

June 7, 2017

#### File No: LQ00464

Arcus Development Group Inc. 1016-510 West Hastings Vancouver, BC V6B 1L8

Dear Sir/Madam:

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

Your application for a Class 3 approval has been approved:



- Subject to the attached conditions.
- Subject to security deposit as received.

The effective date of this approval will be June 7, 2017. All work, including restoration, must be completed by October 30, 2027, and inspected before full security and/or completion certificates can be applied for.

Please feel free to contact our office at (867) 667-3190 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



# 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 a Class 3 Approval to:

#### Arcus Development Group Inc. 1016-510 West Hastings Vancouver, BC V6B 1L8

**APPROVAL NUMBER:** 

PROPERTY NAME:

UNDERTAKING:

CLASS:

Quartz

Dan Man Property

LQ00464

Class 3 Approval

June 7, 2017

**EFFECTIVE DATE:** 

**EXPIRY DATE:** 

October 30, 2027

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 <u>Quartz Mining Land Use</u> <u>Regulation</u> made there under as proposed in Mining Land Use Application LQ00464.

June 7, 2017

oung Chief, Mining Land Use

## MINING LAND USE APPROVAL Class 3 LQ00464 Dan Man Property Arcus Development Group Inc.

# SCOPE OF APPROVAL: Claim Status Report (Appendix A) Exploration Activity Report (Appendix B)

NTS:

## 115-J-14

# **Definitions**

"Act" means the *Quartz Mining Act*, SY 2003, c.14; amended by SY 2008, c.19; SY 2013, c.18;

"Operator" means a person who is engaging in an exploration program;

"Chief" means the Chief of Mining Land Use designated pursuant to the Act;

**"Effective date"** means the date this Approval comes into force as evidence by the date of the signature of the Chief;

"**Site**" means the area bounded by the sum of the mineral claims described above under 'Scope of Approval';

"Inspector" means an inspector designated pursuant to the Act;

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

**"Access road"** means a road that provides access to a public highway or to a private road **"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; and

**"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.

# PART ONE – GENERAL REQUIREMENTS

# **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

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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 contained in Schedule 1 of the <u>Quartz 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 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 867-667-3190 whitehorse.mining@gov.yk.ca

5. The contact for the Operator will be: Arcus Development Group Inc. 1016-510 West Hastings Vancouver, BC V6B 1L8

> Archer, Cathro & Associates (1981) Ltd. Dylan Wallinger dwallinger@archercathro.com 604-688-2568

- 6. All spills must be reported immediately to the 24-Hour Yukon Spill Reporting Line (867) 667-7244 and to the Mining Inspections Division Watson Lake & Whitehorse (867) 456-3882 .
- 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;

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- 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;
- reclamation activities and,
- documentation produced by environmental monitors.
- **10.** The operator shall contact Mining Inspections Division: Watson Lake & Whitehorse (867) 456-3882 at least 14 days prior to commencing the field season.
- The operator shall contact Mining Inspections Mining Inspections Division: Watson Lake & Whitehorse (867) 456-3882 at least 14 days prior to leaving the site at the end of the operation.

#### Heritage

- 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.
- **13.** 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.
- 14. Upon discovery of a heritage resource the operation shall notify the Heritage Department of Trondëk Hwëch'in First Nation, in addition to Government of Yukon, Chief Mining Lands and Yukon Heritage.

#### Wildlife

- **15.** All incidents with wildlife shall be reported to the District Conservation Officer in Whitehorse (Southern Lakes Region) at (867) 667-8005, as well as any other communication regarding wildlife.
- **16.** The operator shall maintain a detailed wildlife log for submission to the Chief, Mining Lands annually.

# PART THREE – TERMS AND CONDITIONS

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

**17.** 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

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**18.** The operator shall minimize disturbance to lichen within the project area to the greatest extent possible.

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

- **19.** 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.
- **20.** 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.
- **21.** 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**

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

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

- **25.** A Heritage Resource Overview Assessment shall be conducted where ground-disturbing activities are proposed. In areas where the Heritage Resource Overview Assessment identified elevated potential for heritage resources, a Heritage Resources Impact Assessment shall be conducted in those areas, prior to ground-disturbing activities.
- **26.** 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.
- **27.** 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

Operating Plan - Page 5 of 10 LQ00464 DAN MAN PROPERTY 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**

- **28.** 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>.
- **29.** 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 <u>Solid</u> <u>Waste Regulations</u>.
- **30.** 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.
- **31.** Camps must be kept clean and tidy.

## Fuel and Chemical Storage and Handling

- **32.** 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 accommodate110% of the capacity of the largest storage tank or 10% of the total capacity of all the tanks, whichever is larger.
- **33.** 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.
- **34.** 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.
- **35.** All petroleum products, including waste petroleum products, and any other hazardous substance, must be transferred and handled without spillage.
- 36. All waste petroleum products and any other special waste, as defined in the <u>Special</u> <u>Waste Regulations</u>, generated in the course of carrying out the explorations program must be disposed of in accordance with the <u>Special Waste Regulations</u> when the program ceases.

Operating Plan - Page 6 of 10 LQ00464 DAN MAN PROPERTY **37.** The operator 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**

- **38.** 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.
- **39.** 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.
- **40.** 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.
- **41.** The location of any spills shall be clearly marked with stakes or flags.

#### **Use of Vehicles**

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

## **Timber and Brush**

- **43.** Cut brush must not be piled so that it blocks movement of wildlife or people.
- **44.** Leaning trees created by cutting of lines, corridors, temporary trails, and clearings must be felled.
- **45.** When it is economically viable to do so, timber suitable for sale must be salvaged and stock piled.
- **46.** All risk of fire hazard must be avoided.

#### Trenching

- **47.** Trenching carried out by hand or using hand-held tools must be methodical.
- **48.** All trenches must be stabilized and marked to minimize risk to the public.
- **49.** Non-active trenches shall be backfilled and/or sloped at one end.
- **50.** 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.

Operating Plan - Page 7 of 10 LQ00464 DAN MAN PROPERTY **51.** The operator must ensure that all employees and contractors working at the trench sites are aware of the operating conditions for trenching.

### Drilling

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

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

- 61. All vehicles must be operated to avoid rutting and gouging of roads and trails.
- **62.** 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.
- **63.** 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 and the former routes must be restored in compliance with the operating conditions for re-establishment of the vegetative mat and erosion control.
- **64.** 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.
- **65.** Routes for temporary trails must be reconnoitered and flagged.

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- **66.** 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.
- **67.** The operator shall install signs on new access roads at either end of the property (onclaims) with "Warning – Active Exploration Area".
- **68.** The operator shall ensure existing roads/trails/other access to Settlement Land parcels remains unaffected by project activities.

### **Release of Sediment**

**69.** 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.

## Wildlife

- **70.** The Proponent shall contact the Regional Biologist (867-993-6461) for information on the specific locations of active peregrine falcon and golden eagle nest sites. When safe to do so, the Proponent shall avoid flying within 1 km of identified active nesting sites. No exploration activities shall be conducted within 1 km of identified active nesting sites.
- 71. The Proponent shall contact the Regional Biologist (867-993-6461) weekly between Sept. 15<sup>th</sup> and Oct. 15<sup>th</sup> to obtain migration updates on the Fortymile Caribou Herd. If the Fortymile Caribou Herd is expected to migrate through the project area, the Regional Biologist will provide written guidance to the Proponent through the Chief, Mining Lands as to when exploration operations should cease for the season.
- **72.** The operator shall suspend exploration activities if large groups of caribou are within 1 km of active work areas. Caribou shall be given the right of way if encountered on roads and trails.

#### Security

**73.** Security may be required at any time by the Chief.

#### Reclamation

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

# PART FOUR - FINAL DECOMMISSIONING

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

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- 77. All waste petroleum products and any other special waste, as defined in the <u>Special</u> <u>Waste Regulations</u>, generated in the course of carrying out the exploration program must be disposed of in accordance with the <u>Special Waste Regulations</u> when the program ceases.
- **78.** 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.
- **79.** Structures must be removed and the site restored at the end of the exploration program to a level of utility comparable to its previous level of utility.

# PART FIVE – OTHER MATTERS

- **80.** 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.
- **81.** Notice of Schedule III must be provided to the Yukon Water Board ten (10) days prior to use of water.
- 82. Attached (Appendix C) are the commitments that form part of this operating plan.

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# Arcus Development Group Inc. LQ00464

# **OPERATIONAL GUIDELINES**

- The Proponent should follow applicable best management practices outlined in the publication; "Flying in Sheep Country". The document is available online at: <u>http://www.env.gov.yk.ca/publications-</u> maps/documents/flying\_in\_sheep\_country.pdf
- The Proponent should follow applicable best management practices outlined in the publication; "Best Management Practices for Works Affecting Water in Yukon". This document is available online at <a href="http://www.env.gov.yk.ca/publications-maps/brochures.php#water">http://www.env.gov.yk.ca/publications-maps/brochures.php#water</a>
- Mineral exploration activities should follow acknowledged Best Management Practices for Heritage Resources, two relevant examples are:
  - Yukon Placer Mining Best Management Practices for Heritage Resources <u>www.tc.gov.yk.ca/pdf/Placer\_Mining\_BMP.pdf</u>
  - Tr'ondëk Hwëch'in Best Practices for Heritage Resources <u>www.trondek.ca/downloads/THBestPractices.pdf</u>
- The Proponent should familiarize themselves with Yukon invasive species and how to manage them by referring to the Yukon Invasive Species Council (YISC) document "Why Should I Care about Invasive Species?"
- The Proponent should report the presence of any invasive plants that are listed on the Yukon Invasive Species Council website: <u>http://www.yukoninvasives.com/plants.html</u> to Government of Yukon by e-mail (invasives@gov.yk.ca).
- The Proponent is encouraged to contact the trappers using the Registered Trapping Concessions that overlap with the Project to minimize land-use conflicts and to identify areas where there may be traps, snares and other trapping equipment in order to avoid any infrastructure during the Project. Contact YG Department of Environment at 867-667-5600 to acquire trapper contact information.

Operational Guideline - Page 1 of 1 LQ00464 DAN MAN PROPERTY



# MINING LAND USE

**EXPLORATION and RELATED ACTIVITIES REPORT** 

# April 28, 2017

LQ00464 Class III 115-J-14 NE

ELEMENT	CRITERIA	TERMS AND CONDITIONS	
Establisment of trails per program		10km x 4m	
Establishing new access roads per program		10km x 4m	
Lines		1m x 30000m	
Nb of clearings per claim, including existing clearings		25	
Surface area of each clearing		100m2	
Nb of persons in a camp at any one time		30	
Nb of person days per camp		3000/year	
Fuel Storage in a stationary container		20000L diesel, 2000L gasoline, 2000lb propane, 5000L jet fuel	

# Arcus Development Group Inc. LQ00464

# <u>Appendix C</u> <u>Proponent Commitments</u>

- The proponent has proposed following the publication Guidelines for Industrial Activity in Bear Country in respect to burning of waste. Generated garbage will be stored in animal-proof containers prior to incineration. Electric fences will be installed around the incinerator and grey water sumps. As part of the permitting process a further attractant management plan will be developed and adhered to. Air horns and bear spray will be available on site. Conflicts that result in an attack, bite, or animal death will be reported to conservation officers.
- The proponent has proposed ongoing trench reclamation.
- If caribou are encountered, the proponent proposes to follow the guidelines outlined in the publication *Flying in Caribou country: How to minimize disturbance from aircraft*.
- The proponent is proposing to contact Tr'ondëk Hwëch'in, the Chief of Mining Land Use, and the archeology branch of the Government of Yukon upon discovery of a heritage resource. The proponent also proposed a 30 m buffer around any site with known or accidently discovered heritage resources in which work will not take place.
- The project proposes fuel storage no closer than 50 m from any watercourse or waterbody. Fuel will be stored in heavy walled 205 litre drums. Where more than 10 drums are stored at one site, drums will be stored in bermed and lined area.
- In the event of a leak, spill or spillage, empty drums will be kept on site with enough capacity to hold 10 percent of the stored fuel in the event of leaks from individual storage drums. Absorbent cloth will be used during refueling activities to catch minor spillage prior to soil infiltration and 20 kg of nitrogen based fertilizer will be used to used to help attenuate the effects of any spill.
- A fuel spill mitigation plan is also proposed and attached to the MLU application submitted as part of this project's proposal.

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# **Claim Status Report**

01 March 2017

Claim Name and Nbr.	Grant No.	Expiry Date Registered Owner	% Owned	NTS #'s	Grouping	Permit
DM 1 - 6	YC83307 - YC83312	2026/04/29 Archer, Cathro & Associates (1981) Limited	100.00	115J14	HW07110	
DM 21 - 114	YC83327 - YC83420	2026/04/29 Archer, Cathro & Associates (1981) Limited	100.00	115J14	HW07110	
DM 115 - 124	YD10495 - YD10504	2023/04/29 Archer, Cathro & Associates (1981) Limited	100.00	115J14	HW07110	
DM 125 - 427	YD60615 - YD60917	2023/04/29 Archer, Cathro & Associates (1981) Limited	100.00	115J14	HW07110	

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

CLAIM DISTRICT: 1000004 CLAIM STATUS: ACTIVE & PENDING OWNER(S): ARCHER, CATHRO & ASSOCIATES (1981) LIMITED, ARCUS DEVELOPMENT GROUP 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)

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Total claims selected : 413

D - Indicates Placer Discovery

C - Indicates Placer Codiscovery

B - Indicates Placer Fraction