

BACKGROUND INFORMATION

for the

INITIAL FEDERAL PUBLIC COMMENT PERIOD

on the

**Comprehensive Study pursuant to the
Canadian Environmental Assessment Act
of the**

**Harper Creek Mine Project
Near
Kamloops, British Columbia**

Proposed by:
Yellowhead Mining Inc.

Prepared by:
Canadian Environmental Assessment Agency

Canadian Environmental Assessment Registry Reference Number: 11-03-61898

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List of Abbreviations

the Act	<i>Canadian Environmental Assessment Act</i>
the Agency	Canadian Environmental Assessment Agency
DFO	Fisheries and Oceans Canada
EAO	British Columbia Environmental Assessment Office
EIS	Environmental Impact Statement
km	kilometre(s)
t/d	tonnes per day
YMI	Yellowhead Mining Incorporated

1.0 INTRODUCTION AND PURPOSE

The Canadian Environmental Assessment Agency (the Agency) has received and accepted a Project Description for the Harper Creek Mine Project (the Project) near Kamloops, British Columbia, proposed by Yellowhead Mining Inc. Yellowhead Mining Inc. proposes to construct and operate a copper, gold and silver mine. Based on a review of the project description, the Agency has determined that the Project is subject to the *Comprehensive Study List Regulations* and has a likely trigger under Section 5(d) of the *Canadian Environmental Assessment Act* (the Act). Fisheries and Oceans Canada is a potential Responsible Authority under the Act due to the likely requirement for an authorization under the *Fisheries Act* related to potential impacts on fish and fish habitat. Therefore, an environmental assessment of the Project is required.

The primary objective of the federal environmental assessment process is to minimize or avoid adverse environmental effects from a project before they occur and to incorporate environmental factors into decision making. The federal environmental assessment process aims to promote sustainable development and, thereby, achieve or maintain a healthy environment and economy. The environmental assessment process also promotes communication and cooperation among federal and provincial agencies and Aboriginal groups, and provides opportunities for timely and meaningful public participation.

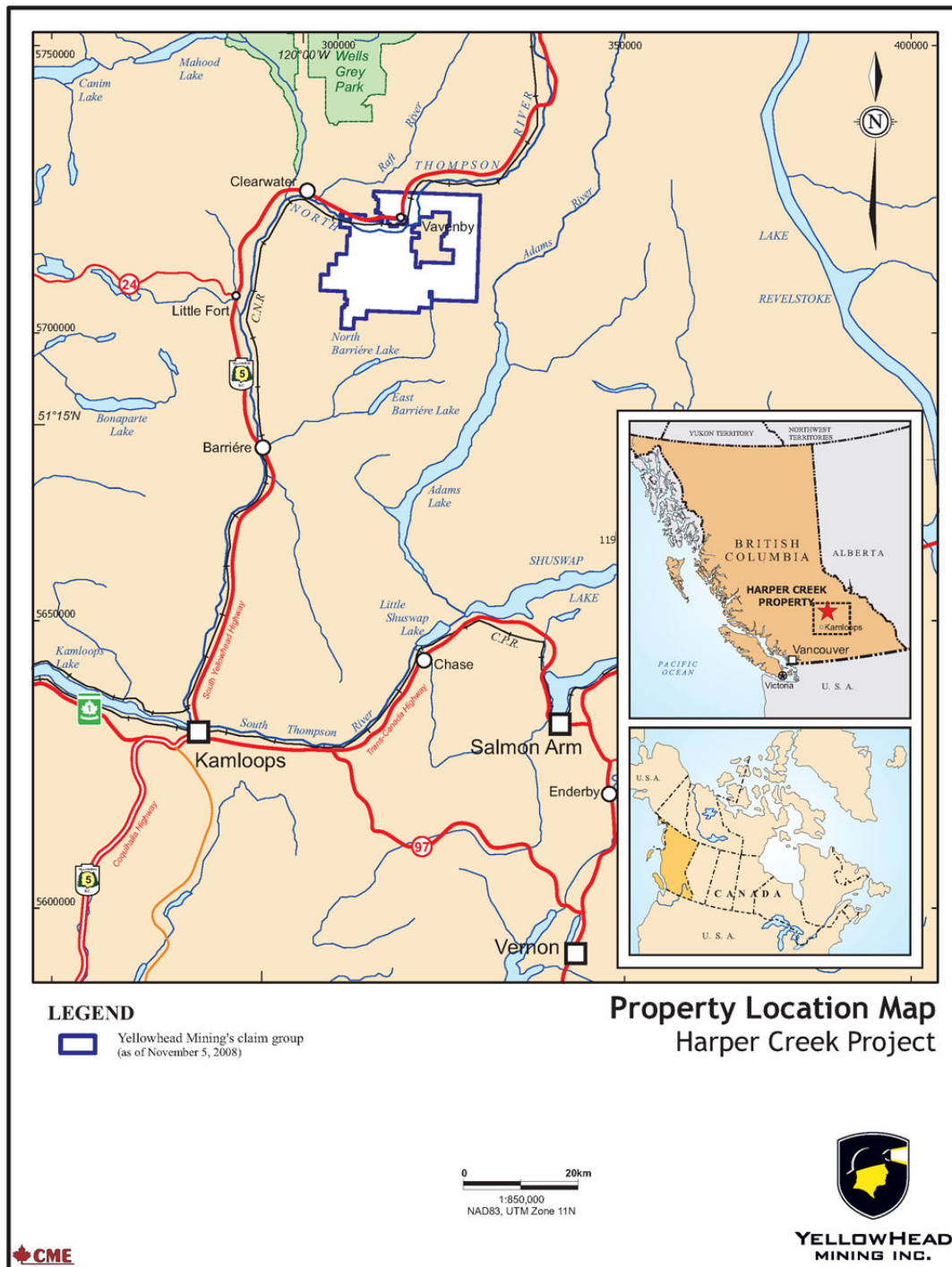
The Agency is required to provide the public with an opportunity to comment on the Project and the conduct of the comprehensive study. As the Agency is identifying the potential environmental effects of the Project that should be examined during the conduct of the comprehensive study, public comments help to shape this process from the beginning. The purpose of this document is to facilitate the first public comment period by providing information about the Project and the environmental assessment process that will be followed, and to solicit public comment.

A notice of this public comment opportunity has been posted on the Agency's website and comments will be received until May 30, 2011. Additional detail on this comment period is included in Section 7.1.

2.0 PROJECT SUMMARY

Yellowhead Mining Inc. is a mineral exploration and development company operating out of Vancouver. The Project is a proposed open pit copper and gold mine located 90 kilometres north-north-east of the City of Kamloops, near the townsites of Vavenby and Clearwater in British Columbia (see Figure 1).

Figure 1. Regional Setting for the Project (from YMI's Project Description – <http://www.yellowheadmining.com/s/ProjectMaps.asp>)



Average annual production of the mine is estimated at 260,000 tonnes of concentrate, yielding 155 million pounds of copper plus gold and silver based on a mill throughput of 70,000 tonnes of ore per day to the mill. The daily tonnage of both ore and waste rock will be 140,000 tonnes which translates to 420 million tonnes of ore and an equivalent amount of waste rock during the life of the mine.

Project components are expected to include the following:

- Open pit mine (18-24 years at 70,000 tonnes ore/day);
- Processing plant;
- Tailings storage facility;
- Water management facility;
- Waste rock storage area and management facilities;
- Road and potential bridge upgrades;
- Mine site facilities (camp, explosives storage facility, etc.);
- BC Hydro powerline upgrade from 100 Mile House to Clearwater where it joins the existing line along the North Thompson River;
- Power line to connect to the BC Hydro power grid at the Vavenby substation;
- Ore concentrate storage facility in Vavenby; and
- Rail siding loadout upgrade in Vavenby and rail transport to Port Metro Vancouver.

The open pit will measure roughly 2000 to 2500 metres across and 300 metres deep. The current plan is to store potentially acid generating waste rock in a tailings storage facility and non-acid generating waste rock in waste dumps adjacent to the pit perimeter. The tailings storage facility, designed as zero-discharge, will be located south of the mill and mine area over the headwater of a small tributary of Harper Creek.

The ore from the mine will be crushed and ground at an on-site mill. The concentrate will have low levels of arsenic, bismuth and mercury (i.e. 'clean') and will be transported by truck to a storage and loadout facility in Vavenby. There will be approximately 20 round trip truck-loads carrying approximately 40 tonnes of concentrate to the rail siding loadout each day. The loadout facility will consist of a concentrate storage shed and conveyor reclaim. The storage shed will be sufficient for storing three weeks' production.

The project will require fresh water for potable water, process start-up, reagent mixing, pump gland seals, fire protection systems, and other requirements at the mine site. An annual water balance of 489 m³/hr will be required, sourced from precipitation, runoff, and groundwater wells at the mine site or near Vavenby. If make-up water is needed from off site wells near the North Thompson River, then it would be conveyed 8km to the mine site via a 10 inch diameter insulated steel pipe, including staged pumping stations. .

3.0 REQUIREMENTS OF A FEDERAL ENVIRONMENTAL ASSESSMENT

3.1 The *Canadian Environmental Assessment Act*

Under section 5 of the *Act*, a federal environmental assessment may be required when, in respect of a project, a federal authority:

- is the proponent;
- makes or authorizes payment or any other form of financial assistance to the proponent;
- sells, leases, or otherwise disposes of lands; or
- issues a permit, license, or other form of approval pursuant to a statutory or regulatory provision referred to in the *Law List Regulations*.

Based on a review of the project description and discussion with federal authorities, the Agency has concluded that an environmental assessment under the *Act* is required because certain components of the Project are likely to require action under a regulatory provision listed on the *Law List Regulations*. Specifically:

- Fisheries and Oceans Canada may issue an authorization pursuant to subsection 35(2) of the Fisheries Act for the harmful alteration, disruption or destruction of fish habitat.

3.2 *Comprehensive Study List Regulations*

The Agency has determined that the Project, as described by the proponent, is subject to a comprehensive study pursuant to Section 16(c) of the *Comprehensive Study List Regulations* of the *Act*.

- The proposed construction, decommissioning, or abandonment of a metal mine, other than a gold mine, with an ore production capacity of 3,000 t/d or more.

3.3 Role of Federal Authorities

A “responsible authority” in relation to a project, is a federal authority that is required to ensure that an environmental assessment of the project is conducted as per the requirements of the *Act* and prior to taking a course of action decision. Therefore, Fisheries and Oceans Canada and the Agency are responsible authorities for the project. Natural Resources Canada, Transport Canada, Environment Canada and Health Canada will provide specialist or expert advice on specific aspects of the potential environmental effects of the proposed project.

The Agency performs the powers, duties, and functions of the responsible authority until it submits a comprehensive study report to the Minister of the Environment, acts as the Federal Environmental Assessment Coordinator, and performs the duties of the Crown Consultation Coordinator. The Agency must also exercise the powers and perform the duties and functions of a responsible authority under subsection 79(1) and 79(2) of the

Species at Risk Act (SARA). This includes identifying the adverse effects of the project on a listed wildlife species and its critical habitat.

In accordance with the *Cabinet Directive on Improving the Performance of the Regulatory System for Major Resource Projects*, the proposed Project has also been identified as a “major resource project” and will be subject to the Major Projects Management Office procedures (see www.mpmo-bggp.gc.ca).

3.4 Role of the Minister of the Environment

The Minister of the Environment makes a decision under section 23 of the *Act*. The federal Minister of the Environment’s decision will be based on an evaluation of the significance of adverse environmental effects as presented in the comprehensive study report and any public comments submitted on that report. The Minister may request additional information or require that public concerns be further investigated before issuing the environmental assessment decision statement.

4.0 JOINT CANADA –BRITISH COLUMBIA ENVIRONMENTAL ASSESSMENT PROCESS

The Project is also subject to the British Columbia *Environmental Assessment Act* which is administered by the BC Environmental Assessment Office (BC EAO). The environmental assessment will be conducted in accordance with the principles of the *Canada-British Columbia Agreement for Environmental Assessment Cooperation* (2004). Under this Agreement, both the Government of Canada and the Government of British Columbia conduct a single, cooperative assessment, where possible, to meet the environmental assessment requirements of both levels of government while allowing for independent decision making on matters within their own legislative authority.

Further details on the proposed project and the provincial environmental assessment requirements are available from the BC EAO website at: <http://www.eao.gov.bc.ca/>

5.0 OVERVIEW OF THE COMPREHENSIVE STUDY ENVIRONMENTAL ASSESSMENT PROCESS

The comprehensive study process begins when a proponent submits a project description that includes all necessary information about the project as accepted by the Agency. Within 90 calendar days following acceptance of the project description, the Agency must determine whether the project is likely to trigger a federal environmental assessment at the comprehensive study level, and, if so, post the Notice of Commencement. Thus begins the technical review and analysis of the project that will culminate in completion of the comprehensive study report within 365 calendar days.

The comprehensive study report summarizes the outcome of the comprehensive study and is made available for a 30 day public comment period by the Agency. The responsible authority will take any public comments into consideration and submit the report to the federal Minister of the Environment for a final decision on the environmental assessment.

The environmental assessment decision statement sets out the Minister's opinion as to whether the project is or is not likely to cause significant adverse environmental effects, taking into account the implementation of any mitigation measures and follow-up programs that the Minister considers appropriate. Once the Minister has issued the environmental assessment decision statement, the project will be referred back to the responsible authority (Fisheries and Oceans Canada) to take a course of action decision whether to permit the project to proceed (i.e. issue an authorization under the *Fisheries Act*).

6.0 FACTORS TO BE CONSIDERED IN THE COMPREHENSIVE STUDY

In a federal environmental assessment the term 'scope of assessment' refers to the boundaries of the environmental assessment study. It consists of the factors listed in section 16 of the Act, the scope of those factors, the scope of the project and the scope of potential environmental effects to be included in the environmental assessment.

6.1 Factors to be considered in a federal comprehensive study

The factors to be considered take into consideration the definitions of "environment", "environmental effect", and "project". For greater clarity, "environmental effect" means, in respect of a project,

- a) *any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the Species at Risk Act,*
- b) *any effect of any change referred to in paragraph (a) on*
 - i) *health and socio-economic conditions,*
 - ii) *physical and cultural heritage,*
 - iii) *the current use of lands and resources for traditional purposes by aboriginal persons, or*
 - iv) *any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or*
- c) *any change to the project that may be caused by the environment,*
whether any such change or effect occurs within or outside Canada.

The following factors must be considered in a comprehensive study:

- The purpose of the project;
- Alternative means of carrying out the project that are technically and economically feasible and the environmental effects of any such alternatives;
- The environmental effects (as defined above) of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;
- Measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project;
- The significance of the environmental effects;
- The need for, and the requirements of, any follow-up program in respect of the project;
- Comments from the public obtained in accordance with the *Act*;
- The capacity of renewable resources that are likely to be significantly affected by the project to meet the needs of the present and those of the future; and
- Any other matter relevant to the comprehensive study, such as the need for the project and alternatives to the project, that the Agency may require to be considered.

6.2 Scope of Potential Environmental Effects

The scope of potential environmental effects describes the aspects of the environment that will be considered in the environmental assessment – terrestrial, aquatic and human environment. After taking into consideration the proposed project and the factors described in section 6.1 above, the Agency is proposing the following be addressed in the comprehensive study review for the Project.

Table 1. Proposed Scope of Environmental Effects

Environment	Environmental Component
Terrestrial Environment	<ul style="list-style-type: none"> • Air quality • Climate and meteorology • Terrain, soils and geology • Natural hazards • Light and Noise Emissions • Vegetation and plant communities • Wetlands • Wildlife and wildlife habitat • Ecologically sensitive or significant areas, species of conservation concern, including species at risk and their habitats • Migratory birds and their habitats

Aquatic Environment	<ul style="list-style-type: none"> • Hydrology • Hydrogeology • Water quality • Fish and fish habitat • Ecologically sensitive or significant areas, species of conservation concern, including species at risk and their habitats
Human Environment (i.e. indirect effects resulting from a direct change in the environment)	<ul style="list-style-type: none"> • Current use of lands and resources for traditional purposes by Aboriginal persons • Navigable waters/ Navigation • Human health (e.g. noise, drinking water quality, country foods) • Physical and cultural heritage • Structures/sites of historical, archaeological, paleontological, or architectural significance • Light and Noise Emissions • Social and economic issues

6.3 Spatial and Temporal Boundaries

The spatial boundary of each environmental component will reflect the range of geographic areas and seasonal/annual fluctuations within which effects may be experienced, specific to each factor. These will be based on the zone of influence of the proposed project beyond which the effects of the project are expected to be undetectable.

The temporal boundaries will encompass the entire lifespan of the Project (approximately 18 to 24 years) until decommissioning.

6.4 Additional matters to be considered

As outlined in section 6.1 above, the factors and the proposed scope of those factors that must be considered in the environmental assessment also includes the following.

Need for and Purpose of the Project

The environmental assessment will include a description of the need for and purpose of the project. The “need for” the project is defined as the problem or opportunity that the proposed project is intending to solve or satisfy. The “purpose of” the project is defined as what is to be achieved by carrying out the project. The “need for” and “purpose of” the project will be established from the perspective of the Proponent.

Alternative Means of Carrying out the Project

The environmental assessment will include an analysis of the alternative means of carrying out the project that are technically and economically feasible, and the environmental effects of any such alternative means. A rationale for the preferred alternative will be included.

Potential Accidents and Malfunctions

The environmental assessment will include consideration of the potential accidents, malfunctions and unplanned events that could occur in any phase of the project, the likelihood and circumstances under which these events could occur, and the environmental effects that may result from such events, should contingency plans not be fully effective.

Cumulative Environmental Effects

The evaluation of potential cumulative environmental effects will focus on the interaction between the residual environmental effects of the project and the environmental effects of other past, present or reasonably foreseeable future projects or activities. The cumulative environmental effects assessment will include, but may not be limited to: existing industrial projects, other proposed developments, other land and resource use activities (forestry, hunting, trapping, fishing), tourism and recreation activities.

Effects of the Environment on the Project

Changes to the project that may arise as a result of the environment will also be considered. This analysis will include consideration of natural hazards such as: extreme weather events (lightning, extreme precipitation, flooding, wind, avalanches and icing); seismic events; fire; slope stability; and climate change. Proposed mitigation, including design strategies, will be considered in the evaluation of the effects of the environment on the project and the determination of their significance.

Comments from the Public

Comments from the public that have been received in accordance with the *Act* will be considered by the responsible authorities and the Minister of the Environment. A record of how comments have been considered and incorporated into the environmental assessment will be prepared.

Mitigation Measures

In the context of the *Act*, mitigation means elimination, reduction or control of adverse environmental effects. The environmental assessment will be used to identify mitigation measures that are technically and economically feasible and would mitigate identified adverse environmental effects arising from the proposed project.

Significance of Adverse Environmental Effects

The federal environmental assessment will include an evaluation of the nature and extent of the residual adverse environmental effects after applying mitigation and whether the residual adverse environmental effects are likely to be significant.

Follow-up Program

The purpose of a follow-up program is to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures. The environmental assessment will describe the follow-up program and its associated monitoring requirements.

Sustainability of Renewable Resources

The environmental assessment will include consideration of the capacity of renewable resources that are likely to be significantly affected by the project to meet the needs of the present and those of the future.

7.0 PUBLIC PARTICIPATION

The Agency will provide at least three opportunities for the public to participate in the federal comprehensive study process:

Public Comment Period #1: Public comments on the proposed Project and the conduct of the environmental assessment are considered by the Agency and other Responsible Authorities, in this case, DFO. The proponent will develop the Environmental Impact Statement (EIS) guidelines for the project, taking these comments into account, as required by the Agency and DFO. The EIS guidelines will guide the proponent's preparation of an EIS (Application). **[The current public comment period]**

Public Comment Period #2: The public is provided an opportunity to participate in the comprehensive study by reviewing, analyzing and commenting on the proponent's Environmental Impact Statement (EIS). This opportunity for public participation is facilitated through participant funding (see section 7 below). The Agency and DFO will then prepare a comprehensive study report that summarizes the analysis of the EIS and provides the outcome of the comprehensive study.

Public Comment Period #3: The comprehensive study report is made available for public comment. Following this final public comment period, the Agency submits the comprehensive study report to the Minister of the Environment along with a summary of how public comments have been considered.

Funding to support the participation of the public in the environmental assessment review process is made available through the Participant Funding Program. Notices of public participation opportunities will be posted on the Canadian Environmental Assessment Registry at <http://www.ceaa-acee.gc.ca>

As the project is also subject to environmental assessment under the BC *Environmental Assessment Act*, the Province may provide additional public comment opportunities. The public may find information about the provincial process at <http://www.eao.gov.bc.ca/>

7.1 Public comments at this time

At this time the Agency is seeking public comments on the Project and its potential effects on the environment to ensure that these issues are identified for consideration during the conduct of the environmental assessment.

Persons wishing to submit comments may do so in writing to the Canadian Environmental Assessment Agency. Comments must be received by close of business day **May 30, 2011**.

Comments should be sent to:

Harper Creek Mine Project
Canadian Environmental Assessment Agency
805-1550 Alberni Street
Vancouver BC V6G 1A5
Telephone: 604-666-2431
Fax: 604-666-3493
Email: HarperCreekMine@ceaa-acee.gc.ca

Please be as detailed as possible and clearly reference the Harper Creek Mine Project and the Canadian Environmental Assessment Registry file number 11-03-61898 in your submission. Please note that all comments received are considered public and will become part of the public registry. Comments received by the deadline will be considered in the environmental assessment process.

Public open houses will not be held as part of this initial federal public comment period.

7.2 Participant Funding

The Government of Canada, through the Agency, will provide financial support for public participation in the review of this project to successful applicants to assist groups and individuals in participating. This funding will be made available whether the environmental assessment proceeds by means of a comprehensive study, mediation or review panel. Information on the participant funding program, including the Participant Funding Program Guide and the application form are available at: www.ceaa-acee.gc.ca.

To receive funding, successful applicants must participate in the environmental assessment by reviewing and commenting on documents, preparing technical analyses, attending meetings or contributing by other means.

Notices regarding the availability of participant funding will be posted on the Canadian Environmental Assessment Registry internet site at www.ceaa.gc.ca under reference number 11-03-61898.

7.3 Canadian Environmental Assessment Registry

Pursuant to section 55 of the Act, the Canadian Environmental Assessment Registry has been established to provide notice of the environmental assessment and to facilitate public access to records related to the environmental assessment. The public registry consists of a project file and an internet site. The internet component of the Canadian Environmental Assessment Registry can be accessed at www.ceaa-acee.gc.ca under reference number 11-03-61898.

8.0 ABORIGINAL CONSULTATION

The federal Crown's duty to consult and, where appropriate, accommodate Aboriginal groups arises when it contemplates conduct that might adversely impact potential or established Aboriginal or treaty rights. Consultations that occur through the environmental assessment process will be used by the federal Crown to assist it in understanding Aboriginal groups' concerns and, as appropriate, in addressing those concerns.

The Agency is the federal Crown consultation coordinator for this environmental assessment and, as such, will work closely with federal authorities, the BC EAO, the proponent and potentially affected Aboriginal groups, to coordinate consultation activities as much as possible.

At this time, the Simpcw, the Adams Lake Band, Little Shuswap Band, Neskonlith Band, Tk'emlups te Secwepemc, Skeetchestn, Tsq'escen' (Canim Lake), and the Métis Nation BC have been contacted with respect to the federal environmental assessment of the Harper Creek Mine Project.

9.0 FURTHER INFORMATION

More information about the proponent and the proposed project may be found on Yellowhead Mining Incorporated's website:

<http://www.yellowheadmining.com/s/HarperCreekProject.asp>