# LAND USE PERMIT APPLICATION DOCUMENT

For

**URAVAN MINERALS INC.** 

**GARRY LAKE EXPLORATION PROGRAM** 

January 21, 2008

# Indian Northern Affairs Canada – Application for Land Use Permit

# <u>Uravan Minerals Inc. – Garry Lake Project</u>

1.	Applicant's name and mailing address:	Fax number: (403) 264 2629			
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	Uravan Minerals Inc. Suite 204, 2526 Battleford Ave. SW	Telephone number: (403) 264 2630			
	Calgary Alberta	Telephone number. (403) 204 2030			
	T3E 7J4				
2.	Head office address:				
		Fax number: (403) 264 2629			
	Uravan Minerals Inc.				
	Suite 204, 2526 Battleford Ave. SW				
	Calgary, AB				
	T3E 7J4	Telephone number: (403) 264 2630 (company direct line)			
	Field supervisor: Ian Fraser (Senior Geologist) Radiotelephone: To be supplied prior to mobilization to	Email address: ifraser@uravanminerals.com			
	field.				
3.	Other personnel (subcontractor, contractors, company staff	etc )			
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	See attachment				
	TOTAL: (Number of persons on site)				
4.	Qualifications	N ( ) 1 ( ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;			
	Refer to section 21 of the Territorial Land Use Regulations	No(s) exploration permit mineral claims (if applicable)			
	a)(i) X a)(ii) a)(iii) b)(i) b)(ii)				
5.	a) Summary of operation (Describe purpose, nature and location of all activities.)				
	See attachment				
	b) Please indicate if a camp is to be set up. (Please provide	details on a separate page, if necessary.)			
	See attachment				
6.					
0.	Summary of potential environmental and resource impacts (Describe the effects of the proposed program on land, water, flora and fauna and related socio-economic areas)				
	(Use separate page if necessary.)				
	(Obe departure page if necessary.)				
	See attachment, Refer to Schedules 1, 2, 3, & 4.				
7.	Proposed restoration plan (please use a separate page if nec	cessary).			
	See attachment				
	See attachment				
8.	Other rights, licenses or permits related to this permit appli	cation (mineral rights, timber permits, water licenses, etc.)			
	See attachment				
	Roads: N/A Is this to be a pioneered road?	Has the route been laid out or ground truthed? N/A			
9.	Proposed disposal methods.				
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	a) Garbage: See attachment				
	, .				
	b) Sewage (Sanitary & Grey Water): See attachment				
	c) Brush & trees: N/A				
	d) Overburden (Organic soils, waste material, etc.): N/A				
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10. Equipment (includes drills, pumps, etc.) (Please use separate page if necess
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Type & number	Size	Proposed use
1 Drill (Boyles 25-A fly drill) with associated pumps (2), coil stoves (2)	Drill & pumps = 4,500 kg; rods, timbers and misc. tools = 20,000 kg	Drill holes into bedrock and retrieve core.
1 Helicopter	To be determined, capable of transporting pilot + 4 passengers	To transport personnel to drill and bring drill core to camp; transport geologists to sites where focused geological projects are planned.
2 - 4 Snowmobiles	1 Cylinder, regular track	Ground transport.
1 – 2, 4-Wheel all Terrain Vehicles	< 500 kg, large tires	Transportation around camp, maintenance of landing area.

11. Fuels	Number of containers	Capacity of containers	Location
Diesel	55	205 litres	Camp fuel cache
Gasoline	20	205 litres	Camp fuel cache
Aviation fuel (Jet A/B)	125	205 litres	Camp fuel cache
Propane	25	45 kg cylinders	Camp fuel cache
Other			

12. Containment fuel spill contingency plans.

## See attachment and refer to Schedule 3.

13. Methods of fuel transfer (to other tanks, vehicles, etc.)

Electric pump for helicopter, manual pumps for drill, snowmachines, 4-wheelers and associated pumps for camp stoves and water pumps. All fueling areas equipped with drip pans, absorbent matting.

14. Period of operation (includes time to cover all phases of project work applied for, including restoration)

14.1. July 1, 2008 - October 31, 2013.

15. Period of permit (up to two years, with maximum of one year of extension).

Start Date YYYY / MM / DD Complet

Completion Date YYYY / MM / DD

2008 / 06 / 01

2010 / 06 / 01

16. Location of activities by map co-ordinates. <b>Refer to Figure 1.</b>					
Minimum Latitude (degree, minute)	Minimum Longitude (degree, minute)				
65°49'42''	99°15'1"				
Maximum Latitude (degree, minute)	Maximum Longitude (degree, minute)				
65°0'0"	100°47'53"				
Map Sheet no. 66F-2, 6, 7, 8, 9, 10, 16; 66G-4,	5, 6, 11, 12, 13				
17. Applicant					
Larry Lahusen (CEO) Sig	gnature	Date			
18. Fees Type A - \$150.00 **	Type B - \$150.00 **	(**Application Fees are Non-Refundable**)			
Land use fee:	hectares @ \$50.00/hectare	\$			
Assignment fee \$50.00	\$				
Total application and land use fees \$					
Please make all cheques payable to "Receiver General of Canada"					

# <u>Indian and Northern Affairs Canada – Application for Land Use – Uravan Minerals Inc. Garry Lake</u> <u>Project (attachment to Application Form)</u>

3. Other personnel (subcontractor, contractors, company staff, etc.)

Uravan Minerals Inc. – 1 cook, 1 bull cook = 2
2 senior geologist including project supervisor = 2
1 staff geologist, 2 student geologist = 3
2 geological assistants = 2
1 helicopter pilot, 1 engineer = 2 – note helicopter contractor to be determined
4 Uravan diamond drillers + 1 foreman = 5

Total: 9 – 16 people (minimum – maximum)

Anticipated man hours when camp at full capacity (16 man x 42 days) = 672 man days. Without drill crew, anticipated man days (9 man x 42 days) = 378 man days. When only drilling is being performed anticipated man days (8 man x 42 days) = 336 man days.

The above breakdown assumes the WCB 42 day limit in which personnel can work in one "turnaround". To fully maximize the field seasons it is Uravan's intention to establish rotations so that field crews are at the project < 42 days, are given time off at home for rest, and then return to the project. In this scenario the man days for the project will be determined by the length of available field season(s), which is estimated for the initial phases of this project not to exceed 90 days.

5 a) Summary of Operations (Describe purpose, nature and location of all activities.)

The purpose of this proposed exploration program is to explore for uranium mineralization that may occur at the Thelon sandstone and underlying older basement unconformity by drill testing a number of Electromagnetic conductive and Radiometric trends or corridors previously determined by heli-borne and fixed-wing geophysical surveys (surveys performed intermittently between May – August 2007). Initial stages of the exploration program are considered reconnaissance. All detected geophysical EM and Radiometric anomalies will be ground proofed by geological prospecting and mapping teams (maximum of 3 teams consisting of 1 geologist, 1 geological assistant). Ground geochemical sampling consisting of the collection of soils, plant tissues for multi-element analysis and possibly radon, will occur in select areas of the property coinciding with the above mentioned EM and Radiometric anomalies (maximum of 2 teams consisting of 1 geologist, 1 geological assistant). Upon completion of ground follow up prospecting, mapping and geochemical sampling, a lightweight, heli portable Boyle's 25-A, core drill; owned and operated by Uravan Minerals Inc., will drill 10 - 20 NQ-size (approx. 47.6 mm in diameter) core drill holes amounting to 2000 – 5000 meters of drilling on various drill targets delineated. Drill hole depths will range in depth from 200 – 400 meters and initially individual drill holes will be spaced a minimum of 2000 meters from one another. It is anticipated the first drill holes will be drilled during the period August 15 - October 31, 2008. Uravan anticipates an ongoing exploration program dominated by diamond drilling and plans to continue reconnaissance diamond drilling during the winter field season (March – May 2009) depending on winter conditions and wildlife migration. Furthermore, it is Uravan's intention to utilize a Sno-Cat type vehicle and a mobile camp to facilitate winter diamond drilling exercises. Exact drill hole locations are undetermined at this time; however, the attached topography map (Figure 1) indicates the anticipated areas (NW polygon & SE polygon) where drilling will occur. These are two very large areas and initial exploration efforts will be designed to detail drill targets within the NW and SE polygons. Once drill hole locations are determined, Uravan will notify all inspectors of their exact locations and provide updated drill hole location maps.

b) Please indicate if a camp is to be set up. (Please provide details on a separate page, if necessary.)

An exploration camp (the "Garry Lake Exploration Camp") will be established in the vicinity of **65° 33' 29" N / 100° 04' 14" W**. A temporary winter camp to facilitate an airborne geophysical survey was established at this location in late winter 2007. A summer camp and a more permanent camp will need to be moved to higher ground and nearer to the esker slightly north of this location. **Figure 2** is a schematic map of the proposed configuration and location for the permanent camp. Once Uravan has finalized the location of this proposed camp, a written notification with exact coordinates will be forwarded to all inspectors and stakeholders.

The Garry Lake Camp will consist of:

5 – 14'x16' sleeping facilities

1 – 14'x20' storage facility

1 - 14'x16' office / first aid facility

1 - 14'x20' main dry facility

1 - 14'x20' female dry facility

1 – 14'x32' kitchen mess facility

3 – 16'x20' core handling / logging / cutting – sampling facility

1 – 10'x12' generator shack

1 portable outhouse

1 Pacto – toilet facility

This proposed camp is an all season style of camp that is designed to withstand the harsh arctic climate. Upon the completion of each exploration program the camp will be closed and put into temporary storage at the camp site. Uravan anticipates using the Garry Lake Camp during the summer – fall field seasons and late winter (mid-March to mid-June) seasons; conditions permitting. Furthermore, Uravan proposes a mobile component of the main camp to accommodate winter diamond drilling. A scaled down camp consisting of (kitchen, dry, 3 sleep facilities, 2 core shack / office facilities, 1 portable outhouse) will constitute the winter camp. Camp and drill will be mobilized to drilling areas utilizing a wide track Sno-Cat type of vehicle.

Water to the camp (summer) will be pumped from the nearest large source of water to two 1100 litre holding tanks in the dry facilities via a screened intake hose to prevent the entrapment of fish species. This water will be used for the kitchen (cooking, washing) and in the two dry facilities for washing of clothes and personal hygiene. Uravan anticipates using a water dispenser (bottled water) in the kitchen for drinking water.

A 20 KVA generator will supply electricity to the summer camp; all structures will be wired with lights and electrical outlets. Each structure will be equipped with fire extinguishers and smoke / CO<sub>2</sub> detectors.

A fuel cache consisting of up to 200 barrels of fuel (diesel and Jet A / B) will be drawn down through the duration of each exploration phase and replaced as needed at the end of or beginning of the next phase of exploration. The cache will be strategically placed to accommodate the refueling of a helicopter and also for the purpose of slinging fuel to the drill location. The location of the fuel cache will take into

consideration the safety of camp and camp personnel, but also the safety of individuals handling the fuel. The fuel cache will be at a flat, sandy location > 100 m from the nearest body of water and a minimum of 50 m from camp. A minimum of 2 spill kits will be located at the fuel cache. Upon establishment of the fuel cache the inspector(s) will be notified of the type of fuel, the quantity of fuel, the method of fuel storage and an estimate of the date the fuel will be removed from the cache location. **Schedule 3** documents Uravan's Fuel Spill Contingency Plan.

6. Summary of potential environmental and resource impacts (Describe the effects of the proposed program on land, water, flora and fauna and related socio-economic areas.)

The proposed exploration program (ground follow up, diamond drilling) is reconnaissance in nature; designed to explore for uranium mineralization in the north-eastern Thelon Basin. Uravan believes this exploratory reconnaissance drill program at this stage, with the use of "Best Management Practices", discussed in detail below and in **Schedule 1** attached, will have minimal or no long term cumulative environmental impacts.

#### Furthermore:

- The proposed drill program will be helicopter supported in the summer season and reconnaissance in nature with drill holes no closer than 2 kilometers from one another. During winter season, access to drilling areas will be by wide track Sno-Cat type vehicle when frozen ground conditions persist. In both scenarios, very minimal direct impact to the land will occur.
- All drill sites / setups will be established on large timbers minimizing direct pressure to the drill surface area, and the drill equipment lay-down area will not exceed 15 m<sup>2</sup>.
- Drill returns / cuttings and all deleterious substances will be contained at the drill site and channeled to nearest natural depression a minimum of 100 m distance from the ordinary high water mark of (if any) the nearest water body. Uravan will ensure that there will be no dispersion of the return / cuttings or any deleterious substances to nearby water bodies.
- Absorbent matting will be used to collect any oils, lubricants that may discharge directly from
  the drilling operation. Drip mats and trays will be employed at all fuelling stations at the drill and
  in camp.
- As at camp, all water intake hoses supplying water to the drill will be screened off to prevent the entrapment of fish species.
- Uravan anticipates having to warm intake water to the drill with propane fired coil stove(s) prior to being pumped down the drill hole to keep permafrost from enclosing the proposed drill holes. It is anticipated that a minimal, diluted mixture of calcium chloride (CaCl) at certain stages in a drill hole may be required in order to prevent drill hole freeze up. A mixture of <8% CaCl will be used and maintained by employing a hydrometer in the mixing tank at the drill.
- In the event significant uranium mineralization is intersected, the BMP (best measures practice) as discussed in the Mineral Exploration Guidelines for Saskatchewan will be implemented; notably, returning cuttings containing >0.05% uranium down the drill hole and immediately grouting any drill hole deemed to have a uranium rich intersection consisting of >1% over a length > 1 meter, and with a meter-percentage concentration > 5.0 over the entire length of the mineralized zone and not less than 10 meters above or below each mineralized zone (see Schedule 1).
- The drilling operation will be using drilling additives and lubricants throughout the drilling program; all additives and lubricants are biodegradable and are considered non-toxic as indicated in attached MSDS (see **Schedule 2**).

• No drilling is currently planned to be conducted on ice covered lakes or rivers; however, Uravan does not want to rule out this possibility in the future.

**Schedule 1** (Best Management Practices – Drilling Operations and the Handling of Uranium Mineralization) further details the summary of potential environmental and resource impacts and possible effects of the Land Use operation.

**Schedule 2** is a comprehensive list of the MSDS all drilling additives, materials anticipated to be used during the proposed reconnaissance-drilling program.

Uravan's knowledge of wildlife in the Garry Lake area is currently restricted to field observations passed on from airborne geophysical crews that performed surveys May – June 2007. With the exception of a Barren Land Grizzly Bear sighted there was no report of any wildlife at the camp used for the survey. Helicopter crews did not report the sighting of any caribou while flying the survey flight lines. Uravan will undertake the following measures to limit impacts on wildlife:

- During periods of active exploration Uravan personnel will note and record wildlife sightings in the field and at camp in log books supplied to all personnel.
- For safety precautions (bear and camp personnel) an electric perimeter fence will encompass the Garry Lake campsite.
- All personnel prior to the start of each exploration program will be oriented in the safety and
  procedures necessary to adhere to while in barren land grizzly, wolverines, wolves and fox
  territory. Precautions will be taken to minimize odours from camp that could potentially attract
  carnivores.
- While in the field Uravan will utilize a "Wildlife Monitor" equipped with a shot gun complete with rubber bullets and cracker shells to be used as a deterrent in the event of an encounter.
- Precautions and guidelines will be followed as per DOE comments with respect to Raptors and nesting areas.
- Caribou Protection Areas will be respected and Uravan will not, without approval, conduct any activity between May 15 and July 15 (as per the Caribou Protection Measures Kaminuriak and Beverly Herds). However, as per Appendix H in the Keewatin Regional Land Use Plan, Uravan will seek approval from the Land Use Inspector to operate beyond the May 15 deadline provided caribou monitoring determines that caribou cows are not expected to use areas Uravan is exploring within the Caribou Protection Areas. If however, caribou approach the area of exploration beyond the May 15 date, Uravan will implement the cessation of all exploration activities and follow procedures as outlined in Appendix H.

Uravan has initiated a Site Data License Agreement with the Department of Culture, Language, Elders and Youth. **Schedule 4** documents Uravan's Best Measures Practice for Archaeological and Cultural Sites and by implementing and respecting these procedures, Uravan's exploration activities will not have any long term cumulative impacts on Archaeological and Cultural Sites.

Uravan initiated public consultation (VP Exploration, Allan Miller) in the spring of 2007 in the hamlet of Baker Lake and will continue its duty to inform the various stakeholders of continued exploration activity through the duration of the exploration project. Uravan believes that any expressed issues or concerns are best mitigated through a proactive program of community interaction with Uravan and its field operations to better understand the mineral exploration process and specifically uranium exploration as this activity relates to environmental or socio-cultural-economic concerns. Uravan has adopted a policy

to provide transportation and access to the project area for aboriginal community members to experience actual diamond drilling operations as a means of providing information and understanding to mitigate any issues or concerns.

A consultation summary is provided as **Schedule 4.** 

## 7. Proposed restoration plans

Uravan recognizes that its proposed exploration program requires temporary use of the land. To ensure that the land is returned (remains) in its natural state Uravan along with all its associated contractors will conduct the exploration in an environmentally responsible manner, taking into consideration the land and its associated wildlife. Uravan will adhere to the following mitigating measures.

## Upon completion of a drill hole:

- Surface drill casing will be removed; if casing cannot be retrieved, the casing will be cut off at ground level.
- All materials will be removed from the drill site, garbage collected; absorbent matting retrieved and properly disposed of, empty fuel drums and propane bottles will be returned to camp. The project supervisor will inspect each drill site and will dictate if further clean up is required.
- Each drill site will be raked and contoured to resemble its natural state upon completion and the only noticeable feature at the drill hole location will be a labeled picket depicting the drill hole number / location.
- Any drill hole making significant water (artesian well) will be reported to the proper authorities (Inspector). Uravan will attempt to grout the hole thus capping the flow of water.

## Mitigating measures at camp:

- The Garry Lake camp will be serviced at least once a week by aircraft from Baker Lake throughout the exploration program(s). Uravan will utilize this service flight to back haul empty fuel drums, propane bottles and camp waste. The hamlet of Baker Lake has granted permission to Uravan to dispose of camp waste at the hamlet's land fill facility.
- At the end of each exploration program the Garry Lake camp will be put into temporary storage and prepared to withstand the elements until the start up of the next phase of exploration.
- When exploration is complete at the Garry Lake Project, the entire camp (structures and frames)
  will be removed from its location along with all empty drums, all equipment along with all
  remaining trash. The camp location will be returned to its natural state.
- Prior to the demobilization of each phase of exploration the inspector(s) will be notified at least 10 days in advance of shut down to advise of removal / storage of equipment, and completion of project – restoration.

8. Other rights, licenses or permits related to this permit application (mineral claims, water licenses, etc.)

Uravan Minerals Inc. Garry Lake Property consists of the following claims:

F56804, F56805 F56814, F56815 F56819, F56820 K01021 – K01183 K05741, K05662 – K05734 K07310 – K07408 K01187, K01189, K01190 K06216 – K06219 K06004 – K06006 K06008 – K06010 K08035

Existing water license: Nunavut Water Board # 2BE-GAR0710

Kivalliq Inuit Association License: # KVL106B208

9. Proposed disposal methods

#### a) Garbage:

Uravan proposes to collect non-combustible items (cans, plastic containers) in camp and dispose of in the hamlet of Baker Lake, or recycle if Baker Lake is set up to do so. Uravan proposes to incinerate (using an approved incinerating device) kitchen waste (food scraps = 2 large garbage bags/day) daily to eliminate potential odours in camp, collect the incinerated residue and dispose of utilizing sealed 45 gallon drums and transport the drum(s) to Baker Lake for proper disposal on a weekly basis. The empty drum(s) will be returned to camp on the next service flight and the process will continue. Extremely combustible items (aerosol cans, hazardous items) will not be incinerated on site and will be transported to Baker Lake for proper disposal.

The hamlet of Baker Lake has granted Uravan permission to dispose of wastes generated at Garry Lake camp in the Baker Lake landfill (see attached letter).

## b) Sewage (Sanitary & Greywater):

Greywater from the dry facilities and kitchen will be plumbed to three individual submerged drums (in individual hand dug pits) capable of holding 205 liters immediately behind each facility. The greywater in each holding drum will be dispersed to the nearest natural depression (natural sump) via three submerged electrical pumps attached to garden hoses that will transport the greywater a minimum of 30m from camp and a minimum of 30 m distance from the ordinary high water mark of (if any) the nearest water body. It is anticipated that <1.2 m³ / day of water will be used and returned to source as greywater. Upon the completion of the program the pits dug to hold the grey water holding tanks will be backfilled. During the winter season camp size will be much smaller and hence daily use of water will be reduced to <0.6 m³. Greywater will be channeled to the nearest depression and all plumbing will have to be heat tape to prevent freezing.

Camp sewage (human waste) will be disposed of in a pit under a proposed portable outhouse. The pit(s) will be located above the normal high water mark of any body of water and a minimum of 30 m from any body of water, ensuring that the contents of the pit will not enter the (if any) body of water. When full, the pit will be backfilled and the surface area raked and contoured to its original state.