

# YUKON'S ENVIRONMENTAL ASSESSMENT ACT (EAA) SCREENING REPORT

## 1. ENVIRONMENTAL ASSESSMENT FILE INFORMATION

Application Number	LQ00156
Proponent Name	Ketza River Holdings Ltd..
Contact Information	Robert Stroshein-26 Liard Road, Whitehorse, YT Y1A 3L4
Project Title	Quartz exploration
Physical Work or Activity	Quartz exploration
Multiple Activity(ies)	N/A
E. A. Start Date	April 27 <sup>th</sup> , 2005
E. A. Finish Date	June 6 <sup>th</sup> , 2005
E. A. Determination	
Subject Descriptor	Exploration
Project Category Code	Area

## 2. RESPONSIBLE AUTHORITY IDENTIFICATION

Lead Responsible Authority	Mining Lands
Other Responsible Authorities	N/A
Date EAA coordination regs triggered	N/A
<b>R. A. Contact Information</b>	<b>Judy St. Amand, Regional Mining Lands Officer, Box 2703, Whitehorse, Yukon Y1A 2C6</b>
Project Trigger	EAA Law List And Inclusion List
Lead Type of Approval	Permit
Status of Approval	Approved
Integrated Screening	N/A
Other Triggers	N/A
Other Types of Approval	
Project File Location	Watson Lake Mining Recorders Office

## 3. PROJECT LOCATION

Region	Watson Lake	
NTS Map #	105-F-09	Quadrant ___NE __X__SE __X__SW ___NW
Geographic Location Name	Beaver Mountain Area	
Latitude and Longitude or UTM Coordinates	<b>N boundary:</b> 61°34'00"N <b>S boundary:</b> 61°30'30"N	<b>E boundary:</b> 132°13'00"W <b>W boundary:</b> 132°19'00"W
Watershed and Drainage Region	Ketza River - White Creek drainage is South of this property and McConnell River Drainage is to the West	
Nearest Community(s)	Name: Ross River	Distance from project: approx. 50 km
	Name: Johnsons Crossing	Distance from project: approx. 135 km
First Nation Traditional Territory(s)	Ross River Dena Council, Teslin Tlingit Council, Liard First Nation	
Surrounding Land Status	Quartz Claims, Category B, Ross River First Nation Land Selection, Outfitting Concession, Trapper Concession	
Special Designation(s)	N/A	

**Ecozone: BOREAL CORDILLERA ECOZONE****Ecoregion: 178. PELLY MOUNTAINS**

This eco-region encompasses the Pelly and northern Cassiar Mountains spanning the British Columbia – Yukon border. The mean annual temperature for the area is approximately  $-3^{\circ}\text{C}$  with a summer mean of  $10.5^{\circ}\text{C}$  and a winter mean of  $-17.5^{\circ}\text{C}$ . Mean annual precipitation is 500-1000 mm, varying with elevation. Boreal forests of white spruce, black spruce, lodgepole pine and aspen cover the lower-elevation valley bottoms. Much of the eco-region lies above the treeline and is characterized by alpine tundra communities of lichens, dwarf ericaceous shrubs, birch, and willows. Grasses, sedges, cottongrass, and some mosses occupy wet sites. Open-growing black and white spruce, and alpine fir are prevalent in the subalpine region. Some aspen and scrub birch occur in valleys and on lower, warmer slopes of the subalpine sections. Lodgepole pine is common following fires. The Pelly and Cassiar Mountains composed of crystalline Mesozoic and Palaeozoic strata, are of moderately high relief, ranging from generally over 1500 m asl to the highest peak at 2404 m asl. Relief is greater in the Pelly Mountains than in the Cassiar Mountains. Permafrost is sporadically distributed. Dystric and Eutric Brunisols are codominant in the ecoregion. Dystric Brunisols are associated with coarse igneous rocks at higher elevation. Plateau areas with sandy loam morainal parent materials are associated with Eutric Brunisols. Turbic Cryosolic soils are found in alpine areas and in some imperfectly to poorly drained sites. Representative wildlife, includes moose, wolverine, snowshoe hare, black and grizzly bear, Stone's and Dall's sheep, ptarmigan, ground squirrel, and caribou. Land use reflects hunting, trapping, and recreation values as well as mining and mineral exploration activities in both the alpine and subalpine regions. Swift River is the only settlement in the ecoregion. The population of the ecoregion is approximately 30.

**4. PROJECT SCOPING****4.1 Project Scope**

The proponent will be undertaking a five year exploration program which will include diamond drilling, upgrading existing roads and trails, developing new roads and trails and trenching. The existing trailer camp will be utilised. Reclamation will be ongoing throughout the program and all material will be removed at the end of the operation. The following is a summary of these activities:

Vehicles	Pickup trucks GVW 8 to 10,000 pounds D-7 Caterpillar Dozer GVW 35 Tonnes UH-07 or Cat-235 Excavator GVW 25 Tonnes
Use of Existing Roads & Trails	on and off claims - 39 km
Upgrade Existing Roads	on claims - 5 km x 3 m (clearing fallen rock, dozing washout/eroded sections)
Develop New Trails	on claims 2 km x 2 m
Develop New Roads	on claims – 2 km x 3 m

No new access routes within 30 m of water bodies or water courses

Clearings	20 to 30 per claim Vegetative mat removed - 200 sq m Trees & Brush only removed – 200 sq m
Drilling	300 to 400 holes, 50,000 m
Trenching	20 trenches – 20 m x 2 m x 2 m = 800 cu m Total volume 16,000 cu m
Camp	use existing trailer camp Maximum 25 people in camp at one time Total 5,000 man days

#### Fuel

Type	Storage Tank	Quantity	Registration Number	Distance to nearest water
Diesel	ULC-AST - 1987	45 K	A975455	300 m Cache Creek
Gasoline	250 gal	1100 L		350 m Cache Creek
Propane	3-1000 USWG Tanks	1000 g each	A-18276-78	300 m Cache Creek

## 4.2 Scope of Assessment

The area has been heavily staked and explored and mined for many years, records for this property date back to early 1950's. The property has been identified as a Type II mine site in the Devolution Transfer Agreement between the Government of Canada and the Yukon Territorial Government.

The existing access to the property leaves the Campbell Highway at three locations, at approximate kilometres 333, 347 and 352. (the junction of the road to the village of Ross River is at km 374 of the Robert Campbell Highway). The first access (km 333) runs along side Ross River Dena Council Category B selection R-55B and the other two travel through Ross River Dena Council Category B selections R-62B and R-1B.

In order to ensure that all cumulative effects in the area are included in this assessment of the project, a very broad spatial scope will be considered. The northern boundary will be The Campbell Highway, the southern boundary, White Creek, the eastern boundary, Horton Creek (which is a tributary of the Hoole River) and the western boundary, the McConnell River. The Ketz River flows through the centre of this assessment area before its confluence with the Pelly River.

The major concerns in this assessment are the effect on prior disturbances, water quality, ARD potential and the impact to wildlife.

## 5. CONSULTATION/REFERRAL LIST

Department or Organization	Contact person	Response
GY, Client Service & Inspections - Mining	Steve Colp	
GY, Regional Mining Lands Officer	Judy St. Amand	
GY, First Nation Liaison	Allan Carlick	
GY Environmental Affairs Section	Morris George	May 16, 2005
GY Exploration & Geological	Karen Pelletier	
GY, Forest Planning & Development	Myles Thorp	28 April 2005
GY, Lands Clients Services	Bryony McIntyre	
GY Lands Use	Marg White	
GY, Executive Council Office	Shane Andre	
GY, Water Resources	Tony Pollyck	
GY, Water Resources	Kevin McDonnell	
GY, Type II Mines	Frank Patch	
GY, Type II Mines	Hugh Copland	
GY, Senior Natural Resource Officer-Tintina	Richard Potvin	
GY, Natural Resource Officer – Ross River	Doug Bishop	12 May, 2005
WCB – Chief Mine Safety	Naresh Prasad	25 May, 2005
DFO Habitat & Enhancement	Sandra Orban	
DOE Environmental Protection	Benoit Godin	16 May, 2005
DIAND, Type II Mines	Russ Smoller	
MacKenzie River Basin Board	Jack VanCamp	
Association of Yukon Communities		
Canada Parks & Wilderness Society	Mac Hislop	
Yukon Chamber of Mines		
Salmon Sub-Committee	Gord Zealand	
Yukon Conservation Society	Karen Baltgailis	May 30, 2005
Yukon FWMB		
Council for Yukon First Nations		
Liard First Nation	Laurie Allen	
Ross River Dena Council	Testloa Smith	May 24, 2005
Teslin Tlingit Council		
Town of the Watson Lake	Hilda Price	

## 6. SUMMARY OF RESPONSES FROM REFERRAL LIST

### Yukon Workers' Compensation Health and Safety Board

- All adits should be fenced.

*This has been completed by the proponent.*

- All dangerous chemicals should either be removed or disposed.

*This will be required in the approval.*

### **GY Dept of Environment**

- Water License may be required for future bulk sampling operations.

*The bulk sampling will be addressed in a future amendment application.*

- Materials including water discharge, from trenching and core drilling, should be tested for acid rock drainage/metal leaching. Results should be reported to mining and water inspections.

*We will require testing and reporting in the approval.*

- Contingency plan should be in place to handle and treat ARD/ML materials including containment and treatment of water which may percolate from drill holes and drain from trenches. This may require a water license to deposit a waste.

*Baseline data will be required for review. Decision on ARD monitoring and management plan will be made at that point.*

- Given ARD/ML potential, security should be considered.

*Security will be considered.*

- Several permits may be required under the Environment Act.

*This is mitigated in our approval.*

- Storage tank permit may be necessary.

*Tanks will be registered with Mining Lands.*

- Concern regarding Thinhorn sheep.

*The general mitigation suggested will be incorporated in the approval. Client has been advised and intends to follow the suggested mitigation.*

### **GY Natural Resource Officer – Ross River**

- Re-establishment of the vegetative mat should specify reclamation to greater than 80% ground cover.

*There is very little existing vegetation, however, our standard operating condition will apply.*

- All wastes should go to the Ross River Dump as the lease makes no provision for operation of a land fill.

*Proponent will be required to remove waste to an approved site.*

- Fuel storage should specify a minimum distance from streams.

*The proponent states that storage will not be within 30 meters of any stream.*

- Details of maintenance of Ketz Road should be provided.

*This is a public road under the Highways Act.*

- This is Stone Sheep habitat and there is hunting in the area – provision should be made for hunters to cross the property.

*The proponent has a surface lease for this area and is required to secure the property, for public safety.*

### **Environment Canada**

- This is a Type II site under the Devolution Transfer Agreement (DTA) and has unresolved environmental liabilities and issues. Further exploration work on these claims should be curtailed until these issues have been addressed in a proper closure and abandonment plan with assurances that the present owner is prepared to take responsibility for this site.

*The concern is acknowledged but not related to environmental impacts of proposed project.*

- Security should be sought.

*Security is being considered*

### **Yukon Conservation Society**

- No exploration approvals should be given to a company that has a track record of not acting responsibly in regards to the problem of arsenic release and the financial liability.

*Further security is being considered.*

- The impacts from the existing mine site already create unacceptable environmental and socio-economic impacts even without additional cumulative impacts from new activities.

*Conditions in the approval will mitigate any exploration activities. The existing environmental impacts will be addressed in the Water License. The Ross River Dena Council feel that they will have socio economic benefits from this program.*

- Reviewers need a much better idea of what new roads are involved, how many and how big the trenches might be, what the disturbance resulting from drilling will actually look like.

*These details have been supplied in the application.*

- Caribou will be calving in late May and early June. Goats are likely to be in the alpine areas and they lamb late May and early June. No activities should be approved without consulting the Ross River Dena council, Regional Biologist for the Liard Region and the Regional Biologist for neighbouring area in NWT regarding wildlife concerns and time periods during which activity should be prohibited.

*Wildlife concerns and mitigation are addressed in GY Environment section.*

- It is essential that the company must provide reclamation security before it undertakes any kind of new activities, including exploration.

*Security is being considered*

### **Ross River Dena Council**

- Request a commitment from the Federal Government that the funding for cleanup of this Type II mine site will not be jeopardised by any permitted exploration work on the property.

*The concern is acknowledged but not related to environmental impacts of proposed project.*

- Include telephone number of Ross River Dena Council (867) 969-2277– 2279

*Proponent has been advised of this request. Proponent has stated their intention of working closely with RRDC.*

- Request that copy of emergency report to be sent to RRDC.

*Proponent has been advised of this request.*

- At every mine inspection, RRDC YESA Coordinator and 1 additional designate must be present.

*RRDC should make arrangements with our inspections branches. Your letter and expressed wish has been forwarded to both water (Dept. of Environment) and mining inspection (Client Services and Inspections- EM&R) branches.*

- Request copies of pre and post season reports.

*Proponent has been advised of this request.*

- Wildlife incidents, encounters with archaeological sites and burial grounds to be reported to RRDC.

*Proponent has been advised of this request. Wildlife incidents are to be reported to the area Conservation Officer. Archeological and burial site discoveries are reported to the Chief, Mining Land Use, who then contacts Heritage branch and Ross River Dene Council.*

- Fuels and oils must not be burned, only incinerated in proper facilities.

*Standard operating conditions mitigate this concern.*

- Scrap metals, old fuel barrels and similar waste to be removed at the end of every field season – this removal to be monitored at every post season inspection.

*Standard operating conditions mitigate this concern. Operator will be required to clean up existing debris and Client Services and Inspections will be monitoring.*

- Fuel spills to be reported to RRDC.

*Proponent has been advised of this request.*

- Fuel drum labels should be permanent.

*Standard labelling requirements will be required.*

- RRDC should be contacted prior to fords of streams.

*Proponent has been advised of this request.*

- Request hunting ban for mine employees.

*Proponent has been advised of this request.*

- Reclamation must be ongoing – a work plan should be in place outlining when and what reclamation work will be done – pre season reports should detail reclamation work to be completed during the season.

*It is a standard clause of our approvals that mitigation be ongoing and reported in post-season reports. The proponent has given written intention to do so.*

- Prior to each season or drilling phase, a security deposit of 100% of the anticipated clean up costs must be made by Ketzá River Holdings Ltd. to YTG for the upcoming work.

*Security is being considered.*

- Where work will take place on previously disturbed areas, the clean up costs associated with the previous disturbance must be included in the security deposit.

*Security is being considered.*

- Respect should be made to Dèna Nèsid figure located at the mine site.

*Dène Nèsid figure on the mountain above the mine is a sacred area. This area is to be avoided.*

- The company should be encouraged by YTG to work closely with the RRDC in terms of employment contracting and training.

*Proponent has been advised of this request and has stated their intention of working closely with RRDC.*

- Mineral licks in the footprint of the mine must be left undisturbed.



*This will be included in the approval.*

- Prior to issuance of any approval, verification should be made that the drilling program will not affect the runoff in the Shamrock area. The specific concern here is that Red Creek should not be further impacted.

*Baseline data regarding Acid Rock Drainage will be collected and reviewed by the Chief. A decision will be made at that point whether further monitoring and management is necessary.*

## **7. MANAGING THE POTENTIAL ENVIRONMENTAL EFFECTS OF THE PROJECT**

### **7.1 Potential Adverse Effects on the Environment**

1. Re-establishment of Vegetative Mat
2. Erosion Control
3. Archaeological Sites and Burial Grounds
4. Disposal of Wastes/Cleanliness
5. Drilling Concerns
6. Trenching concerns
7. Potential Fuel Spills
8. Disturbance to Wildlife
9. Chemical Hazards
10. ARD concerns
11. Disturbance to existing contaminated sites
12. Security on the site

### **7.2 Cumulative Environmental Effects**

Area has been heavily staked, explored and mined over 50 years. Numerous surface disturbances in the area include access roads and trails, excavations, buildings, waste fuels and rock, tailings, clearings etc.

To the west of this property, across the McConnell River, there is an active Class 3 Mining Land Use Approval LQ00073 – 2004 filed season included camp occupation, diamond drilling and some rehabilitation of existing trails. This is a 5 year approval which has a current expiry date of July 4, 2006. The activities included in the assessment and approval are; camp facilities, ground geophysics, geological mapping, diamond drilling, soil sampling, diamond drilling, clearings, road/trail maintenance.

Approximately 6 km to the southwest of the Ketz property, there is an active Class 3 Mining Land Use Approval LQ00111 where field work in 2004 consisted of only general prospecting, rock sampling and soil sampling. This is a 5 year approval which has been assessed and approved for mapping, prospecting, rock and soil sampling, hand trenching, excavator trenching and use of explosives.

### **7.3 Required Mitigation Measures**

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

- All areas disturbed during an exploration program must be left by the operator in a

condition conducive to successful re-vegetation by native plant species or other species adaptable to that environment.

### **Erosion Control**

- All areas disturbed during an operation must be re-sloped, contoured or otherwise stabilized by the operator to prevent long-term soil erosion, slumping and subsidence and to comply with the operating conditions for re-establishment of the vegetative mat.

### **Archaeological Sites and Burial Grounds**

- All archaeological sites and burial grounds must be avoided. If such a site is encountered in the course of an exploration program, it is to be marked, reported to the Chief and protected from further disturbance until authorization is given by the Chief.

### **Disposal of Waste/Cleanliness**

- All garbage and debris will be kept in a covered container until disposed of.
- Sewage shall not be allowed to spread to surrounding lands or water bodies.
- Campsites must be kept clean and tidy.
- New and existing debris, equipment, fuel barrels, scrap metal and other waste at the work site shall be disposed of safely, so as not to attract wildlife, by removal, or incineration, as often as is practicable throughout the mining season and completely at the cessation of the operation.

### **Drilling**

- Vegetation other than that within a drill sump must not be covered with drill cuttings.
- Core must be stored in a stable fashion in racks that will withstand long term weather conditions.
- Drill mud must be re-circulated when possible.
- All drill fluids must be contained in a small, natural or artificial sump that will be left in a condition conducive to the re-establishment of the vegetative mat at the end of its use.
- All drill holes that pose a hazard or that lead to ground water must be plugged in a suitable manner. All drilling must be done in a way that minimizes its impact on wildlife and the public.
- The location of drill holes must be marked on the ground by flagging or other suitable means.

### **Trenching**

- Trenching carried out by hand or with hand-held tools must be methodical, and the trenches must be stabilized and marked in such a way as to minimize risk to the public.
- When trenching with mechanized equipment an operator shall segregate material into two

piles:

- a) Vegetative mat, and
  - b) overburden and bedrock;
- to be conserved and used for backfilling trenches.

- Trenches excavated during an exploration program with mechanized equipment must be backfilled by the operator. Overburden and bedrock shall be replaced first, followed by vegetative mat. The backfilled trench must comply with the operating conditions for re-establishment of the vegetative mat and erosion control.

### **Fuel and Chemical Storage and Handling**

- Fuel and other petroleum products and chemicals shall be stored and transferred in such a manner as to prevent spillage into a body of water or onto the surrounding land.
- A fuel spill emergency plan must be in place and a copy of it posted at each fuel cache on-site.
- Vehicles must be maintained and operated in a manner designed to prevent spills of fuel to oil.
- All waste petroleum products must be safely stored on-site or be removed to a waste disposal facility approved under the Special Waste Regulations of the *Environment Act* (Yukon).
- All fuel spills must be immediately contained, cleaned up and reported to an inspector and the Fuel Spill Hot Line.
- Sufficient oil spill clean-up equipment and material must be in a state of readiness and on site at all times in order to clean-up all petroleum spills.
- All 200 litre drums must have the permit holder's name and contents labelled on the tops.
- When the quantity of fuel in storage exceeds 4000L, a secondary containment facility must be constructed that is of material impervious to petroleum products and that is of sufficient size to accommodate at least 110% of the fuel, in the case of a single storage tank. If there is more than one storage tank, the secondary containment facility must be of sufficient size to accommodate 110% of the capacity of the largest tank or 10% of the total capacity of all the tanks, whichever is greater.

### **Disturbance to Wildlife**

- Wildlife should be approached with caution and shall not be disturbed.
- Removed brush must not be piled so that it blocks movement of wildlife or people.
- Feeding of any wildlife is prohibited.
- Thinhorn sheep must be protected.

### **Disposal of Chemicals**

- Cyanide is to be removed to an approved disposal facility in secure containers.

- All SO<sub>2</sub> must be removed from existing storage tank until recertification is secured.

#### **Acid Rock Drainage**

- Baseline data regarding Acid Rock Drainage will be collected and reviewed by the Chief. A decision will be made at that point whether further monitoring and management is necessary.

#### **Existing Disturbed Sites**

- Care must be taken to not further impact existing disturbed sites. Reclamation must be started in areas within the jurisdiction of this approval.

#### **Access Restriction**

- All buildings must be secured so as to restrict access to any hazards within.
- Access to site must be restricted to protect the public

### **7.4 Residual Effects**

The proposed mitigation measures identified in the amendment application and those noted above should be sufficient to mitigate the potentially negative effects of this project to wildlife and other terrestrial ecosystem values. No other residual effects are anticipated.

### **7.5 Significance of Effects**

There should be no significant adverse environmental effects after mitigation has been applied. Security will be required to offset the possibility that the mitigation and restoration requirements of the permits are not met. Follow-up will be conducted by review of the submitted plans, inspection reports, pre and post season reports and site visits/inspections.

### **7.6 Likelihood of Occurrence**

The likelihood of any significant occurrence is considered unlikely, with the proposed mitigation measures by the proponent, those brought forward in this assessment, and the requirement for security.

## **8. EAA DETERMINATION**

**16(1)(a)** project not likely to cause significant adverse effects, or  
 **16(1)(b)** project likely to cause significant adverse effects that cannot be justified

For 16(1)(b) determinations only:

**16(1)(c)(i)** likelihood of significant effects occurring uncertain

**16(1)(c)(ii)** significant effects may be justified

**16(1)(c)(iii)** public concerns

the Minister shall refer the project to a mediator or a review panel in accordance with section 25.

## 9. AUTHORIZATION

**Prepared by:**

**Signature:** \_\_\_\_\_ **Date: June 2nd, 2005**  
*Judy St.Amand, Regional Mining Lands Officer*

**Authorized by:**

**Signature:** \_\_\_\_\_ **Date: June 2nd, 2005**  
*Joanne Oberg, A/Chief, Mining Land Use*