

Energy, Mines and Resources Box 2703, Whitehorse, Yukon Y1A 2C6 Mineral Resources Branch (K-9) Mining Lands

July 31, 2017

File No: LQ00387b

Keno Hill Exploration Corp. PO Box 15, Site 1 Keno City, Yukon Y0B 1M1

Dear Sir/Madam:

Re: Class 3 Quartz Mining Land Use Approval

Your application for an amendment to your Class 3 approval has been approved:

	As submitted.
\boxtimes	Subject to the attached conditions.
	Subject to security deposit as received

The effective date of this approval will be July 31, 2017. All work, including restoration, must be completed by August 5, 2022, 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.

Please feel free to contact our office at (867) 996-2256 should you have any questions.

Regards

Briar Young

Chief, Mining Land Use

CC:

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

Keno Hill Exploration Corp. LQ00387b

OPERATIONAL GUIDELINES

- The proponent should follow the Yukon Mineral and Coal Exploration Best
 Management Practices and Regulatory Guide
 (http://www.yukonminers.ca/Industry/BMPs.aspx) while conducting all project activities.
- The proponent should familiarize themselves and their contractors with Yukon invasive species and how to manage them by referring to the document "Why Should I Care About Invasive Species?" available from http://www.yukoninvasives.com/pdf_docs/WhyshouldIcare2011_sm.pdf.
- Wherever practicable the proponent should remove foreign soil and plant material from equipment prior to moving it to the project site.
- If invasive plants become established on the site, the proponent should contact the Yukon Conservation Data Centre (1-800-661-0408 local 5331) for advice on appropriate mitigations. Please see http://www.env.gov.yk.ca/wildlifebiodiversity/invasiveplants.php for a listing of Yukon Invasive Plants.
- The proponent should contact the Regional Biologist (867-996-2162) for procedures for conducting a pre-activity survey for Collared Pikas.
- The proponent should not disturb or destroy confirmed Collared Pika colonies.
- The proponent should contact the Regional Biologist (867-996-2162) for information on appropriate set back distances if raptor nests are observed.



MINING LANDS MINERAL RESOURCES BRANCH GOVERNMENT OF YUKON

Pursuant to the *Quartz Mining Act* and <u>Quartz Mining Land Use Regulation</u>, the Chief, Mining Land Use hereby grants an amendment to a Class 3 Approval to:

Keno Hill Exploration Corp.
PO Box 15, Site 1
Keno City, Yukon
Y0B 1M1

APPROVAL NUMBER:

LQ00387b

UNDERTAKING:

Quartz

CLASS:

Class 3 Approval

EFFECTIVE DATE:

July 31, 2017

EXPIRY DATE:

August 5, 2022

This permit shall be subject to the restrictions and conditions contained herein and to the restrictions and conditions contained in the *Quartz Mining Act* and the <u>Quartz Mining Land Use Regulation</u> made there under as proposed in Mining Land Use Application LQ00387, LQ00387a and LQ00387b.

Dated this July 31, 2017

Briar Young

Chief, Mining Land Use

MINING LAND USE APPROVAL Class 3 LQ00387b Keno Hill Exploration Corp.

SCOPE OF APPROVAL: Nabob (YC01995) & Faro (YD34926)

NTS: 105M14

PART ONE – GENERAL REQUIREMENTS

Definitions

- "Chief" means Chief, Mining Land Use pursuant to the Act.
- "Corridor" means a path from which trees and brush have been cut to accommodate a trail, water line, fuel line or power line.
- "Isolated road" means a road that does not provide access to a public highway directly or through a private road.
- "Road" means a pathway for vehicular traffic the construction of which requires the movement of rock or earth.
- "Trail" means an access to a site within a claim or lease that is constructed with little or no movement of rock or earth.
- "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.

Duration of Approval

- 1. 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.
- 2. All outstanding reclamation continues to be the responsibility of the operator.

Compliance with Operating Conditions

3. All mineral exploration activities must comply with the *Operating Conditions* (appended) contained in Schedule 1 of the <u>Ouartz Mining Land Use Regulation</u>. These Operating Conditions are enforceable.

PART TWO - REPORTING REQUIREMENTS

Contact Numbers/Planning and Communication

4. Submissions and reports to the Chief should be made in duplicate to the following addresses:

Chief, Mining Land Use

Mining Lands Officer

Box 2703, K-09

Box 10

Whitehorse, Yukon Y1A 2C6

Mayo, Yukon Y0B 1M0

5. The contact for the Operator will be:

Keno Hill Exploration Corp. PO Box 15, Site 1 Keno City, Yukon Y0B 1M1

- 6. All spills must be reported immediately to the 24-Hour Yukon Spill Reporting Line (867) 667-7244 and to the Mining Inspections Division Mayo (867) 996-2568.
- 7. 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.
- **8.** A report shall be submitted at the beginning of each mining season outlining the exploration activities planned for the season including the proposed locations.
- 9. A report shall be submitted at the end of each mining season indicating exploration activities completed during that season. This report shall include but not be limited to:
 - detailed mapping of all areas worked;
 - location of new construction;
 - new areas of disturbance;
 - maps with Global Positioning System (GPS) coordinates of all new roads and trails:
 - maps with Global Positioning System (GPS) coordinates of all reclaimed roads and trails;
 - areas of permafrost encountered;
 - total disturbed area;
 - reclamation activities and,
 - documentation produced by environmental monitors.
- 10. Prior to commencing any burning operations, a Burning Permit must be obtained from the Fire Management Office in Mayo at (867) 996-3200, as well as any other communications regarding wildfire management.
- 11. The operator shall contact Mining Inspections at Mayo (867) 996-2568 at least 14 days prior to commencing the field season.

- 12. The operator shall contact Mining Inspections at Mayo (867) 996-2568 at least 14 days prior to leaving the site at the end of the operation.
- 13. The operator shall contact the local municipal solid waste facility prior to usage to ensure proper governance of waste.

Royalty

14. A royalty shall be declared annually on or before April 1st of each year as per section 102 of the *Quartz Mining Act* and subsection 103(1) (a) of the *Quartz Mining Royalty Regulation*.

Heritage

- 15. All palaeontological resources uncovered during operations shall be reported to the Yukon Palaeontology Program, Government of Yukon in Whitehorse at (867) 667-8089 or (867) 667-5386.
- 16. 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.

Wildlife

- 17. All incidents with wildlife shall be reported to the District Conservation Officer in Mayo (Northern Tutchone Region) at (867) 996-2202, as well as any other communication regarding wildlife.
- **18.** The proponent shall maintain a detailed wildlife log for submission to the Chief, Mining Lands each year.

PART THREE - TERMS AND CONDITIONS

Removal of the Vegetative Mat

19. 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 reestablishing the vegetative mat when the exploration program ceases.

Re-establishment of the Vegetative Mat

- 20. 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.
- 21. 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.
- 22. 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

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

Historic Objects and Burial Grounds

- 25. 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.
- 26. Any sites containing archeological objects, palaeontological 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.

Disposal of Wastes/Cleanliness

- 27. 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 <u>Solid Waste Regulation</u> when the program ceases.
- **28.** The proponent shall keep all garbage in a container that prevents access by bears and other wildlife, until properly disposed of in accordance with the <u>Solid Waste Regulations</u>.

Fuel and Chemical Storage and Handling

- **29.** If petroleum fuel storage capacity exceeds 4000L, 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.

- **30.** 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.
- 31. All fuel cache(s) must be protected with an earthen berm and flagged to prevent spills resulting from accidental contact with heavy equipment. Flags should be visible above the snow pack.
- **32.** All petroleum products, including waste petroleum products, and any other hazardous substance, must be transferred and handled without spillage.
- 33. All waste petroleum products and any other special waste, as defined in the Special Waste Regulations, generated in the course of carrying out the explorations program must be disposed of in accordance with the Special Waste Regulations when the program ceases.
- **34.** The proponent shall clearly identify the owner, the contents and the date on fuel drums to establish and manage ownership and responsibility.

Spills and Spill Contingency Plans

- 35. 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.
- **36.** 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.
- 37. 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

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

Trenching

- **39.** 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.
- **40.** Open trenches should be sloped at one end to avoid entrapment of wildlife.
- **41.** 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.
- **42.** The operator must ensure that all employees and contractors working at the trench sites are aware of the operating conditions for trenching.

Drilling

- **43.** All reasonable efforts must be made when drilling to minimize the impact on wildlife and the public.
- **44.** Vegetation other than that within a drill sump, must not be covered with drill cuttings
- **45.** Core must be stored in a stable fashion.
- **46.** Drill mud must be re-circulated when possible.
- **47.** All drill fluids must be contained in a sump.
- **48.** Drill holes that pose a hazard or that lead to ground water must be plugged in a suitable manner.
- **49.** The location of drill holes must be marked on the ground by flagging or other suitable means at the location of the drill hole.
- **50.** Drilling waste, including fluid, cuttings and mud must not be left within 30m of a water body.
- **51.** The operator must ensure that all employees and contractors working at the drill sites are aware of the operating conditions for drilling.

Bulk Sampling

- **52.** Bulk sampling must not exceed 5000 tonnes and must be extracted and removed from the project site by December 31, 2012.
- 53. The proponent shall develop and implement a comprehensive Acid Rock Drainage/Metal Leaching (ARD/ML) sampling and monitoring protocol to be submitted to the Chief for review and approval by October 31, 2012.
- **54.** If ARD/ML results are positive the proponent shall cease work immediately and shall contact the Chief for further actions.
- 55. Bulk samples must be stored in a secure fashion until removed from the site.

Waste Rock

- **56.** Any waste rock with the potential for acid generation or metal leaching shall be segregated and stored in a manner that prevents direct or indirect drainage to any watercourse.
- **57.** Waste rock shall be stored in a manner that prevents interaction with air and water.
- **58.** Waste rock piles must be located at least 30m from any water body and be physically stable.

Use of Explosives

59. 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.

Roads, Trails, and Off-road Trail Use

- **60.** All vehicles must be operated to avoid rutting and gouging of roads and trails.
- 61. 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.
- **62.** 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.
- **63.** 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.
- **64.** Routes for temporary trails must be reconnoitered and flagged.
- **65.** In addition to any remedial action required in relation to re-establishment of the vegetative mat, temporary trails must be blocked to prevent further vehicular access.

Release of Sediment

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

Security

67. Security may be required at any time by the Chief.

Reclamation

68. Reclamation shall be progressive in nature where possible and completed before expiry of the approval.

PART FOUR - FINAL DECOMMISSIONING

- **69.** Final reclamation will occur prior to the expiry of the operation, according to standards outlined in the operating conditions for re-establishment of vegetative mat and erosion control.
- **70.** All petroleum products and any other hazardous substance must be removed from the site of the exploration program when the program ceases.

- 71. All waste petroleum products and any other special waste, as defined in the Special Waste Regulations, generated in the course of carrying out the explorations program must be disposed of in accordance with the Special Waste Regulations when the program ceases.
- 72. 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 as often as is practicable throughout the mining season and completely at the cessation of the operation.
- 73. Structures must be removed and the site restored at the end of the operation to a level of utility comparable to its previous level of utility.

PART FIVE - OTHER MATTERS

Applicable Laws

- 74. All applicable federal, territorial, and First Nation law or local regulations, ordinances or by-laws must be conformed with at all times. 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.
- 75. Notice of Schedule III must be provided to the Yukon Water Board ten (10) days prior to use of water.
- **76.** Attached is a list of the exploration activities for which you are approved (Appendix A).



LQ00387b Appendix A

MINING LAND USE EXPLORATION ACTIVITY REPORT

LQ00387b Class III

Keno Hill Exploration Corp. Box 15, Site 1 Keno City, YT Y0B 1M1

ELEMENT	CRITERIA TERMS AND CONDITIONS
Establisment of trails per program	2km x 5m
Establishing new access roads per program	1km x 9m
Fuel Storage in a stationary container	220L Diesel, 220L Gasoline
Nb of clearings per claim, including existing clearings	50
Off Road use of vehicles in summer	1.5km on claims
Surface area of each clearing	100m2 where vegetative mat removed.
Total volume of trenching	12,500m3 total volume: 10 trenches (50m x 5m x 5m = $1250m3$ each).
Upgrading of access roads per	1km x 9m
Use of explosives	1000kg in a 30 day period. Total amount: 10,000kg.
Use of vehicles on existing roads or trails	Pickups/ATVs, trailer, water & dumptruck, Air Track & Compressor, D. Drill, 225 excavator, D8 cat.
Total volume of trenching	BULK SAMPLE: 5,000 tonnes, remove from site by December 31, 2012.