March 2012

Nunavut Permit No. 11-035A

Prosperity Goldfields Corp.
Kiyuk Lake Project
2011 Exploration Program

Heritage Resources Impact Assessment

Submitted to:
Department of Culture, Language, Elders and Youth
PO Box 310
Igloolik, Nunavut
X0A 0L0

REPORT

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Report Number: 11-1361-0047

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Golder Associates

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Executive Summary

Golder Associates Ltd. was contracted by Prosperity Goldfields Corp. to conduct an archaeological assessment of the 2011 exploratory drill program at their Kiyuk Lake Property in southern Nunavut. This assessment was completed under Class 2 Nunavut Archaeologist Permit No. 11-035A issued by the Department of Culture, Language, Elders and Youth, Nunavut.

During the assessment, 19 drill locations, the associated camp, and the location of a potential airstrip were examined. No archaeological sites were observed during the course of the assessment. As a result, there are no further heritage concerns with the 2011 Kiyuk Lake Project. This Final Report fulfils the permitting requirements necessary for the completion of this archaeological assessment.

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1.0 INTRODUCTION

Prosperity Goldfields Corp. (Prosperity) is conducting mineral exploration activities in their Kiyuk Lake Project area. Kiyuk Lake is located approximately 350 km southwest of Arviat near the southwest corner of Nunavut, between Ennadai Lake and Nueltin Lake. This program will consist of 19 exploratory holes, a field camp, and a proposed airstrip.

To support the terms and conditions of their land use permit, Prosperity retained Golder Associates Ltd. (Golder) to conduct an archaeological assessment of the drill locations and supporting infrastructure. The objective of the assessment was to examine the project area and determine if any heritage resources were in potential conflict with proposed activities.

The assessment was completed on August 8, 2011 under Class 2 Nunavut Archaeologist Permit No. 11-035A issued by the Department of Culture, Language, Elders and Youth, Nunavut. The field crew consisted of Brad Novecosky (Archaeologist, Golder) and Leo Ikakhik of Arviat, Nunavut.

This report summarizes the results of the assessment. Section 2 provides a description of the project location and environment. Section 3 summarizes previous archaeological research carried out in the region, while Section 4 provides an overview of the culture history of the Barrenlands of Nunavut. Section 5 outlines the assessment methods and results are discussed in Section 6. Summary and recommendations can be found in Section 7.

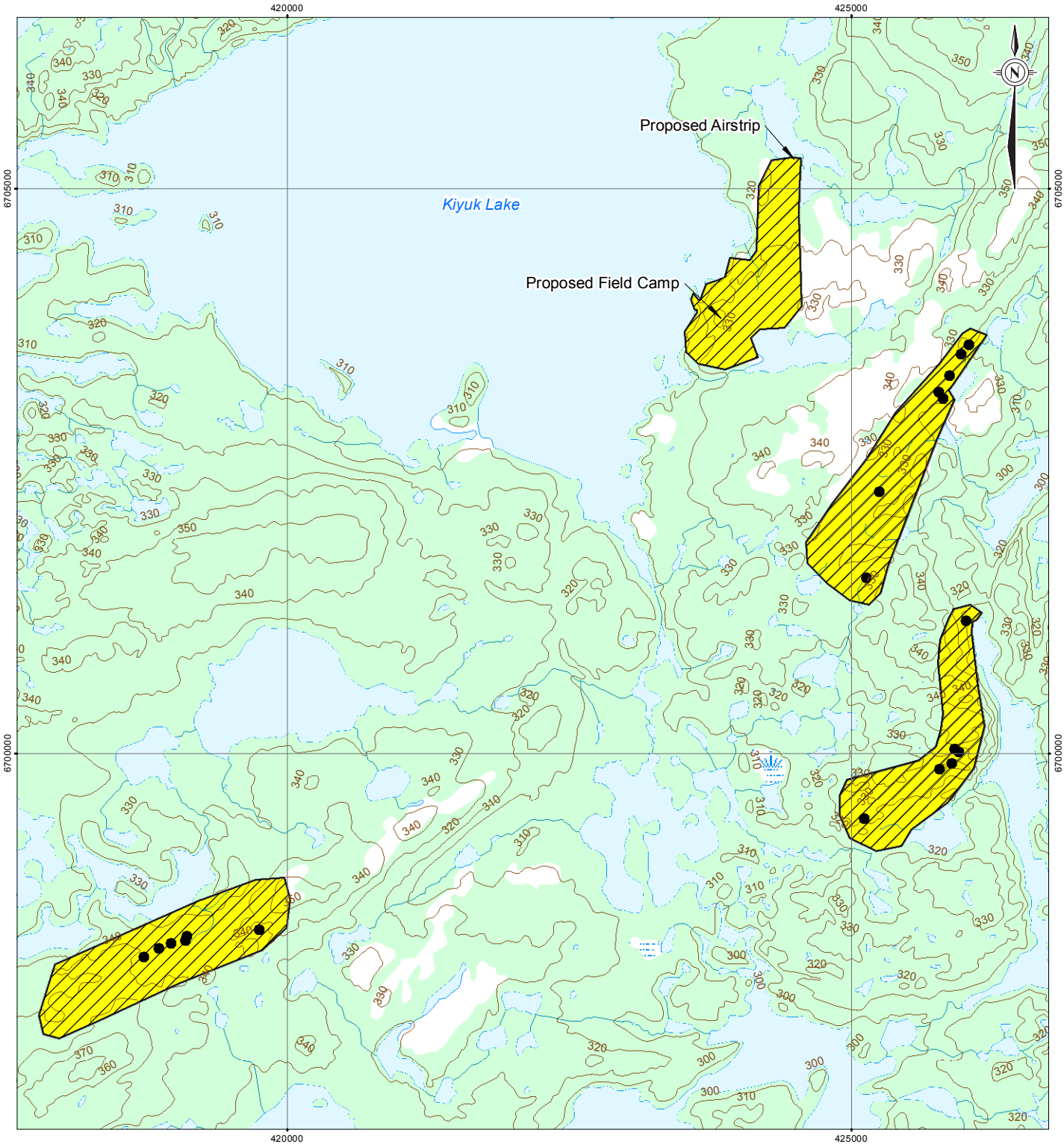
2.0 PROJECT LOCATION AND ENVIRONMENT

The Kiyuk Lake Project is located in southwestern Nunavut, approximately 40 km west of Nueltin Lake and 50 km north of the Manitoba border (Figure 1). Hogarth Lake, Poorfish Lake, and Windy Lake are located near the project area, as well as numerous unnamed lakes and drainages. The 2011 activities located in five claim areas: MAR 3, MAR 6, MAR 10, KIY 1, and KIY 2 (Appendix A).

The field camp is located on an upland overlooking the east shore of Kiyuk Lake, while the airstrip is located approximately 1.6 km north of camp near the south shore of a small unnamed lake. Three drilling areas were assessed as part of the 2011 exploration program. This included a cluster of seven drill holes (CS11-001 to 006 and HL11-001) located along a series of small, unnamed lakes 2.3 km east of Kiyuk Lake; six drill holes (RUS11-001 to 005 and NS11-001) located west of a large, linear lake 3.6 km southeast of Kiyuk Lake; and a cluster of six drill holes (GP11-001 to 006) located 5.6 km south of Kiyuk Lake.

In a broader context, the Kiyuk Lake Project is situated within the Kazan River Upland Ecoregion of the Taiga Shield Ecozone. The Kazan River Upland stretches westward from the Seal River in Manitoba to near the East Arm Hills in the Northwest Territories (Agriculture and Agri-food Canada 1998). The environment is characterized by:

> *... hummocky Precambrian bedrock partially covered by a thin veneer of acidic, sandy, granitic till. Vegetation ranges from stands of stunted black spruce and tamarack with dwarf birch, willows, northern Labrador tea, sedges and mosses, with white spruce, ericaceous shrubs and lichens on drier sites, and tundra shrub communities and sedge tussock vegetation on wetter sites* (Agriculture and Agri-food Canada 1998).



LEGEND

- PROPOSED DRILL HOLE
- ASSESSED AREA

1 0 1

SCALE 1:50,000 KILOMETRES

PROJECT

PROSPERITY GOLDFIELDS CORP.
KIYUK LAKE PROJECT

TITLE

LOCATION OF ASSESSED AREAS

REFERENCE

NTS MAPSHEET 65C08
DATUM: NAD83 PROJECTION: UTM ZONE 14

Golder Associates
Saskatoon, Saskatchewan

PROJECT	11-1361-0047		FILE No.	
DESIGN			SCALE AS SHOWN	REV. 0
GIS	JW	05/01/12	FIGURE:1	
CHECK	PY	13/03/12		
REVIEW	BN	13/03/12		

G:\2011\1361\11-1361-0047 Propserity Gold\Figures\Working\Heritage\11-1361-0047 Kiyuk Lake Project.mxd Date: 3/15/2012 10:45:24 AM

A variety of wildlife including barren-ground caribou, arctic fox, wolf, wolverine, weasel, otter, mink, and snowshoe hare are found in the Ecoregion.

3.0 PREVIOUS STUDIES

An archaeological site search request was submitted to the Department of Culture, Language, Elders and Youth (CLEY) for the Kiyuk Lake Project area. On July 12, 2011 Douglas R. Stenton (Director, Culture and Heritage, Government of Nunavut) replied by email indicating that a site search was completed and no known archaeological sites were recorded in the project area.

To date, there has been no previous archaeological research conducted in the Kiyuk Lake Project area. The nearest archaeological investigations were conducted by Dr. Ronald J. Nash (1975) as part of the Transitional Forest Archaeological Project. This five year study was carried out during the 1960s and early 1970s and focussed on the central sub-arctic (Nash 1975). Although the study did not extend to Kiyuk Lake, Nash investigated the Windy Bay area (also known as Smith Bay) located on the northwest shore of Nueltin Lake, approximately 30 km northeast of Kiyuk Lake.

Nash's fieldwork was inspired by explorer P.G. Downes' visit in 1939 to the Red River Post west of Windy Bay (Downes 1943); author Farley Mowatt's 1947 study of the Ihalmiut Eskimos living north of Nueltin Lake (Mowat 1951); and naturalist Dr. Francis Harper's 1947 study of flora and fauna in the Windy Bay area (Harper 1964). Nash chose to study the Windy Bay area because it was a known caribou crossing, and Harper's report contained photos of archaeological sites including tent rings and look-out sites (Nash 1975).

4.0 CULTURAL SETTING

The culture history or Precontact occupation of the Kiyuk Lake area is relatively unknown as a result of limited archaeological studies carried out in the project area. However, a number of documented archaeological sites along Windy Lake and Nueltin Lake in combination with archaeological sites elsewhere in southern Nunavut and northern Manitoba provide information on the culture history of this region.

Occupation of this region began shortly after the recession of the glaciers approximately 8,000 years ago (Nash 1975). The earliest recognized Paleo-Indian archaeological tradition in the region is Agate Basin (8,000 to 6,500 rcybp). These long lanceolate points with tapered and ground bases were manufactured largely out of quartzite and are suggested to date from approximately 8,000 to 7,000 rcybp (Gordon 1996). In northern Manitoba, one Agate Basin site has been recorded along the Cochrane River and two sites from Little Duck Lake including the Duck Lake Narrows site (Nash 1975). In addition, Paleo-Indian artifacts including a large knife and a large stemmed projectile point similar to Alberta types have been recovered from the Little Duck Lake locality. The Flat Island Site (JdLx-40) along Windy Lake may represent the earliest recorded occupation near Kiyuk Lake; with projectile points resembling Scottsbluff forms recovered from this site (Nash 1975).

Approximately 6,500 rcybp, Paleo-Indian cultures began to shift to an Archaic way of life, which is commonly referred to as the Shield Archaic Tradition (6,500 to 3,500 rcybp) (Wright 1972). This cultural development coincided with a warming period that resulted in the expansion of the boreal forest as far north as Dubawnt Lake.

The archaeological culture is characterized by projectile points manufactured primarily out of quartzite, but differ from the preceding Northern Plano Tradition in that they are “side-notched lanceheads with ground, rocker [convex] bases” (Gordon 1996). Friesen (1989) has suggested that the Shield Archaic peoples were more adapted to the Canadian Shield and boreal forest environments of the subarctic, and as such, may only have had a marginal presence in the southern interior of Nunavut, restricted to the Thelon River and its Dubawnt and Kazan tributaries.

The Shield Archaic Tradition is followed by the Pre-Dorset Tradition, which lasted from approximately 3,450 to 2,650 rcybp (Gordon 1996). Pre-Dorset is part of the Arctic Small Tool Tradition well known in the high arctic (Irving 1970; Maxwell 1984). The migration of these early Pre-Inuit groups corresponded with a cooling trend that adversely affected maritime hunting. As a result, these arctic-adapted people were forced further south in their quest for food. They were able to exploit migrating caribou herds as a result of the southward retreating forest edge. The Pile O’ Rocks site located on a known caribou migration route near the Windy River provides evidence of continuous use from Pre-Dorset times through to the Historic Period (Nash 1975). The Pre-Dorset Tradition is characterized archaeologically by very small, finely retouched tools manufactured from fine grained, banded chert. Distinct tools include end and side blades used for harpoons and arrows, burins, and micro-cores.

The Taltheilei Tradition is the latest precontact archaeological culture identified in the study area, and dates from approximately 2,600 to 200 rcybp (Gordon 1996). People representing this tradition moved into the region from the west after the preceding cooling period ended, and are generally regarded as ancestral Dené (Clark 1987). The nearest archaeological evidence of the Taltheilei Tradition to the project area comes from the Jonson site along the southwest shore of Nueltin Lake and site NM-62-14 near Baralzon Lake (Nash 1975).

The material culture of the Taltheilei Tradition is characterized by a continuum of lanceolate and notched points, distinct discoidal hide-working tools known as chithos, and a variety of scraping tools. This archaeological culture has been divided into three Periods based on projectile point style: the Early Period (2,600 to 1,800 rcybp) is characterized by long stemmed points; the Middle Period (1,800 to 1,300 rcybp) by unshouldered lanceolate points; and the Late Period (1,300 to 200 rcybp) by small side and corner-notched points (Gordon 1996).

The Historic Period in the subarctic begins with the establishment of fur trade posts on the western shore of Hudson Bay in 1670. While Aboriginal groups travelled to the posts in order to trade, early traders eager to make contact with more distant Aboriginal groups ventured into the Barrenlands of Nunavut. It is believed that explorer Samuel Hearne passed through the Windy Bay area during his journey to the Coppermine River in 1771 (Nash 1975). It was during the early Historic Period that Dené groups, decimated by European disease, abandoned the Barrenlands in favour of the forests to the south to more effectively engage in the fur trade (Gordon 1996). Following this migration, the historic Caribou Inuit moved into the Barrenlands, either from the central arctic or the east coast of Hudson’s Bay (Burch 1979; Fossett 2001; Gordon 1996; Linnamae and Clarke 1976). Their descendents have occupied much of the interior of Nunavut ever since, including the Kazan, Dubawnt, and lower Thelon drainage basins. The margins of these major rivers and lakes are dominated by Inuit sites, which are characterized by stone features including inuksuit, tent rings, caches, hunting blinds, and kayak stands (Friesen 1989). The precontact origins of the Caribou Inuit ultimately lie in the Thule Tradition, which spread across the central and eastern arctic approximately 1,000 rcybp (McGhee 1984).

It was not until the 20th century that fur trade posts were established in the interior of Nunavut (Usher 1971). Around 1917 the Hudson's Bay Company, Revillon Frères, and Independent traders began to establish posts on Nueltin Lake (Nash 1975; Usher 1971). By the mid-1930s the Hudson's Bay Company had total control of trade in the area and operated a post, known as the "Old Post," along the Red River (Nash 1975). Following the abandonment of the Old Post, a new post was built at the mouth of the Windy River in 1947 and abandoned in 1948 (Nash 1975).

5.0 METHODS

5.1 Field Investigation

Archaeological field studies for the Kiyuk Lake Project were conducted with the intent of identifying significant heritage and cultural resources that might be affected by project activities associated with the proposed 2011 exploration program. This included three drill areas (containing 19 drill holes) and a camp/airstrip area. Locations identified for assessment were investigated using a combination of low-level helicopter survey and pedestrian reconnaissance.

The four areas were first examined by helicopter to identify areas with heritage potential. Attention was paid to well-drained, elevated landforms suitable for habitation, especially areas adjacent to water bodies, including the shore line of Kiyuk Lake. Upon completion of the aerial survey, the field crew was dropped off in each area to carry out pedestrian reconnaissance of the 19 drill locations, camp, and airstrip. Surveyed areas were recorded using hand held GPS units, and digital photographs were taken of drill hole locations, significant landforms, and any existing exposures.

6.0 RESULTS

Approximately 468 ha of land were examined by low-level aerial survey and 24 linear kilometres were examined by pedestrian reconnaissance on the ground. This included assessment of the 19 drill hole locations, field camp and proposed airstrip. The locations of each drill hole and assessment results are summarized in Table 1 below.

Table 1: Summary of Drill Hole Locations and Assessment Results

Drill Hole	Zone (NAD 83)	East	North	Claim Area	Environment	Heritage Resource in Conflict
Cs11-001	14V	6703544	425971	KIY 2	Located along chain of small, unnamed lakes 2.3 km east of Kiyuk Lake	No
Cs11-002	14V	6703151	425808	KIY 2	Located along chain of small, unnamed lakes 2.3 km east of Kiyuk Lake	No
Cs11-003	14V	6703206.	425768	KIY 2	Located along chain of small, unnamed lakes 2.3 km east of Kiyuk Lake	No
Cs11-004	14V	6703349	425867	KIY 2	Located along chain of small, unnamed lakes 2.3 km east of Kiyuk Lake	No
Cs11-005	14V	6702326	425244	KIY 2	Located along chain of small, unnamed lakes 2.3 km east of Kiyuk Lake	No
Cs11-006	14V	6703625	426038	KIY 2	Located along chain of small, unnamed lakes 2.3 km east of Kiyuk Lake	No
Hl11-001	14V	6701564	425129	MAR 10	Located along chain of small, unnamed lakes 2.3 km east of Kiyuk Lake	No

Table 1: Summary of Drill Hole Locations and Assessment Results (continued)

Drill Hole	Zone (NAD 83)	East	North	Claim Area	Environment	Heritage Resource in Conflict
Ns11-001	14V	6701181	426012	MAR 10	Located near northern tip of unnamed lake 3.2 km southeast of Kiyuk Lake	No
Rus11-001	14V	6700020	425949	MAR 10	Located 3.6 km southeast of Kiyuk Lake, west of unnamed lake	No
Rus11-002	14V	6699920	425883	MAR 10	Located 3.6 km southeast of Kiyuk Lake, west of unnamed lake	No
Rus11-003	14V	6699864	425777	MAR 10	Located 3.6 km southeast of Kiyuk Lake, west of unnamed lake	No
Rus11-004	14V	6699429	425110	MAR 10	Located 3.4 km southeast of Kiyuk Lake	No
Rus11-005	14V	6700047	425909	MAR 10	Located 3.6 km southeast of Kiyuk Lake, west of unnamed lake	No
Gp11-001	14V	6698282	418862	KIY 1	Located on small unnamed lake 5.6 km south of Kiyuk Lake	No
Gp11-002	14V	6698204	418728	KIY 1	Located on small unnamed lake 5.6 km south of Kiyuk Lake	No
Gp11-003	14V	6698323	418974	KIY 1	Located on small unnamed lake 5.6 km south of Kiyuk Lake	No
Gp11-004	14V	6698347	419098	KIY 1	Located on small unnamed lake 5.6 km south of Kiyuk Lake	No
Gp11-005	14V	6698390	419114	KIY 1	Located on small unnamed lake 5.6 km south of Kiyuk Lake	No
Gp11-006	14V	6698445	419755	KIY 1	Located on small unnamed lake 5.6 km south of Kiyuk Lake	No

The east shoreline of Kiyuk Lake adjacent to the field camp and proposed airstrip was inspected for cultural materials (Photo 1). During the assessment, it was noted that the shoreline was heavily vegetated with no exposed beaches and generally poor landing opportunities from the water. The camp area itself was situated on an elevated, rocky knoll with limited vegetation cover, approximately 350 m east of Kiyuk Lake (Photo 2). The main tent area, fuel depot, equipment laydown/storage areas, and exposures created by trails were examined (Photo 3). The proposed airstrip and intervening areas to camp were also examined by pedestrian reconnaissance. The airstrip was located on a flat gravel landform with sparse vegetation immediately south of an unnamed lake and 400 m east of Kiyuk Lake (Photo 4). Surface visibility was good in this area as well, but no features or artifacts were observed.

The remaining drill locations are located further inland and away from Kiyuk Lake. These areas consisted of rugged, boulder terrain with thick stunted spruce forest and dwarf birch vegetation (Photos 5 to 8). No features or artifacts were observed at any of the drill locations. With no prominent eskers or drumlins to serve as inland travel corridors or provide a natural lookout for game, navigation through this area (south and southeast of Kiyuk Lake) would have been difficult, and occupation less desirable. In general, the region has generally low heritage potential.

Photo 1: View looking west toward Kiyuk Lake from proposed airstrip

Photo 2: View looking west toward field camp

Photo 3: View looking along trail leading to Kiyuk Lake from camp

Photo 4: View of airstrip

Photo 5: Typical boulder strewn terrain/vegetation observed at drill hole locations

Photo 6: Typical boulder strewn terrain/vegetation observed at drill hole locations

Photo 7: Example of black spruce vegetation observed at drill hole locations

Photo 8: Example of thick dwarf birch observed at drill hole locations

As a result of assessments carried out under Class 2 Nunavut Archaeologist Permit No. 11-035A, no heritage resources were identified in the 2011 Kiyuk Lake Project area. Local assistant, Leo Ikakhik of Arviat, Nunavut and construction personnel from Lac Brochet, Manitoba had no knowledge of any sites in project area. They suggested that archaeological sites would more likely be found in between Windy Lake and Nueltin Lake further to the east where there were more abundant eskers and sandy beaches.

7.0 SUMMARY AND RECOMMENDATIONS

The purpose of this field reconnaissance was to identify any heritage/cultural resources in potential conflict with project activities in Prosperity's Kiyuk Lake Project area. During the course of the assessment, 19 drill hole locations, a field camp, and potential location of a future airstrip were examined; however, no archaeological sites were identified.

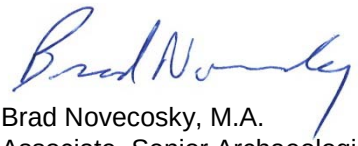
As a result, there are no heritage concerns with the 2011 Kiyuk Lake Project. This Final Report fulfils the permitting requirements necessary for the completion of this archaeological assessment.

Even the most thorough investigation may not identify all archaeological materials that may be present. Prosperity is advised that if unanticipated archaeological materials or features (including but not limited to, tent rings, inuksuit, caches, lithic, and faunal artifacts, and human remains) are encountered as a result of exploration activities, all work in the immediate area should cease and contact made with CLEY for further direction.

8.0 CLOSURE

We trust the above meets your present requirements. If you have any questions or require additional details, please contact the undersigned.

GOLDER ASSOCIATES LTD.



Brad Novecosky, M.A.
Associate, Senior Archaeologist

MM/BN/ldmg

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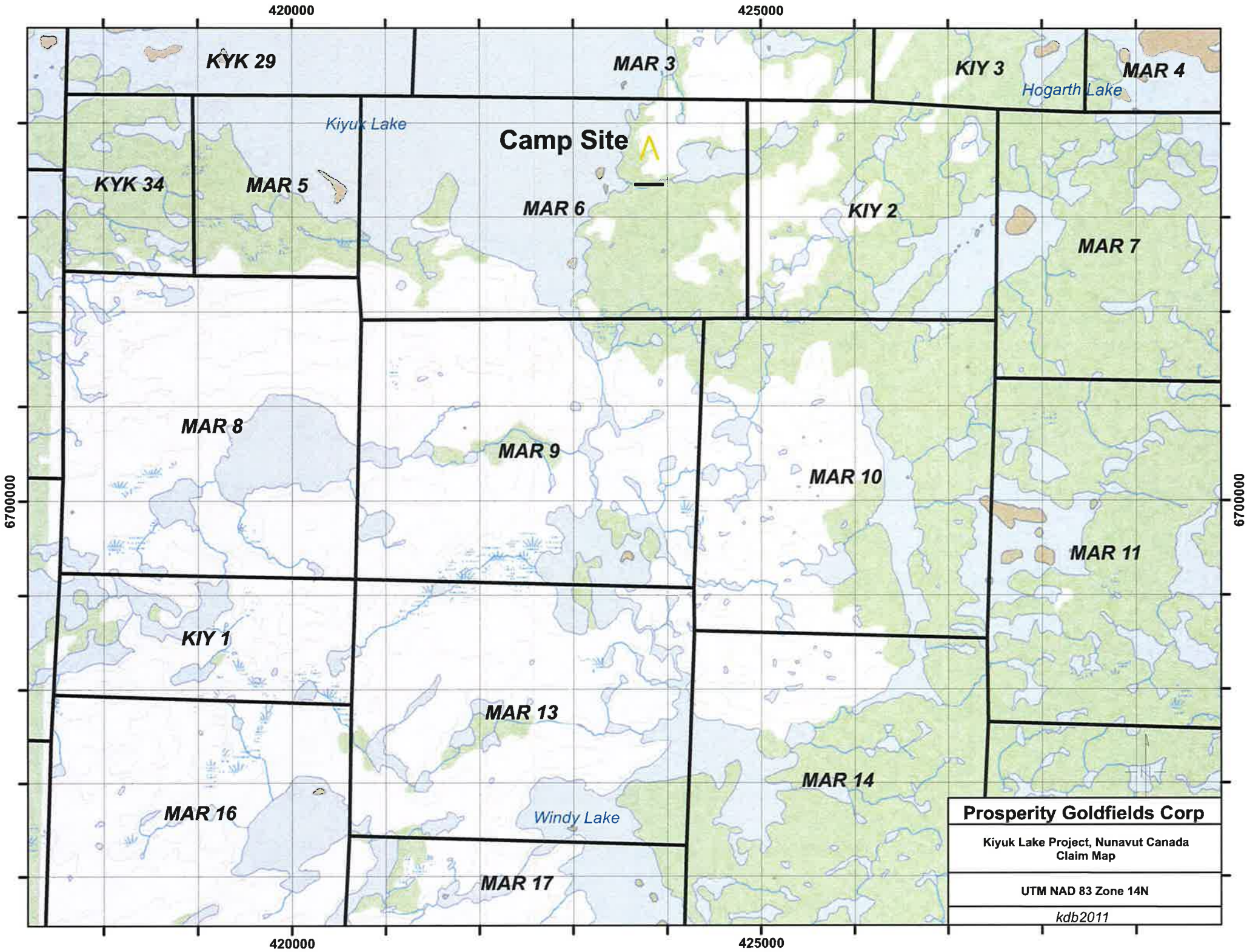
APPENDIX A

Kiyuk Lake Project Claim Map


420000
425000
KYK 29
MAR 3
KIY 3
MAR 4
Hogarth Lake
Kiyuk Lake
Camp Site
KYK 34
MAR 5
MAR 6
KIY 2
MAR 7
MAR 8
MAR 9
MAR 10
MAR 11
6700000
KIY 1
MAR 13
MAR 14
MAR 16
Windy Lake
MAR 17
Prosperity Goldfields Corp
Kiyuk Lake Project, Nunavut Canada
Claim Map
UTM NAD 83 Zone 14N
kdb2011

At Golder Associates we strive to be the most respected global group of companies specializing in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organizational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

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