



Summary of the Phase 1 Ground-Penetrating Radar Search at Blue Quills IRS, AB April 2023

Before reading further, this summary contains information related to unmarked graves at former Indian Residential Schools. This information is unsettling for most people. If you are experiencing trauma or feeling triggered, help will be available on-site during the ceremony while we share the results of the ground search, and is also available 24/7 for survivors and their families through the Indian Residential Schools Crisis Line at 1-866-925-4419. Mental health support for Indigenous peoples across the land we call Canada is available through the Hope for Wellness chatline at 1-800-721-0066 or using the chat box at <https://www.hopeforwellness.ca/>.

Between August 9th and 13th, 2022, Kisha Supernant and the team at the Institute of Prairie and Indigenous Archaeology (IPIA) visited the Blue Quills Reserve near St. Paul, Alberta at the invitation of University nuhelot'ine thiyots'i nistameyimâkanak Blue Quills (UnBQ) to conduct Phase 1 of the geophysical investigation for Blue Quills IRS. Ground-based ground-penetrating radar was conducted at target areas identified by Elders and Survivors, including the areas to the south and west of the healing garden, the area around the former sweat lodge, and the area extending west towards the culture camp. Drone imagery was taken in the areas surveyed to provide high resolution orthomaps. The following is a summary of our findings that accompanies a detailed report provided to UnBQ.

Before discussing the results of the survey, it is important to recognize that ground-penetrating radar is a geophysical technique that looks for changes in signals sent by the GPR as they move through the ground and return to the antenna. GPR looks for changes in the soil related to grave shafts and is not able to confirm the presence or absence of human remains. It is therefore not a foolproof method of detecting unmarked graves as it relies on specialized knowledge of data interpretation. A negative result from a remote sensing survey (including ground penetrating radar) does not mean that there are no graves in a particular location; it only means that further analysis or study is needed to confirm, especially if Survivor testimony, oral history, or archival research suggests otherwise.

Also, there is currently no standard on what language to use when discussing GPR results, and many groups use different terminology to refer to the same thing. In our report, the words '**potential unmarked grave**' are used as an umbrella term to include any areas **independently identified by two or more analysts** in the GPR data as containing burial traits associated with graves with a local comparison to known burials (e.g., from results in a nearby cemetery). The term '**reflections of interest**' is used to describe reflections that have traits in the GPR data that are consistent with burials seen in the published scientific literature, but lack a local comparison.

During the Phase 1 Survey, 18 grids were placed in the target areas identified by community members as areas of concern, totaling approximately 1.29 acres in area using the [Canadian Archaeological Association](#)'s established best practices for single-channel GPR data collection when searching for unmarked graves. In general, the GPR survey worked reasonably well in the areas that were surveyed. There were a few areas where the GPR data was noisy and reflective, and a soil layer around 30 cm below the surface caused some issues with seeing reflections below 30 cm in many of the

grids. Though this layer obstructed the data below it, we were able to see below it with extra processing and adjustments to the data.

Reflections of interest were found in every area investigated during the Phase 1 survey, with a total of 19 reflections of interest identified by both analysts with burial traits seen in the scientific literature (Table 1). However, more information is needed in order to determine the exact nature of these reflections as we do not have comparison data of known graves in the area. These results should be taken with caution as they indicate the highest potential areas that contain reflections worth further investigation with other techniques to determine their exact nature. Further work may be desired by Survivors or UnBQ on these locations to increase confidence in the results or to explore additional areas of concern. Once additional information is available to compare the results with, a reanalysis of the results may be able to provide additional confidence of what these particular reflections represent.

Table 1. Summary table of GPR results.

Phase 1 Area	Reflections of Interest
West of the Healing Garden	7
South of the Healing Garden	4
Former Sweat Lodge Area	3
Field Heading Towards the Culture Camp	5
Total Reflections of Interest =	19

The results from Phase 1 suggest that additional research should be undertaken to identify possible burial areas associated with the Blue Quills IRS. We recognize that the results of the survey for unmarked graves may be distressing for members of the community and for all the survivors, as every child matters and there remains a lack of justice and accountability for what happened. We also recognize the results of the survey may be disappointing for community members looking for answers. Though these results may not have much clarity or certainty, they do provide important information and are a starting point for further investigation and alternative options moving forward.

Overall, this report details the results of what is the beginning of a long journey to find answers to what happened to the children who never came home from the residential school at the Blue Quills IRS.. Out of the many questions that need answers, GPR and other remote sensing techniques can only address the question of ‘where’ potential unmarked burials are located. Please note that our recommendations are only for the location of possible graves of children. What happens after these locations are identified will depend on how the community wishes to proceed.

The team at the IPIA would like to express our heartfelt gratitude and appreciation to the Elders, Helpers, Survivors, and Community Members who came out to visit during the Phase 1 survey. Your prayers, guidance, and companionship encircled our team throughout the week and gave us strength. We are thankful for the continued care and support from the team at UnBQ as they work to find their path forward.

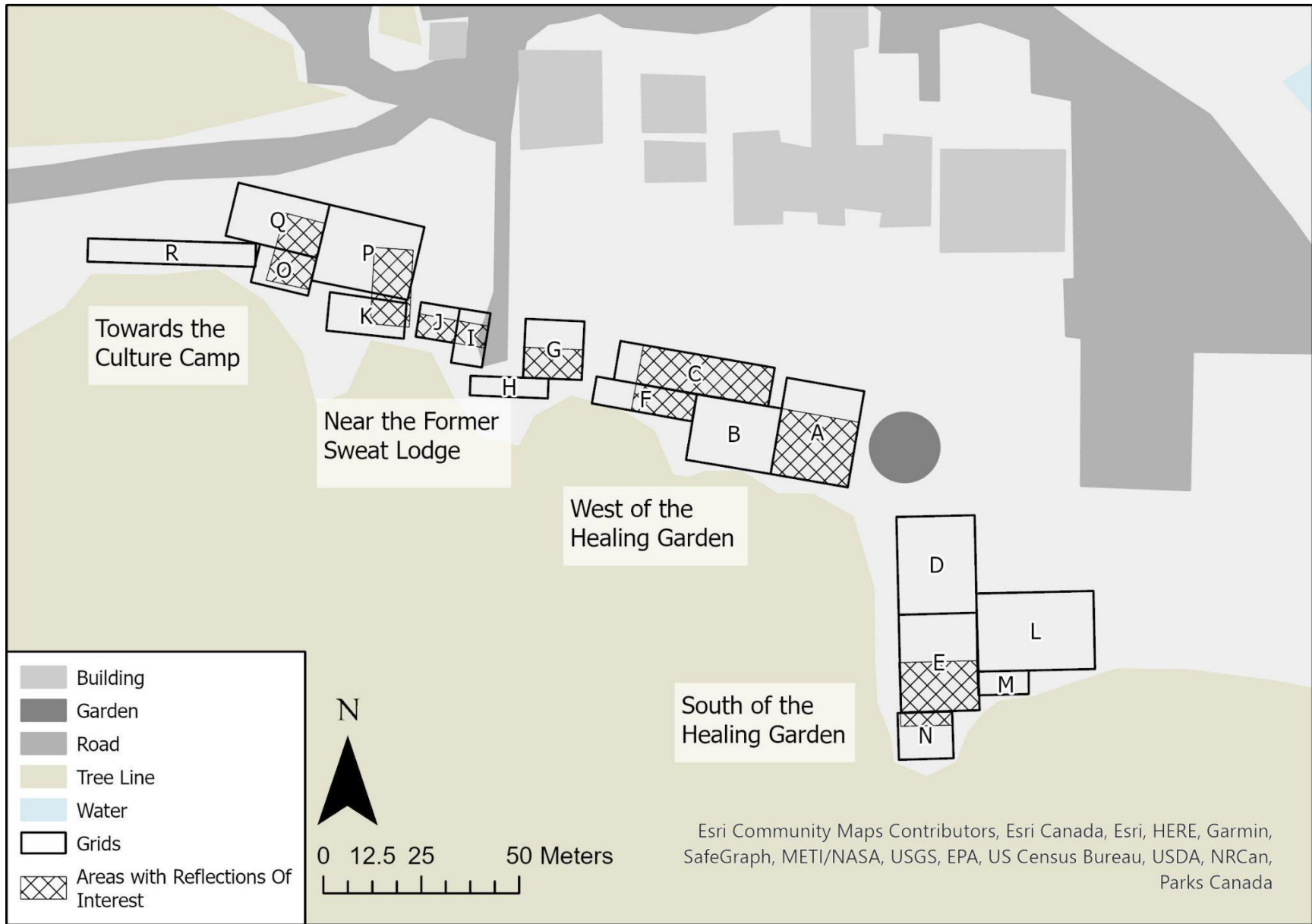


Figure 1. Schematic map showing the location of 18 GPR grids of the Phase 1 survey at Blue Quills IRS and generalized areas that contain reflections of interest.