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INTRODUCTION

In May 1978, the Geological Survey of Canada, Ontario Region, initiated a four-year program to study the geochemistry and mineralogy of the Kirkland Lake (KLIP) Basal Till. The program was designed to provide information on the geochemistry and mineralogy of the basal till in the Timiskaming District, Ontario. The program was designed to provide information on the geochemistry and mineralogy of the basal till in the Timiskaming District, Ontario. The program was designed to provide information on the geochemistry and mineralogy of the basal till in the Timiskaming District, Ontario.

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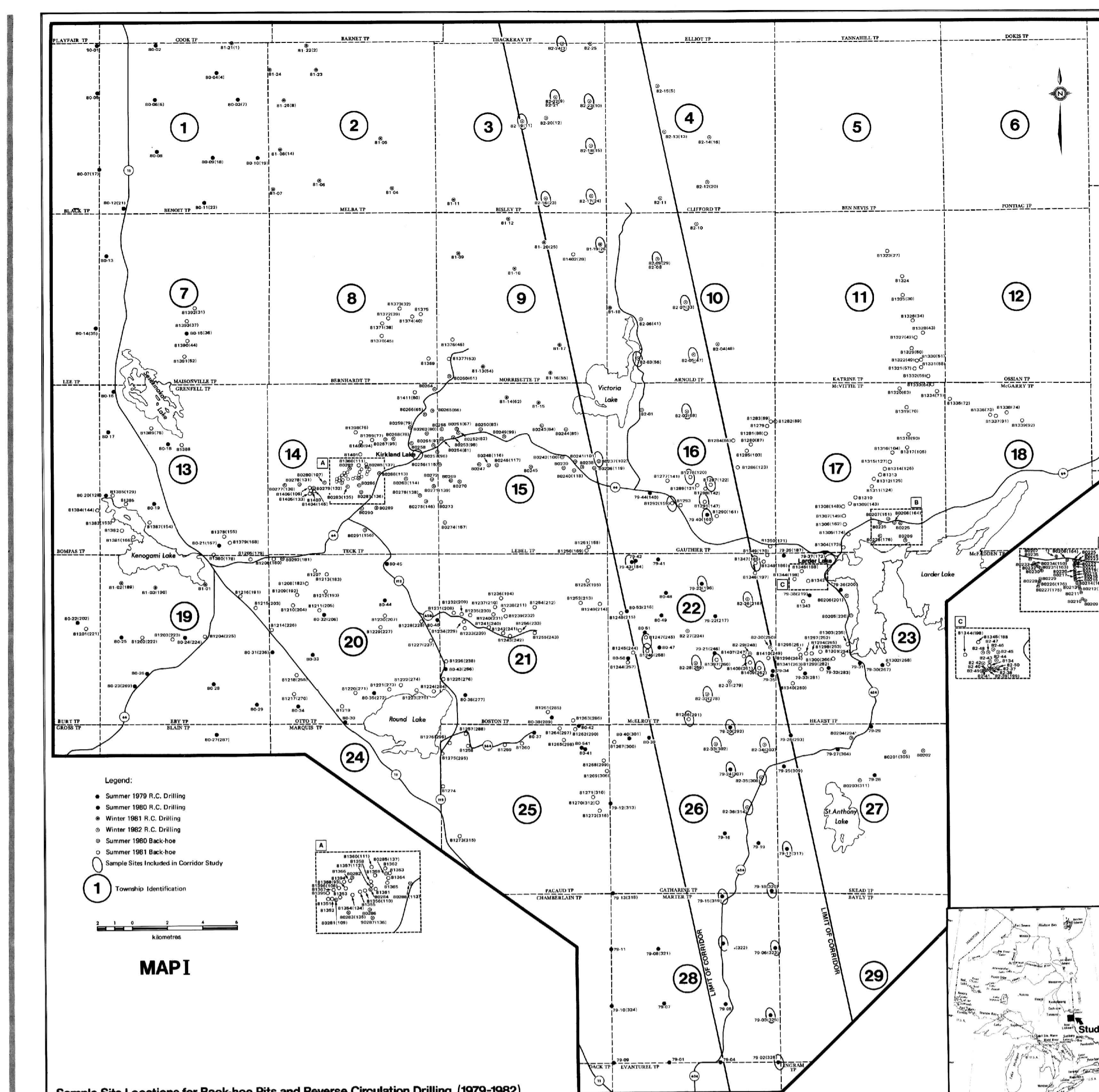
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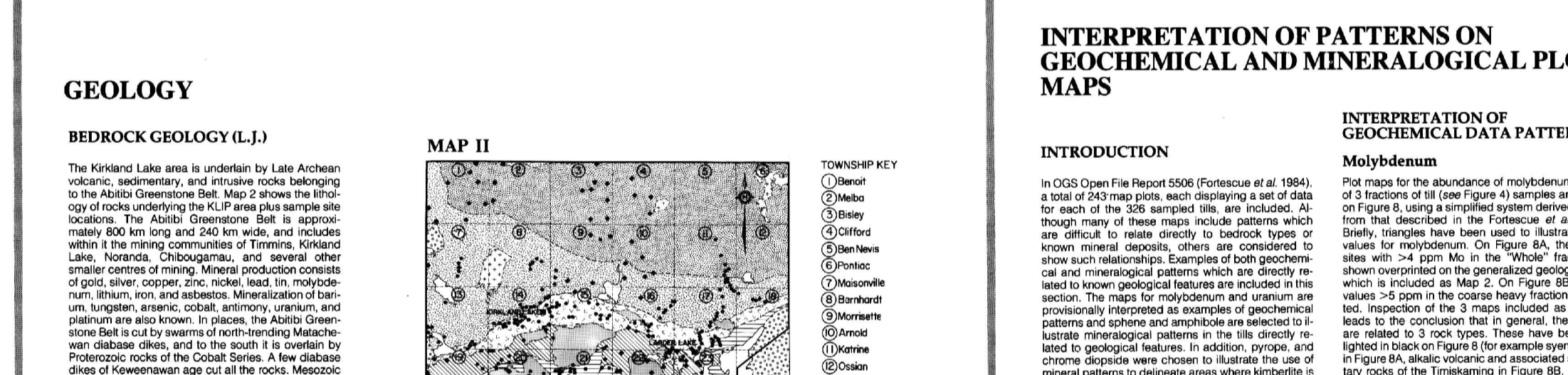
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Map I. Sample Site Locations for Backhoe Pits and Reverse Circulation Drilling (1979-1982)



Map II. MAPI

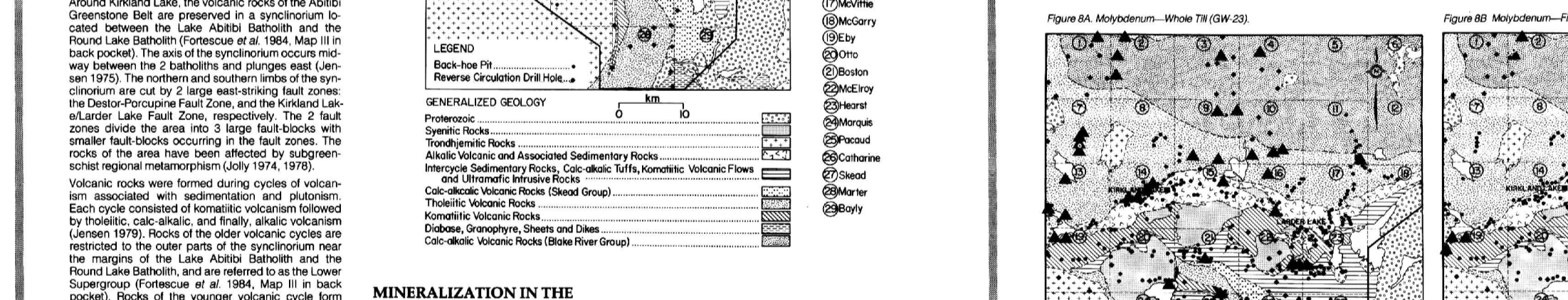


Figure 1. Model of the hypothetical landscape with data for geochemical and mineralogical information obtained from a grid of 325 sample sites.

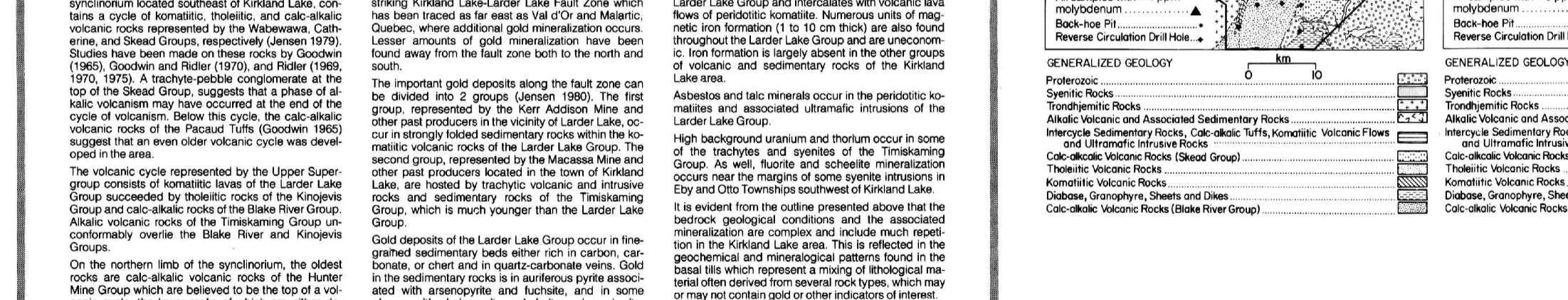


Figure 2. Conceptual model of the basal till.

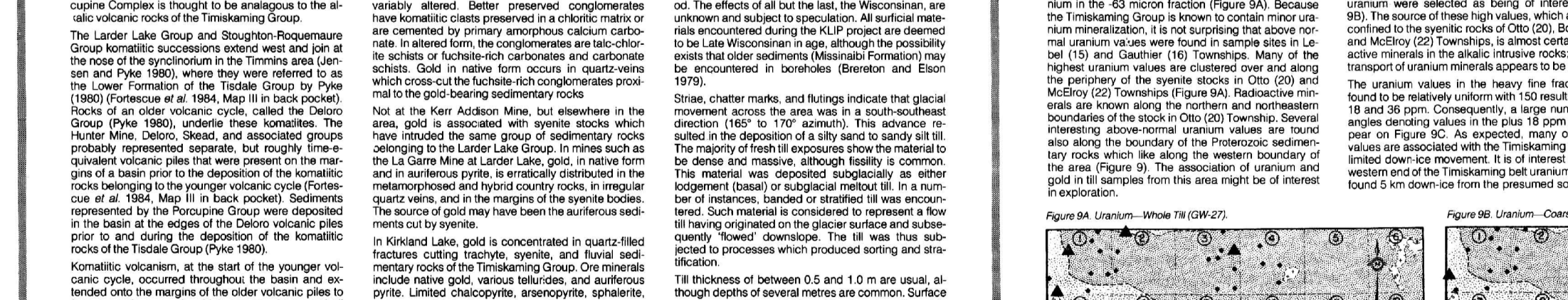


Figure 3. Generalized mineralogical map of the basal till.

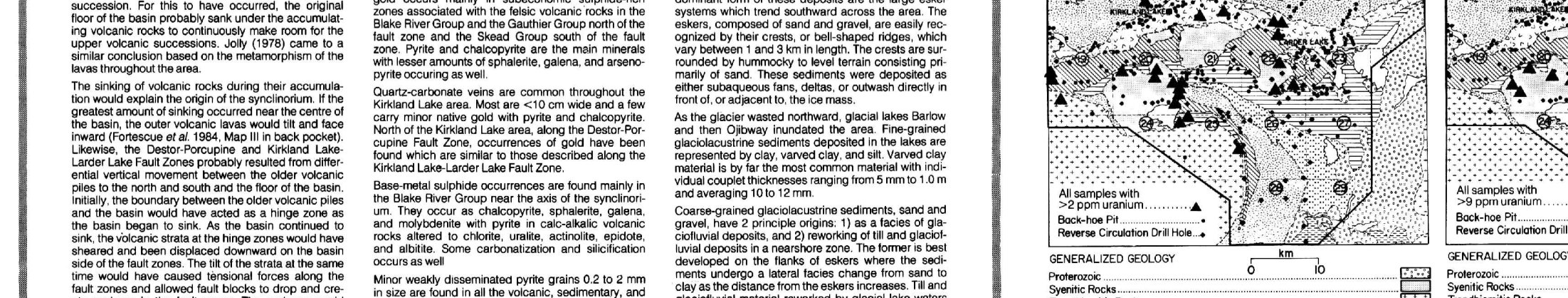


Figure 4. Generalized geochemical map of the basal till.

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VISIBLE GOLD

GOLD GRAINS OBSERVED DURING THE EXAMINATION OF KLIP SAMPLES (J.L. AND J.F.)

Introduction

A unique suite of geochemical and mineralogical information has been obtained from the basal till and related materials during the KLIP project. One of the most interesting features of the study of the basal till is the presence of visible gold grains. This paper reports on the results of the study of these gold grains.

From the viewpoint of geochemistry, visible gold grains are as important as such as they may be in relation to the abundance of gold in rocks and minerals. From the viewpoint of mineralogy, visible gold grains are important because they provide information on the conditions of formation of the basal till. Consequently, data on the occurrence of gold in the basal till are of great importance in the study of the basal till. It is, therefore, the purpose of this paper to report on the results of the study of these gold grains.

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INTERPRETATION OF PATTERNS ON GEOCHEMICAL AND MINERALOGICAL PLOT MAPS

INTRODUCTION

The KLIP geochemical and mineralogical data have been plotted on various maps to show the distribution of these elements across the study area. This paper discusses the interpretation of these patterns and their significance.

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MINERALIZATION IN THE KIRKLAND LAKE AREA

The mineralization in the Kirkland Lake area is related to the presence of the basal till. This paper discusses the distribution and characteristics of the mineralization in this area.

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QUARTZENY GEOLOGY (C.B.)

The quartzenous geology of the Kirkland Lake area is characterized by the presence of quartzite and other quartz-bearing rocks. This paper discusses the distribution and characteristics of these rocks.

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KIMBERLITE INDICATORS

The presence of kimberlite indicators in the basal till is an important feature of the study. This paper discusses the distribution and characteristics of these indicators.

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CONCLUSIONS REGARDING THE BASAL TILL IN REGIONAL STUDIES

The study of the basal till in the Timiskaming District, Ontario, has provided valuable information on its geochemistry and mineralogy. This paper discusses the conclusions of the study and their implications for regional studies.

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CREDITS

This project was a joint project of the Ontario Geological Survey and the Mining Research and Development Society. The project was supervised by V.O. Minne, Director, Ontario Geological Survey. The project was carried out by the staff of the Ontario Geological Survey, Timiskaming District Office.

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