of “good” conductors. These images indicate that there are several large conductive units, discrete conductors and bull’s-eye anomalies that merit investigation for metals, and the latter for kimberlite pipes as well.

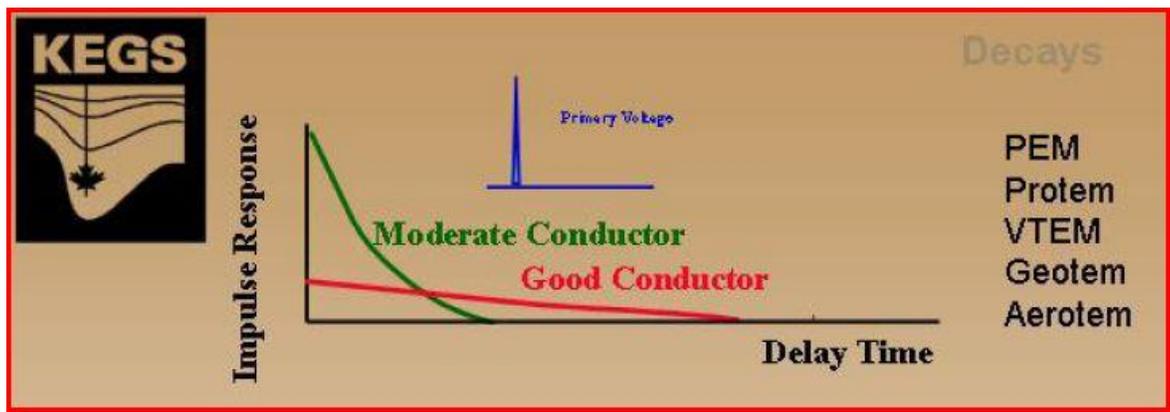


Figure 4. Decay of electromagnetic response with time (from KEGS Presentation by Greg Hodges and John Donohue, 2007).

- Poor conductor – Strong early time response, no mid or late-time response (not shown)
- Moderate conductor – Moderate early time response, decays away by mid-time
- Good conductor – Low early time response but it persists into late-time

Figure 5 shows an example of the electromagnetic and magnetic responses in the vicinity of a kimberlite indicator mineral sampling site that returned a high number of indicator minerals. There is a well-defined, discrete electromagnetic anomaly centered 1,500 m southeast of the sample site, and a magnetic anomaly centered 650 m southwest of the sample site. Both represent kimberlite pipe targets. The linear anomalies in the northeast part of the magnetic image reflect Franklin gabbro-dolerite dykes.

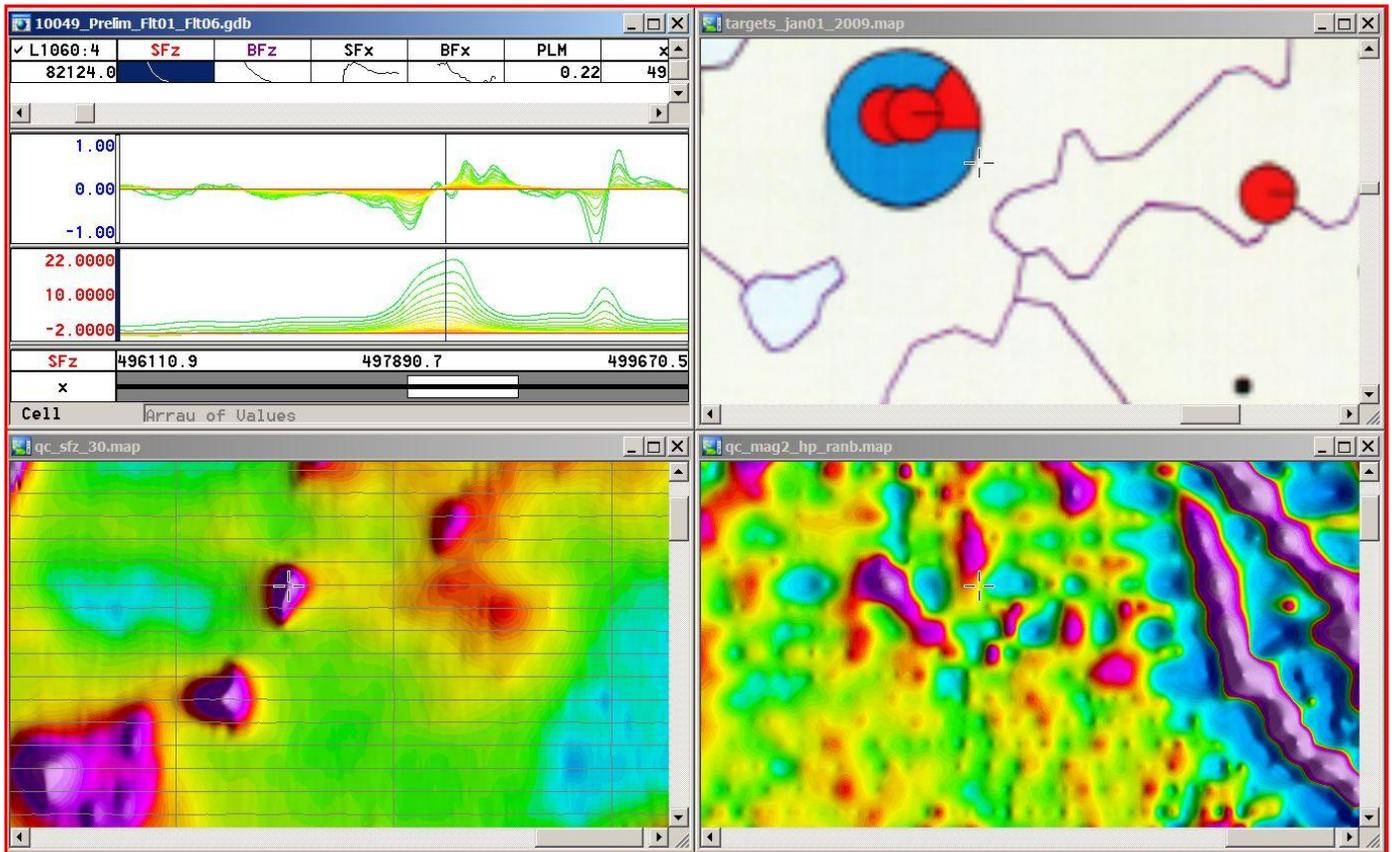


Figure 5. Geotech survey data in the vicinity of a good kimberlite indicator mineral sample. Cursor centered on a discrete electromagnetic anomaly. Red-purple colours indicate the high responses and blue colours the low responses.

Top left – dB/dT profile data (channels 15 to 45), top: X-component, bottom: Z-component

Top right – Regional indicator mineral counts

Bottom left – Z-component channel 30 (mid time, moderate depth)

Bottom right – Residual magnetic field

## Gravity Survey

The motivation for the gravity survey was to significantly improve the resolution of the ground gravity data previously collected by the GSC and by the Company over the Darnley Bay Anomaly. Other than a few traverses with gravity stations spaced at 500 to 1,000 m, most of the gravity coverage was from regional surveys with stations spaced 10 to 20 km apart. The new survey on regularized survey lines improves the data resolution immensely. This not only provides a more accurate rendition of the Darnley Bay Anomaly, but also delineates residual anomalies from near-surface sources that represent drill targets for mineralization.

The gravity survey was flown along east-west oriented traverse lines spaced 500 m apart, and north-south oriented control lines spaced 3,500 m apart. One area in the southeast was infilled with traverse lines spaced 250 m apart. The sample rate along the survey lines averaged 17.8 m for the gravity data and 3.6 m for the magnetic data. The survey was flown with a helicopter at a nominal height of 120 m above ground, with both the gravity and magnetic sensors onboard the aircraft. Approximately 6,192 line-km of data were acquired. The AirGRAV system provides channels of both the free-air and Bouguer gravity. The latter incorporates a correction for surface topography applied to the former. There are additional topographic corrections that remain to be applied to these field data, so the images incorporate signal from topography that will be removed in the final data and better isolate the geological signal.

Figure 6 shows the Bouguer gravity field of the region centered on the Darnley Bay Anomaly and a residual Bouguer field computed by applying a 30 km high-pass filter to emphasize the responses from shallower sources. The figure provides a “before and after” view of the gravity field, with the new airborne survey data and without. The residual field images show the improved resolution of the airborne data and the improved rendition of the larger anomaly shapes where gaps were filled in the ground data. The processing currently underway at Sander will further improve the resolution of the airborne gravity data.

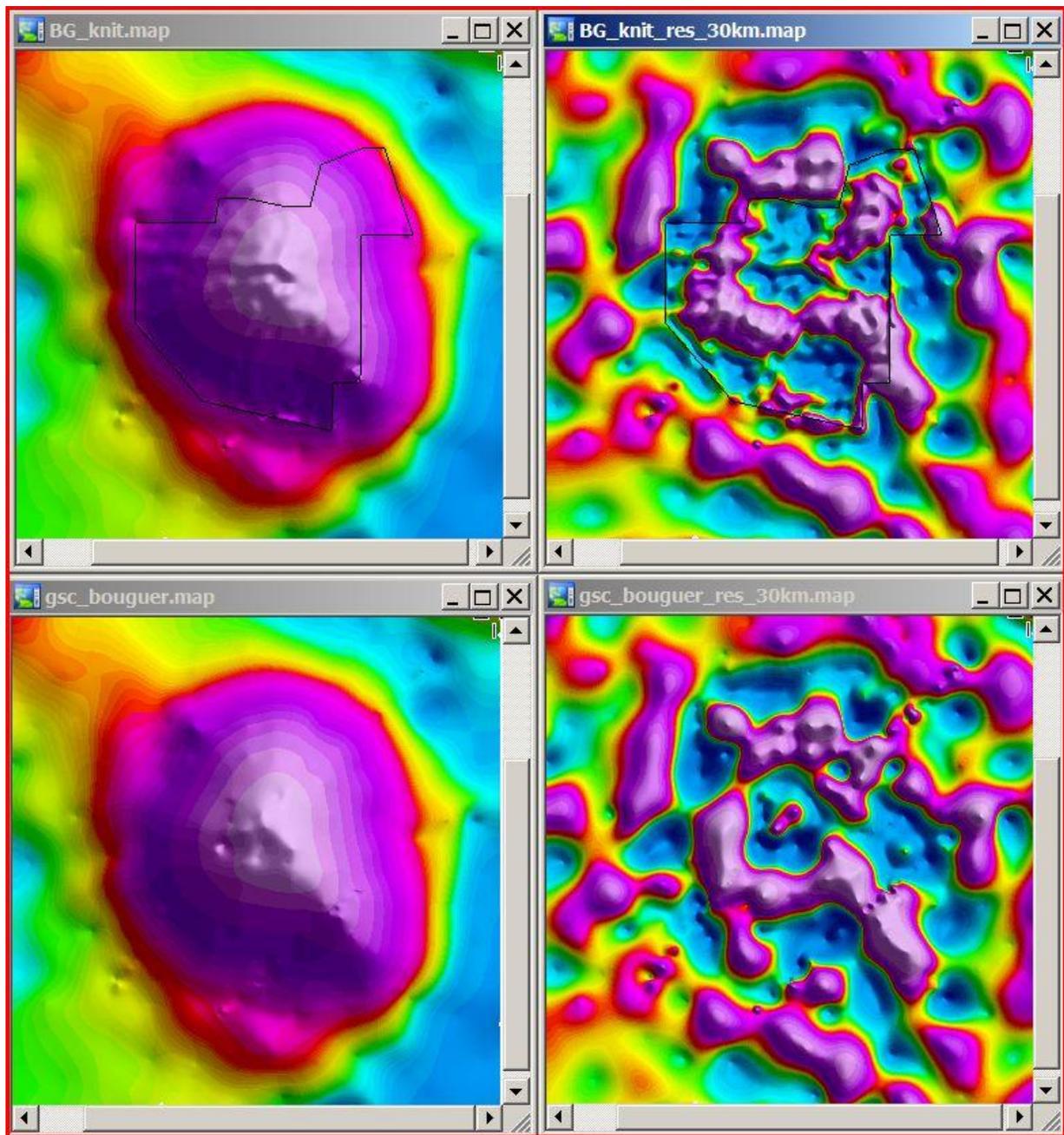


Figure 6. Airborne gravity data from Sander survey and ground gravity data from Geological Survey of Canada. Red-purple colours indicate the high responses and blue colours the low responses.

- Top left – Airborne Bouguer gravity (black outline) stitched in to the ground Bouguer gravity (range 149.1 mGal)
- Top right – 30 km residual Bouguer gravity of airborne and ground data reflecting shallow sources (range 25.9 mGal)
- Bottom right – Ground Bouguer gravity (range 148.7 mGal)
- Bottom left – 30 km residual Bouguer gravity of ground data reflecting shallow sources (range 18.4 mGal)

Figure 7 shows the Bouguer gravity field from the airborne survey divided between regional and residual components. As the filter wavelength is reduced from 45 km to 15 km, the residual field depicts responses from increasingly shallower sources. The residual images show the Darnley Bay Anomaly breaks into three distinct components, and these are further divided in the 15 km residual which reflects the shallower portions of the sources. Together with the electromagnetic and magnetic data, these positive gravity responses will be assessed as drill targets. Please note that the topographic effects of hills, ridges and valleys will be removed in the final data, so images of this kind will change to some extent.

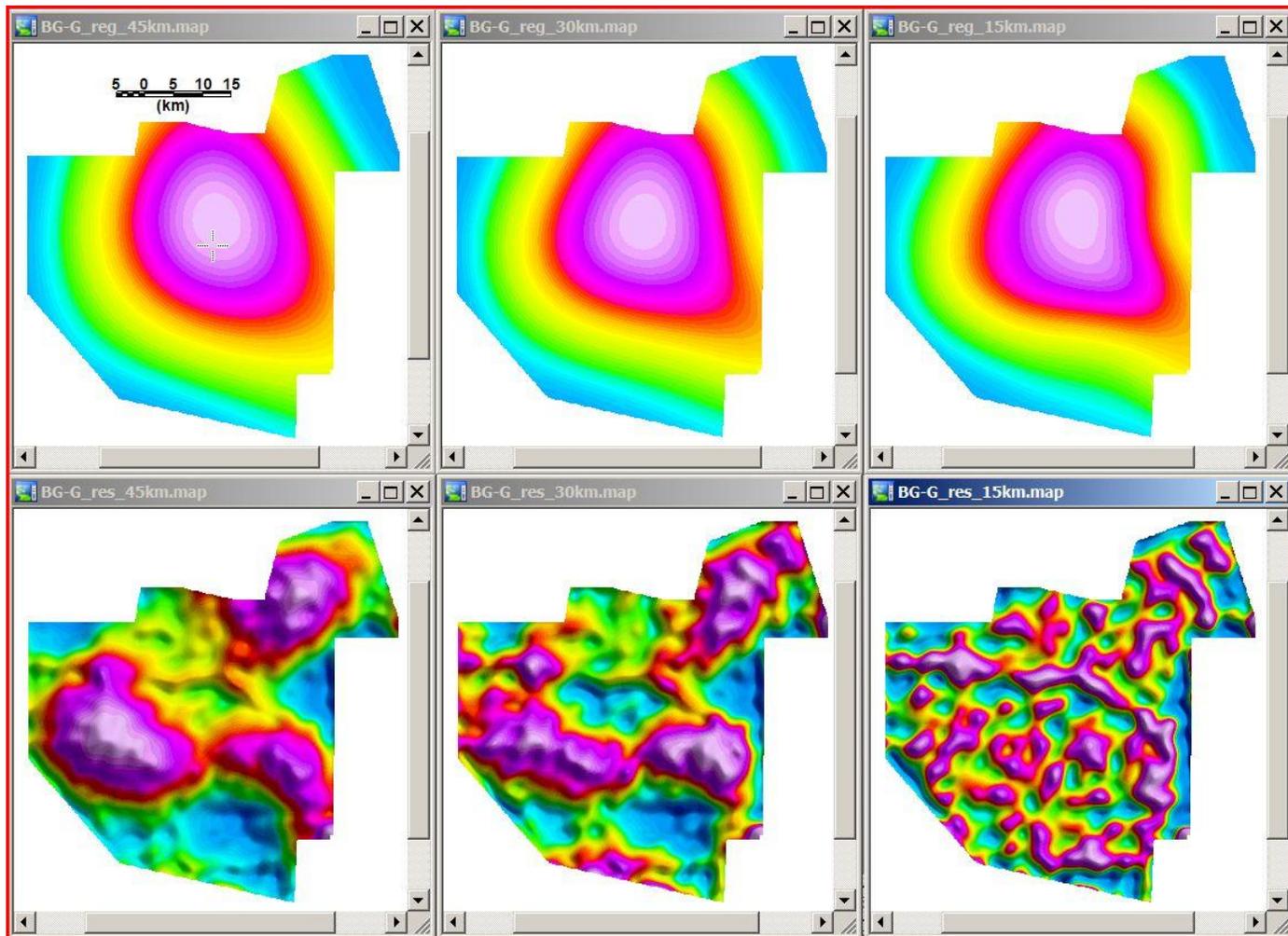


Figure 7. Airborne gravity data from Sander survey divided between regional Bouguer gravity field (top row) and residual Bouguer gravity field (bottom row). Red-purple colours indicate the high responses and blue colours the low responses.

- Left – 45 km filter applied (residual range 25.7 mGal)
- Middle – 30 km filter applied (residual range 15.8 mGal)
- Right – 15 km filter applied (residual range 10.2 mGal)

## Magnetic Surveys

Figure 8 shows the magnetic data from the Geotech VTEM survey. The total magnetic field is not yet leveled, which accounts for the east-west striping in that image. The residual magnetic field shows an abundance of near-surface sources. Some of the responses correlate directly with river and creek valleys, where they cut down through magnetic horizons. Others have no correlation whatsoever with topography, and indicate sources buried in the top few hundred meters.

Figure 9 shows the same images from the Sander AirGrav survey. It covers a larger area and provides a better rendition of the Darnley Bay Anomaly and the NNW-striking dykes. The sources of many of the shallow responses to the north and east will be investigated for gabbro-dolerite sills. Detailed analysis of both magnetic surveys will be applied to better define kimberlite pipe targets from earlier surveys and to locate new targets.

Stephen Reford, P. Eng. (ON) is a Qualified Person under NI43-101. He designed, supervised and provided quality control of the two airborne surveys, and is doing the same as the contractors prepare the final products. He prepared the images and commentary in this update.

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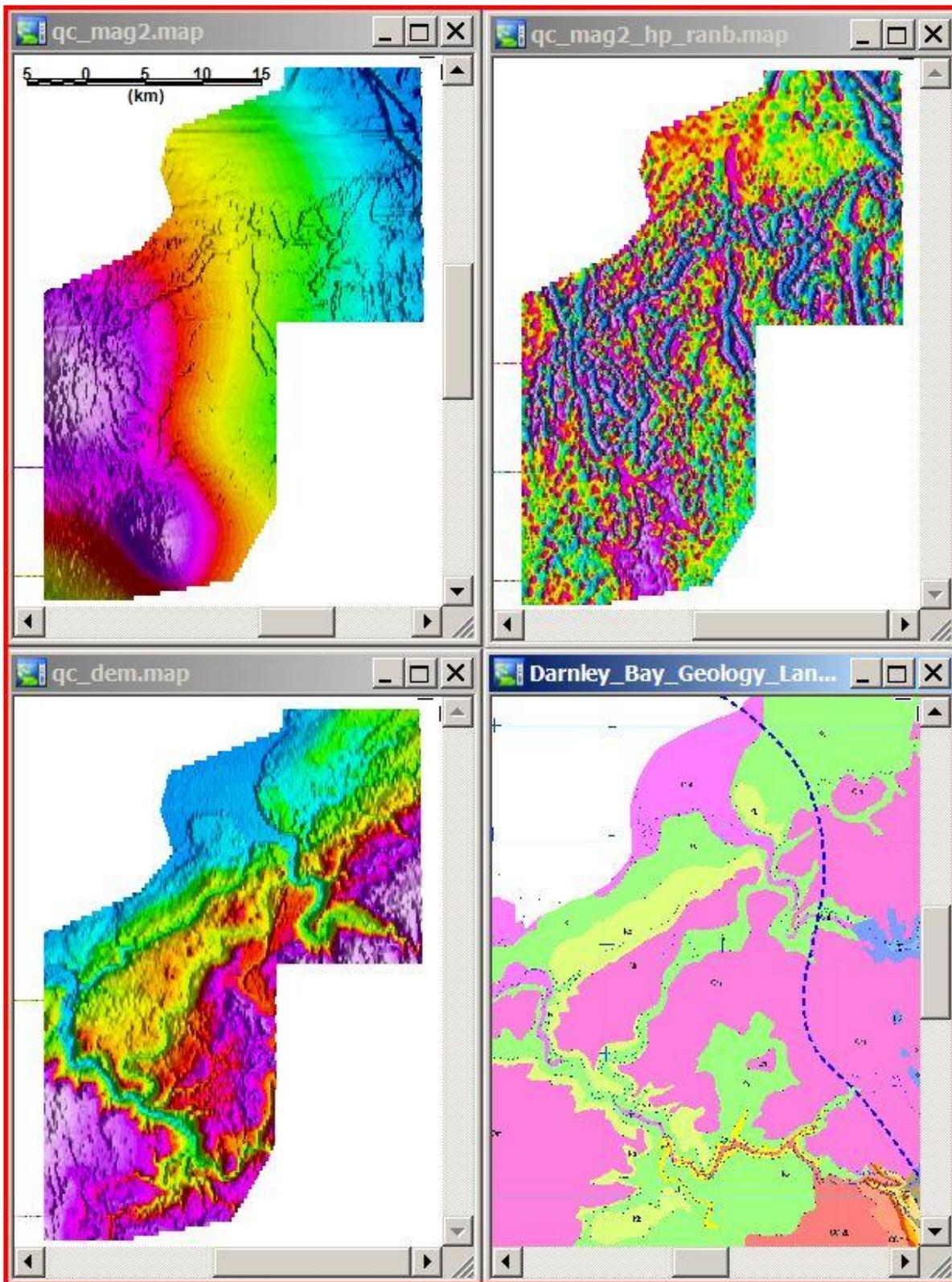


Figure 8. Magnetic data, Geotech survey. Red-purple colours indicate the strongest responses and blue colours the weakest responses.

Top left – total magnetic field (range 1,337 nT)

Top right – residual magnetic field reflecting shallow sources (range 274 nT)

Bottom right – surface geology (digitized from Geological Survey of Canada maps)

Bottom left – digital terrain model (range 5 m to 407 m asl)

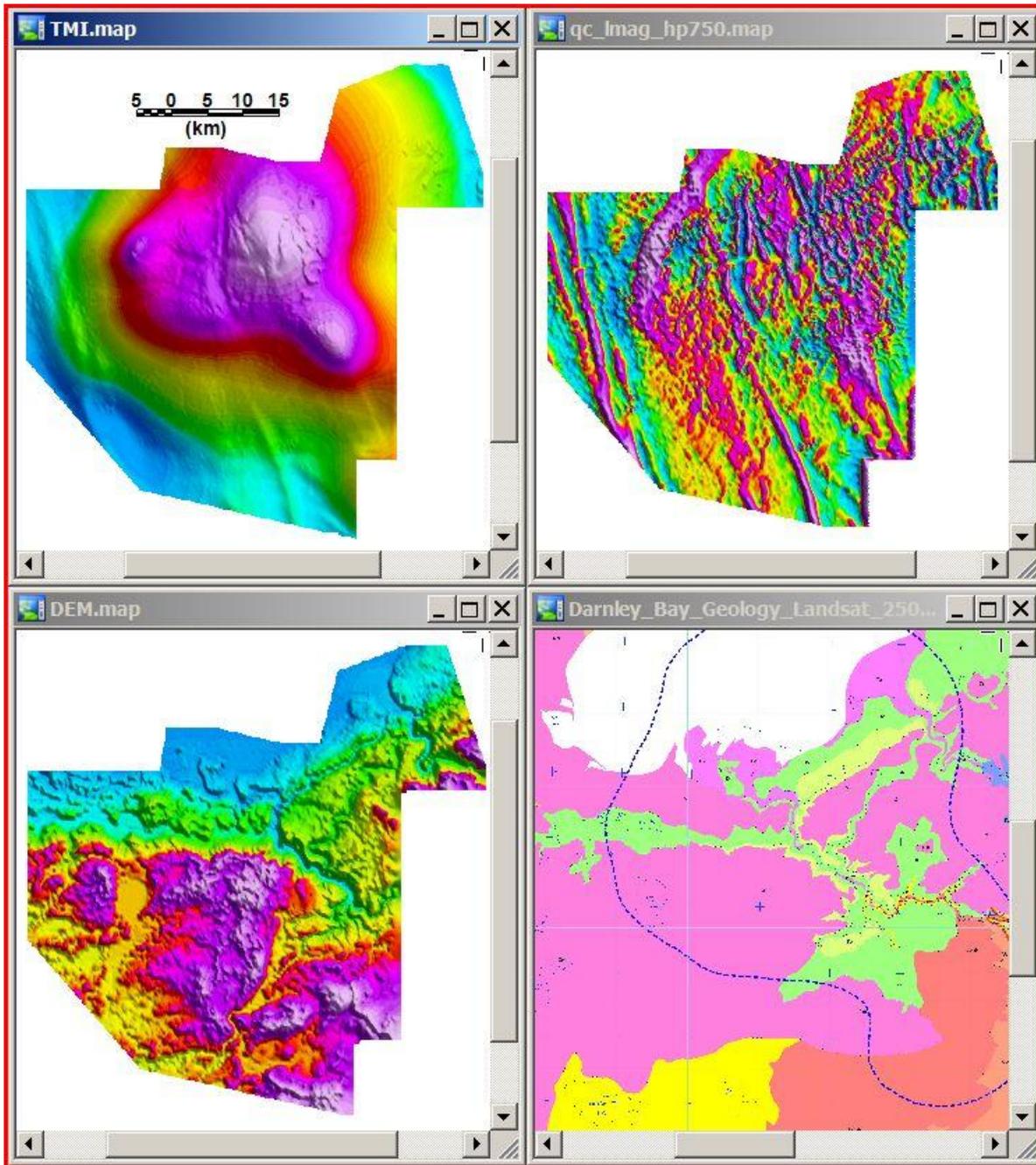


Figure 9. Magnetic data, Sander survey. Red-purple colours indicate the strongest responses and blue colours the weakest responses.

Top left – total magnetic field (range 1,393 nT)

Top right – residual magnetic field reflecting shallow sources (range 101 nT)

Bottom right – surface geology (digitized from Geological Survey of Canada maps)

Bottom left – digital terrain model (range 0 m to 371 m asl)