

Environmental Assessment Approval

Approval Date: September 6, 2002

White Rock Quartz Mine

Black Bull Resources Inc., Proponent

Flintstone Rock, Yarmouth County, Nova Scotia

The White Rock Quartz Mine (the “Undertaking”), proposed by Black Bull Resources Inc. (the “Proponent”), Yarmouth County is approved pursuant to Section 13(1)(b) of the *Environmental Assessment Regulations*. This Approval is subject to the following conditions and obtaining all other necessary approvals, permits or authorizations required by municipal, provincial and federal acts, regulations, by-laws, guidelines, policies or standards before commencing work on the Undertaking. It is the responsibility of the Proponent to ensure that all such approvals, permits or authorizations are obtained before commencing work on the Undertaking.

This environmental assessment approval is based upon the review of the conceptual design, environmental baseline information, impact predictions, and mitigation presented in the Registration Document.

Terms and Conditions for Environmental Assessment Approval

1.0 General Approval

- 1.1 The Environmental Assessment Approval for the project is limited to the project as described in the registration document. Any proposal by the Proponent for expansion, modification or relocation of any aspect of the project from that proposed in the registration document must be submitted to the Environmental Assessment Branch for review and may require an environmental assessment.
- 1.2 The Proponent shall implement all mitigation and commitments in the Registration Document, unless approved otherwise by the NSDEL or as indicated in the attached

terms and conditions.

- 1.3 Unless granted a written extension by the Minister, this approval shall expire within two years of the date of its issuance unless the Proponent commences work on the Undertaking by the end of the two year period.
- 1.4
 - a) The Proponent shall not transfer, sell, lease, assign or otherwise dispose of this approval without the written consent of the Minister.
 - b) The sale of a controlling interest of a business or a transfer of an approval from a parent company to a subsidiary or an affiliate is deemed to be a transfer requiring consent under 1.4(a) of these Terms and Conditions.

2.0 Wilderness Areas

- 2.1 The Proponent shall hire a qualified expert consultant(s) acceptable to the NSDEL to develop and submit prior to commencing work on the Undertaking, an Environmental Effects Monitoring (EEM) program to monitor and evaluate impacts to the Tobeatic Wilderness Area resulting from the mine. This program must be reviewed and approved by the NSDEL. Based on the results of EEM and/or other monitoring programs, the Proponent shall make necessary modifications to mitigation plans and/or mine operations to prevent continued unacceptable environmental effects to the satisfaction of NSDEL. Any proposed changes shall be submitted to the NSDEL and other appropriate departments for review and approval.

Prior to commencing any mine development work, the Proponent shall post a bond in the amount of \$85,000. This bond shall be used to acquire lands in compensation in the event that the Undertaking is deemed by the Minister to have caused an unacceptable environmental effect within the Tobeatic Wilderness Area and the Proponent has not provided NSDEL with adequate additional lands in compensation. The Minister, after obtaining appropriate advice, shall be the sole judge of whether or not the Undertaking has caused an unacceptable environmental effect and whether or not any proposed additional lands are adequate. Should the Minister consider that the Undertaking has caused an unacceptable impact and that the Proponent has not provided adequate lands in compensation, the full amount of the bond will be used by NSDEL to acquire additional lands in compensation for that impact.

3.0 Operation

- 3.1 No hazardous materials are to be stored on the site other than fuels and lubricants, unless otherwise approved by the NSDEL.
- 3.2 The Proponent shall operate the mine within the NSDEL requirements.
- 3.3 Plans for any proposed expansion, extension or modification shall be submitted to the Environmental Assessment Branch for review and may require an environmental assessment.
- 3.4 The Proponent shall conduct periodic testing and reporting to confirm low levels of sulphide and uranium mineralization. Testing and reporting shall meet NSDNR requirements.
- 3.5 The Proponent, as part of the application for Part V Approval(s), shall provide for review and approval:
 - a) details of stockpiling at the proposed mine site and port load-out facilities, including, as a minimum, stockpile locations, stockpile volumes, length of duration of any stockpiling activity on site, and erosion protection measures
 - b) details of any plans by the Company to direct load at any of the port load-out facilities
 - c) plans for shutdowns
 - d) details and inventories of any chemicals including, but not limited to, reagents and flocculents to be used
 - e) details of a kaolin management plan.
- 3.6 The Proponent shall at least annually review sight lines and where necessary reduce visibility of mine infrastructure.
- 3.7 The Proponent shall develop a “stewardship protocol” designed to minimize any potential impacts of the mine operations. This protocol shall build on the Proponent’s commitment to work closely with the NSDEL, NSDNR and other government and public/private interest groups such as the Tobeatic Wilderness Committee.

4.0 Surface Water Resources

- 4.1 All discharges from the site must meet the NSDEL requirements.
- 4.2 The Proponent, as part of the application for Part V Approval(s) under the

Environment Act, shall provide for review and approval:

- a) details of a surface water collection system capable of diverting all wastewater and runoff discharge, including extreme precipitation events, to the sedimentation pond system
 - b) details of water treatment and a sedimentation pond system for all surface and pit water generated from the site, its stockpiles, roads and all other surfaces. The capacity of sedimentation ponds must be approved by NSDEL.
 - c) an Erosion and Sediment Control Plan which covers, at a minimum, surface infrastructure, mine development and operation, stockpiles, and areas used at port load-out facilities
 - d) details regarding the maintenance of sedimentation ponds and drainage provisions at all times, until these structures have been reclaimed
 - e) details regarding a program to monitor water quality and quantity, including, but not limited to, liquid effluent, surface water, and acid generation potential, that is capable of providing data for any necessary adjustments to mitigation measures, mine design and/or operation. All monitoring details including, but not limited to, sampling protocols, locations of all monitoring stations, parameters sampled for, the frequency of sampling, and format of reporting, must be approved by the NSDEL. The monitoring program must include stations on the Clyde River that meet NSDEL requirements.
- 4.3 If results of surface water monitoring show significant change from baseline conditions, the Proponent shall make necessary modifications to surface water control plans, mitigation measures and/or mine operations to the satisfaction of the NSDEL. Any such changes must be reported to and approved by the NSDEL and other appropriate departments.

5.0 Groundwater Resources

- 5.1 The Proponent, as part of the application for Part V Approval(s) under the *Environment Act*, shall provide for review and approval details of a groundwater monitoring program, including monitoring station locations, sampling parameters, and sampling frequency, as required by the NSDEL. The monitoring program must be capable of detecting any drawdown effects including, but not limited to, those on wetlands and the baseflow of the Clyde River.
- 5.2 If results of groundwater monitoring show significant change from baseline conditions, the Proponent shall make necessary modifications to pit dewatering procedures,

mitigation measures and/or mine operations to the satisfaction of the NSDEL. Any such changes must be reported to and approved by the NSDEL and other appropriate departments.

6.0 Aquatic and Wetland Resources

- 6.1 The Proponent, prior to commencing work on the Undertaking, shall submit details of an Environmental Effects Monitoring (EEM) program which detects changes in watercourses, including the Clyde River, and wetland environments. The program shall include, but is not limited to, monitoring of aquatic invertebrate and fish populations, and fish habitat. Details of the program must be reviewed and approved by the NSDEL and appropriate regulatory agencies. Details of this program, including monitoring location, frequency, sampling protocols, and reporting, must be approved by the NSDEL. The EEM program shall be coordinated with surface water and groundwater monitoring programs. Based on the results of EEM and other monitoring programs, the Proponent shall make necessary modifications to mitigation plans and/or mine operation to the satisfaction of NSDEL. Any such changes shall be reported to and approved by NSDEL and other appropriate departments.
- 6.2 The Proponent shall maintain a minimum 30 metre buffer zone with no operational activity along all watercourses and wetlands within the zone, unless otherwise required by the NSDEL.
- 6.3 The Proponent shall post signage prohibiting access to wetlands at the request of appropriate regulatory departments.

7.0 Terrestrial Resources

- 7.1 The Proponent shall consult with the NSDNR (Wildlife Division) respecting species at risk and moose.
- 7.2 Prior to mine development, the Proponent shall consult with the NSDNR (Wildlife Division) on the use of berms and fencing around the pit to exclude wildlife.
- 7.3 Activities such as those proposed by the Land Management Plan are subject to discussion with and approval by the NSDNR.
- 7.4 The Proponent shall use only native species seed mixes for all revegetation work

throughout the area of and life of the Undertaking.

8.0 Public Consultation

- 8.1 The Proponent shall form a Community Liaison Committee (CLC) in consultation with the NSDEL and with county and community leaders. The NSDEL *Guidelines for the Formation of a Community Liaison Committee* (see attached) shall be used for the guidance of the Proponent and community.
- 8.2 The Terms of Reference shall describe the CLC's degree of participation in, but not necessarily limited to, the following:
- f) trucking routes and schedules
 - b) noise and dust control measures,
 - c) blasting plans,
 - d) reclamation plans and
 - e) review of environmental monitoring and testing data and associated environmental reports submitted to the appropriate government departments and agencies.
- 8.3 The Proponent shall implement a Dispute Arbitration Process and Policy to address all concerns that arise during the operation and reclamation of this undertaking.

9.0 Noise and Dust

- 9.1 All mine equipment is to be operated with standard noise suppression exhaust systems and kept in good repair.
- 9.2 Petroleum products shall not be used as a dust suppressant.
- 9.3 As part of application for Part V Approval(s) under the *Environment Act*, the Proponent shall submit to NSDEL for review and approval detailed plans for monitoring air particulates (at the mine, processing plant, and ports) and noise.

10.0 Transportation

- 10.1 The Proponent shall conduct a Traffic Impact Study that meets the requirements of the

Nova Scotia Department of Transportation and Public Works. Based on study results, the Proponent shall propose and submit for review and approval plans for appropriate mitigation to NSTPW.

- 10.2 The Proponent shall address transportation related concerns by ensuring that:
- a) all trucks leaving the mine site will be fitted with tarpaulins to cover loads
 - b) dust on mine site roads will be stabilized using water or other means as required by the NSDEL
 - c) site staff will ensure that trucks are clean and inspected before leaving the mine site
 - d) ongoing vehicle inspections shall be undertaken to ensure that all contracted haulers have properly functioning engine noise muffling devices and other operating equipment
 - e) trucking contracts stipulate adherence to speed limits, vehicle maintenance requirements and periodic inspections.

11.0 Blasting

- 11.1 The Proponent shall develop a blasting schedule in consultation with the NSDEL and the CLC.
- 11.2 The Proponent shall undertake pre-blast visual assessments for moose.
- 11.3 The Proponent shall conduct blasting in accordance with any terms and conditions applied to the Undertaking as part of Part V Approval(s).

12.0 Archaeological and Cultural Resources

- 12.1 The Proponent shall maintain a 30-metre buffer zone around Aggies Rock and Porcupine Rock.
- 12.2 The Proponent shall ensure a training program is delivered to equipment operators to help them identify potential artifacts.
- 12.3 The Proponent shall cease work and notify the Director, Heritage Division, Nova Scotia Department of Tourism and Culture and the Executive Director, Confederacy of Mainland Mi'kmaq immediately upon discovery of an archaeological site or artifact

unearthed during construction or operation.

13.0 Reclamation

- 13.1 The Proponent shall ensure the preparation of a preliminary reclamation plan for approval by the NSDEL and the appropriate regulatory departments or agencies prior to the commencement of mineral extraction.
- 13.2 Mining operations must be completed and reclaimed to the satisfaction of the NSDEL and the appropriate regulatory departments.

14.0 Contingency Plan

- 14.1 As part of the application for the Part V Approval(s) under the *Environment Act*, the Proponent shall provide an Environmental Protection Plan, which must include a contingency plan that addresses accidental occurrences including, but not limited to, contingencies for surface water control structure failure, spills or fire, and procedures for responding to incidents occurring during times when the facility is not staffed (eg. evenings, weekends, holidays). A contingency plan for groundwater drawdown of the Clyde River must also be included.

Original Signed By:

David Morse
Minister of Environment and Labour

GUIDELINES FOR THE FORMATION OF A COMMUNITY LIAISON COMMITTEE

PREAMBLE

The following guidelines are presented to assist Proponents and community representatives in establishing a Community Liaison Committee. Conditions of Release under the *Environment Act* may necessitate further guidance by the Department.

The earlier the formation of the Committee, the more likely it will be that the Committee will be able to address in a timely and sensitive fashion the issues which may be raised by a particular project. Proponents are encouraged to establish, where warranted, a Community Liaison Committee as early as possible in the planning stages of the proposed undertaking.

PURPOSE AND STRUCTURE

A Community Liaison Committee is an advisory body to the project Proponent and provides input on matters regarding operations or approvals/permits that have or are perceived to have environmental impacts. Community representatives provide an avenue for the exchange of information on the project to interested individuals.

The Community Liaison Committee is intended to be an ongoing mechanism established with the following terms of reference:

- a) for consultation between the Proponent and the residents of the area on the final design and operational stages of an approved undertaking as stipulated in the Conditions of Release, which impact or are perceived to impact on the environment and the quality of life of the residents in the area;
- b) the establishment of a forum for ongoing dialogue between the facility operators and area representatives for consideration of any issues of public concern;
- c) a means for the facility operator to provide information to, consult with, and obtain advice from a body representative of the community; and
- d) a provision whereby the residents can bring any issues which occasion public concern to the attention of the facility operators.

A Committee may choose to establish additional terms of reference that address specific issues of interest to the community.

It is the Proponent's responsibility to hold an organizational meeting with any interested parties to determine the make-up and mandate of the Committee. Interested parties or representatives could be ascertained during the public consultation review process. The Committee should be kept to a manageable size, in most cases no greater than ten members.

Members of the Committee may be chosen from individuals or groups representing the geographic area which will be impacted by the project. However, if there are specific groups impacted by the project who do not reside within the immediate area, the Proponent, in consultation with the Community Liaison Committee, may decide to select additional members.

The Proponent is to be represented at all Committee meetings.

The Committee shall ensure that the views of the Committee are made available to the public in an appropriate manner. This could include the posting of minutes in a public place in the affected area or the provision of minutes to interested parties.

Where the Committee is established by Conditions of Release under the *Environment Act* notice of the formation of said Committee shall be made known to the residents of the affected area and include a list of Committee members.

The selection of a Chairperson shall be the responsibility of the Proponent. This may be achieved through an election by CLC members, the appointment of Co-chairs, the selection of an impartial third party, or through another process chosen by the Proponent.

The mandate and membership of the Committee is to be reviewed on an annual basis.

The Committee shall establish a schedule of meetings.

PROCEDURES

The Proponent shall be responsible for the provision of meeting space, copying of minutes (copies to be sent to regulatory agencies) and, where applicable, an annual meeting and annual reporting.