



Exploration Permit Application

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(BHPB & Diavik)

Application for:  
New Land Use Permit  Amendment  to \_\_\_\_\_

1. Applicant's name and mailing address: <b>David Wiley</b> <b>130 King Street West</b> <b>Suite 2120, PO Box 221</b> <b>Toronto Ontario M5X 1C8</b>	Fax number: (416) 363-4567
	Telephone number: (647) 260-1247
2. Head office address: <b>130 King Street West</b> <b>Suite 2120, PO Box 221</b> <b>Toronto Ontario M5X 1C8</b> Field supervisor: To be determined Radiotelephone: To be determined	Fax number: (416) 363-4567
	Telephone number: (647) 260-1247
<b>3. Other personnel (subcontractor, contractors, company staff etc.)</b> <ul style="list-style-type: none"> <li>• Golder Associates Limited (consultants)</li> <li>• Tlicho Logistics and other Tlicho Investment Corporation companies</li> <li>• Merc personnel (project geologist)</li> <li>• Aurora Geosciences (geological technician, field assistants)</li> <li>• Bradley Bros. Ltd./Major Diamond Drilling (drilling personnel)</li> <li>• Discovery Mining Services Ltd. (including camp personnel, caretakers, assistants, etc.)</li> <li>• Great Slave Helicopters (helicopter support for diamond drilling)</li> <li>• 1984 Enterprises Inc. (First Aid equipment and training, camp cook)</li> <li>• Additional subcontractors may be required as the project progresses</li> </ul>	
TOTAL: (Number of persons on site) 25 - 45; may increase as project moves forward (pending approval by the Inspector)	
<b>4. Eligibility:</b> (Refer to section 18 of the <i>Mackenzie Valley Land Use Regulations</i> )  a)(i) X      a)(ii)      a)(iii)      b)(i)      b)(ii) <ul style="list-style-type: none"> <li>• According to section 18 of the Mackenzie Valley Land Use Regulations, Merc International is eligible to apply for a land use permit under Section 18, subsection a) i)</li> </ul>	

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

Exploration activities will take place within the Merc lease boundaries and associated activities include winter road construction and use, construction and use of temporary camps, and fuel storage. It is anticipated that operations for mineral exploration in the proposed area will include:

- prospecting, bedrock sampling, geological mapping, geophysics;
- exploration drilling (specific targets to be determined);
- use of explosives for trenching and/or bulk sampling;
- winter road construction from the Wha Ti Junction to the Damoti Lake property;
- winter road construction to the Colomac mine site;
- winter road construction for spur roads from the main Winter Road to Diversified, Chalco and Spider Lake. Spur roads may also be required to access smaller satellite exploration camps at or near exploration drill sites. The locations of the smaller exploration camps will be provided to WLWB and the inspector as they become known;
- progressive remediation to ensure that exploration sites are cleaned up and;
- maintenance of Colomac airstrip and access to quarry site should the need arise.

The exploration work done at these sites will not interfere with engineered structures or monitoring sites established in past reclamation and remediation works.

For a more detailed description of anticipated mineral exploration operations please refer to **Appendix A** – Merc Technical Briefing – Indin Lake Land Package. The current Damoti Lake Water Licence (W2010L2-0001) is included in **Appendix B** as **Attachment B1**. The existing Land Use Permit (W2010C0008) which will be replaced by this permit is included as **Appendix B** as **Attachment B2**.

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

Two sites may be used as camp locations for the anticipated exploration activities: the Damoti Lake project site and the Colomac Mine site. It is also anticipated that additional satellite exploration camps will be set up at or near drill site locations that will be determined in the early stages of exploration, and there is a possibility that a small camp may be set up at Diversified during reclamation activities. *The Damoti camp and satellite camps were approved under the previous permit (W2010C0008).* A schematic of the existing camp at Damoti is included as **Appendix B – Attachment B3**. Prior to the establishment of any satellite exploration camps or a reclamation camp at Diversified, the Inspector will be provided with camp locations and associated documents.

**6. Summary of potential environmental and resource impacts (describe the effects of the proposed land-use operation on land, water, flora & fauna and related socio-economic impacts). Use separate page if necessary.**

**Environmental Impacts**

It is anticipated that potential environmental impacts from exploration activities will be minimal and may include disturbances to land, air, environment and wildlife. The following measures will be taken to reduce environmental impact from exploration and remediation activities:

- Helicopter-supported drilling to reduce or eliminate rutting or disruption of topsoil.
- Helicopter-supported and traverse-based geological mapping and sampling to minimize impact.
- Adherence to Merc’s Waste Management Plan (**Appendix C - Attachment C1**) and Incinerator Management Plan (**Appendix C - Attachment C2**) with emphasis on training, mitigation, and enforcement.
- Proper closure by Merc of camps not in use (main Damoti camp and satellite exploration camps); and when camps are no longer required, sites will be restored to pre-exploration conditions or to a level approved by the inspector.

The Merc Spill Contingency Plan (**Appendix D**) was designed specifically for the Damoti camp and applies to Merc’s exploration activities in the entire Merc land lease area. There is a possibility that an exploration camp will be set up at other locations (including Colomac), and these camps would follow the same protocols and mitigation measures as those used at the Damoti camp. It is also anticipated that the camp size, fuel use, and camp materials would be very similar to Damoti. Site-specific Spill Contingency information will be developed for new camps once the location of new camps is determined. This information will be provided to the WLWB and the Inspector.

Potential environmental and resource impacts for winter road use/construction may include:

- Water use for maintenance of the winter roads.
- Some wildlife disturbance.

A summary of anticipated fuel stores under this permit is included as **Appendix E**. A summary of winter proposed spur roads is included as **Appendix F**.

**Wildlife Impacts**

The area of land that the Indin Lake land package encompasses is significant and Merc is aware of potential impacts to wildlife. Merc is committed to preserving the environment and will take steps to ensure that disturbances are minimized through consultations with government bodies, stakeholders and interest groups, knowledge and training of staff, by adhering to company policies, and through mitigation efforts.

Various species at risk or species of socio-economic importance may be present within the lease area including: rusty blackbird (*Euphagus carolinus*), grizzly bear (*Ursus arctos*), Wolverine (*Gulo gulo*), short-eared owl (*Asio flammeus*), caribou (*Rangifer tarandus*), moose (*Alces alces*), black bear (*Ursus americanus*), red fox (*Vulpes vulpes*), lynx (*Lynx canadensis*) and wolf (*Canis lupus*). A wildlife monitoring log (**Appendix G**) will be used to record noteworthy sightings of wildlife during exploration activities. Data collected using the wildlife monitoring log can be a useful tool for supporting baseline knowledge of wildlife abundance and distribution in the area, supplementing traditional knowledge and overall understanding of the project area.

In order to reduce disturbance to wildlife the following mitigation measures will be employed:

- Wildlife will not be directly disturbed by persons on foot or with equipment.
- Disturbances to known wildlife habitat (eskers, nests, etc) will be avoided as necessary.
- If caribou are observed during operations, non-critical work (e.g., aircraft departure, ground transportation) will cease until the animals have moved beyond the area of work.

Merc's Incinerator Management Plan will be used to control garbage in camps and at work sites to prevent attracting wildlife.

**Archaeologically Important Sites**

Merc understands that archaeological and heritage resources may also be impacted by camp, exploration and/or remediation activities. Merc has been in consultation with the Cultural Places Program (GNWT, Prince of Wales Northern Heritage Centre) and is aware of known archaeological or heritage sites within the exploration lease area. These areas of archaeological importance will be essential during planning in order to ensure these sites are avoided. Any suspected archaeological sites (boulder features, lithic scatter, burial sites) encountered during field activities will be reported to the government of the Northwest Territories and the Canadian Museum of Civilisation. Consultation with Government bodies, stakeholders and interest groups will take place to identify concerns or communicate knowledge of the project area. Site visits with elders or consultants is also an option for identifying historic significance.

Should significant discoveries be made during the exploration of the Indin Lake Land package, Merc will work with the regulatory agencies, governments and stakeholders to determine land use requirements that are beyond the scope of work outlined in this land use package.

**Resource Impacts**

Direct resource impacts with regard to the exploration program will be positive at both the community and individual level. The number of exploration personnel involved including Merc, contractors and sub-contractors is anticipated to be between 25 to 45 individuals, therefore the number of individuals involved that will have direct resource benefits will be low. However, the development of the Wekweëti winter road for 2012 will provide community members with road access and there are several opportunities for involvement by Tlicho Investment Corporation companies.

Merc engaged the Tlicho Government, the Kwe Beh working group, the North Slave Métis Alliance, the Wek'èezhii Renewable Resources Board, and the Prince of Wales Northern Heritage Centre during the pre-submission process. A summary of meeting findings, a record of the emails, phone conversations, and meetings is included as **Appendix H**.

**7. Proposed restoration plan (please use a separate page if necessary).**

The focus for restoration will be progressive reclamation. The Damoti site will be used as a base camp for continued exploration activity on new and existing land claims. The camp will provide facilities for up to 45 people and will be the embarkation/disembarkation point for winter road travel and aircraft transportation of personnel. The Colomac site may also be used as a base camp with a similar level of activity. Progressive reclamation is a continual and on-going process. The progressive reclamation activities include the removal of scrap wood, metal, bio-waste and contaminated soil from both Colomac and Damoti.

Monitoring of fuel storage sites will be ongoing to lessen the risk of hydrocarbon contamination; this will include checking drums or other storage containers to ensure that they are in good condition and to identify potential leaks. Excess drums are continually removed from sites when they are empty. Remaining fuel drums will be organized and placed on racks. An AANDC approved incineration procedure for both camp waste and human waste has been implemented. A Surveillance Network Program (SNP) is active and ongoing at the Damoti Site with monitoring at specific sites. Along with this, Site visits will be conducted twice a year for a visual assessment of the infrastructure for physical stability and security. Routine maintenance will be undertaken to address issues as required.

Small, temporary drill camps may be established on or near exploration sites to support exploration activities. At the temporary

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drill camps and at drilling sites, all man-made material will be removed once drilling is complete. Upon the completion of work in an area (drill site, camps, etc.) the site will be reclaimed or restored to prior conditions. The sites will be searched for debris which will be collected and removed as well. Drill casings will be cut close to the ground and each hole will be capped to match the local topography wherever possible. Drill sumps are inspected to ensure that there is no run-off. Drill water is held in natural depressions and backfilled, if necessary.

For further information, see Damoti Lake Advance Exploration Closure and Reclamation Plan Report No. 09-1192-0124R prepared by Golder Associates Ltd., under review by the Wek'èezhìi Land and Water Board.

### 8. Other rights, licences or permits related to this permit application (mineral rights, timber permits, water licences, etc.)

- Currently the Damoti camp is monitored under Water License Number W2010C0008 Type A and Land Use Permit W2010C0008.
- Surface Lease for the Colomac airstrip

Maps of the Merc Land Leases are included as **Appendix I - Attachments I1 and I2**. A map showing claims covered under Land Use Permit W2010C0008 and claims under this permit application is included as **Appendix I – Attachment I3**.

#### Roads:

- Is this to be a pioneered road?
  - The main winter road is not a pioneered road. See **Appendix J** for a map of the Winter Road
  - Shorter spur winter access roads may be required to access satellite exploration camps (refer to **Appendix F**).
- Has the route been laid out or ground truthed?
  - The route for the main road has been laid out. Proposed routes for spur winter access roads have been developed. Routes for additional roads for accessing satellite exploration drill sites have not been determined; information will be provided to WLWB and the inspector when these additional routes are determined.

#### Additional Information:

- A copy of the agreement between Merc and AANDC describing the land use activities on the Merc properties is included as **Appendix K**.

### 9. Proposed disposal methods.

Waste management and disposal for the exploration activities within the Merc land leases will be completed in accordance with proposed disposal methods outlined for Damoti Lake. For additional information on the proposed disposal methods, refer to the Merc Waste Management Plan (**Appendix C - Attachment C1**). Overburden (organic soils, waste material, etc) will be managed as per Water License Number W2010C0008 (refer to **Appendix B**).

Site specific waste materials at Damoti camp not covered under the Waste Management Plan (refer to **Appendix C - Attachment C1**), including waste rock, are included in the Damoti Lake Closure and Reclamation Plan. This Plan is forthcoming as a required component of Water License Number W2010C0008 and will be posted to the WLWB website once it is submitted.

### 10. Equipment (includes drills, pumps, etc.) (Please use separate page if necessary.)


**\*Note: all equipment types and numbers are estimated as of January 2012; any modifications will be subject to authorization by an Inspector. A full equipment list will be provided by the contractor as required.**

Type & number	Size	Proposed use
2 to 5 diamond core drills	With platform, 7 m x 7 m	Diamond core drilling and collection
Generator set	5.0 m x 2.0 m	Power submersible pumps
Up to 2 Diesel Generator (rented)	20 kW	To power camp
Gasoline generator (company owned)	15 kW	Dedicated power for the rented 3.5 hp diamond blade rock saw. Stored in Yellowknife

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Oil-fired Garbage Incinerator		Burning camp waste – ashes collected and sent to Yellowknife for proper disposal		
3 Stornburn Propane-fired Incinerating Toilets		Sterile ash collected and shipped to Yellowknife for disposal		
Oil stoves and propane heaters (several)		Located in foreman’s building and core shack (cutting area)		
Quads (one on site, more to be rented)		Transport personnel in and around camp, moving equipment		
Snowmobiles (several)		Transport personnel in and around camp		
3 Tractor/Dozers		movement of equipment		
Helicopter (on site when drilling is on-going)		Transportation of crews and equipment from Damoti Lake camp to drilling locations		
2 Snowcat/Piston Bully		Initial clearing of snow on lakes and portages		
2 Water truck(s)		Watering of portage		
2 Graders		Winter road maintenance		
Plow truck		Winter road construction		
Manitowoc Model 4000W liftcrane (left by crown at Colomac)		Movement of equipment		
2 Excavators		Movement of material		
<b>11. Fuels</b>	()	<b>Number of containers</b>	<b>Capacity of containers</b>	<b>Location</b>
Diesel	See attached – <b>Appendix E: Summary of Fuel</b>			
Gasoline				
Aviation fuel				
Propane				
Other (Enviro-Tanks)				
<b>12. Containment fuel spill contingency plans.</b>				
<p>The Damoti Lake Spills Contingency plan with updated fuel volumes is attached as <b>Appendix D</b>. This spill contingency plan covers all fuel types to be used, preventative measures and spill action plans/procedures with respect to applicable guidelines. A spill contingency plan for the Damoti Winter road and spur winter roads is also included in <b>Appendix D</b>. Prior to the establishment of a camp at Colomac, an updated spill contingency plan with site specific information and anticipated volumes will be submitted.</p>				
<b>13. Methods of fuel transfer (to other tanks, vehicles, etc.)</b>				
<ul style="list-style-type: none"> <li>• Wobble pumps to transfer fuel from drums</li> <li>• Gasoline pumps to fuel tanks</li> </ul>				
<b>14. Period of operation (includes time to cover all phases of project work applied for, including restoration)</b>				
<ul style="list-style-type: none"> <li>• 5 years</li> </ul>				

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<b>15. Period of permit (up to five years, with maximum of two years of extension).</b>		
<ul style="list-style-type: none"> <li>• 5 years</li> </ul>		
<b>16. Location of activities by map co-ordinates (refer to maps in Appendix I)</b>		
Minimum latitude (degrees, minutes, seconds) 64° 0' 0.76" N	Maximum latitude (degrees, minutes, seconds) 64° 31' 52.2"	
Minimum longitude (degrees, minutes, seconds) 114° 48' 48.49" W	Maximum longitude (degrees, minutes, seconds) 115° 26' 41.1" W	
NAD 83	Map Sheet no. 86b	
<b>17. Applicant</b>		
Print name in full  <b>David Wiley</b>	 Signature	February 2, 2012  Date
<b>18. Fees</b>		
An estimate of the anticipated land use area is included as <b>Appendix L</b> .		
Type A - \$150.00 **      Type B - \$150.00 **      (**Application Fees are Non-Refundable**)		
Land use fee: <u>8</u> hectares @ \$50.00/hectare	\$ <u>400.00</u>	
Assignment fee	\$ <u>150.00</u>	
Total application and land use fees    \$ <u>550.00</u>		
<b><i>Please make all cheques payable to "Receiver General of Canada"</i></b>		