



NUCLEAR WASTE SOCIÉTÉ DE GESTION
MANAGEMENT DES DÉCHETS
ORGANIZATION NUCLÉAIRES

Phase 2 Preliminary Assessments
in Crystalline Rock Settings:
Working Together to Identify Study Areas

DRAFT FOR DISCUSSION



JANUARY 2015

Phase 2 preliminary assessments are the next step in the multi-year process of technical study, dialogue and engagement designed to identify a safe and secure site for the long-term management of Canada's used nuclear fuel in a deep geological repository. Phase 2 studies build on work conducted earlier in the siting process and will advance the search for potential sites through identifying smaller siting areas for consideration and more detailed study.

- **Land around interested communities has been identified as potentially suitable.**

Studies conducted to date by the NWMO have suggested there are large land areas in the vicinity of interested communities which may meet technical safety requirements for the deep geological repository and warrant further study. Working together with those in the area, a decision needs to be made on where to focus Phase 2 studies.

- **Phase 2 studies will help identify smaller areas with strong potential to meet technical requirements for safety.**

Phase 2 technical studies will help to identify smaller land areas for consideration. These studies will provide important information to support discussions with the interested community, First Nation and Métis communities in the area, and surrounding communities about a site where the project might be implemented.

- **The NWMO will work closely with the interested community, First Nation and Métis communities in the area, and surrounding communities to plan and implement these studies.**

Phase 2 technical studies involve airborne geophysical surveys, and depending on the outcome of these surveys, surface and subsurface studies, including detailed geological and environmental mapping, and borehole drilling and testing.

The NWMO will work closely with the interested community, First Nation and Métis communities in the area, and surrounding communities to plan and implement these technical studies. The NWMO will engage those in the area in discussions to confirm the plan for airborne geophysical surveys – the first activity in Phase 2 studies. Once airborne surveys are completed, the NWMO will work with those in the area to review the findings from these surveys and plan for walking portions of the land for geological and environmental mapping. Plans for any subsurface studies, such as deep borehole drilling and testing, will also be planned in discussion with those in the area.

- **Land in potentially suitable areas has been temporarily removed from mineral staking and exploration to allow for Phase 2 studies to be conducted. This is the starting point for planning and discussion.**

In preparing for Phase 2 studies, land has been temporarily removed from staking for mineral claims in the vicinity of Northern Ontario communities involved in Phase 2 studies by the province. These Ontario communities are Hornepayne, Ignace, Schreiber, Manitouwadge, White River, Elliot Lake and Blind River. Similarly, the NWMO has staked land in the vicinity of the Saskatchewan community of Creighton to ensure

opportunity for Phase 2 studies to be conducted in that area. These lands are marked on maps that follow. The NWMO will use these maps as a starting point for discussions with communities on how best to plan and implement Phase 2 studies in the area.

- **The identification of a single smaller preferred site is many years off and will involve the interested community, First Nation and Métis communities in the area, and surrounding communities.**

Phase 2 studies are an early step in a multi-year process to identify a site for Canada's used nuclear fuel repository and centre of expertise. Several more years of study will be required before specific sites are identified for consideration and detailed characterization of these sites is initiated. The preferred site must meet robust technical requirements focused on safety. It must also be appropriate, considering the social, economic, cultural and spiritual practices and preferences of those in the area.

The project will only proceed with the interested community, First Nation and Métis communities in the area, and surrounding communities working in partnership to implement the project.

Preparing for Phase 2 Technical Studies

- Some land has been temporarily removed from staking for mineral claims to provide an opportunity for further study. These areas have been identified as potentially technically suitable to safely and securely contain and isolate used nuclear fuel over the long term.
- We are still several years away from selecting a site. The temporary removal of land from mineral staking is intended to facilitate further assessment. The NWMO will continue to work with interested communities, First Nation and Métis communities in the area and surrounding communities to identify a potentially suitable site.
- These areas of land are much larger than would be required for the deep geological repository and associated facilities.
- Surface activities such as trapping, tourism, hunting, fishing, berry picking, and gathering of medicinal plants will continue to be encouraged. The temporary removal of land from mineral staking is not intended to affect these activities.
- The NWMO will work with interested communities, First Nation and Métis communities in the area and surrounding communities to help determine when airborne surveys are conducted in order to minimize any disruption to regular activities on the land and to ensure the public is notified about the activity.
- As land is assessed, areas not considered potentially suitable for the NWMO project will be identified to the province so the land can be released.
- The temporary removal of land from mineral staking is not expected to negatively affect mineral exploration; the NWMO is seeking areas that do not have the potential for, or have known, exploitable natural resources.
- Phase 2 technical studies are conducted with the involvement of the interested community, First Nation and Métis communities in the area, and surrounding communities. Involvement in research studies is not interpreted as an indication of support for the project nor of a particular site.

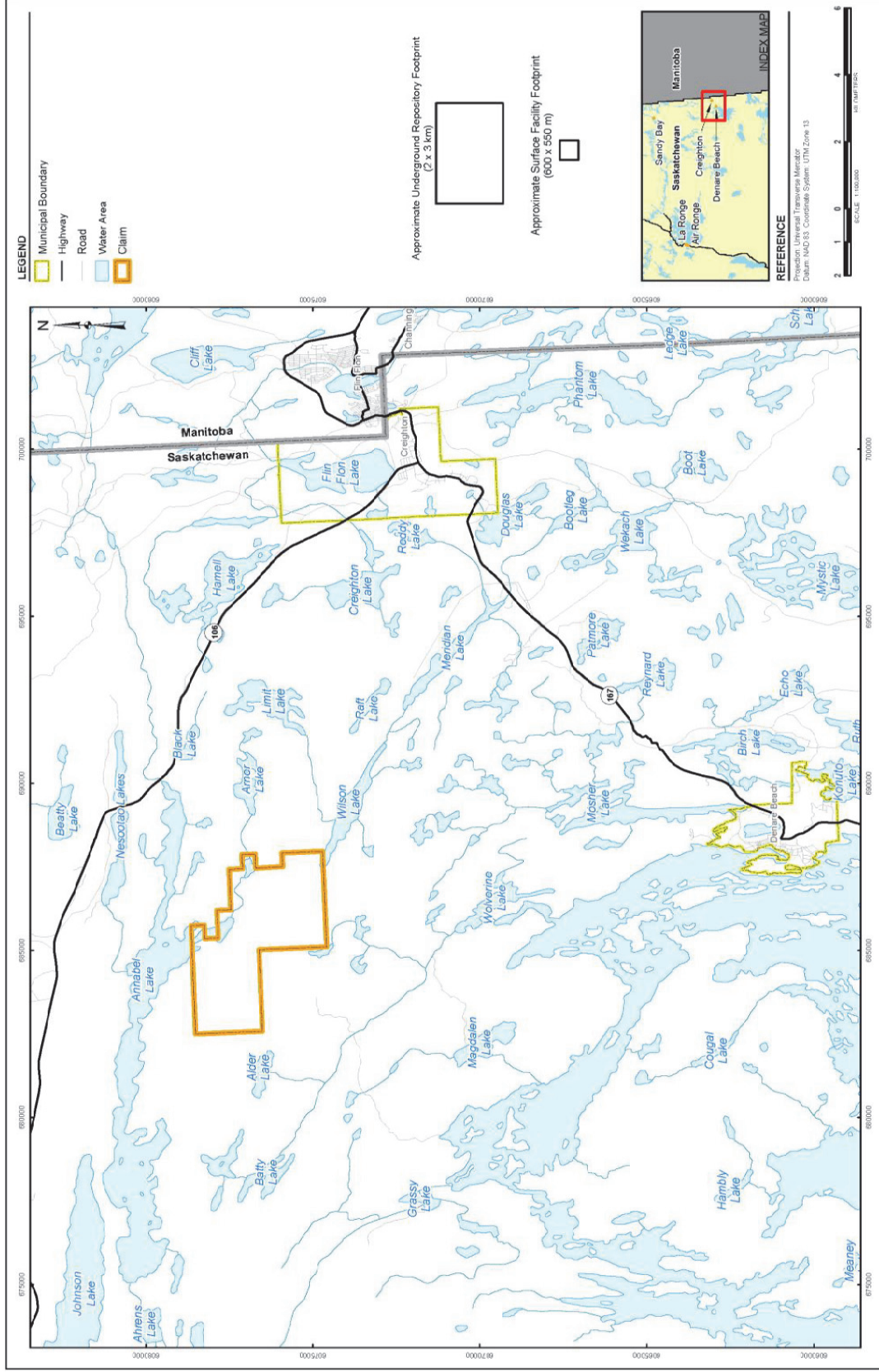


Figure 1: Creighton area, Saskatchewan – Land staked to facilitate Phase 2 studies

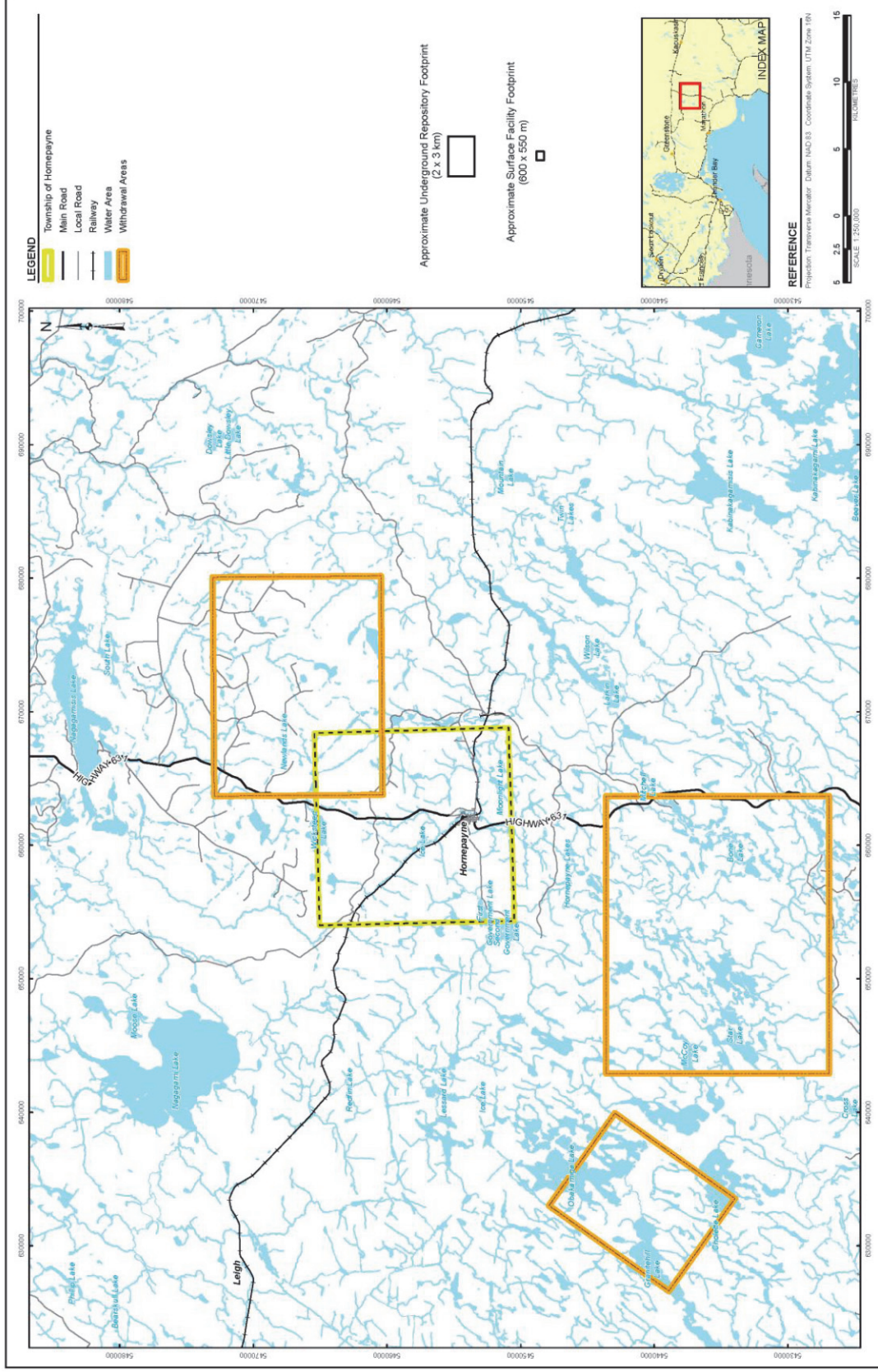


Figure 2: Hornepayne area, Ontario – Land withdrawn to facilitate Phase 2 studies

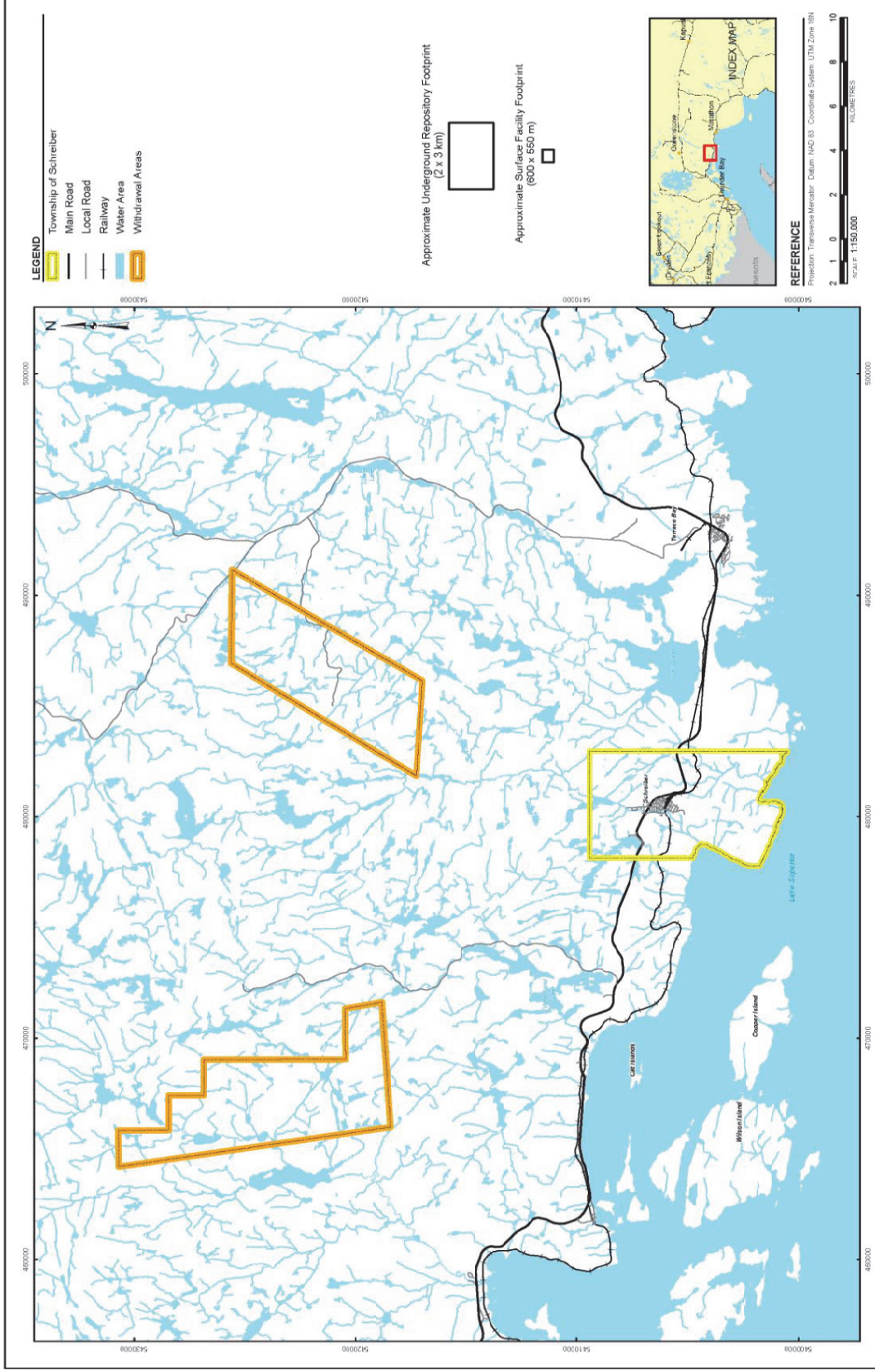


Figure 4: Schreiber area, Ontario – Land withdrawn to facilitate Phase 2 studies

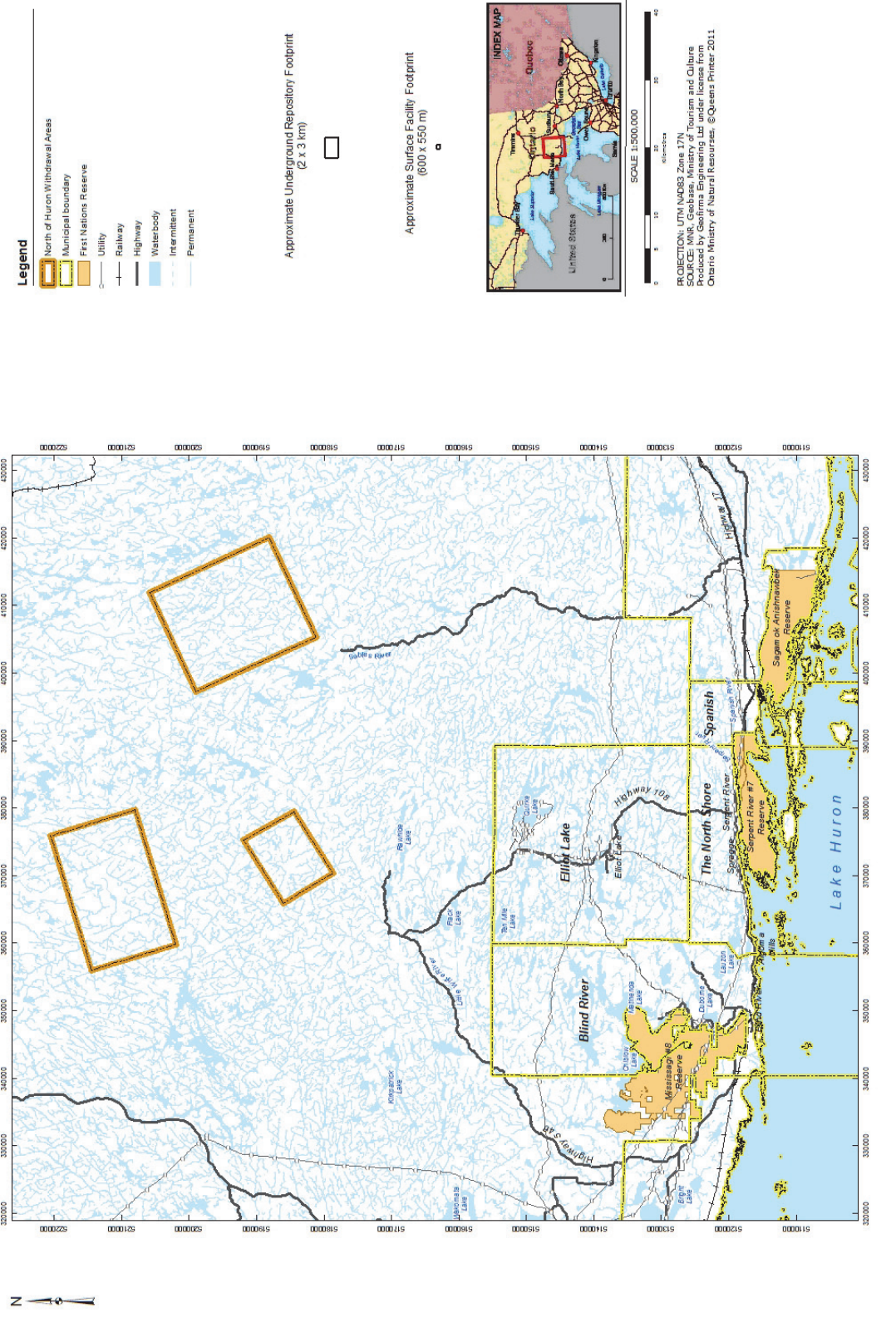


Figure 5: Blind River and Elliot Lake area, Ontario – Land withdrawn to facilitate Phase 2 studies

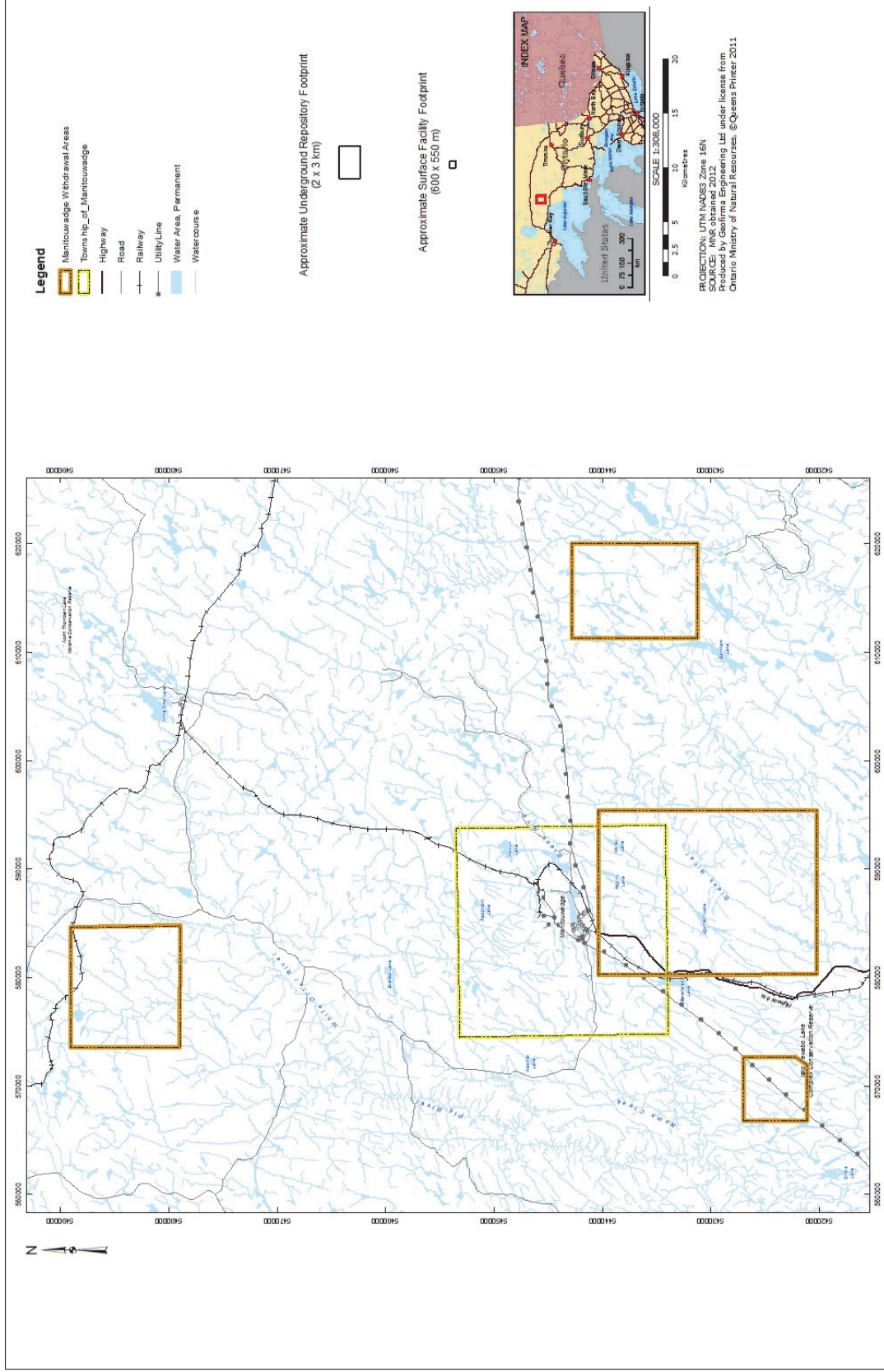


Figure 6: Manitowadge area, Ontario – Land withdrawn to facilitate Phase 2 studies

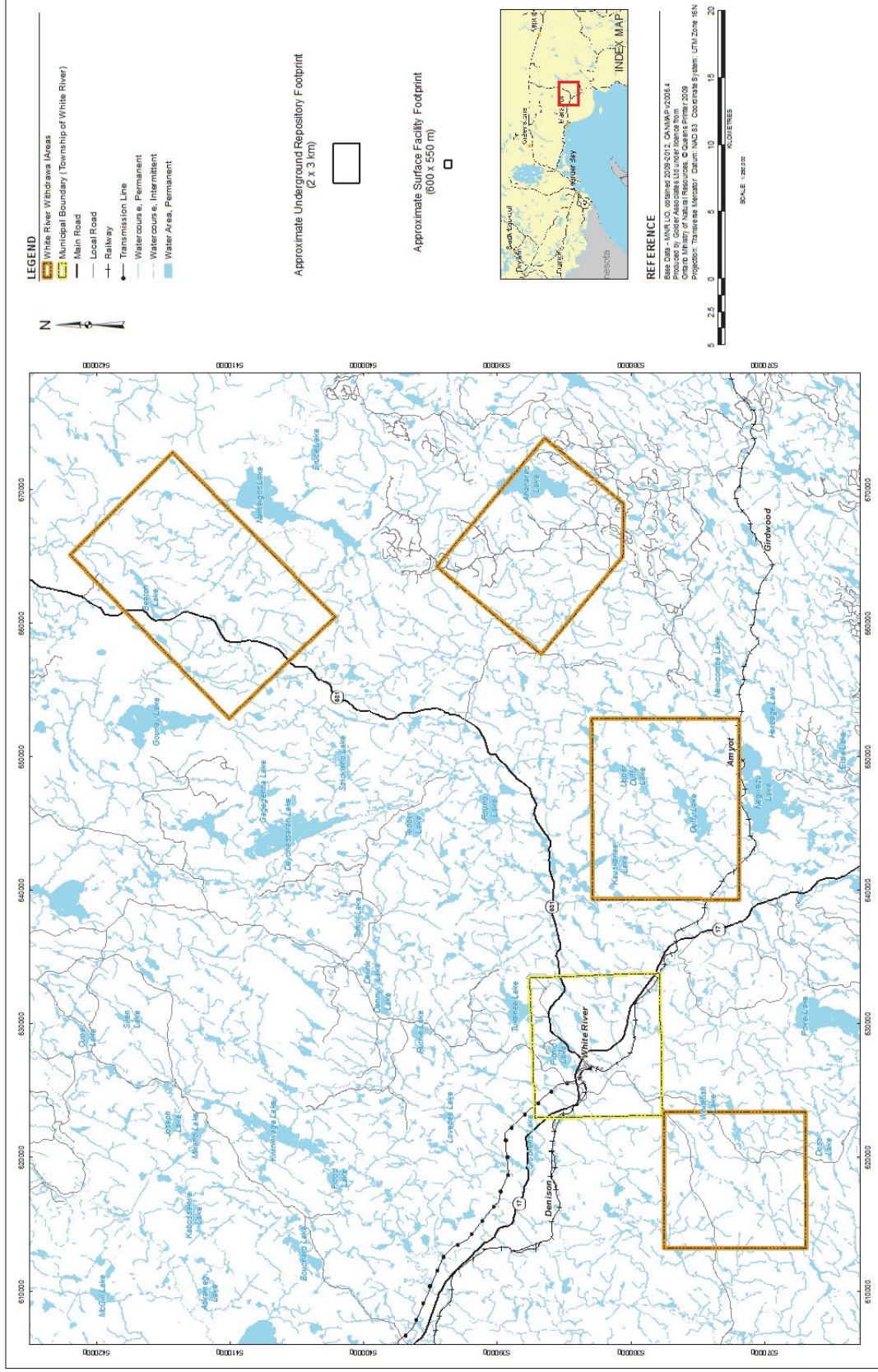


Figure 7: White River area, Ontario – Land withdrawn to facilitate Phase 2 studies