# **ABANDONMENT AND RESTORATION PLAN**

## DEWAR LAKES CAMP QIKIQTANI REGION, NUNAVUT, CANADA



Prepared by:



Effective Date: July 1, 2022

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## 1 Introduction

This Abandonment and Restoration Plan (ARP) applies to activities carried out at the Commander Resources Ltd. (Commander or the Company) Dewar Lakes Camp (the Camp), Nunavut, Canada.

This ARP will come into effect July 1, 2022, pending approval. Copies and updates to this plan may be obtained via the Company or APEX Geoscience Ltd. (APEX). The ARP will be replaced, upon approval, if there are any significant changes to the activities outlined in the existing permits which warrant changes to the ARP. Minor changes will be submitted as an addendum to the ARP and submitted to the distribution list as required.

#### 1.1 Contact Details

## Commander Resources Ltd.

11th Floor, 1111 Melville Street Vancouver, BC V6E 3V6 Tel: (604) 685-5254 Fax: (604) 484-7143

info@commanderresources.com www.commanderresources.com

## **APEX Geoscience Ltd.**

100, 11450-160 Street NW Edmonton, AB T5M 3Y7 Tel: (780) 467-3532

info@apexgeoscience.com www.apexgeoscience.com

## 1.2 Purpose and Scope

The purpose of the Dewar Lakes Camp ARP is to provide guidelines to follow during seasonal shutdown and final abandonment of the Camp, in order to return the campsite to as near as possible to natural conditions.

## 1.3 Other Plans

The ARP should be considered as a part of the Dewar Lakes Camp management system. Other management plans in place at the Dewar Lakes Camp include:

- Emergency Response Plan (ERP)
- Environmental Management Plan (EMP)
- Fuel Management Plan (FMP)
- Spill Prevention and Response Plan (SPRP)
- Waste Management Plan (WMP)

## 1.4 Camp Description and History

The Dewar Lakes Camp has been used as a base location to conduct mineral exploration work on Baffin Island since 2003. Camp activities were most recently conducted under the authorization of Crown Indigenous Relations and Northern Affairs Canada (CIRNAC) Land Use Permit N2017J0014 (Expires July 4, 2022) and Nunavut Water Board (NWB) Water Licence 2BE-NAD1722 (Expires July 17, 2022) both issued to Commander Resources Ltd. (Commander). Commander is requesting to renew Land Use Permit

N2017J0014 for an additional 2 years and Water Licence 2BE-NAD1722 for an additional 5 years to support work activities at the existing Dewar Lakes Camp.

The Camp is located on Crown Land beside Dewar Lakes, adjacent to the North Warning System Fox-3 airstrip in the Qikiqtani Region of Nunavut. The approximate location of the Camp is 68°37'59" N and 71°6'38" W (or 414199E/7614919N UTM Nad83 Zone 19) and is located within the 1:50,000 National Topographic System (NTS) map sheet 27B12.

The Camp consists of accommodations for up to 40 persons with a dry, large cook tent, generator shack, tool shed, incinerator, core shack, latrine with pacto toilets and a metal silo structure used for storage. At the end of the 2018 program, the Dewar Lakes Camp fuel cache contained 6 drums of jet fuel and 5 propane cylinders. 50 empty drums remain on site for removal during the next field program.

The Camp was used by Commander as an operating base to support exploration activities from 2003 to 2011. The Camp was unoccupied from 2012 to 2016, other than in 2013 when Biogenie personnel, on behalf of Commander, were onsite to clean up and secure the Camp after an episode of vandalism damaged structures. The Camp was utilized by ValOre Metals Corp. (ValOre, formerly Kivalliq Energy Corp.) in 2017 and 2018 to support mineral exploration activities at their Baffin Gold Project.

Exploration activities supported by the Dewar lakes camp are authorized under separate permits and licenses held by Commander or an assignee (currently ValOre). It is anticipated that the Dewar Lakes Camp will support ongoing exploration activities for the next several years.

A figure illustrating the Dewar Lakes Camp location is located in Appendix 1.

## 2 Schedule

Activities at the Dewar Lakes Camp are anticipated to commence annually in the spring (typically the beginning of June) and are expected to run through to September. A seasonal shutdown will take place at the completion of exploration activities for the year in September, annually.

Exploration programs are anticipated to utilize the Dewar Lakes Camp for the next 5 years, depending on each of the previous year's results. Prior to subsequent years program commencements all regulatory authorities will be notified and supplied with updated schedules.

Final abandonment and restoration will commence as soon as possible after it has been determined that the project does not warrant further exploration or following commercial production. The duration of the final abandonment and restoration is dependent on the scale of infrastructure on site and on environmental parameters (physical, biological, and socio economic). All final abandonment and restoration work will be completed prior to the date of expiry of any existing or future applicable land use permits and water licences.

## 3 Detailed Infrastructure

## 3.1 **Camp**

The following is a list which details the structures, equipment and vehicles that are currently on site, will be mobilized and/or constructed.

#### 3.1.1 Structures

- 3 12'x14' Ancient Mariners canvas tents on plywood flooring to serve as sleeper tents and First Aid. Includes plywood beds, tables, chairs, heaters etc.
- 2 14'x16' Ancient Mariners canvas tents on plywood flooring to serve as sleeper tent. Includes plywood beds, tables, chairs, heaters etc.
- 1 14'x14' Ancient Mariners canvas tent on plywood flooring to serve as sleeper tent. Includes plywood beds, tables, chairs, heaters etc
- 1 14'x16' Ancient Mariners canvas tent on plywood flooring to serve as a kitchen. Includes plywood kitchen counters, sink, plumbing, tables, chairs, heaters, etc.
- 1 12'x14' Ancient Mariners canvas tent on plywood flooring to serve as a dry. Includes shower stalls, sink, plumbing, heaters etc.
- 1 10'x12' plywood generator shack. Includes exhaust piping, etc.
- 1 14'x16' plywood tool shed.
- 1 14'x16' canvas tents that was previously used for core logging.
- 1 12'x20' plywood latrine shack. Includes 5 pacto toilets.
- 1 Metal silo for storage

## 3.1.2 Other Camp Infrastructure and Equipment

- 2 500 gal Water tanks (1 for kitchen and 1 for dry)
- 2 Hot water tanks
- 2 Water pumps with fish screens and hose line
- 1 Refrigerators
- 1 Chest freezers
- 1 Cooking stoves
- 1 Washing machines
- 1 Dryers
- 1 Camp fuel cache, with Insta-Berm (or similar) secondary containment.

Various lumber (stacked)

Various office, camp and medical supplies and spill kits

#### 3.1.3 Vehicles

- 1 Helicopter (A-Star, Bell 407, or longRanger)
- 1 ATV with trailer (Honda Fourtrax or similar)

## 4 Seasonal Shut downs

## 4.1 Inspection and Documentation

Prior to a seasonal shutdown of the Camp, a complete inspection of all areas will be conducted. Inspections will focus on ensuring no spills have gone unnoticed, all hazardous materials containment is sound and all structure and equipment are winterized. Prior to leaving the site, photographs will be taken to document the conditions and will be archived along with photos taken at the beginning of the season. Copies of these photos will be included as part of the Dewar Lakes Camp Annual Report. An example of the Camp Shut Down Inspection Checklist is located in Appendix 2.

## 4.2 Buildings, Content, and Fuel

A full inventory of all structures, equipment, fuel, and other supplies will be taken at the beginning and end of each exploration season.

All food, fuel, wastes, empty fuel drums, and valuable or sensitive equipment will be removed from site. Any salvageable items (i.e. food) may be donated to the communities if desired. A few wooden structures will be left at the camp. All structures to be left on site will be winterized, closed off, and secured. One structure will be designated to house any chemicals or other hazardous materials that are not suited to outdoor storage. All water tanks and pipes will be drained at the end of each season. Pumps and hoses will be drained and removed from camp. All mechanical equipment, including vehicles and generators will be removed from site.

All empty drums will be removed from site or stored properly for removal in backhauls during mobilization of the next years program.

#### 4.3 Waste

All wastes will separated into combustible, non-combustible, recyclable or hazardous and the following waste treatments will be used:

<u>Combustible Waste:</u> All combustible waste will be incinerated in accordance with the Nunavut Environmental Guideline for the Burning and Incineration of Solid Waste. Any residual waste (ash) will be placed in sealed containers and backhauled for proper disposal.

Non-Combustible, Recyclable and Hazardous Waste: All non-combustible, recyclable and hazardous wastes will be sealed in appropriate containers and backhauled to Iqaluit or to southern facilities for proper disposal. All authorizations for disposal of any waster will be obtained prior to commencement of field programs.

<u>Grey Water</u>: Camp greywater will be stored and treated in an excavated sump, which will allow for slow infiltration into the soil and will be located at least 31 m away from the high water mark of any water body. If available, coarse gravel will be placed in the bottom of the sump to provide filtration, and supports will be built on the sides to prevent slumping. Filters will be installed on kitchen drains to ensure solid food wastes do not enter the sumps and have the potential to attract wildlife. When full, greywater sumps will be covered with enough material to allow for future ground settlement.

<u>Sewage</u>: The Dewar Lakes Camp will utilize Pacto toilets and the waste will be incinerated, by an incinerator designed for that type of waste. Ash generated from sewage incineration will be stored in sealed metal 205 L drums and removed from site via regularly scheduled backhaul. At seasonal shut down the pacto toilets will be cleaned and the shack secured for the winter.

<u>Contaminated soils/snow</u>: All contaminated soil will be stored in empty 205 liter drums, and will be transported to Iqaluit for proper disposal.

Empty barrels/ fuel drums: Empty drums will be collected and transported to Iqaluit either for disposal at an approved site or for refilling.

For more information on waste generation and management see the "Dewar Lakes Camp Waste Management Plan."

#### 4.4 Seasonal Restoration

Any contaminated areas around the camp will be treated in accordance with the "Dewar Lakes Camp Spill Prevention and Response Plan." Any washed out areas are discovered they will be filled and re-contoured to natural levels. Any areas of disturbed vegetation, including camp and fuel caches will be photographed and managed as per recommendation of the CIRNAC inspector. Remediation procedures might include fertilization to encourage re-growth.

## 5 Final Abandonment and Restoration

## 5.1 Inspection and Documentation

Prior to final abandonment, a thorough inspection of all areas will be conducted. Any contaminated areas around the Camp that have gone unnoticed will be treated as per the "Dewar Lakes Camp Spill Prevention and Response Plan." Photographs will be taken to include in the final reports submitted to the CIRNAC Inspector and as part of the Annual Report submitted to the CIRNAC, NWB and NIRB. All relevant regulatory agencies will be notified upon final abandonment of the Camp.

## 5.2 Buildings, Content, and Fuel

Prior to land use permit, claim or lease termination, all structures, equipment, supplies, and fuel will be removed from the Camp.

Any wooden floors will be burned in accordance with the Nunavut Environmental Guideline for the Burning and Incineration of Solid Waste, and tent sites may be fertilized, as per recommendation by the Inspector, to encourage re-vegetation. The open burning

of structures will only occur after approval from CIRNAC and NWB. A request letter will be submitted to the regulating authorities, which will include the characteristic and volume of material to be burned.

Any materials of value on site will be salvaged. Local businesses and residents will have the opportunity to salvage any remaining materials that will otherwise be disposed of.

All remaining fuel and empty drums will be removed from site. The soil under and surrounding any area where fuel was stored will be thoroughly inspected for any contamination and photographs will be taken.

#### 5.3 Waste

All wastes will be disposed of in accordance with the "Dewar Lakes Camp Waste Management Plan" and any contamination will be treated as per the "Dewar Lakes Camp Spill Prevention and Response Plan". Sumps will be inspected to ensure there is no leaching or run-off. Back filling and leveling will be employed as necessary.

#### 5.4 Restoration

Tent sites and any other areas disturbed by activities related to the Dewar Lakes Camp will be fertilized as recommended by CIRNAC Inspector to encourage re-vegetation. Eroded or washed-out areas will be filled and re-contoured to natural levels. Any contaminated areas that have gone unnoticed will be treated as per the "Dewar Lakes Camp Spill Prevention and Response Plan."

## 6 Post Closure Site Monitoring

After reclamation is complete, and if required, annual monitoring may take place. The monitoring may consist of soil and water testing, measuring and documenting plan regrowth, examining potential run-off and erosion problems, and checking the stability and condition of the core boxes. Reports, including photographs, will be submitted to the appropriate regulatory bodies. The monitoring will continue as long as the regulating bodies deem it necessary.

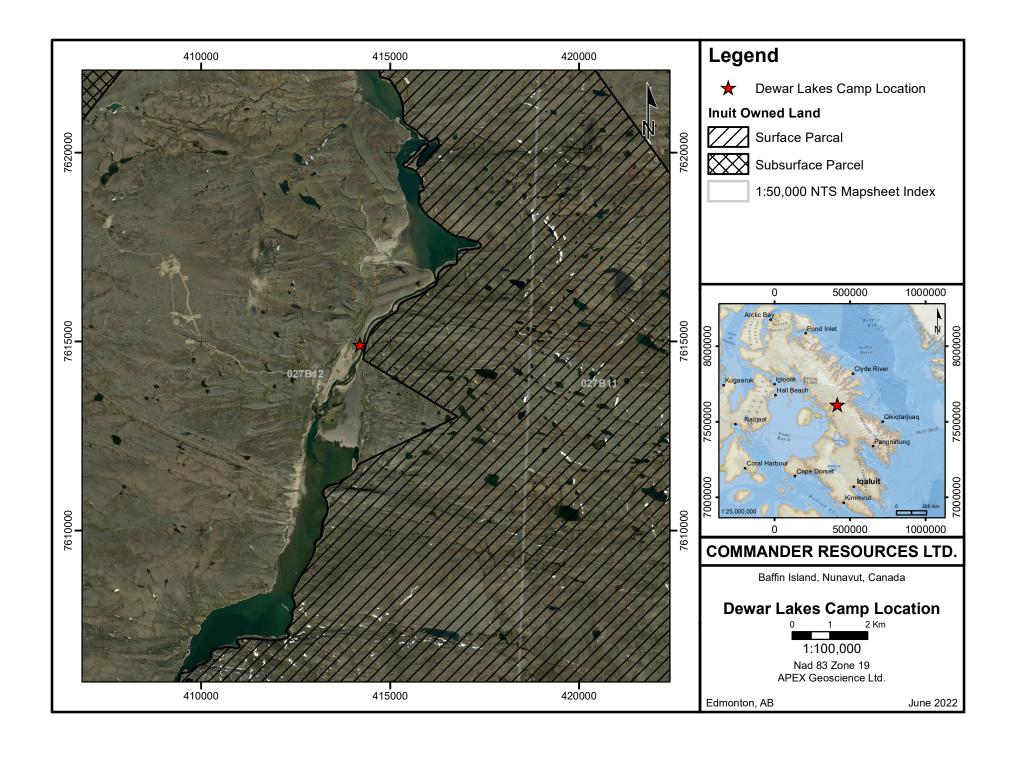
## 7 Emergency Contact Information

**Table 7.1: Emergency Contact Information** 

Contact	Telephone Number
24 Hour Spill Report Line	867-920-8130
Robert Cameron, President and CEO, Commander Resources	(604) 685-5254 (office)
Ltd.	(778) 989-1501 (cell)
CIRNAC Water Resources Manager	(867) 975-4550 (Iqaluit)
CIRNAC Field Operations Manager	(867) 975-4295 (Iqaluit)
CIRNAC Resource Management Officers (Qikiqtani Region)	(867) 975-4296 (Iqaluit)
CIRNAC Water Resource Officers (Qikiqtani Region)	(867) 975-4289 (Iqaluit)
Government of Nunavut Department of Environment	(867) 975-7700 (Iqaluit)
Department of Fisheries and Oceans (Central and Arctic Region)	(867) 979-8000 (Iqaluit)

Contact	Telephone Number
Department of Fisheries and Oceans (Central and Arctic Region) Habitat Impact Assessment Biologist	(867) 979-8007 (Iqaluit)
Nunavut Water Board	(867) 360-6338 (Gjoa Haven)
RCMP	(867) 924-0123 (Clyde River) (867) 928-0123 (Hall Beach)
Qikiqtani General Hospital	(867) 975-8600 (Iqaluit)
Stanton Regional Hospital	(867) 669-4111 (Yellowknife)
Medevac (Yellowknife)	(867) 873-5161
Kivalliq Air - 27/7 Air Medical Line (Qikiqtani Office)	(867) 979-3970 (Iqaluit) (877) 440-8244 (Toll Free)
Air Tindi	(867) 669-8212 (Yellowknife)
Discovery Mining Services	(867) 920-4600
Camp Satellite Phone	TBA
Helicopter Satellite Phone	TBA

# Appendix 1 Figures



# Appendix 2 Example Camp Shut Down Inspection Checklist

<u>Area</u>	<u>Complete</u>	<u>Comment</u>	<u>Inspector</u>
General Camp area  General camp area inspected for any waste, debris or spills/contamination			
General camp area secure for winter			
Combustible and non-recyclable waste incinerated			
Non-combustible waste and incinerator ash prepared for removal			
Record, prevent further damage and remediate (if possible) any unnecessary or excessive vegetation damage			
Buildings and Content  Tents and building complexes secured for the winter (e.g. windows and doors are fitted with plywood covers with extruding nails ("bearwindows/doors"), etc.)			
Office equipment; furniture; kitchen equipment; recreational equipment and other mobile heavy equipment winterised and secured			
Equipment not capable of withstanding winter conditions prepared for removal			
Area inspected for waste, debris or spills/contamination			
Water Supply System  Water pumps, filtering systems, water lines and any other equipment associated with the water supply system drained and winterised			
Water pumps, intering systems, water lines and any other equipment associated with the water supply system drained and winterised  Water pump shed secured			
Area inspected for waste, debris or spills/contamination			
Sewage System			
Greywater system drained (i.e., no greywater remaining in the discharge pipe)			
Greywater sumps treated if required, filled and recontoured  Privy Pits treated with Iye and winterized			
Privy Pits secure and cleared of any debris			
Area inspected for waste, debris or spills/contamination			
Waste Incinerator			
Incinerator fuel supply shut off using all valves Incinerator fuel in appropriate and functional secondary containment adjacent to the incinerator			
Area inspected for waste, debris or spills/contamination			
Electrical System			
Generator shack and surrounding area inspected for signs of spills and remaining wastes such as oil and grease.			
Generator shed is lined with enviromat in the event any external spills go unnoticed  Generator drained of fuel and winterized			
Generator drained of fuel and winterized  Generator shack secured for winter			
All electrical wires, plugs and sockets which remain in their installed locations are safe and secure			
All electrical cords temporarily connected to a buildings or machinery unplugged, rolled and stored			
Camp Heating Systems			
Each 205 L fuel barrel attached to respective tent or building secured and within secondary containment  Any remaining fuel in lines burned out			
Empty propane cylinders ready for transport for refilling or recycling			
Any sleeping quarters converted to electric heat are secured			
Petroleum Products and Storage Facilities			
Fuel stored in appropriate and functional secondary containment (e.g. no rips, signs of wear, collapses, etc.)  Secondary hydrocarbon filtration systems working properly and do not need replacement before the next field program			
Fuel storage areas clearly marked in the event snow clearing activities are required during spring camp opening			
Fuel storage areas GPS location recorded			
Fuel labelled properly			
Area inspected for waste, debris or spills/contamination			
Fuel containers (including full, partially empty and empty) inspected and all small amounts of fuel remaining in drums is consolidated  Fuel pumps and hoses are drained and stored in a building			
Chemicals and Hazardous Waste			
All chemicals stored in appropriate building or on within appropriate functional secondary containment			
All household cleaners properly secured and stored in kitchen and dry			
All empty bags/containers removed for proper disposal  Any remaining waste fuel, oil and grease stored in approved and labelled containers for reuse during summer operations			
Any hazardous waste that cannot be reused properly stored, sealed, labels, and prepared for removal			
Area inspected for spills or contamination			
Area cleared of any debris			
Spill Response Kits Spill kit inventory performed			
Spill kits not needed over winter relocated to secured building			
Spill kits needed over winter (i.e., for the remaining petroleum areas) properly stocked and secure			
Emergency Response			
Fire extinguishers in working order and secure in all necessary locations  Smoke/CO2 detectors in working order and secure in all necessary locations			
Fire extinguishers used are prepared for removal for refilling			
Transportation			
Transport areas including airstrips, helipads, ATV trails, docks and footpaths inspected for equipment, supplies, waste or spills/contamination			
Vehicles remaining onsite moved into secure buildings			
Vehicles remaining onsite winterized   Drill Sites/Equipment			
Diamond drills are dismantled and ready for demobilization or secured in designated storage area			
Diamond drills remaining on site winterized			
Any drill casing unable to be removed is flush cut and capped  Drill sites are adequately extended and inspected for any samining equipment, supplies waste as saille (contamination).			
Drill sites are adequately restored and inspected for any remining equipment, supplies, waste or spills/contamination  Drill sites photographed before drilling and after restoration			
Documentation			
Proper documentation and approvals for all inert and Hazardous waste transport and receipt			
Notification to all required authorities of pending seasonal shut down			
Baseline samples (i.e., water, soil, air quality) collected and all data recorded  Inspections recorded, dated and signed			
Photos taken of camp, drill sites, fuel caches and any other important locations/items			
Photos of drill lay down storage area			
GPS coordinates recorded for camp, fuel storage areas, drill sites, wildlife or habitat sightings, Archeological/paleontological sites or any area/items of interest			
Descriptions recorded for all wildlife or habitat sightings, Archeological/paleontological sites or any area/item of interest  Year-end inventory of all equipment and buildings left on site			
List of all equipment, items and repairs required for next operating season			
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