High-Resolution Aeromagnetic Surveys – Mackenzie Corridor (1998-2003)

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ABSTRACT
Since 1998, the Geological Survey of Canada has been active in providing new high-resolution aeromagnetic survey data to the public sector in the Mackenzie Corridor. In five phases of the project, over 300,000 kilometres of survey lines were flown by geophysical survey contractors in accordance with GSC aeromagnetic specifications. The surveys were financed through joint funding by the GSC, governments of Yukon and Northwest Territories and industry partners. This systematic airborne geophysical coverage provides important information on regional subsurface structures that control hydrocarbon accumulation. Such information will enhance our geoscience knowledge base, stimulate future exploration and attract industry investment for northern development.

In 2002, surveying of Phase V was completed over the Bonnet Plume Basin, Yukon and southern Peel Plateau, N.W.T. Magnetic total field and first vertical derivative data were released in January 2003. Line and gridded digital data sets accompanied by maps at a scale of 1:100 000 were published. These maps are now available in PDF format for free downloading from GSC, Yukon EMR, and the NWT Geology web sites. Digital Data from Phase I through V are available from the GSC Geophysical Data Centre.

The sixth phase of surveying in 2003 will attempt to fill the remaining gap in aeromagnetic coverage over the northern Peel Plateau region. The combined aeromagnetic coverage will be one element of the Geological Atlas of the Northern Canadian Sedimentary Basin study that will include partners from the GSC, Yukon and Northwest Territorial Governments and industry.