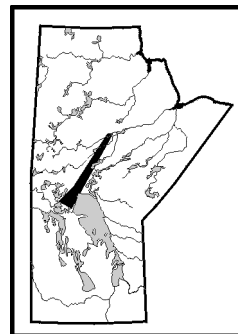


**GS-15 THOMPSON NICKEL BELT PROJECT: PROGRESS REPORT (PARTS OF NTS
63J, 63O AND 63P), MANITOBA**
by J.J. Macek, C.R. McGregor and C.G. Couëslan¹

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SUMMARY

This past winter, a new topographic map was 80% completed for the exposed part of the Thompson Nickel Belt (TNB), using new orthophoto tiles. Upon completion, the map will serve as a base for the final geological compilation map of the TNB.

During the summer of 2002, the four-year program of re-examining Bucko diamond-drill core was completed. All retrieved geological information will be incorporated into the final TNB compilation map.

For the first time, the Thompson Formation in the South pit of the Thompson mine was sampled for a detailed mineralogical and petrological study. These new data will be compared with those already available from the Manasan quarry and the 1C pit of the Thompson mine.

INTRODUCTION

The purpose of all recent geological work (collecting, organizing and processing data, filling geological gaps, preparing a base map, etc.) is the preparation of a final TNB geological compilation map and accompanying detailed report. Much progress has been made toward this end in the office during the winter of 2001–2002 and in the field during the summer of 2002.

OFFICE ACTIVITY

During the winter of 2001–2002, C.R. McGregor and J.J. Macek transferred from orthophoto tiles all infrastructure features (e.g., paved roads, winter and logging roads, bush trails, railway lines and grades, quarries and gravel pits, cut lines, all visible outcrops) onto a new topographic base map that covers the exposed part of the TNB between Moak Lake (northeast of Thompson) and Gormley Lake (southwest of Wabowden). When completed, this new detailed topographic map will serve as a base for all currently available geological information. Some information is already published on preliminary compilation maps of the TNB (Thompson Nickel Belt Geology Working Group, 2000f, g, h) but will be geographically corrected. All new unpublished geological information will be added (Macek et al., 2001). The final product will be a new, GIS-compatible, geological compilation map series of the TNB.

FIELD ACTIVITY

During the 15-week summer field season of 2002, two tasks were accomplished:

- Re-examination of the diamond-drill core stored at Wabowden was completed.
- Geological data and samples were collected from the South pit of the Thompson mine.

Re-examination of the diamond-drill core

The last portion of the diamond-drill core stored at Wabowden has been re-examined. This concludes the four-year program of retrieving geological data begun in 1999 (Macek et al., 1999). When this program was initiated, more than 15 000 boxes of diamond-drill core were stored in outside racks and crosspiles at the Falconbridge Limited Bucko exploration site. This core, which originated from numerous exploration targets drilled in the southern portion of the exposed TNB, represents a valuable source of geological information from a terrane heavily covered by glacial deposits.

The core was moved to Wabowden (Macek et al., 1999) and relogged in subsequent years (Macek et al., 2000, 2001, this report). Geological data thus obtained in 2000 are already incorporated into some preliminary compilation maps of the TNB (Thompson Nickel Belt Geology Working Group, 2000f, g, h). The data obtained from 2001 and 2002 relogging will be incorporated in the final TNB geological compilation maps.

During the re-examination process, all geological units were photographically documented and the core was

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abbreviated. Where possible, generous portions of the core were saved for future geochemical and geochronological investigations. The abbreviated core is stored at the Manitoba Geological Survey (MGS) Drill Core Library in Winnipeg.

Falconbridge Limited is gratefully acknowledged for providing access to this core and all derived documentation. Both the documentation and the core will be accessible to the public at the MGS core library, once they are properly organized and arranged for easy viewing.

Data collection from the South pit of the Thompson mine

The Manasan and Thompson formations of the Ospwagan Group are spectacularly exposed on the western shoulder of South pit at the Thompson mine. These outcrops, which are currently the best available exposures of these formations in the TNB, had never been sampled in detail prior to 2002. They offer an excellent opportunity for detailed mineralogical and petrological studies, and to properly document this important information for these formations. Inco Limited is gratefully acknowledged for granting permission to C.G. Couëslan to conduct these investigations as a basis for his B.Sc. Honours thesis. Mineralogy and petrography of the Thompson Formation 'skarns' will be compared with those of equivalent rocks at both the Manasan quarry and the 1C pit of the Thompson mine. The results will be published in next year's *Report of Activities*.

ACKNOWLEDGMENTS

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Inco Limited is gratefully acknowledged for their very generous and continuous support of all investigations conducted in the TNB, including the latest ones conducted in the South pit of the Thompson mine and the Manasan quarry.

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