

GEOPHYSICAL STRUCTURAL DISCONTINUITY MAPPING AND OVERBURDEN DEPTH
DETERMINATIONS AT THE ATIKOKAN RESEARCH AREA: 1985

by

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ABSTRACT

Very low frequency-electromagnetic (VLF-EM), magnetic, resistivity and seismic refraction surveys, implemented during 1985 in the Atikokan Research Area, are presented in this report. The VLF-EM tilt angle surveys in the Eye-Dashwa Portage and Brown lake survey grids have delineated conductors, which according to the evidence available from drilling and air-photo lineament analysis, correspond to structural discontinuities. The discontinuities also cause magnetic lows. Quantitative interpretation of both data sets has provided an estimate of dip of some of the structures. Depth of overburden was calculated at eight widely spaced locations primarily by the seismic refraction method, and also on a semi-experimental basis by the VLF-EM resistivity method. There is a reasonable degree of agreement between the two sets of results.