

ABANDONMENT AND RESTORATION PLAN

**MUSKOX PROPERTY
NUNAVUT, CANADA**



**Original Effective Date: June 2015
1st Amended Effective Date: July 2015
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1 Introduction

This Abandonment and Restoration Plan (“ARP”) applies to mineral exploration activities conducted by APEX Geoscience Ltd. (“APEX”) and/or Benchmark Metals Inc. (“Benchmark”) at the Muskox Property, (the “Property”) Nunavut, Canada.

This ARP will come into effect August 2019, pending approval. Copies and updates to this plan may be obtained via APEX and Benchmark (the “Companies”). 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

APEX Geoscience Ltd.

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Edmonton, AB T6P 1L3

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www.apexgeoscience.com

Benchmark Metals Inc.

10545 45 Avenue NW/ Suite 300

250 Southridge NW

Edmonton, AB T6H 4M9

(780) 437-6624

info@bnchmetals.com

1.2 Purpose and Scope

The purpose of the Muskox Property ARP is to provide guidelines to follow during seasonal shutdown and final abandonment of the Property, in order to return exploration and camp sites to as near as possible to natural conditions.

1.3 Other Plans

The ARP should be considered as a part of the Property wide management system. Other management plans in place at the Muskox Property 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 Property Description

The Muskox Property is composed of the Muskox and Contwoyto Diamond Projects and the Contwoyto Gold Project. The Property is located in the Kitikmeot Region, Nunavut Territory, within 1:250,000 scale NTS map sheets 76E, 76L and 86I. The Property is approximately 250 km southeast of the community of Kugluktuk, 400 km northeast of Yellowknife and is in close proximity the inactive Jericho and Lupin Mines. The Diamond Projects consists of 8 non-contiguous mineral claims, totaling 8884.73 hectares (ha) (Table 1.1, Figure 1.1).

Table 1.1 Muskox and Contwoyto Diamond Projects Mineral Tenures

Claim Number	Claim Name	Claim Status	Issue Date	Staking Date	Anniversary Date	Claim Area (ha)
F93677	MX 01	ACTIVE	2016-10-17	2016-09-13	2018-10-17	150
K91849	RH 2	ACTIVE	2017-12-06	2017-10-14	2019-12-06	1249.2
K91851	MU 1	ACTIVE	2017-12-06	2017-10-14	2019-12-06	1243.77
K91848	RH 1	ACTIVE	2017-12-06	2017-10-14	2019-12-06	1250
K91850	RH 3	ACTIVE	2017-12-06	2017-10-14	2019-12-06	1249.54
K91843	CL 1	ACTIVE	2017-12-06	2017-10-14	2019-12-06	1248.85
K91844	CL 2	ACTIVE	2017-12-06	2017-10-14	2019-12-06	1243.37
K91845	CL 5	ACTIVE	2017-12-06	2017-10-14	2019-12-06	1250

The Contwoyto Gold Project is located directly south of the Contwoyto Diamond Project and consists of 4 mineral claims and 2 grandfathered mineral leases totaling 6,222.73 ha (Table 1.2, Figure 1.1).

Table 1.2 Contwoyto Gold Project Mineral Tenure

Claim Number	Claim Name	Claim Status	Issue Date	Staking Date	Anniversary Date	Claim Area (ha)
K14797	FIN 4	ACTIVE	2011-06-28	2011-06-02	2019-06-28	479.96
K14791	FIN 1	ACTIVE	2011-06-28	2011-06-02	2019-06-28	789.95
K91846	PN 1	ACTIVE	2017-12-06	2017-10-14	2019-12-06	951.22
K91847	PN 2	ACTIVE	2017-12-06	2017-10-14	2019-12-06	1240.84
L-3362	AU 23, AU 24	LEASED	1981-02-20	1981-02-20	2032-11-30	2010.88
L-3407	BARB-1	LEASED	1980-12-31	1980-12-31	2033-02-28	749.88

1.5 Land and Water Use Authorizations

All land and water use authorizations are currently held in the name of APEX Geoscience Ltd., with the exception of KTL315C011, which is in the name of Benchmark Metals Inc. The mineral tenures are held in the name of Crystal Exploration Ltd. Benchmark Metals Inc. changed its name from Crystal Exploration Inc. on May 25th, 2018. All mineral tenures and land use authorizations will be transferred into the name of Benchmark Metals Inc. when applying for extensions and/or amendments.

Table 1.3 details the land and water use authorizations associated with the Muskox Property.

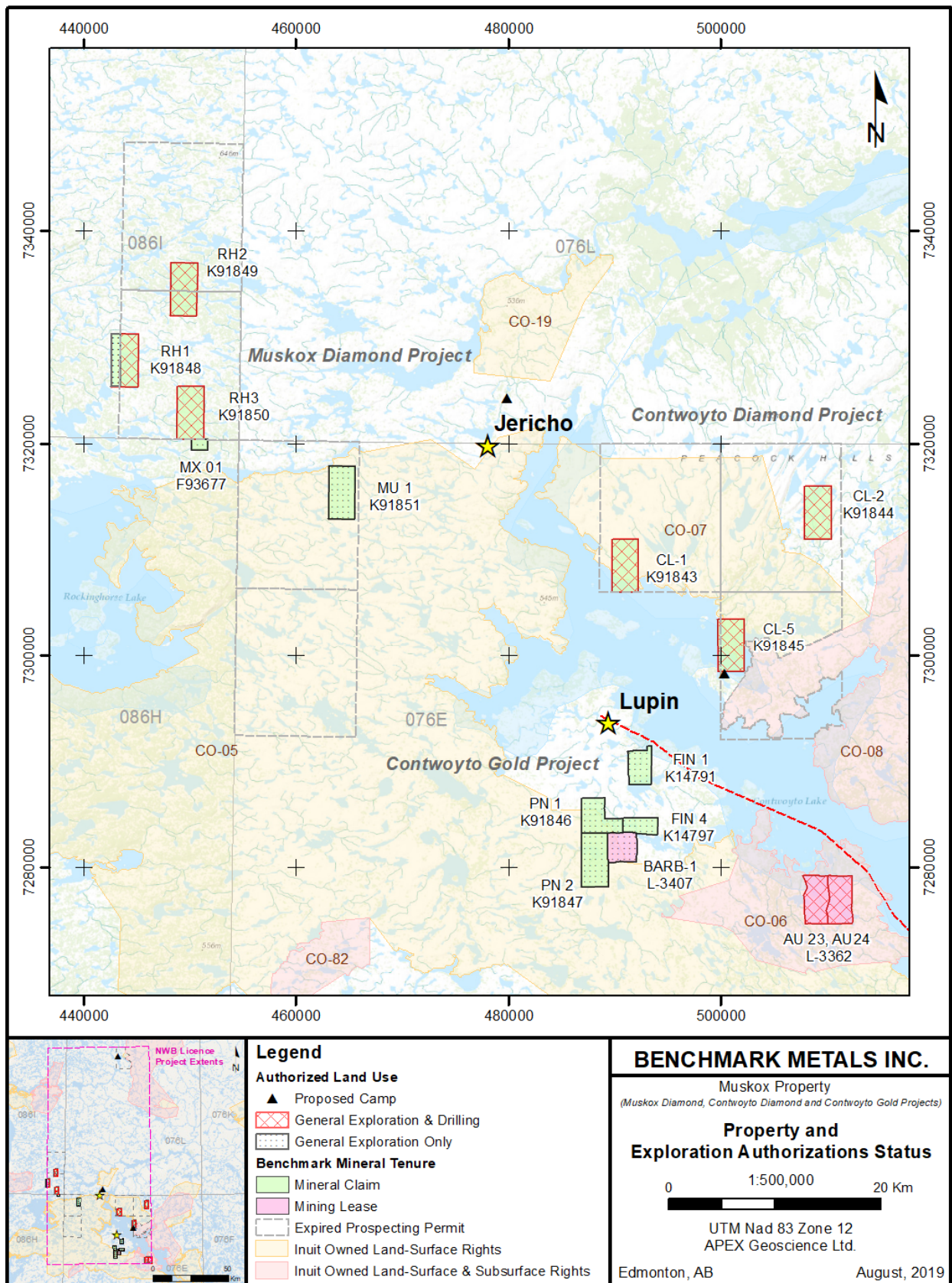


Figure 1.1 Muskox Property Location and Approved Exploration

Table 1.3 Muskox Property Land and Water Use Authorizations

<u>Organization</u>	<u>Authorization</u>	<u>Licensee/ Permittee</u>	<u>Authorization Number</u>	<u>Expiration Date</u>
Nunavut Planning Commission ("NPC")	Conformity Determination	APEX Geoscience Ltd.	150515	N/A
Nunavut Impact Review Board (NIRB)	Screening Decision	APEX Geoscience Ltd.	15EN024	N/A
Crown-Indigenous Relations and Northern Affairs Canada ("CIRNAC")	Land Use Permit	APEX Geoscience Ltd.	N2015C0020	Sept 3, 2019
Nunavut Water Board ("NWB")	Water Licence	APEX Geoscience Ltd.	2BE-MDP1520	Sept 9, 2020
Kitikmeot Inuit Association ("KitlA")	Inuit Owned Land Use License	Benchmark Metals Inc.	KTL315C011	Aug 22, 2019
		APEX Geoscience Ltd.	KTL117B011	July 6, 2019

2 Proposed Project Activities

The proposed exploration activities for the Muskox Property include geological mapping, till sampling, prospecting, ground geophysical surveys and diamond drilling.

The proposed exploration programs will likely be supported by the Lupin Mine, but as an alternative three potential camp locations have been identified. The proposed camp would be a temporary, mobile 10-12 person exploration camp, therefore able to be moved to one of the other approved locations, if need be. The camp, with fuel cache, will be reclaimed prior to moving to one of the other approved locations and therefore no more than one campsite will be in use at one time. The exact timing of use for each of the campsites is unknown at this time, but CIRNAC and the NWB will be notified at least 30 days prior to camp construction. Personnel and cargo will be transported to and from Lupin/camp in the summer months by fixed wing (Twin Otter) from Yellowknife and due to the close proximity to the Tibbitt to Contwoyto Ice Road can be serviced by ground in the winter. Due to the remoteness of the Property location, the only people, who would be directly affected by a potential spill, are employees and contractors.

The proposed camp locations were selected due to appropriate terrain composed of a consolidated and durable surface, such as gravel or sand, which is able to withstand repeated, heavy use from aircraft and camp use. Structures for each of the proposed camps may include 6 sleeper tents, medical tent, kitchen, dry, office, shop, core shack, generator housing, incinerator, and 2 outhouses. The majority of the structures will be insulated Weatherhaven tents, or similar, with tarp floors.

A fuel cache of approximately 40,000 L (~ 200 drums) will be established on stable ground near the camp location in use, primarily to store diesel and jet fuel. Small quantities of gasoline and propane will also be stored. GPS locations of the camp fuel cache, hazardous waste storage areas and incinerator will be provided to the CIRNAC and the NWB once established and be included in annual reports. No fuel will be stored at camp locations that are not in use. Small temporary fuel caches, of less than 4,000 L, may also be required to supply the drilling and exploration programs. Within 30 days of any temporary fuel cache, CIRNAC, NWB and KitlA (if on IOL) will be notified of the details of the cache including: GPS location, fuel type, container sizes, method of storage and date

of removal. The temporary fuel cache GPS locations will also be included in the annual reports.

Drill programs of 5,000 to 10,000 m are anticipated annually, utilizing one to two diamond drills. The average hole depth is expected to be approximately 200 m, up to a maximum proposed depth of 700 m. The areas of proposed drilling are currently uncertain as additional exploration work, such as ground geophysical surveys, is required to define precise targets. Exact drillhole locations will be provided to CIRNAC, NWB and the KitlA (if on IOL) prior to commencement and will also be provided in the annual reports. Any ground disturbance work will be strictly confined to areas for which Benchmark (Crystal) holds the subsurface mineral rights within the original authorized area encompassed by the now-expired Prospecting Permits (Figure 1.1).

3 Proposed Project Schedule

Exploration programs are anticipated to commence annually in June and terminate in October, but also have the potential to continue through the winter.

As a generalized guide for timing of activities, equipment and supplies, including camp construction materials, will be mobilized to Lupin Mine or one of the authorized camp locations in the spring. It is expected that camp construction will take approximately 1 week. Fieldwork, including mapping, prospecting, geochemical sampling, and ground geophysical surveys are expected to commence as soon as camp construction begins and run through July and August. Drilling will commence as soon as targets are identified and all equipment can be mobilized, most likely at the beginning of July and may have the potential to continue through the winter. As best as possible, camp location use and drilling of targets will be timed appropriately to accommodate for caribou migration and calving timing and areas.

If any or all of the three proposed temporary camp locations on the Property, James River, Muskox and Contwoyto, is required, only one camp will be occupied and in use at a time. Each camp location will be reclaimed once the camp has moved to a new camp location. At seasonal shutdown a few wooden structures may be left at the last camp location in use.

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 abandonment and restoration work will be completed prior to the date of expiry of any existing or future applicable land use permits/licences and water licenses.

4 Detailed Infrastructure

4.1 Proposed Camp

The following is a list which details the structures, equipment and vehicles that may be constructed or stored at one of the three proposed campsites.

4.1.1 Structures

- 7 12'x16' insulated Weatherhaven tents (or similar) on tarp flooring to serve as sleeper tents and a medical tent
- 1 14'x16' insulated Weatherhaven tent (or similar) on tarp flooring to serve as an office
- 4 16'x20' insulated Weatherhaven tents (or similar) on tarp flooring to serve as a kitchen, dry, core shack and shop. Dry will contain 1 sink, 2 showers and a washer /dryer set.
- 2 14'x16' Weatherhaven tent (or similar) on tarp flooring to serve as housing for a 50kW diesel generator plus backup generator and batch feed dual-chamber controlled air incinerator.
- 2 5'x5' wooden outhouse structures

4.1.2 Other Camp Infrastructure

- 2 Water tanks (1 for kitchen and 1 for dry)
- 2 Water pumps with fish screens and hose line
- 2 Diamond bladed core cutting saws (to be located in core shack)
- 1 Small camp fuel cache, with Insta-Berm (or similar) secondary containment.
- 3 600' airstrip and helicopter landing area

4.1.3 Vehicles

- 1 All-Terrain vehicles (quads) with trailers
- 1 Helicopter (A-Star, Bell 407, or similar)
- 1 Twin Otter (on site periodically)

4.1.4 Drilling Equipment

- 2 Zinex A5 (or similar) diamond drill complete with motor, gear box, drill head, tower, overshot, skids, and housing
- 4 Supply pump with shack
- 2 Mix tank with pressure pump
- 6 Coil heater
- 6 Fuel tank
- 6 Fly basket for drill equipment, spares, supplies, etc.
- 400 3 metre NQ drill rods
- 50 NQ casing (various sizes)

150 100' hose line

5 Seasonal Shut downs

5.1 Inspection and Documentation

Prior to seasonal shutdown, a complete inspection of all areas will be conducted. Photographs will be taken to document the conditions prior to leaving the site, and will be archived along with photos taken at the beginning of each season. Copies of these photos will be included as part of the Annual Report.

5.2 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. If required, a few wooden structures will be left at the last campsite used. 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 stored inside a secured structure. All mechanical equipment, including vehicles, drill equipment, and generators will be winterized and stored in berms for secondary containment. When possible, the equipment and berms will be fully covered.

All remaining fuel and empty drums will be removed from site.

5.3 Waste

All wastes will be separated into combustible, recyclable or hazardous.

Combustible Waste: 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 to Yellowknife 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 Yellowknife for proper disposal.

Grey Water: 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 a 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.

Sewage: Privy pits (outhouses) will be located at least 31 m away from a water body. To control sewage pathogens, outhouses will be periodically treated with lime. When full, the pits will be covered with at least 30 cm of compacted soil.

Contaminated soils/snow: All contaminated soil will be stored in empty 205 liter drums and will be transported to Yellowknife for proper disposal.

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

For more information on waste generation and management see the Muskox Property “Waste Management Plan.”

5.4 Seasonal Restoration

Any contaminated areas around the camp or drill sites will be treated in accordance with the Muskox Property “Spill Prevention and Response Plan.” Any washed out areas will be filled and re-contoured to natural levels. Any areas of disturbed vegetation, including camp, fuel caches or drill sites will be photographed and managed as per recommendation of the CIRNAC inspector. Remediation procedures might include fertilization to encourage re-growth.

6 Final Abandonment and Restoration

6.1 Inspection and Documentation

Prior to final abandonment, a thorough inspection of all areas will be conducted. Any contaminated areas around the camp or drill sites that have gone unnoticed will be treated as per the “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 KitlA (if on IOL). All relevant regulatory agencies will be notified upon final abandonment of the Property.

6.2 Buildings, Content, and Fuel

Prior to land use permit, claim or lease termination, all structures, equipment, supplies, and fuel will be removed from the Property with the exception of the drill core stacks, which will be permanently secured on site.

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 the CIRNAC, NWB and the KitlA (if on IOL). 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.

Drills and drilling equipment will be dismantled, packaged, secured, and shipped as per the drill contract. All drill casing will be removed from the ground or cut down to ground level if removal is not possible.

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.

6.3 Waste

All wastes will be disposed of in accordance with the Muskox Property “Waste Management Plan” and any contamination will be treated as per the “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.

6.4 Restoration

Tent sites, drill sites, and any other areas disturbed by activities related to exploration at the Muskox Diamond Property will be fertilized as recommended by the CIRNAC Inspector to encourage re-vegetation. Eroded or washed out areas related to exploration activities will be filled and re-contoured to natural levels. Any contaminated areas around the camp or drill sites that have gone unnoticed will be treated as per the “Spill Prevention and Response Plan.”

7 Post Closure Site Monitoring

After reclamation is complete, annual monitoring will take place. The monitoring will consist of soil and water testing, measuring and documenting plan re-growth, 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.

8 Emergency Contact Information

Table 8.1: Emergency Contact Information

Contact	Telephone Number
Rob L'Heureux, Offsite Project Supervisor (APEX Geoscience Ltd.)	(780) 467-3532 (office) (780) 916-5482 (cell)
CIRNAC (Nunavut)	(800) 567-9604
CIRNAC manager of Field Operations	(867) 975-4295 (phone)
Nunavut Water Board	(867) 360-6338
Environment Canada	(867) 975-4644
DFO (Central and Arctic Branch)	(519) 383-1813
Government of Nunavut Department of Environment	(867) 982-7450 (Kugluktuk) (867) 983-4164 (Cambridge Bay)