

# Land Use Permit Application Form

(Subsection 19(2) and Schedule 2 of the Mackenzie Valley Land Use Regulations)

1	Applicant's name and mailing address: Michael J. Byron Nighthawk Gold Corporation 141 Adelaide St. W., Suite 301 Toronto, Ontario M5H 3L5		Fax no.: N/A
			Telephone no.: (647)794-4359
2	Head office address: 141 Adelaide St. W., Suite 301 Toronto, Ontario M5H 3L5		Fax no.: N/A
	Field supervisor: TBD	Email address: mbyron@nighthawkgold.com	Telephone no.: (647) 794-4359
3	<p>Other personnel (subcontractor, contractors, company staff etc.):</p> <ul style="list-style-type: none"> <li>• Golder Associates Limited (consultants)</li> <li>• Tlicho Logistics and other Tlicho Investment Corporation companies</li> <li>• Nighthawk personnel (project geologist)</li> <li>• GeoMinEx Consultants Inc. (geologists, geological technicians, field assistants)</li> <li>• Major Diamond Drilling (drilling personnel)</li> <li>• Discovery Mining Services Ltd. (camp personnel, caretakers, assistants, Industrial Occupation First Aid Level 3 staff, camp cooks)</li> <li>• Great Slave Helicopters (helicopter support for diamond drilling)</li> <li>• Sub-Arctic Geomatics, Ltd. (surveyors)</li> <li>• Additional subcontractors may be required as the project progresses</li> </ul> <p>Total number of persons on site: Up to 50 (at the Colomac Camp); may increase as project moves forward (pending approval by the Inspector)</p>		
4	Eligibility (Refer to section 18 of the Mackenzie Valley Land Use Regulations):		
	<input type="checkbox"/> (a)(i)	<input type="checkbox"/> (a)(ii)	<input type="checkbox"/> (a)(iii)      X (b)
5	<p>Other rights, licences or permits related to this permit application (mineral rights, timber permits, water licences, etc.):</p> <ul style="list-style-type: none"> <li>• Exploration and closure and reclamation of the Damoti Lake mine site is covered under the existing Land Use Permit W2012C0002 Class A (expiration February 28, 2019) and Water License W2012L1-0002 Type B (expiration February 27, 2019).</li> <li>• Land Use Permit, Number W2012X0003 issued February 29, 2012, and expiring February 28, 2019. This LUP covers remediation of the Diversified, Chalco Lake, and Spider Lake Sites.</li> <li>• Nighthawk also holds a valid GNWT Prospector's License #33742, and (NWT-AANDC) Federal prospecting License NEF0012.</li> <li>• Nighthawk Mineral Leases and Mining Claims are included in Figure 5 Indin Lake Land Tenure Map. <i>(note: Chalco Lake has been fully reclaimed and is included in the maps for reference purposes only)</i></li> </ul>		

**a)** Summary of operation (describe purpose, nature and location of all activities) (Provide details on a separate page, if necessary)

(Refer to paragraph 19(3)(b) of the Mackenzie Valley Land Use Regulations):

The Damoti Lake project site closure and reclamation activities are currently permitted under the Land Use Permit number W2010C0008 and Water License number W2012L1-0002). The Damoti Interim Closure and Reclamation Plan will be submitted in November 2018. It should be noted that Nighthawk Gold is currently conducting work on the Damoti property during 2018, a drill program employing two drill rigs, and is also conducting a geological mapping and sampling program.

The purpose of reclamation activities is to ensure the sites are compatible with future use by wildlife and humans, to establish chemical and physical stability, and to reduce the need for long term monitoring care and maintenance. These activities are subject to the terms and conditions of the conveyance and reclamation agreement between AANDC and Nighthawk in accordance with the final closure and reclamation plans to be developed for Damoti Lake

Closure and reclamation plans were developed in accordance with the draft document: *Guidelines for the Closure and Reclamation of Advanced Mineral and Exploration and Mine Sites in the Northwest Territories* released by Aboriginal Affairs and Northern Development Canada (AANDC) in 2013. A remedial options analysis was prepared by Nighthawk and Golder Associates Ltd. in consultation with stakeholders and the Tlcho Government to determine the most suitable remediation option for each reclamation objective with respect to effectiveness, ease of implementation, duration, feasibility, liability, acceptability and cost. In accordance with the 2013 AANDC Guidelines, remediation activities included and will include:

- removal of all waste deemed hazardous or unacceptable
- deconstruction of all buildings and structures remaining on-site
- collection of all metal debris for removal
- identification and safe storage of waste rock at risk for acid-generation or metal leaching
- backfilling of trenches in a manner to ensure physical stability
- removal or controlled burning of unpainted, non-pressure treated wood

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For further details on the proposed closure and reclamation operations see the following documents:

- Spider Lake Project Site Interim Closure and Reclamation Plan
- Diversified Mine Lake Project Site Interim Closure and Reclamation Plan

*(note: the closure and reclamation of the Damoti mine site is covered under permit W2010C0008 and water licence W2010L1-0002. The Interim Closure and Reclamation Plan is being updated for submission on November 1, 2018.)*

Operations will require ground crews and small machinery to access each site. A base camp for these activities will be established at the Colomac site. Exploration activities will take place concurrent to remediation activities and overlap (including camp use, winter road use and fuel storage) is anticipated. Information related to camp and exploration activities are covered under Exploration Land Use Permit being submitted to the WLWB in September 2018.

**b)** Indicate if a camp is to be set up. If yes, indicate size of camp or describe camp. (Provide details on a separate page, if necessary):

One site is intended for use as base camp location for the anticipated exploration activities at the Colomac site. This camp location will also act as base camps for future proposed closure and reclamation activities. Under the same permit, additional satellite exploration camps may 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 camps were approved under the previous permits (W2010C0008 and W2010L2-0001).* Prior to the establishment of any satellite camps, the Inspector will be provided with camp locations and associated documents.

The existing Colomac camp is comprised of 20 insulated tents on wood platforms, 13 stick-built tent frame structures. All structures are set back a minimum of 30m from the ordinary high-water mark. Approximate square footage of structures is 6000ft<sup>2</sup>. The existing Damoti camp is comprised of 17 plywood insulated tent structures with tarpaulin roofs and 1 stick-built core building. All structures are set back a minimum of 30m from the ordinary high-water mark. Approximate square footage of structures is 3500ft<sup>2</sup>.

Satellite camps may potentially be established after approval from the Inspector was received. Satellite camps would be established near remote drilling targets to increase efficiencies if extended drilling is planned. Details are not known at this time. The camp would house up to 15 people and likely host 2 drills. The length of time the small satellite camp would be required for is dependent on the discovery itself and can not be forecasted. All details will be provided to the

inspector prior to camp establishment, such as: location and distance from waterbodies, number and types of structures, number of personnel stationed at camp and water sources and volumes required to support the camp.

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

The main objective of the land use activities covered under this permit the remediation of environmental impacts from past mining and exploration activities. The overall impacts on the environment, wildlife and land use will be positive.

#### **Environmental Impacts**

Remedial activities will further improve the physical and chemical environment of the sites. The following activities will have a positive overall impact:

- removal or containment of sources of environmental contamination
- establishment of physical stability through removal of hazards such as unstable structures, trenches and hazardous waste
- treatment or removal of contaminated soils, with a focus on preventing further contamination
- collection and disposal of metal and non-hazardous waste on-site
- identification and storage of waste rock at risk for acid generation or metal leaching

Efforts will be made during remediation activities to minimize further disturbances to land, air, environment and wildlife. The following measures will be taken to reduce environmental impact:

- adherence to Nighthawk's Waste Management Plan and Incinerator Management Plan with emphasis on training, mitigation, and enforcement
- proper closure by Nighthawk of camps not in use (main Colomac camp and potential satellite camps); and when camps are no longer required, sites will be restored to pre-exploration conditions or to a level approved by the inspector
- minimize the impact made by visiting crews during site and reclamation activities
- account for all materials which are transported to sites to ensure they are backhauled
- minimize the possibility for fuel spills by adhering to the Spill Contingency Plan and focusing on training, prevention and adherence by all site visitors (including contractors and subcontractors)

Nighthawk's Spill Contingency Plan is provided in the application package.

#### **Archaeologically Important Sites**

Nighthawk understands that archaeological and heritage resources may also be impacted by camp and remediation activities. Nighthawk 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 entire lease area. These areas of archaeological importance will be avoided during land use activities to protect the integrity of the sites. Any suspected archaeological sites (boulder features, lithic scatter, burial sites, etc.) encountered during field activities will be reported to the government of the Northwest Territories and the Canadian Museum of Civilization. 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 remediation of the Indin Lake legacy sites, Nighthawk 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.

#### **Wildlife Impacts**

The area of land that the Indin Lake Gold Project encompasses is significant and Nighthawk is aware of potential impacts to wildlife. Refer to the Wildlife Mitigation and Management Plan for a summary of the anticipated potential negative impacts on wildlife and species at risk, proposed mitigation measures to reduce potential impacts, and ongoing monitoring to confirm the effectiveness of the mitigation. Nighthawk 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 will be used to record noteworthy sightings of wildlife during remediation 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.

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.
- Wildlife will not be fed or harassed by Project personnel and contractors.
- Disturbances to known wildlife habitat (eskers, nests, etc.) will be avoided as necessary.
- If caribou are observed during operations within 500 metres of Project activities, non-critical work (e.g., aircraft departure, ground transportation) will cease until the animals have moved beyond the area of work.

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

#### Resource Impacts

Direct resource impacts about the remediation program will be positive at both the community and individual level. The number of personnel involved including Nighthawk, contractors and sub-contractors is anticipated to be between up to 50 individuals, therefore the number of individuals involved that will have direct resource benefits will be low.

In addition, there may be salvageable equipment and materials at the remedial sites that may be useful to nearby communities. An assessment of items eligible for reuse will be completed with consideration towards health and safety, feasibility and cost. Consultations will be made with these communities to determine interest in the acquisition and use of these items.

#### Engagement

Nighthawk 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 past submission process. Nighthawk's Engagement Plan and including the current Engagement Record is provided in the application package.

Proposed restoration plans (Use a separate page if necessary):

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The focus for restoration will be progressive reclamation. The Colomac site will be used as a base camp. The camp will provide facilities for up to 50 people and will be the embarkation/ disembarkation point for winter road travel and aircraft transportation of personnel. The Damoti site may also be used as a satellite camp. Progressive reclamation is a continual and on-going process and includes the removal of scrap wood, metal, bio-waste and contaminated soil from 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. In the past, an approved incineration procedure for both camp waste and human waste has been implemented and the same procedure will be proposed again for this upcoming work. 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.

For further information, refer to Damoti Lake Interim Closure and Reclamation Plan V3.2 that is being prepared by Golder Associates Ltd. and will be submitted to the Wek'èezhii Land and Water Board for review by November 2018.

Roads:

Is this to be a pioneered road?

Short spur roads may need to be constructed to facilitate reclamation activities. A map of these potential roads is included in shown in Figure 2.

Has the route been laid out or ground truthed?

Proposed routes for spur winter access roads have been developed. There is a 3 km portage on the spur road to Spider Lake which would need to be ground truthed should the road be required.


(Provide details on a separate page.)

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#### Proposed disposal methods:

Waste management and disposal for the reclamation activities within the Nighthawk mineral leases will be completed in accordance with proposed disposal methods outlined in Nighthawk's Waste Management Plan. All waste will be handled, transported and disposed of by KBL Environmental based in Yellowknife, NWT. Overburden (organic soils, waste material, etc.) will be managed as per Water License Number W2010L1-0002 that will be expired on 28 February 2019 and is currently being renewed in September 2018. Site specific waste management procedures have been developed for all restoration and camp activities. Restoration activity waste management is described in the Damoti Interim Closure and Reclamation Plan (to be submitted in November 2018).

	When small ground crews visit legacy sites, they will gather and remove all waste that has been brought in with them. Any fuel containers and other materials necessary for reclamation brought back to base camp as soon as possible. Any waste generated during site visits will be returned to the base camp and dealt with in accordance with the waste management plan.		
<b>10</b>	Equipment (includes drills, pumps, etc.) (Use separate page if necessary):		
	<b>Number</b>	<b>Type and Size</b>	<b>Proposed use</b>
	2 Small to Medium Sized Excavators	Cat 320 or equivalent, operating weight of approximately 15,000 kgs.	Breaking concrete foundations, digging out soil and debris, reshaping the waste rock pile, destruction of buildings
	1 Backhoe	Operating weight of approximately 10,000 kgs	Waste debris collection and building demolition
	1 Bobcat	Approximately 2000 kgs	Waste debris
	1 Bulldozer	Operating weight of approximately 16,000 kgs	Material movement
	1 Drum Crusher	Crushing of cleaned legacy fuel drums	1 Drum Crusher
	1 Welding/cutting unit	Approximately 100 kg	For onsite repairs and to cut various large pieces into workable unit
	1 Walk-behind compactor	610 kg	Compacting waste rock piles after regrading
	Up to 2 Generator sets	5.0 m x 2.0 m	Electricity generation
	1 Dumptruck or all-terrain Rocktruck	Operating weight of approximately 10,000 kg	Transporting contaminated soil and/or waste rock
	1 Concrete mixer	2,100 kg	Prepare concrete for capping of mine opening
	Quads (one on site, more to be rented)		Transport personnel in and around camp, moving equipment
	Snowmobiles (several)		Transport personnel in and around camp
<b>11</b>	Fuels:	Number of containers:	Capacity of containers: Location:
	Diesel	To be determined; pending area of remediation and amount of activity.	
	Gasoline	At a minimum, the following quantities will be stored within bermed fuel storage areas at the Colomac site:	
	Aviation Fuel	360 x P50 diesel.	
	Propane	120 x Jet B.	
	Other	12 x gasoline. 10 x propane.	
<b>12</b>	Containment fuel spill contingency plans (attach separate contingency plan if necessary): A Spill Contingency Plan is provided in the application package. The Spill Contingency Plan covers all fuel types to be used, preventative measures and spill action plans/procedures with respect to applicable guidelines.		
<b>13</b>	Methods of fuel transfer (to other tanks, vehicles, etc.): <ul style="list-style-type: none"> <li>• Wobble pumps to transfer fuel from drums.</li> <li>• Electric pumps to fuel tanks.</li> <li>• Fuel transfer areas are bermed and spill kits are available.</li> <li>• Only trained operators will perform fuel transfers.</li> <li>• Westeel tidy tanks are available at Colomac if required.</li> </ul>		
<b>14</b>	Period of operation (includes time to cover all phases of project work applied for, including restoration): 5 years		
<b>15</b>	Period of permit (up to five years, with maximum of two years of extension): 5 years, to facilitate the process of restoration, performance assessment and short-term monitoring.	Start Date: March 1, 2019	Completion Date: February 28, 2024
<b>16</b>	Location of activities by map coordinates (attach maps and sketches): <i>To complete this part of the Application Form, please see the <a href="#">Standards for Geographic Information Systems (GIS) Submissions</a>.</i>		

Minimum latitude (degree, minute): 64° 8' 0" N		Maximum latitude (degree, minute): 64° 29' 35.16"N	
Minimum longitude (degree, minute): 115°12'36.00"W		Maximum longitude (degree, minute): 115° 7'0" W	
Map Sheet no.: 86b NAD 83			
17	Applicant: Print name in full, in upper case: MICHAEL J. BYRON		
		Signature: 	Date: Oct 16, 2018
18	Application fees for Type A or Type B permit (for federal and non federal lands) <sup>i</sup>		
	a) Application fees for Type A or Type B permit (include the first two hectares) - \$150.00:		\$ 150
	AND b) Land-use fees for <b>federal public lands only</b> : If more than two hectares of federal public lands are being used, enter the number of hectares in excess of the two hectares included in the Application fee, rounded up to the next whole hectare <u>10</u> hectares at \$50.00/hectare		\$ 500
	Total fees <sup>ii</sup> :		\$ 650
An estimate of the anticipated Land Use is included in the application package.			

<sup>i</sup> To help identify whether your activity is on federal lands, please see [this map](#).

<sup>ii</sup> Please make all cheques payable to the Receiver General for Canada.