



APPLICATION for LAND USE PERMIT

KWANLIN DÜN FIRST NATION

WE ARE HERE TO HELP

Staff at Heritage, Lands and Resources will assist and help guide citizens through the land application process. If you have questions or need help, please call Jimmy at 334-2746 or email jimmy.kennedy@kdfn.net

Application Number: 2022-8-LU

Parcel Code Number: R-80A, C-104B, R-8A, R-9A

Date / Time Rec'd: 2022/08/01 3:13pm
(office use only)

PART 1 – APPLICANT CONTACT INFORMATION

APPLICANT INFORMATION

Company/Organization:
Yukon Geological Survey

Last Name: Relf	First Name: Carolyn	Middle Name:
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Are you a Kwanlin Dün First Nation Beneficiary and/or Citizen? <input type="checkbox"/> BENEFICIARY <input type="checkbox"/> CITIZEN <input checked="" type="checkbox"/> NO	Are you a COMPANY? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Business Licence #: _____	Are you currently 19 years of age or older? <input checked="" type="checkbox"/> YES
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Address:
PO Box 2703 (K-14)

City/Town: Whitehorse	Territory/Province: Yukon	Postal Code: Y1A 2C6
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Country: Canada	Phone No.: [REDACTED]	Business Phone No: [REDACTED]
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Email: [REDACTED]	Preferred Method of Contact: Email or phone
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AGENT ACTING ON BEHALF OF APPLICANT(S) (if required)

Last Name:	First Name:	Middle Name:
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Address:

City/Town:	Territory/Province:	Postal Code:
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Country:	Phone No.:	Business Phone No.:
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Email:	Preferred Method of Contact:
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This is to confirm that the person named above may act as the agent on behalf of the applicant(s).

Signed: _____ Date: _____ (applicant)

Signed: _____ Date: _____ (co-applicant)

PART 2 – PROJECT PROPOSAL & LOCATION

PROJECT SUMMARY

Describe briefly the activity or project you wish to undertake on settlement land:

Yukon Geological Survey (YGS) is undertaking a regional geophysical survey to help assess geothermal energy potential in Yukon. The survey involves measuring the electrical conductivity of rocks. Most of the work will involve taking magnetotelluric (MT) readings at 10km intervals along parts of the Alaska Highway, North and South Klondike Highway, Robert Campbell Highway, and Dempster Highway.

In Kwanlin Dun First Nation’s Traditional Territory, 14 sites are being proposed to install instruments and take readings; 4 of the sites are on settlement lands. At each of the four sites, instruments will be set in shallow holes (about 30 cm depth), readings will be taken for about 24 hours, then the instruments will be removed and the holes filled in. The survey is a “passive” survey, meaning that the instruments read naturally-occurring electrical current moving through the rocks. The source of the energy comes from the atmosphere: lightning strikes and the aurora borealis.

Upon completion of the survey, the data from all sites will be compiled to enable us to identify areas where the rocks at depths of 2-4 km are electrically conductive. In terms of how this relates to geothermal energy: geothermal energy involves harnessing energy from the earth by tapping into hot groundwater and using it to heat homes or (where the water is hot enough) to generate renewable electricity. Water at these depths tends to be salty, and salt water conducts electricity. Some rocks are also good conductors, so the presence of conductive material at depth will not necessarily indicate a geothermal resource; however, it is one step in identifying potential sites of interest.

PARCEL SIZE, LOCATION & SITE COORDINATES

Community, Local or Geographic Area: sites are along AK Highway from near Mendenhall River to Marsh Lake area

Settlement Land Parcel (R, C or S#): Site 1 on R-80A; Site 9 on C-104B; Site 12 on R-8A; Site 13 on R-9A. (Site #'s correspond to appended map)

Legal Description (Lot, Quad, CLSR, LTO): _____

What is the area (in hectares) of the extent of land being applied for?

AREA: roughly 0.006 hectares (total for all 4 sites)

SITE COORDINATES

The applicant must flag the limits of the proposed project area.

The applicant must arrange an in-person on site visit with the KDFN Lands Officer and verify the GPS coordinates in writing below prior to submitting this application for review. The corners of the application area are to be flagged/marked.

Latitude/Northing	Site 1	60°45'48"N	136°04'45"W	NTS 115A/16
Longitude/Easting	Site 9	60°35'25"N	134°51'06"W	NTS 105D/10
Latitude/Northing	Site 12	60°30'46"N	134°19'14"W	NTS 105D/9
Longitude/Easting	Site 13	60°26'07"N	134°13'51"W	NTS 105D/8

NTS Map Sheet No. **Community or Local Area:** Study area is a corridor along the AK Highway extending from Mendenhall River area in the west, to the south end of Marsh Lake

APPLICATION SKETCH

A detailed, legible, and drawn-to-scale sketch must be provided outlining the applied for area and including:

- The boundary and configuration of the proposed parcel,
- The dimensions (in metres) of all proposed parcel boundaries,
- The area (in hectares) of the proposed parcel,
- Any existing, surveyed properties or Road rights-of-way that are adjacent or near the parcel,
- Any existing roads, trails or pathways within or near the proposed parcel,

- Any road, trail or driveway that is proposed to be constructed to connect the parcel to a public road, street, or highway,
- All waterbodies and drainage courses within or near the proposed property,
- Any existing or proposed buildings or other improvements on or near the proposed property,
- An arrow indicating north,
- The scale at which the sketch is drawn,
- (Any other specific information as may be required by HLRD.)

Please see attached satellite images with site locations

PART 3 – SITE CHARACTERISTICS AND INFORMATION

PLANNING and ZONING

Applicable Land Use Plans or Community Plan in effect for the proposed project area: _____ n/a _____

Current Planning / OCP designation of the proposed project area: _____ n/a _____

Current zoning bylaw or zoning regulation designation for the proposed project area: _____ n/a _____

SITE CHARACTERISTICS

Describe the Site Characteristics (topography, soil conditions, landscape features, vegetation coverage etc):

Site 1: forested area, mainly black spruce, fairly flat and well drained, 440 m south of AK highway (25 m off a secondary road)

Site 9: forested area, mixed spruce and deciduous trees, fairly flat. Site is 90 m north of a gravel pit; accessed via the pit.

Site 12: Treed slope (mainly spruce) 125 m NE of (upslope from) AK highway, near Marsh Lake.

Site 13: Treed slope (mainly spruce), 30 m S of the south access to Marsh Lake Community Centre (road is not named on map)

Describe any adjacent or nearby creeks, rivers, lakes or other bodies of water?

Site 1: 1.8 km from Takhini River. Site is 45 m from the edge of a clay cliff (on the high ground); ground at base of cliff is marshy

Site 9: 780 m from a small pond

Site 12: 280 m from Marsh Lake, 650 m from Grayling Creek

Site 13: 1 km from Marsh Lake; 1.1 km from the outlet of Judas Creek

PART 4 – PROJECT DETAILS

A clear, concise description of proposed development activity will help determine whether the development activity will require assessment under the YESAA. If an assessment is required, the applicant will be required to complete and submit a YESAA Form 1 application to the YESAB designated office. When filling out the sections below, if the space provided is insufficient, please attach any additional pages you may need to fully explain any activity.

DETAILED PROJECT DESCRIPTION: Please describe the details, scale, scope and nature of the proposed activity or project:

Each site will be occupied for 24 to 48 hours. The "occupation" will consist of burying 7 instruments to a depth of about 30 cm. Three instruments will measure magnetism of the rocks; these instruments are 1 m long tubes. The other four instruments will measure electric current in the rocks; these instruments are about the size and shape of a tin of tomatoes. All seven instruments will be connected to a battery and a sensor that records data. The sensor and battery will be tarped.

The system will be left in place for 24-48 hours to record data.

An appended document shows a schematic layout and has some photos of the instruments.

TIMEFRAME: Provide an estimated schedule and overall timeframe from project commencement through to completion of development and potential restoration on the site.

We anticipate installing instruments at the first site (Site 1) as early as August 23, and removing the equipment from the last site (site 13) on or before August 30.

Each site will be restored (holes backfilled; organics/moss caps replaced) upon removal of the instruments.

FUEL STORAGE AND CONTAINMENT: Please provide detailed information regarding the delivery, type, volume capacity and storage of fuel to be used on site. Also provide a fuel spill contingency plan.

Not applicable. (Instruments are powered by sealed batteries)

EQUIPMENT: Please describe or list any equipment (heavy equipment, drills, pumps etc) intended to be used):

Holes will be hand dug using shovels.

SITE PREPARATION: Describe all site preparation activities that will occur. Activities such as clearing, grubbing, stripping, drilling, burning of debris, construction of buildings or structures, and any earthworks. Include the use and type of any heavy machinery planned to be used in these activities.

Not applicable

ACCESS: Explain how you will access the site, and if you plan to construct a new road or upgrade an existing access. Also confirm if or how others may be affected by your access plans.

Sites will be accessed on foot from a truck. Gear will be carried to site (in backpacks). Do not anticipate affecting anyone.

SERVICES & DISPOSAL: Describe provisions or requirements for:

Supply of Water (for drinking or other purposes):

Field crew will bring water for drinking in water bottles or thermoses

Garbage Disposal:

Field crew will remove all garbage (garbage to be disposed of at hotel)

Sewage (sanitary or grey water):

Not applicable

Overburden Disposal (organic soil and waste):

Overburden (moss, etc) will be placed on top of back-filled holes.

Brush and Tree Disposal:

Not applicable

PROPOSED RESTORATION: Please describe how the site will be restored or reclaimed upon completion or decommissioning of the activity or project:

Holes dug to house the instruments will be filled in after the instruments are removed. Moss or organic material will cap the fill. Restoration will occur as instruments are removed at each site.

APPLICANT CONSENT

I/we have read all of the information contained in this application or have had it explained by a third party and fully understand it.

I/we certify that all submitted information is true and correct to the best of my knowledge and belief.

I/we understand that any misrepresentation in this application may invalidate this application and may result in the revocation of any land interest resulting from this misinformation.

I/we hereby acknowledge and confirm that the submission of this application does not grant me/us any rights to occupy or use the land for which I/we applied for prior to the approval and completion of all conditions attached to this land authorization, should this application be approved.

I/we have read all of the relevant regulations and policies and believe to the best of my knowledge that my/our application is in compliance with all requirements.

The information contained in or attached to this application is being collected under the authority of the Kwanlin Dün First Nation Lands Act (2020). This information may be shared with other persons or agencies for the purpose of reviewing the request for land. Care will be taken to protect your personal information.

SIGNATURE:



Applicant:
Carolyn Relf

Co-applicant:

Date:
August 1, 2022

Date:

PLEASE RETAIN A PHOTOCOPY OF THIS APPLICATION FOR YOUR PERSONAL RECORDS

CHECKLIST

The checklist is to help you complete all applicable sections of this application and to ensure that all additional information is attached. Incomplete applications will not be accepted and will be returned to the applicant for completion.

All Land Use Applicants must provide:

- Fully Completed Application
- Detailed Site Sketch
- GPS coordinates verified by the KDFN Lands Officer
- Site flagged consistent with the GPS coordinates
- Other documents, permits, authorizations or approvals as may be required on a case by case or use-specific basis.

In addition, Commercial/Industrial Applications must also include:

- Business Plan or Project Plan
- Detailed Site Plan
- Copy of Business Licence
- For quarries and industrial applications, an operations plan and a decommissioning/rehabilitation plan

- **Fee with the application**