



Department of Energy, Mines & Resources  
PO Box 2703, Whitehorse, Yukon Y1A 2C6



March 9, 2022

File No: LQ00571

Brad Mackinnon  
Box 5407  
Haines Junction, YT Y0B 1L0

Dear Sir/Madam:

**Re: Class 3 Quartz Mining Land Use Approval**

Your application for a Class 3 approval has been approved and is subject to the attached conditions. The effective date of this approval will be March 9, 2022. All work, including restoration, must be completed by May 25, 2030, and inspected before full security and/or completion certificates can be applied for.

The attached 'Operational Guidelines' offer additional mitigations that would enable you to maximize the environmental performance of your program, but are not approval conditions.

Please ensure that pre-season and post-season reports are provided before and after each exploration season. Pre- and post-season reports assist the Mineral Resources Branch in monitoring exploration activity and reclamation. Not providing reports may result in additional security being required.

Please feel free to contact our office at 867-667-3190 or [Whitehorse.mining@yukon.ca](mailto:Whitehorse.mining@yukon.ca) should you have any questions.

Regards,



Tamera Johnson  
A/Chief of Mining Land Use

cc: EMR Natural Resources Officer, Compliance Monitoring and Inspections  
ENV Environmental Affairs, Environmental Protection Branch



**MINING LANDS**  
MINERAL RESOURCES BRANCH  
GOVERNMENT OF YUKON

Pursuant to the Quartz Mining Act and Quartz Mining Land Use Regulation, the Chief, Mining Land Use hereby grants a Class 3 approval to:

Brad Mackinnon  
Box 5407  
Haines Junction, YT Y0B 1L0

APPROVAL NUMBER:	LQ00571
PROPERTY NAME:	Project Ruby
UNDERTAKING:	Quartz
CLAS2-S:	Class 3 Approval
EFFECTIVE DATE:	March 9, 2022
EXPIRY DATE: Land	May 25, 2030 or until another Quartz Mining Use approval is issued, whichever occurs first

This approval shall be subject to the restrictions and conditions contained herein and to the restrictions and conditions contained in the Quartz Mining Act and the Quartz Mining Land Use Regulation made there under as proposed in Mining Land Use Application.

Dated this March 9, 2022



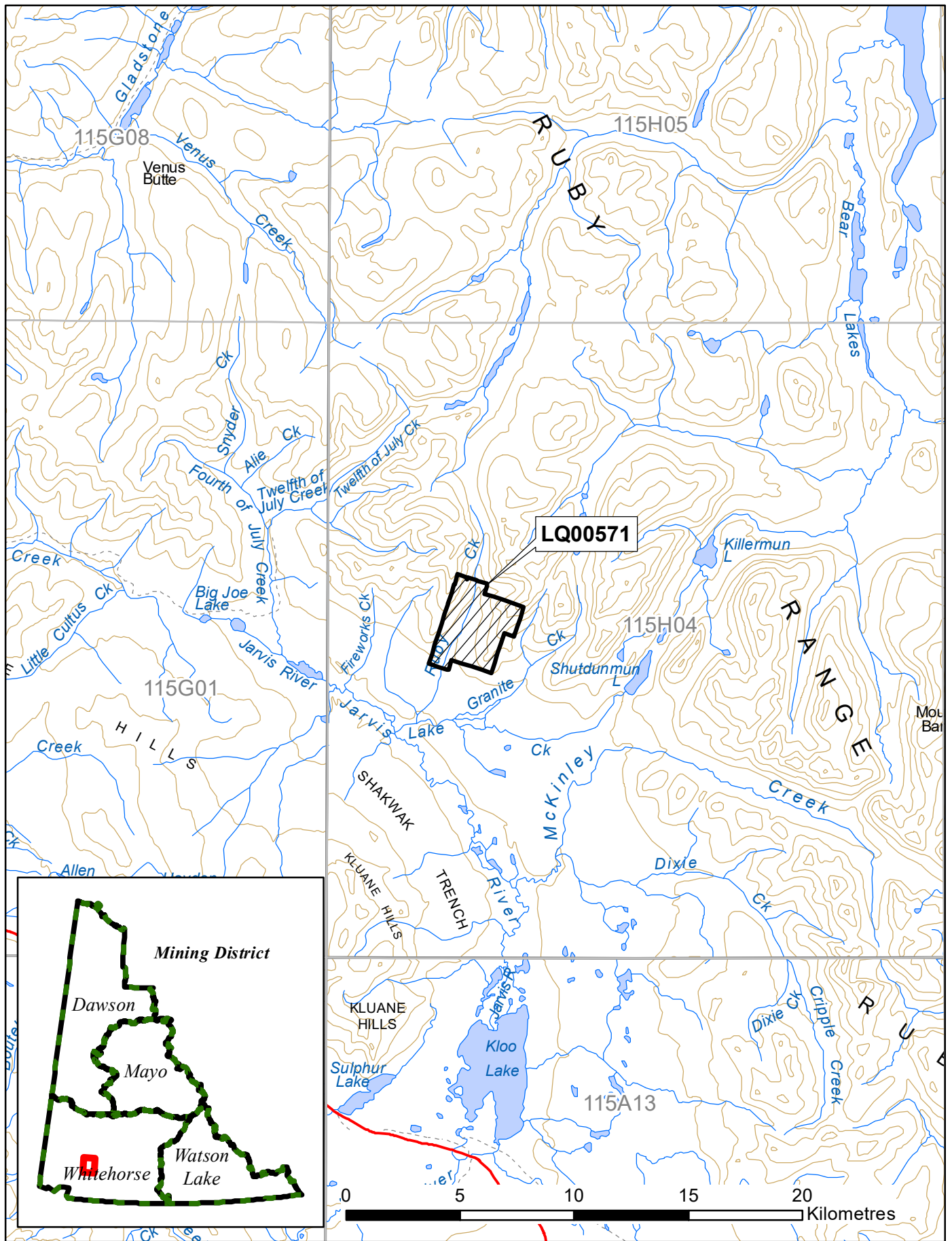
Tamera Johnson  
A/Chief of Mining Land Use

**MINING LAND USE  
APPROVAL  
Class 3**

<b>SCOPE OF APPROVAL:</b>				
Claim Status Report (Appendix A)		LQ00571		
Operating Season	July 15 to October 30		HW07456	
<b>PROJECT ACTIVITIES (ON-CLAIM):</b>				
<b>USE OF VEHICLES/EQUIPMENT</b>				
Use of vehicles on existing roads or trails				<input type="radio"/> No <input checked="" type="radio"/> Yes
Gross vehicle weight		On-roads: More than 40 t	On-trails: Less than 20 t	
Off-road use of vehicles in summer				<input checked="" type="radio"/> No <input type="radio"/> Yes
Off-road use of vehicles in winter				<input checked="" type="radio"/> No <input type="radio"/> Yes
<b>NEW &amp; EXISTING ACCESS</b>				
Upgrading of existing access	<input checked="" type="radio"/> No <input type="radio"/> Yes	Length: 0 km	Width: 0 m	
New roads	<input checked="" type="radio"/> No <input type="radio"/> Yes	Length: 0 km	Width: 0 m	
New trails	<input type="radio"/> No <input checked="" type="radio"/> Yes	Length: 3 km	Width: 4 m	
New temporary trails	<input type="radio"/> No <input checked="" type="radio"/> Yes	Length: 3 km	Width: 4 m	
Other new access:				
<b>LINES &amp; CORRIDORS</b>				
Lines – hand held tools	<input type="radio"/> No <input checked="" type="radio"/> Yes	Length: 2.5km	Width: 1.5 m	
Corridors	<input checked="" type="radio"/> No <input type="radio"/> Yes	Length: 0 km	Width: 0 m	
<b>SITE PREPARATION</b>				
Number of clearings per claim: N/A		Area: 0 m <sup>2</sup>		
Number of clearings for helicopter pads and camps: 0		Area: 0 m <sup>2</sup>		
Removal of the vegetative mat				<input checked="" type="radio"/> No <input type="radio"/> Yes
<b>EXPLORATION TRENCHING &amp; BULK SAMPLING</b>				
Hand-dug				<input checked="" type="radio"/> No <input type="radio"/> Yes
Mechanized				<input type="radio"/> No <input checked="" type="radio"/> Yes
Number: 30 per year	Length: 7 m	Width: 2 m	Depth: 5 m	Total volume: 2100 m <sup>3</sup>
Bulk sampling		<input checked="" type="radio"/> No <input type="radio"/> Yes		Amount/year: 0 tonnes
Explosives		<input checked="" type="radio"/> No <input type="radio"/> Yes	Total amount: 0 kg	Max. in 30 days: 0 kg
<b>EXPLORATION DRILLING N/A</b>				
<b>FUEL STORAGE N/A</b>				
<b>FACILITIES &amp; STRUCTURES</b>				
Camp structures: Existing camp authorized under Water Licence PM19-043				
Number of persons in camp at any one time: 0		Number of person days: 0		
Construction of underground structures				<input checked="" type="radio"/> No <input type="radio"/> Yes
Amount per year: 0		Amount per program: 0		

**MINING LAND USE  
APPROVAL  
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All other applicable legislation, regulations, laws, by-laws and ordinances must be complied with. Additional authorizations or approvals may be required. Any doubt as to whether an additional authorization or approval is required should be verified by a duly authorized official at the appropriate government body or bodies.



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**DEFINITIONS**

“**Act**” means the Quartz Mining Act, S.Y. 2003, c.14;

“**Access road**” means a road that provides access to a public highway or to a private road;

“**Adverse effects**” of an exploration program means its adverse environmental or socio-economic effects and any adverse effects it may have on the existing or asserted aboriginal or treaty rights of any First Nation;

“**Chief**” means the Chief of Mining Land Use designated pursuant to the Act;

“**Clearing**” means an area that is cleared of trees, brush or vegetative mat for the purpose of establishing a campsite or carrying out mining exploration, but does not include an area cleared for the purpose of establishing a corridor or trail;

“**Corridor**” means a path from which trees and brush have been cut to accommodate a water line, fuel line or power line;

“**Effective date**” means the date this Approval comes into force as evidenced by the date of the signature of the Chief;

“**Exploration program**” means any activity or group of activities undertaken for the sole or principal purpose of assessing land for its suitability for the production of minerals;

“**Foundation**” means the part of a structure that penetrates the ground and supports the structure;

“**Isolated road**” means a road that does not provide access to a public highway directly or through a private road;

“**Inspector**” means an inspector designated pursuant to the Act;

“**Line**” means a line cut for the purpose of carrying out a geophysical, geological, or engineering survey;

“**Low ground pressure vehicle**” means a vehicle that applies 35 kPa of pressure or less to the ground surface;

“**Operator**” means a person who is engaging in an exploration program, or in development or production;

“**Person-day**” in respect of the use of a campsite, means the use of the campsite by one person during a period of 24 hours;

“**Response**” means a notice given by the Chief that indicates whether or not an exploration program may be carried out or that extends the time for the Chief’s review of a Notification or operating plan;

“**Road**” means a pathway for vehicular traffic the construction of which requires the movement of rock or earth;

“**Site**” means the area bounded by the sum of the mineral claims described above under ‘Scope of Approval’;

“**Summer**” means the period of a year that is not winter;

“**Trail**” means an access to a site within a claim or lease that is constructed with little or no movement of rock or earth; and

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**“Trenching”** means excavation carried out on a mineral claim for the purpose of obtaining geological information;

**“Upgrading”**, in relation to a road, means re-establishing a road that has not been useable for more than five years by vehicles of a type the road was originally designed to serve, modifying a road to provide usability for vehicles that are of a different type than those for which the road was originally designed to serve and any other upgrading or modifying of a road, other than for maintenance or erosion control;

**“Vegetative mat”** means the organic surface of soil, characterized by the accumulation of organic matter, or partly decomposed organic matter, derived mainly from leaves, twigs, and woody materials, and includes the root mass of living vegetation;

**“Winter”** means the period of the year during which (a) the ground is frozen sufficiently to support a vehicle, other than a low ground pressure vehicle, without rutting or gouging of the surface; and (b) there is a sufficient amount of snow on the ground to produce a packed base of 10 cm.

## **PART ONE – GENERAL REQUIREMENTS**

### **Duration of Approval**

1.0 This approval is valid upon signature of the Chief until the expiry date. In the event that claims lapse, or that agreements to operate on claims are dissolved, the approval becomes null and void for that portion of the operating plan, where there is no right to the minerals.

### **Compliance with Operating Conditions**

1.1 All mineral exploration activities must comply with the Operating Conditions contained in Schedule 1 of the *Quartz Mining Land Use Regulation* and within the approval. Where there is a difference between the operating conditions and approval, the terms of this approval shall prevail. These Operating Conditions are enforceable.

### **Reporting Requirements**

#### **Contact Information**

1.2 Submissions and reports to the Chief should be made to both the following addresses:

Chief, Mining Land Use  
Box 2703, K-9  
Whitehorse, Yukon  
Y1A 2C6

Mining Lands Officer  
Room 102 - 300 Main Street  
Whitehorse, YT Y1A 2B5  
whitehorse.mining@gov.yk.ca

1.3 The contact for the operator will be:

Brad Mackinnon  
Box 5407  
Haines Junction, YT Y0B 1L0  
bmackinnon@northwestel.net

#### **Pre-season and Post-season Reporting**

1.4 A pre-season report shall be submitted no later than March 31<sup>st</sup> outlining the exploration activities planned for the season including the proposed locations.

1.5 A post-season report shall be submitted no later than December 31<sup>st</sup> indicating exploration activities completed during that season. This report shall include but is not limited to:

- detailed mapping of all areas worked;
- location of new construction;
- new areas of disturbance;
- map data, in the form of SHP files or GIS compatible, of all new roads and trails;
- map data, in the form of SHP files or GIS compatible, of all reclaimed roads and trails;
- areas of permafrost encountered;
- total disturbed area;
- pre-activity survey results, if applicable;



- reclamation activities; and
- documentation produced by environmental monitors.

1.6 The operator shall contact the Kluane Mining Inspections Office (Compliance, Monitoring and Inspections) at (867) 634-2256 at least 14 days prior to commencing the field season.

1.7 The operator shall contact the Kluane Mining Inspections Office (Compliance, Monitoring and Inspections) at (867) 634-2256 at least 14 days prior to leaving the site at the end of the operation.

### **Spill Reporting**

1.8 All spills must be reported immediately to the 24-Hour Yukon Spill Reporting Line (867) 667-7244 and to the Kluane Mining Inspections Office (Compliance, Monitoring and Inspections) at (867) 634-2256.

1.9 An operator who takes an emergency remedial measure shall, as soon as possible but not later than 10 days after taking it, send a written report to the Chief describing the duration, nature and extent of the emergency and the measures taken to respond to it.

### **Heritage Reporting**

1.10 All paleontological resources uncovered during operations shall be reported to the Yukon Paleontology Program, Government of Yukon in Whitehorse at (867) 667-8089 or (867) 667-5386 and the Chief.

1.11 All archaeological resources uncovered during operations shall be reported to the Yukon Archaeology Program, Government of Yukon in Whitehorse at (867) 667-3771 or (867) 667-5386 and the Chief.

1.12 The report(s) developed for Section(s) 2.9, shall be submitted to Government of Yukon – Heritage Resources Unit, Cultural Services Branch.

### **Wildlife Reporting**

1.13 All incidents with wildlife shall be reported to the District Conservation Officer in Haines Junction (Kluane Region) at (867) 634-2247.

## **PART TWO – PROJECT SPECIFIC OPERATING CONDITIONS**

### **Schedule 1 Operating Conditions (Appendix B)**

The operator is bound by the Schedule 1 Operating Conditions per the *Quartz Mining Land Use Regulation*. In addition to the Schedule 1 Operating Conditions, the operator must also comply with the following terms and conditions:

#### **Erosion Control and Permafrost**

2.0 The operator shall insulate the ground surface beneath all temporary structures and temporary facilities used in the project where permafrost is present to:

- a) prevent any vegetation from being removed; and
- b) prevent the ground from settling or eroding.

#### **Trenching**

2.1 Open trenches shall be sloped at one end to avoid entrapment of wildlife.

2.2 The operator must ensure that all employees and contractors working at the trench sites are aware of the operating conditions for trenching.

#### **Solid Waste**

2.3 The operator shall keep all garbage, including kitchen waste, in a container that prevents access by bears and other wildlife, until properly disposed of in accordance with the *Solid Waste Regulations*.

2.4 When burning kitchen waste on site it must be burned regularly to reduce odours that might attract wildlife and be burned to ash by forced air or fuel fired incineration.

#### **Petroleum Fuel and Hazardous Substances**

2.5 The operator shall, with indelible marker or paint, clearly identify the owner, the contents and the date on fuel drums to establish and manage ownership and responsibility.

2.6 All fuel cache(s) must be protected with an earthen berm or suitable barrier and flagged to prevent spills resulting from accidental contact with heavy equipment. Flags should be visible above the snow pack.

2.7 The location of any spills shall be clearly marked until cleanup has taken place. Location markings shall not be removed until directed in writing by an Inspector.

#### **Drilling**

2.8 The operator must ensure that all employees and contractors working at the drill sites are aware of the operating conditions for drilling.

## **Heritage Resources**

2.9 A heritage resources impact assessment shall be completed in advance of ground disturbing activities in areas with elevated potential for the presence of archaeological or historic sites.

2.10 Champagne and Aishihik First Nations shall be made aware prior to a heritage resources impact assessment being conducted and be provided an opportunity to participate.

2.11 Upon discovery of a heritage resources, the Operator shall notify Champagne and Aishihik First Nations' Heritage Department in addition to Government of Yukon, Chief of Mining Lands and Yukon Heritage.

## **Wildlife**

2.12 The Operator shall cease clearing if raptor nests are observed in, or within 1 km of, the project claims and shall contact the Government of Yukon Regional Biologist for further mitigation.

2.13 Project activities shall pause if sheep and/or caribou are observed on active claim blocks and only resume once the animal(s) has moved off on their own accord.

2.14 Earthworks shall be sloped at one end to allow for wildlife escapement and shall be reclaimed as soon as they are no longer required for mining purposes.

### **PART THREE – RECLAMATION AND/OR DECOMMISSIONING**

- 3.0 Reclamation and/or decommissioning shall be progressive in nature where possible and will occur prior to the expiry of the exploration program or prior to the expiry of this approval, whichever comes first, according to standards outlined in the operating conditions, unless otherwise specified by the Chief.
- 3.1 Debris, equipment, fuel barrels, scrap metal and other waste at the work site shall be completely disposed of, so as not to attract wildlife, by removal to an authorized disposal site at the cessation of the exploration program or prior to the expiry of the approval, whichever comes first.
- 3.2 Structures must be removed and the site restored at the end of the exploration program or prior to the expiry of this approval, whichever comes first, to a level of utility comparable to its previous level of utility.
- 3.3 If an amendment to this approval or new approval is granted, for the claims within the scope of this approval (Appendix A), all outstanding reclamation continues to be the responsibility of the operator.

### **PART FOUR – OTHER MATTERS**

- 4.0 Security may be required at any time by the Chief. The operator must furnish security within thirty (30) days of receiving the written notice from the Chief of the requirement to post security.
- 4.1 All activities requiring security identified in the pre- and/or post-season report(s) shall be paid on or before April 30 annually.
- 4.2 Notice of Schedule III must be provided to the Yukon Water Board ten (10) days prior to use of water.



## Claim Status Report

Claim Name and Nbr.	Grant No.	Expiry Date	Registered Owner	% Owned	NTS #'s	Grouping	Permit	Settlement Land
HOST	YC26231	2026/02/06	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST	YC26232	2026/02/06	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST	YC26233	2026/02/06	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST	YC26234	2026/02/06	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST	YC26235	2027/02/06	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST	YC26236	2027/02/06	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST	YC26237	2026/02/06	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST	YC26238	2026/02/06	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST	YC26482	2026/02/20	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST	YC26483	2026/02/20	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST	YC26484	2026/02/20	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST	YC26485	2026/02/20	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST	YC26486	2026/02/20	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST	YC26487	2026/02/20	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 1	YC39058	2026/02/16	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 1	YC40224	2026/09/12	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 2	YC39059	2026/02/16	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 2	YC40225	2026/09/12	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 3	YC39060	2026/02/16	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 3	YC40226	2026/09/12	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 4	YC39061	2026/02/16	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 4	YC40227	2026/09/12	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 5	YC39062	2026/02/16	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 5	YC40228	2026/09/12	Bradley D. MacKinnon	100.00	115H04	HW07456		

Total claims selected : 50

Left column indicator legend:

- R - Indicates the claim is on one or more pending renewal(s).
- P - Indicates the claim is pending.

Right column indicator legend:

- L - Indicates the Quartz Lease.
- F - Indicates Full Quartz fraction (25+ acres)
- P - Indicates Partial Quartz fraction (<25 acres)
- D - Indicates Placer Discovery
- C - Indicates Placer Codiscovery
- B - Indicates Placer Fraction



## Claim Status Report

Claim Name and Nbr.	Grant No.	Expiry Date	Registered Owner	% Owned	NTS #'s	Grouping	Permit	Settlement Land
HOST 6	YC39063	2026/02/16	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 6	YC40229	2026/09/12	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 7	YC39064	2026/02/16	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 7	YC40230	2026/09/12	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 8	YC39065	2026/02/16	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 8	YC40231	2028/09/12	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 9	YC39066	2026/02/16	Bradley D. MacKinnon	100.00	115H04	HW07456		
HOST 9	YC40232	2026/09/12	Bradley D. MacKinnon	100.00	115H04	HW07456		
NOB 0	YD19040	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
NOB 3	YD19043	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
NOB 5	YD19045	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
NOB 9	YD19049	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
NOB 11	YD19051	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
NOB 13	YD19053	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
NOB 15 - 17	YD19055 - YD19057	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
TOP 2	YE54572	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
TOP 4	YE54574	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
TOP 6	YE54576	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
TOP 8	YE54578	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
TOP 10	YE54580	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
TOP 12	YE54582	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
TOP 14	YE54584	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		
TOP 16	YE54586	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		

Total claims selected : 50

Left column indicator legend:

- R - Indicates the claim is on one or more pending renewal(s).
- P - Indicates the claim is pending.

Right column indicator legend:

- L - Indicates the Quartz Lease.
- F - Indicates Full Quartz fraction (25+ acres)
- P - Indicates Partial Quartz fraction (<25 acres)
- D - Indicates Placer Discovery
- C - Indicates Placer Codiscovery
- B - Indicates Placer Fraction



# Claim Status Report

Claim Name and Nbr.	Grant No.	Expiry Date	Registered Owner	% Owned	NTS #'s	Grouping	Permit	Settlement Land
TOP 18	YE54588	2025/10/13	Bradley D. MacKinnon	100.00	115H04	HW07456		

**Criteria(s) used for search:**

CLAIM DISTRICT: WHITEHORSE CLAIM STATUS: ACTIVE & PENDING OWNER(S): MACKINNON BRADLEY D.  
REGULATION TYPE: QUARTZ

Left column indicator legend:

- R - Indicates the claim is on one or more pending renewal(s).
- P - Indicates the claim is pending.

Right column indicator legend:

- L - Indicates the Quartz Lease.
- F - Indicates Full Quartz fraction (25+ acres)
- P - Indicates Partial Quartz fraction (<25 acres)
- D - Indicates Placer Discovery
- C - Indicates Placer Codiscovery
- B - Indicates Placer Fraction

Total claims selected : 50

## **APPENDIX B**

### *Quartz Mining Land Use Regulation*

#### **Schedule 1** **Operating Conditions**

##### **Removal of the Vegetative Mat**

1. If the vegetative mat must be removed to carry out exploration activities, it must be removed so as to protect the seed and root stock contained within the mat and be stored separately from other overburden or bedrock removed for use in re-establishing the vegetative mat when the exploration program ceases.

##### **Re-establishment of the Vegetative Mat**

2. (1) All vegetated areas disturbed by exploration activities, including fuel and waste storage areas, clearings, corridors, temporary trails, camps and supporting infrastructure, and trenches and drill sites, must be left in a condition conducive to re-vegetation by native plant species or other species adaptable to the local environment to encourage re-vegetation comparable to similar, naturally occurring, environments in the area.

(2) Conditions conducive to re-vegetation include provision of adequate soil layer with moisture retaining ability, no soil contamination by hydrocarbons or other hazardous substances, provision of adequate seed or root stock, and contoured or otherwise stable slopes.

3. If adequate seed or root stock is not naturally available, re-seeding or transplanting of vegetation is required. Only non-invasive species may be used for re-seeding or transplanting. Consult with the Mining Inspector prior to seeding.

##### **Erosion Control and Permafrost**

4. All areas disturbed during an exploration program must be re-sloped, contoured or otherwise stabilized to prevent long-term soil erosion, slumping and subsidence.
5. All exploration activities must be carried out to avoid or minimize damage to and loss of permafrost.

##### **Trenching**

6. Trenching carried out by hand or using hand-held tools must be methodical. All trenches must be stabilized and marked to minimize risk to the public.
7. Trenches constructed with mechanized equipment must be back filled by first depositing any removed overburden and bedrock and then replacing the vegetative mat that was removed to construct the trench.



### **Historic Objects and Burial Grounds**

8. Exploration activities must not be carried out within 30m of a known archeological site unless the Chief indicates, in writing, that such activities may be carried out.
9. Any sites containing archeological objects, paleontological objects or human remains or burial sites discovered in the course of carrying out an exploration program must be immediately marked and protected from further disturbance and, as soon as practicable, the discovery reported to the Chief. No further activities may be carried out within 30m of the site until the Chief indicates, in writing, that activities may be resumed.

### **Solid Waste**

10. All solid waste, including debris, equipment, barrels, drums, and scrap metal, must be safely stored on the site of the exploration program while the program is carried out and must be disposed of in accordance with the *Solid Waste Regulation* when the program ceases.
11. Camps must be kept clean and tidy.

### **Petroleum Fuel and Hazardous Substances**

12. If petroleum fuel storage capacity exceeds 4000 L, a secondary containment structure must be constructed. The containment structure must be made of a material impervious to petroleum products and:
  - a) if there is a single storage tank, be of sufficient size to accommodate at least 110% of the capacity of the storage tank; or
  - b) if there is more than one storage tank, be of sufficient size to accommodate 110% of the capacity of the largest storage tank or 10% of the total capacity of all the tanks, whichever is larger.
13. All petroleum products, including waste petroleum products, and any other hazardous substances must be stored in a secure fashion no less than 30m from the ordinary high water mark of any water body.
14. All petroleum products, including waste petroleum products, and any other hazardous substance, must be transferred and handled without spillage.
15. All petroleum products and any other hazardous substances must be removed from the site of the exploration program when the program ceases.
16. All waste petroleum products and any other special waste, as defined in the *Special Waste Regulations*, generated in the course of carrying out the exploration program must be disposed of in accordance with the *Special Waste Regulations* when the program ceases.

### **Spills and Spill Contingency Plans**

17. A spill contingency plan for petroleum products and other hazardous waste must be prepared and posted in the camp and at all fuel handling locations used in carrying out the exploration program.
18. All spill clean-up equipment and material must be maintained in a state of readiness sufficient at all times to contain and clean-up any hazardous material spills.
19. If a spill occurs, the spill contingency plan must be immediately implemented and notice given to the 24-hour Yukon Spill Report Line. As soon as practicable, an inspector must be contacted. Whatever remedial action is required to clean-up the spill and reclaim the affected land and water must be taken.

### **Use of Vehicles**

20. Vehicles must be maintained and operated to prevent spills of fuel, lubricants, coolants and oil.

### **Timber and Brush**

21. Cut brush must not be piled so that it blocks movement of wildlife or people.
22. Leaning trees created by cutting of lines, corridors, temporary trails, and clearings must be felled.
23. When it is economically viable to do so, timber suitable for sale must be salvaged and stockpiled.
24. All risk of fire hazard must be avoided.

### **Drilling**

25. All reasonable efforts must be made when drilling to minimize the impact on wildlife and the public.
26. Vegetation other than that within a drill sump, must not be covered with drill cuttings.
27. Core must be stored in a stable fashion.
28. Drill mud must be re-circulated when possible.
29. All drill fluids must be contained in a sump.
30. Drill holes that pose a hazard or that lead to ground water must be plugged to prevent flow of water to the surface.

31. The location of drill holes must be marked on the ground by flagging or other suitable means at the location of the drill hole.
32. Drilling waste, including fluid, cuttings and mud must not be left within 30m of a water body.

### **Roads, Trails, and Off-road Trail Use**

33. All vehicles must be operated to avoid rutting and gouging of roads and trails.
34. Off road and trail routes must be reconnoitered and must be used in a way that minimizes ground disturbance, including damage to permafrost and sensitive wildlife habitat.
35. If rutting, gouging, ponding or permafrost degradation occurs off road or trail, vehicle use must be suspended or relocated to ground that is capable of bearing the weight of the vehicle without causing such damage.
36. Use of skids on permafrost or wet ground is only permitted outside of winter where it is not reasonable to use any other means of transporting equipment.
37. Routes for temporary trails must be reconnoitered and flagged.
38. In addition to any remedial action required in relation to item 2 of this schedule, temporary trails must be blocked to prevent further vehicular access.

### **Release of Sediment**

39. All reasonable care must be taken in carrying out exploration activities near or adjacent to a water body to prevent sediment from entering a water body, unless otherwise permitted by law.

### **Use of Explosives**

40. Explosives must be set off in a manner to minimize impact on wildlife and the public to ensure that forest fires, unplanned landslides, or artificial damming of water bodies does not occur.

### **Waste Rock**

41. Waste rock piles must be located at least 30m from any water body and be physically stable.
42. Waste rock containing sulfides must be returned underground.
43. Access to underground openings must be blocked to prevent access by wildlife and people.

## **APPENDIX C**

### **Proponent Commitments**

- The Proponent's commitments for progressive and final reclamation of mined areas is considered sufficient to ensure that some wildlife habitat is re-established, thereby reducing the magnitude of effects to moose.
- The Proponent indicated that trenches would be reclaimed (which includes backfilling) as soon as sampling would be completed.
- Proper progressive and final reclamation, as committed to by the Proponent, will ensure the regrowth of vegetation and eventual return of habitat for furbearers at a capacity similar to current conditions once the mining activities are over.

## **Operational Guidelines**

### **Exploration activities**

The Yukon Chamber of Mines has developed an informative Best Management Practices document that should be reviewed in the context of project activities. The operator should reference the following document when planning and conducting project activities:

- Yukon Mineral and Coal Exploration Best Management Practices and Regulatory Guide (<https://www.yukonminers.org/index.php/all-docs/guidebooks/3-yukon-mineral-and-coal-exploration-best-management-practices-and-regulatory-guide/file>).

### **Bears and other wildlife**

To increase worker safety, reduce potential conflicts and prevent unnecessary wildlife mortality, the operator should implement pertinent components of:

- Guidelines for Industrial Activity in Bear Country for the Mineral Exploration, Placer Mining and Oil & Gas Industries (<https://yukon.ca/sites/yukon.ca/files/env/env-guidelines-industrial-activity-bear-country.pdf>).
- If an electric fence is an appropriate precaution, or a requirement, the operator should reference the following comprehensive and highly informative guide: Reducing Wildlife Conflict with Electric Fencing: A Beginner's Guide ([https://yukon.ca/sites/yukon.ca/files/env/env-electric-fencing\\_en.pdf](https://yukon.ca/sites/yukon.ca/files/env/env-electric-fencing_en.pdf)).

### **Invasive species**

To minimize the risk and consequences of spreading invasive plant species the operator should:

- Become familiar with the Yukon invasive species and how to manage them by referring to the Yukon Invasive Species Council document, "Why Should I Care About Invasive Species" (<https://www.yukoninvasives.com/index.php/en/resources/brochures/31-why-should-i-care-about-invasive-species/file>).

### **Heritage Resources**

To better understand how to manage potential impacts to heritage resources, the operator should refer to the following document(s):

- Mineral Exploration Best Management Practices for Heritage Resources ([http://www.tc.gov.yk.ca/pdf/Mineral\\_Exploration\\_BMP\\_for\\_Heritage\\_Resources.pdf](http://www.tc.gov.yk.ca/pdf/Mineral_Exploration_BMP_for_Heritage_Resources.pdf)).
- Best Management Practices for Burial Sites and Human Remains in Yukon ([http://www.tc.gov.yk.ca/pdf/BurialSites\\_BMP\\_2014.pdf](http://www.tc.gov.yk.ca/pdf/BurialSites_BMP_2014.pdf)).

### **Work in/near water**

Project activities have the potential to affect water quantity, quality and/or rate of flow. The operator should provide for the protection of water by applying practices described in:

- Best Management Practices for Works Affecting Water in Yukon (<https://yukon.ca/sites/yukon.ca/files/env/env-preferred-practices-works-affecting-yukon-waters.pdf>).