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 KATIMAYINGI

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 NUNAVUT WATER BOARD
 NUNAVUT IMALIRIYIN

WATER LICENCE APPLICATION FORM

Application for: (check one)

☒ **New** ☐ **Amendment** ☐ **Renewal** ☐ **Assignment**

LICENCE NO:

(for NWB use only)

1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE

Andrew Mitchell
401-1113 Jade Court
Thunder Bay, Ontario
P7B-6M7
 Phone: 807-346-1668
 Fax: 807-345-0284
 e-mail: andrew.mitchell@wolfdenresources.com

2. ADDRESS OF CORPORATE OFFICE IN CANADA (if applicable)

Wolfden Resources Inc.
401-1113 Jade Court
Thunder Bay, Ontario
P7B 6M7
 Phone: 807-346-1668
 Fax: 807-345-0284
 e-mail: info@wolfdenresources.com

3. LOCATION OF UNDERTAKING (describe and attach a topographical map, indicating the main components of the Undertaking)

Continued use of existing camp, Federal Crown lease number 86H/10-1-7, West Kitikmeot Region, Nunavut.

Latitude: 65 40' N Longitude: 112 50' W NTS Map No. 86H/10 Scale 1:50:000

Drilling to be conducted on Mining lease 3163, West Kitikmeot Region, Nunavut.

Latitude: 65 37" N Longitude: 112 46" W NTS Map No. 86H/10 Scale 1:50:000

Drilling to be conducted on Mining lease 3202 and NTI Lands CO-40 Sub-areas A and B (Hood area), West Kitikmeot Region, Nunavut.

Latitude: 66 8" N Longitude: 99 37" W NTS Map No. 82I/2 Scale 1:50:000

4. DESCRIPTION OF UNDERTAKING (attach plans and drawings)

The main water using components of the undertaking include the operation of up to a 40 person camp and the supply of water to a maximum of 3 diamond drill units. The attached map shows the location of the existing camp and the approximate locations of the proposed regions for surface drilling. Proposed drilling for 2006 will total about 20,000 m on the Izok property and approximately 30,000 m on the Hood property. Plans for 2007 have not been determined. In addition, up to two prospecting teams will map and sample for new targets. Personnel for both of these undertakings, as well as appropriate support staff, will be based from the existing camp at Ham Lake.

Other planned activities for the coming field season include:

- Transport to site and storage of fuel for operations;
- Transport of drill core to camp for logging, sampling, and storage;
- Inspection and reclamation of drill set-ups upon drill hole completion; and
- Camp clean up and seasonal shut down.

5. TYPE OF PRIMARY UNDERTAKING (A supplementary questionnaire must be submitted with the application for undertakings listed in “**bold**”)

- | | |
|---|--|
| <input type="checkbox"/> Industrial | <input type="checkbox"/> Agricultural |
| <input type="checkbox"/> Mining and Milling | <input type="checkbox"/> Conservation |
| <input type="checkbox"/> Municipal (includes camps/lodges) | <input type="checkbox"/> Recreational |
| <input type="checkbox"/> Power | <input checked="" type="checkbox"/> Miscellaneous (includes exploration/drilling) |
| | (describe): <u>exploration drilling and supporting camp</u> |

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings

6. WATER USE

- | | |
|--|--|
| <input checked="" type="checkbox"/> To obtain water | <input type="checkbox"/> To divert a watercourse |
| <input type="checkbox"/> To modify the bed or bank of a watercourse | <input type="checkbox"/> Flood control |
| <input checked="" type="checkbox"/> To alter the flow of , or store, water | <input type="checkbox"/> Other (describe): _____ |
| <input type="checkbox"/> To cross a watercourse | |

Water will be used to supply the drills and camp (showers, kitchen, laundry, rock saw). This may necessitate the temporary storage of water in tanks located at the drills and at the camp and core shack.

7. QUANTITY OF WATER INVOLVED (cubic metres per day including both quantity to be used and quantity to be returned to source)

It is estimated that drilling and domestic water consumption will be in the order of 100m³ Per day. Approximately 90 % of water would be returned to local sources after passing through settling sumps and ground filtration. The actual volume of water lost in drilling is estimated at 6m³ per day. This amount is consumed downhole at the bit face for cooling purposes. The remaining water returns back up the hole where it is contained, settled in tanks to remove any particulate matter, and re-cycled in a closed circulation system. For three drills approximately 18-20m³ will be consumed per day.

The camp will use an estimated 5m³ per day. Grey water generated by the kitchen, the showers, and the laundry facilities is collected and settled in a tank before being pumped to a natural sump behind camp. This allows percolation and filtration through the soil to occur.

8. WASTE (for each type of waste describe: composition, quantity (cubic metres per day), methods of treatment and disposal, etc.)

☒ Sewage - Pacto toilets are used containing all human waste in doubled plastic bags which are collected daily and incinerated along with other burnable solid and semi solid wastes.

☒ Greywater – Approximately 5m³ per day is produced from kitchen, shower and laundry facilities. Grey water is settled in tanks and then pumped to a natural sump behind the camp and

approximately 100 m. from the nearest water body. This water is from the kitchen sink, dry sinks, and showers and will contain at times small food particles, animal fats, and soap/shampoo residues.

X Sludges – Approximately 75m³ of water is circulated through the closed systems of the 3 drills during a day of drilling. Cuttings and sludges are settled in tanks and then sludge is bagged for disposal and disposed of in natural sumps located at least 50 m from any water bodies. A long drill hole may produce up to 1m³ of this material for disposal. Salt used occasionally down the hole to prevent freezing is sufficiently diluted by water to be insignificant as a constituent of these sludges.

X Waste oil - waste oil is collected and stored in sealed 45 gallon (205 l) drums clearly marked as to their contents and removed from site by aircraft to be properly disposed of in Yellowknife at an approved facility.

X Bulky Items/Scrap Metal - All scrap metal is collected and stored in 45 gallon drums which are wired shut and then removed from the site by aircraft to be disposed of in Yellowknife at the refuse facility.

X Solid Waste – All burnable solid waste is incinerated in an oil fired forced air furnace located at the Ham Lake camp and capable of incinerating 64 Kg of waste/hour. Solid waste will be incinerated daily. This waste includes kitchen wastes, sewage, paper and cardboard, any fuel or oil-soaked materials and plastics. It is expected that six large garbage bags of waste would be incinerated daily. Ashes and any un-burned material will be removed on a daily basis and placed in the 45 gallon (205 l) drums that contain scrap metal, which will be removed from site.

X Hazardous Materials – Lead-acid batteries and petroleum products are the only hazardous materials used on site. Lead-Acid batteries are removed from the site for disposal at an approved facility in Yellowknife.

9. PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING (give name, mailing address and location; attach if necessary)

Land Use Permit

DIAND X Yes ___ No If no, date expected Land Use Permit application for drilling on Crown Lands made concurrent with this water license application. Attention: Jeff Holwell, Building 918, P.O. Box 100 Iqaluit NU X0A 0H0.

Regional Inuit Association X Yes ___ No If no, date expected Land Use Permit application for drilling on IOL made concurrent with this water license application. Attention: Jack Kaniak, KIA Lands Manager, Kitikmeot Inuit Association, P.O. Box 360, Kugluktuk, NU X0B 0E0

Commissioner ___ Yes ___ No If no, date expected _____

10. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES (direct, indirect, cumulative impacts, etc.)

A tabular summary of the potential wildlife and resource impacts and proposed mitigation measures is presented as follows:

Environmental Resources, Impacts and Mitigation

Resource/Topic	Potential Impact	Mitigation
Terrain / Permafrost	Overburden drilling will cause minor disturbance to immediate drilling areas. Contamination of terrain/permafrost and, surface and ground water due to fuel spills. Accidental fuel spills.	Drill rigs will be heli-portable and will not traverse the ground surface. Site will be left in a stable state. Proper storage of fuel containers and use of drip pans. See Attachment B Spill Contingency Plan.
Hydrology	Water removal required from local water bodies for geotechnical drilling.	Chilled brine will be kept in closed circulation by the drill, minimizing the amount of water used. Additional make-up water will be required if downhole circulation is lost. Amounts are expected to be minimal.
	Water quality changes to groundwater if artesian well is encountered during drilling.	If an artesian well is encountered, drilling will stop, the hole will be plugged, and the location will be recorded and reported to the Inspector.
Surface Water Quality	None – no discharge to receiving water environment, negligible sedimentation.	No mitigation required.
Fish and Fish Habitat	Entrainment of fish and other aquatic life from water withdrawal for drilling purposes.	Use of screens over intake pipe to prevent entrainment.
Vegetation	Spilled brine during drilling may result in minor damage in immediate vicinity of drill site Minor compaction of vegetation caused by drill.	Implementation of field protocols to ensure there is no brine spillage. Drill-rig will be heli-portable and will not traverse the ground surface.
Wildlife and Wildlife Habitat	Wildlife: short-term aircraft and drilling noise, human interaction. Habitat: Minor disturbance to vegetation in drilling areas by compaction.	Personnel training on wildlife-human interaction/encounters. Pre-drilling reconnaissance site visit prior to drilling activities will assist in identifying sensitive wildlife habitat. Site will be left in a stable state, promoting vegetation re-established. Any critical or sensitive wildlife species encountered during the drilling season, such as nesting raptors in the area, will be avoided by a 10 m buffer zone.
	Disturbance of wildlife from low-level aircraft activities.	Low-level aircraft activity will be restricted to flights into and out of the

		camp for crew changes and supply deliveries.
Socio-economics	Positive impacts. Personnel actively employed from local communities. Continued employment opportunities for field personnel from the local communities.	Local employment provides jobs, employment benefits and income to individuals and families.
Archaeology / Cultural Sites	Minor disturbance to immediate drilling areas.	Pre-drilling terrain mapping and reconnaissance site visit will assist in identifying potential archaeological sites. Personnel training on archaeological resource identification. Standard notification procedures will be followed in the event that archaeological artifacts are encountered.
Archaeology / Cultural Sites	Disturbance, removal and/or destruction of archaeological specimens or sites.	Project activities that encounter or disturb an archaeological site or specimen shall be stopped, and the proper regulatory authorities shall be immediately notified. All persons working on site will be made aware of this mitigation procedure and any permit conditions. Archaeological specimens or sites shall not knowingly be removed, disturbed or displaced.

NIRB Screening

Yes ☒ No ☐ If no, date expected July 2006**11. INUIT WATER RIGHTS**

Will the project or activity substantially affect the quality, quantity, or flow of water flowing through Inuit Owned Lands and the rights of Inuit under Article 20 of the Nunavut Land Claims Agreement?

The nearest community to the project is Kugluktuk at some 265 km distance from the area. The proportional water taking for camp domestic water supply and drilling use is very small when compared to the water volume of the affected water bodies. The manner of water taking will be by a small submersible pump or suction hose extended outward from the shore. There will be no damming of streams, diversions or significant construction work in any water bodies. Operations will be restricted to a minimum of 30 m beyond the ordinary high water line of water bodies. Considering the non-invasive nature of the work and the small footprints of the equipment and facilities as they relate to water use, impacts on the water use areas by the nearby communities is expected to be minimal or non-existent. Similarly, the impact on local fish and wildlife habitats are expected to be slight and fully mitigated by normal diamond

drilling operating procedures and appropriate precautions taken when working near water bodies.

11. (Continued)

If yes, has the applicant entered into an agreement with the Designated Inuit organization to pay compensation for any loss or damage that may be caused by the alteration. If no compensation agreement has been made, how will compensation be determined?

In the unlikely event of some occurrence necessitating compensation, negotiations would proceed to determine the appropriate compensation for the act.

12. CONTRACTORS AND SUB-CONTRACTORS (name, address and functions)

Major Drilling - contracted to provide all diamond drilling
337 Old Airport Rd. Phone 867 873 3358
PO Box 1377
Yellowknife, NT
X1A 2P1

Wardrop Engineering Inc. - engineering consultant
330 Bay Street - Suite 610 Phone: 416.368.9080
Toronto ON,
M5H 2S8

Gartner Lee Limited - contracted to perform environmental base line studies
3015 - 5th Avenue NE Phone 403 262 4299
Suite N195
Calgary AB T2A 6T8
Canada

Great Slave Helicopters - contracted to provide helicopter transportation on site
Bag 7500 Phone 867 873 2081
Yellowknife, NT
X1A 2R3

1984 Enterprises - contracted to provide cooking staff and first aid
201 - 750 Denman St. Phone 604 736 8142
Vancouver, BC
V6G 2L5

Discovery Mining Services - contracted to provide expediting services
101 - 487 Range Lake Rd. Phone 867 920 4600
PO Box 2248
Yellowknife, NT
X1A 3R9

13. STUDIES UNDERTAKEN TO DATE (list and attach copies of studies, reports, research, etc.)

Bibliography of Relevant Documents for the Izok Lake Site.

Metall Mining Corporation, 1993. **Environmental Evaluation Izok Project: Submission to the Regional Environmental Review Committee.** Document prepared by Klohn-Crippen Consultants Ltd., Richmond, BC for Metall Mining Corporation, Edmonton, AB. 1,267 pages.

SRK, 2002. **Review and Assessment of the 1993 Izok Environmental Evaluation.** Document prepared by Steffen Robertson and Kirsten (Canada) Inc., Vancouver, BC for Inmet Mining Corporation, Toronto, ON. 46 pages plus appendices.

14. THE FOLLOWING DOCUMENTS MUST BE INCLUDED WITH THE APPLICATION FOR THE REGULATORY PROCESS TO BEGIN

Supplementary Questionnaire (where applicable: see section 5) ☒ Yes ___ No If no, date expected _____

Inuktitut/English Summary of Project ☒ Yes ___ No If no, date expected _____

Application fee \$30.00 (Payee Receiver General for Canada) ☒ Yes ___ No If no, date expected _____

Water Use fee (see Section 9 of the *NWT Waters Regulations*; Payee Receiver General for Canada)
___ Yes ___ No If no, date expected _____

15. PROPOSED TIME SCHEDULE

☒ Annual (or) ___ Multi Year

Start Date: July 1, 2006

Completion Date: December 31, 2006

Andrew Mitchell
Name (Print)

Project Manager
Title (Print)

Andrew Mitchell

Signature

June 5, 2006
Date

For Nunavut Water Board use only

APPLICATION FEE Amount: \$ _____ Pay ID No.: _____

WATER USE DEPOSIT Amount: \$ _____ Pay ID No.: _____

Project Description – Izok and Hood Properties – 2006 Exploration Programs

Wolfden Resources Inc. (Wolfden) is a Canadian exploration and mining development company that has acquired the mineral rights for the Izok property, and portions of the Hood property from Inmet Mining Corporation.

The Hood property contains copper and zinc deposits, and consists of two mineral leases surrounded by Inuit Owned land (surface and subsurface rights; CO-40: Sub-areas A, B, and Open).

The Izok property contains copper and zinc, and consists of three mineral leases and three claims (currently being processed). The leases are located on Crown and Inuit Owned Land (CO-05; surface rights).

Wolfden is proposing a 2006 exploratory drilling program in the vicinity of Izok Lake and on the Hood property, both located in Nunavut (Figure 1). These programs will begin in August 2006 and initially operate for about six months. We anticipate that additional exploration work will take place in 2007 and that the scope of these future programs will be based, in part on the results of the 2006 drilling.

In addition to mineral exploration activities, we anticipate that environmental baseline work and engineering studies will be carried out concurrent with the planned diamond drilling and prospecting.

The planned activities are necessary to increase the technical understanding of the nature of the mineral deposits. The long-term objective of any mineral exploration program is to progress the project towards feasibility studies and eventual development of a producing mine. In addition to the mineral exploration work, environmental baseline studies will be undertaken to obtain the necessary background data and to improve the knowledge of the physical environment of the property. This is in preparation for a future submission of an Environmental Impact Statement in support of permit applications for mine development and operation.

Summary of Operation

Hood Property

The Hood property is Inuit-owned land (CO-40; surface and subsurface rights). The proposed drill locations on the Hood Property are shown in red on Figure 2. A Land Use License application has been submitted to the Kitikmeot Inuit Association (KIA) concurrent with this application.

Izok Property

Figure 3 shows the Izok Property area and the mineral leases owned by Wolfden. The drill locations on the North-East side of the outlet from Izok lake to Itchen Lake are located on IOL land (CO-05; surface rights) and the drill locations on the South-West side are on Crown land.

We propose to drill up to approximately 30,000 m on the Izok property in 2006. Plans for 2007 have not been determined and will depend on budgetary factors and the results of the 2006 drilling. The majority of the drilling is planned for Inuit Owned Land areas; however the borehole locations have not been finalized and it will be necessary to access crown land for drilling setups. For the purposes of this application, general locations of drilling activities have been provided. Land use permits are needed for access to 17.3 hectares of Inuit Owned Land and

3.5 hectares of Land owned by the Crown at Izok. A small field-prospecting program is also planned on both properties.



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NUNAVUT WATER BOARD

NUNAVUT IMALIRIYIN KATIMAYINGI

**EXPLORATION/ REMOTE CAMP
SUPPLEMENTARY INFORMATION REQUEST**

Applicant: [WOLFDEN RESOURCES INC.](#)

Licence No: _____
(For NWB Use Only)

ADMINISTRATIVE INFORMATION

1. Environment Manager: [Andrew Mitchell](#) Tel: [807-346-1668](#) Fax: [807-345-0284](#)
E-mail: andrew.mitchell@wolfdenresources.com
2. Project Manager: [Andrew Mitchell](#) Tel: [807-346-1668](#) Fax: [807-345-0284](#)
E-mail: andrew.mitchell@wolfdenresources.com
3. Does the applicant hold the necessary property rights?

[Yes - Transfer currently in process, full title will be in place before water license comes into effect.](#)
4. Is the applicant an 'operator' for another company (i.e., the holder of the property rights)?
If so, please provide letter of authorization. [No](#)
5. Duration of the Project
☒ Annual
☐ Multi Year:
If Multi-Year indicate proposed schedule of on site activities
Start: _____ Completion: _____

CAMP CLASSIFICATION

6. Type of Camp
☐ Mobile (self-propelled)
☐ Temporary
☒ Seasonally Occupied: [from mid February to mid December](#)
☐ Permanent
☐ Other: _____
7. What are the design population of the camp and the maximum population expected on site at one time? What will be the fluctuations in personnel?

The planned population of the camp up to as many as 40 people, this may fluctuate as low as 20 and as high as 40 for short periods of time (several days).

8. Provide history of the site if it has been used in the past.

The camp has existed at its present location since the discovery and beginnings of exploration on and around the Izok showing in the 1970's. It has been expanded over time to include more structures in order to accommodate larger field crews. First discovered in the early 1970's, the area has been historically worked through the 1970's, 1990's and early 2000's. Wolfden Resources obtained the property in April 2006 and wishes to begin work this summer.

CAMP LOCATION

9. Please describe proposed camp location in relation to biogeographical and geomorphological features, and water bodies.

The existing camp is located at the southern end of Ham Lake on its southwestern shore. The camp itself is situated on a gravel point adjacent to Ham Lake (see map).

The Wolfden Resources Inc. Izok and Hood Projects are mineral exploration projects focused on base metal exploration in the Point Lake-Itchen Lake volcanic belt and the Takiyuak greenstone belt. The Izok and Hood Projects are located in the Kitikmeot region of Nunavut, approximately 360km north and 425km north Yellowknife, NWT respectively. The closest population center is Kugluktuk, located 265km north of the camp on the Izok property.

The Izok and Hood Projects are contained within the Takijua Lake Upland Ecoregion. This ecoregion takes in the eastern half of the Bear-Slave Upland south of Coronation Gulf. Much of the upland surface is composed of unvegetated rock outcrops that are common on the Canadian Shield. The mean annual temperature is approximately -10.5° C with a summer mean of +6° C and a winter mean of -26.5° C. The mean annual precipitation range is 200-300 mm.

10. How was the location of the camp selected? Was the site previously used? Was assistance from the Regional Inuit Association Land Manager sought? Include maps and/or aerial photographs.

The location of the camp was selected by the previous operator of the mineral exploration project, Inmet Mining Corporation. Presumably the location was chosen based on the needs of the operation for the support of mineral exploration activity on the property. The site has been used for this purpose since the 1970's. Use of the site prior to this time and for other purposes is not documented. The Regional Inuit Association was not in existence at this time and therefore could not have been consulted in its placement.

11. Is the camp or any aspect of the project located on:

<input checked="" type="checkbox"/> Crown Lands	Permit Number (s)/Expiry Date: Lease 86H/10-1-7, April 30, 2008.
<input type="checkbox"/> Commissioners Lands	Permit Number (s)/Expiry Date: _____
<input checked="" type="checkbox"/> Inuit Owned Lands	Permit applications submitted concurrently with this application.

12. Closest Communities (distance in km):

Kugluktuk, Nunavut is the closest community and is located approximately 265 km north of the property.

13. Has the proponent notified and consulted the nearby communities and potentially interested parties about the proposed work?

The local Inuit Administration in Kugluktuk has been notified as to intention to commence work at Izok Lake and we plan to employ several individuals from Kugluktuk, Cambridge Bay, and possibly Bathurst Inlet.

14. Will the project have impacts on traditional water use areas used by the nearby communities? Will the project have impacts on local fish and wildlife habitats?

The nearest community to the project is Kugluktuk at some 265 km distance from the area. The proportional water taking for camp domestic water supply and drilling use is very small when compared to the water volume of the affected water bodies. The manner of water taking will be by a small submersible pump or suction hose extended outward from the shore. There will be no damming of streams, diversions or significant construction work in any water bodies. Considering the non-invasive nature of the work and the small footprints of the equipment and facilities as they relate to water use, impacts on the water use areas by the nearby communities is expected to be minimal or non-existent. Similarly, the impact on local fish and wildlife habitats are expected to be slight and fully mitigated by normal diamond drilling operating procedures and appropriate precautions taken when working near water bodies.

PURPOSE OF THE CAMP

15. ☒ Mining

☐ Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.)
(Omit questions # 16 to 21)

☐ Other _____ (Omit questions # 16 to 22)

16.

- ☐ Preliminary site visit
- ☒ Prospecting
- ☐ Geological mapping
- ☐ Geophysical survey
- ☒ Diamond drilling
- ☐ Reverse circulation drilling
- ☐ Evaluation Drilling/Bulk Sampling (also complete separate questionnaire)
- ☐ Other: _____

17. Type of deposit:

- ☒ Lead Zinc
- ☐ Diamond
- ☒ Gold
- ☐ Uranium
- ☒ Other: Silver and Copper

DRILLING INFORMATION

18. Drilling Activities

- ⊗ Land Based drilling
- ⊗ Drilling on ice

19. Describe what will be done with drill cuttings?

Water used during drilling is conserved with a closed system of circulation. Drill cuttings are collected in a sludge recovery system that allows them to settle out and accompanying water to be returned down the hole. The cuttings are then bagged and transported to natural sumps chosen as to be located more than 50m. from the closest water source and with sufficient opportunity for filtration through local soils.

20. Describe what will be done with drill water?

Water involved in drilling is re-circulated within a closed system. A small amount of water is actually consumed at the bit face but the majority returns to surface where it is passed through settling tanks to remove any particulate matter (cuttings) and then is returned down the hole. When drilling ceases, overflow from the settling tanks will run off and percolate into local soils, providing further filtration before eventually returning naturally to local water courses as ground water. A small amount of surface run off is to be expected during this period and occasionally during the drilling process as well, and this will be contained or channeled so as not to directly enter any water courses and provide some filtration.

21. List the brand names and constituents of the drill additives to be used? Include MSDS sheets and provide confirmation that the additives are non-toxic and biodegradable.

A list of the drill additive types that may be used by Major Drilling are:

Brand Name	Constituent
Poly-Drill O.B.X.	Liquid Polymer
Poly-Drill 133-X	Liquid Anionic Polymer
Poly-Drill 1330	Liquid Anionic Polymer
Westcoast Drilling Supplies	Linseed Soap
Peladow	Calcium Chloride salt

MSDS sheets are contained within the Spill Contingency Plan attached to this application form.

22. Will any core testing be done on site? Describe.

Core will be transported from the drill to the core shack where it is logged by geologists. Geologically significant intersections will be split with a core saw...half the core stored on site and the other half bagged and sent for lab assay.

SPILL CONTINGENCY PLANNING

23. Does the proponent have a spill contingency plan in place? Please include for review.

A copy of the Draft Spill Contingency Plan for the Izok/Hood/Gondor operations is attached for review.

24. How many spill kits will be on site and where will they be located?

There will be Six (6) emergency spill kits will be deployed during operations. Two will be located in the fuel storage area. Each of the diamond drill rigs will have their own spill kit and one will be maintained in camp near the generator shack.

25. Please describe the types, quantities, and method of storage of fuel and chemicals on site, and provide MSDS sheets.

The fuel types to be used include diesel fuel, gasoline and propane. In addition to petroleum fuels, motor oil and grease and polymer additives will be utilized in the drilling operations. Diesel fuel will be used in the greatest quantity as motor fuel for the drill rigs. Gasoline will be used in engines for small generators, power tools, all-terrain vehicles and light trucks used at the camp site and air strip.

Diesel Fuel - There are seven (7) 12,000 gallon (55,000 litre) storage tanks at the camp site, which is located on leased crown land. Diesel fuel will be flown in by aircraft tanker and transferred to the large storage tanks by a fuel tank pulled on a trailer behind a pickup truck from the air strip to the tank farm. The fuel will be transferred from tank to tank using portable electric or gasoline powered fuel transfer pumps. The fuel will then be transferred to 205 litre drums and flown by helicopter to the drill sites. Fuel at the drill sites will be stored in drums placed on spill containment pallets. Typically the drilling contractor will maintain an inventory of 1 to 2 drums at the drill site. Consumption is expected to be in the order of 4-600 litres per day while operating, extending to approximately 80,000 litres for a 3 month work program, with two drills running. Actual consumption will vary depending on the nature of drilling operations.

Gasoline will be handled in 205 litre drums, which will be flown in by aircraft to the air strip and carried in the box of a pickup truck to the tank farm area at the camp. Gasoline will be transferred from drums to portable containers using hand pumps. In the order of 2 050 litres (10 drums) will be kept in inventory at the camp. For a 90 day operating period, consumption is estimated to be 4-6,000 litres.

Propane will be flown in to the airstrip in 100 lb or 20 lb bottles. They will be manually unloaded from the aircraft and carried in the box of a pickup truck to the general area of the fuel tank farm for storage. As needed, bottles will be carried to the drill sites by helicopter or to the points beside the camp buildings where the supply hoses protrude from the walls of the structures. Empty bottles will be flow out on a regular basis for refilling. An inventory of fifty (50) one hundred pound bottles will be maintained at the camp. Each drill rig will generally have one or two 20 pound capacity bottles on the drill set up site for torch use and one or two 100 lb. bottles for shack heating.

Aviation Fuel (Jet B) will be used for helicopter operations and will be stored at the airstrip site in 205 litre drums. An inventory of approximately 100 drums will be kept at the site

during operations. Fuel will be transferred from the drums to the aircraft using hand actuated pumps or using battery powered electric pumps. An inventory of approximately 100 drums (20,500 litres) will be maintained at the strip. Fuel will be flown in by fixed wing aircraft.

Petroleum Lubricants including motor oil, hydraulic fluid, transmission fluid and grease will be consumed during the drilling operations. Motor oil, hydraulic oil and transmission fluid will be contained either in 20 litre pails or 205 litre drums. Machine servicing and oil changes will occur on the drill set ups. Fresh lubricating fluids will be transported to the drill set-up sites by helicopter and used fluids returned to the camp in the same manner. Used oils will be used for incinerator fuel. Heavy lubricants including grease are contained in 20 litre pails or small cartridges and transported with general supplies by helicopter. Empty cartridges will be collected with other refuse and burned in the camp incinerator. Approximately 25 to 50 cases (12-24 cartridges) of cartridge grease may be used in a typical 90 day operating period. Grease for the drill rods is packaged in 20 litre pails. These will be transported by helicopter and grease will be applied to the drill rods as needed during operations. Empty containers will be incinerated.

Polymer Drill Additives are contained in 20 litre pails or in small plastic bags or cardboard box packages. These products will be transported to the drill with general supplies by helicopter. Packaging is disposed of with other refuse by incineration.

WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

A variety of small water bodies will supply the water for the drilling. Some of these are outlined on the map provided with this application that shows proposed drill hole locations. These are chosen for their proximity to the drill, minimizing the pumping distance and therefore the risk of freezing hose lines. Water supply for the camp will come directly from High Lake.

27. Estimated demand (in L/day * person):

- ⊗ Domestic Use: 100 L/day/person Water Source: Ham Lake
- ⊗ Drilling Units: 180,000 L/day Water Source: Various small Lakes and ponds
- Other: _____ Water Source: _____

28. Describe water intake for camp operations? Is the water intake equipped with a mesh screen to prevent entrapment of fish? Describe:

Water is pumped from the lake with a submersible pump that has a mesh screen attached to the intake. The water then passes through approximately 60 meters of insulated and heat traced hose-line before entering the holding tanks.

29. Will drinking water quality be monitored? What parameters will be analyzed and at what frequency?

Water quality will not be monitored on a regularly scheduled basis.

30. Will drinking water be treated? How?

Based on Inmet's experience, Ham Lake water quality meets potable water quality standards. No chemical treatment of drinking water is contemplated. Disinfection by ultraviolet light may be considered if it becomes necessary.

31. Will water be stored on site?

Camp - No.
Drills - Yes.

WASTE TREATMENT AND DISPOSAL

32. Describe the characteristics, quantities, treatment and disposal methods for:

- ⊗ Camp Sewage (blackwater)

The sewage system currently in place eliminates waste through incineration, i.e. No blackwater is produced.

- ⊗ Camp Greywater

Grey water from the kitchen and showers will be diverted to a sump.

- ⊗ Solid Waste

Burnable solid waste is incinerated in a diesel powered forced air furnace capable of disposing 64Kg of refuse per hour. Non combustible solid waste will be removed from site.

- ⊗ Bulky Items/Scrap Metal

Scrap metal and any other non-combustible refuse is collected and sealed in 45 Gal drums and then transported to Yellowknife for eventual disposal by the appropriate means.

- ⊗ Waste Oil/Hazardous Waste

Waste oil is collected and sealed in 45 Gal drums clearly marked for this purpose and then transported to Yellowknife for eventual disposal by the appropriate means. Lead-Acid batteries are also contained in appropriate sealed containers, clearly marked, and returned to the Lupin Mine site or Yellowknife for disposal.

- ⊗ Empty Barrels/Fuel Drums

Empty drums are collected and transported back to Yellowknife either for disposal or for re-filling

- Other:

-
33. Please describe incineration system if used on site. What types of wastes will be incinerated?

All burnable solid and semi-solid wastes will be incinerated, as well as human wastes. This will include sewage, kitchen refuse, plastics, cardboard and paper, and any fuel soaked material (i.e. Rags, absorbent mats etc.)

34. Where and how will non-combustible waste be disposed of? If in a municipality in Nunavut, has authorization been granted?

As stated above, non-combustible waste is sealed into 45 Gal drums and flown back to Yellowknife for appropriate disposal.

35. Describe location (relative to water bodies and camp facilities) dimensions and volume, and freeboard for sumps (if applicable).

Previous sumps have been located in an area of deep sand and gravel soils just east of the camp. The sumps will be constructed as to provide a minimum of 1 m freeboard. Drill water sumps will be at least 30 m from the high water mark of adjacent water bodies. Water holding tanks will be deployed where the use of sumps to settle solids is impractical.

36. Will leachate monitoring be done? What parameters will be sampled and analyzed, and at what frequency?

No leachate is expected to be developed at the site based on the anticipated activities.

OPERATION AND MAINTENANCE

37. Have the water supply and waste treatment and disposal methods been used and proven in cold climate? What known O&M problems may occur? What contingency plans are in place?

All of these water supply and waste treatment and disposal measures have been used in previous years and have proven to be effective even during the coldest of temperature extremes. Possible problems which may arise are freezing hose-lines. Water intake lines are heat traced and insulated to ensure flow in cold temperatures. Grey water disposal hose-lines are self draining and need not be heat traced. Water moves through them fast enough when being pumped that no freezing can occur. In the event that greywater lines were to freeze, sufficient hose line is on hand to run a new line until the original can be dismantled and thawed.

ABANDONMENT AND RESTORATION

38. Provide a detailed description of progressive and final abandonment and restoration activities at the site.

A comprehensive Abandonment and Restoration Plan is attached for reference. The following is a brief description of the procedures that apply to borehole abandonment and restoration.

After each drill hole is completed any trash and litter is gathered up and transported back to camp for either burning or flying out to Yellowknife. Capped casing pipes are expected to be used to mark hole locations where significant mineralization was intersected. Natural re-vegetation is expected to eventually reclaim drill sites. At the close of the field season rented equipment would be removed and flown back to Yellowknife for storage. The camp would be left in a clean and tidy state and the remaining camp structures would be secured for the winter as consistent with their use.

BASELINE DATA

39. Has or will any baseline information be collected as part of this project? Provide bibliography.
- ☒ Physical Environment (Landscape and Terrain, Air, Water, etc.)
 - ☒ Biological Environment (Vegetation, Wildlife, Birds, Fish and Other Aquatic Organisms, etc.)
 - ☐ Socio-Economic Environment (Archaeology, Land and Resources Use, Demographics, Social and Culture Patterns, etc.)
 - ☐ Other:

Bibliography of Relevant Documents for the Izok Lake Site.

Metall Mining Corporation, 1993. **Environmental Evaluation Izok Project: Submission to the Regional Environmental Review Committee.** Document prepared by Klohn-Crippen Consultants Ltd., Richmond, BC for Metall Mining Corporation, Edmonton, AB. 1,267 pages.

SRK, 2002. **Review and Assessment of the 1993 Izok Environmental Evaluation.** Document prepared by Steffen Robertson and Kirsten (Canada) Inc., Vancouver, BC for Inmet Mining Corporation, Toronto, ON. 46 pages plus appendices.

Work will be resuming on environmental baseline studies in 2006. The scope of work for these studies is being prepared by Wolfden's environmental consultant, Gartner Lee Limited. Work plans will be disclosed once they have been finalized.

REGULATORY INFORMATION

40. Do you have a copy of:
- ☐ Article 13 - Nunavut Land Claims Agreement
 - ☐ NWB - Water Licensing in Nunavut - Interim Procedures and Information Guide for Applicants
 - ☐ NWB - Interim Rules of Practice and Procedure for Public Hearings
 - ☐ NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the

NWT

- NWTWB - Guidelines for Contingency Planning
- DFO - Freshwater Intake End of Pipe Fish Screen Guideline
- Fisheries Act - s.35
- RWED - Environment Protection- Spill Contingency Regulations
- Canadian Drinking Water Quality Guidelines
- Public Health Act Camp Sanitation Regulations
- Public Health Act Water Supply Regulations
- Territorial Land Use Act and Regulations

You should consult the above document, guidelines, and legislation for compliance with existing regulatory requirements.

**ATTACHMENT 1 – SPILL CONTINGENCY PLAN
INCLUDING RELEVANT MSDS DOCUMENTS**

ATTACHMENT 2 – ABANDONMENT AND RESTORATION PLAN