



Environment
 Box 2703, Whitehorse, Yukon Y1A 2C6

YUKON WATER BOARD

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APPL. NO. Q201-051

December 29, 2004

VIA FACSIMILE

To: Judy St. Amand
 Mining Lands Office
 Energy Mines & Resources

Florian Vedress
 Transportation Engineering
 Highways & Public Works

From: Chuck Hubert
 Environmental Affairs
 Environment

Re: Mining Land Use Amendment LQ00026 & Highways Permit, Expatriate Resources

We have reviewed this Mining land Use amendment for mobilization along the existing winter trail subsequent underground exploration program and can provide the following information and recommendations. This correspondence will relate primarily to the terrestrial aspects of the project. Department of Environment recommendations for mitigation related to water quality and hydrology for the project will be presented in greater detail in our response to the Type B Water License application under separate cover (attached). These two pieces of correspondence from Environment should be considered in an integrated fashion during the screening of this underground exploration project though some recommendations may be more appropriate in one individual regulatory instrument than another.

Winter Access Trail

The primary issue from a wildlife and wildlife management perspective with respect to this underground exploration project is access. There are many examples throughout the territory where wildlife populations (moose and caribou primarily) have declined significantly following improved year-round access construction into previously inaccessible areas.

The Finlayson caribou herd has been of the subject of considerable management efforts by government and First Nations over the past 20 years. Areas of seasonal importance to this caribou herd are well documented and have been adequately referenced and addressed in this amendment application for winter access.

We support the use of the existing winter trail for the mobilization of equipment to the property as outlined in the current application. During discussions with Expatriate staff in 2001 we recommended this winter only access alternative during the exploration and pre-feasibility stage as it will result in no new access to the property at this time.

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Q201-051

The application notes that equipment will remain on site for the duration of 2005 and will only be demobilized from the property to the Campbell Highway along the same winter trail in 2006 should a production decision not be made. We recommend this be included as a condition in the permit and that an amendment be required should alternative surface access arrangements be proposed. Department of Environment requests a full review of any proposal to construct year-round access to this property as there could be potential long-term negative effects to the regions wildlife and the Finlayson caribou herd in particular.

The trail should be gated during the period of mobilization (and potential demobilization) to ensure only company personnel use the trail as described in the application. Creek crossings along the trail should be snow-filled only with no debris or soil placed into the creek channel. This should be added to Condition #54 in the draft Approval.

The cover letter on the application notes that a minimum of 0.30 m of packed snow base will be present along the trail corridor prior. Condition #51 in the draft Approval notes a minimum snow cover of 10 cm during the transportation phase. While meeting minimal regulatory requirements, this amount of snow cover may not adequately protect the vegetative mat from gouging and rutting throughout the length of the trail. As the proponent has committed to a 30-cm base of snow for travel along the trail to protect terrain values in their project proposal, we recommend that this be stated as the preferred snow depth requirement in Condition #51.

Wildlife

Our Department supports the mitigation measures to protect wildlife listed in Table 1 of Appendix D entitled "Wildlife Considerations". We note, however, that the proposed barge/ice trail link across Wolverine Lake is listed several times in the table. This access alternative was discussed a few years ago but does not appear in other current discussions of access to the property. These references should be removed as they do not constitute part of the project as currently proposed. Our understanding is that mobilization and demobilization of equipment for this advanced exploration project will be along the existing winter trail.

We recommend that a wildlife log be maintained at the camp to document wildlife sightings and incidents at the camp, portal site, winter access road and airstrip. These logs can provide valuable information to wildlife managers as well as to Expatriate during feasibility studies on species type, abundance and reactions (if any) to development activities. The wildlife logs would be most useful for big game animals (moose, caribou, sheep) and raptors (eagles, osprey, hawks).

Fixed wing and helicopter access to the property should avoid disturbance to wildlife where possible as is referenced in the draft Approval. We request that our office be contacted should the air activity within our recommended no-fly timeframe in condition #60 prove necessary.

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We support the Expatriate "no hunting or fishing policy" for company and contract personnel. Our Conservation Officers in both Ross River and Watson Lake have offered to conduct wildlife information and training sessions to Expatriate staff and contractors, particularly with respect to garbage management, bears and interactions and potential camp interactions.

Waste Rock Storage Area (WRS)

While it is acknowledged that the temporary WRS area is conceptual at this time, there is a lack of information on foundation conditions and whether or not a liner of some type will be required. What alternatives are there for some type of treatment for decanted or seepage water from the storage area that may not be compliant with applicable regulations (as laid out in the accompanying Water License)?

Conceptual plans for a short-term cover for the WRS area during a temporary care and maintenance situation should be considered. In addition, options for a potential permanent closure facility for the WRS area in the event that a production decision does not will require clearer definition.

Water Discharge Quality

A settling pond to settle out suspended solids from the wash plant at the aggregate development site is proposed and supported. What contingency plans are in place when water decanted from portal contain suspend solids and particulate matter above MMER criteria (or those regulated in the Water License)?

Water decanted from underground during exploration of the Wolverine deposit may not be of adequate quality for surface discharge. Water pumped from the face of the decline may have a significant concentration of suspended solids, particularly during mining in the less consolidated waste rock segments of the decline. A settling pond for effluent pumped from the portal during periods of dewatering is required in order to settle out suspended solids from underground discharge. This may be a requirement of the Water Licence and could possibly be a condition of the Mining Land Use Permit as well.

Portal Drainage

It is understood that all water related development activities including the portal, waste rock storage pad, quarry, settling ponds and related structures are intended to drain south into the Go Creek/Money Creek system. The portal and rock storage area, however, are located very near the headwaters of the Wolverine Lake system. What contingencies are in place to ensure that both surface and groundwater drainage resulting from development activities will not enter Wolverine Lake? Unanticipated examples include ice plug formation and release of contaminated effluent under pressure should underground workings be allowed to flood as well as possible terrain modification due to landslides above the portal/storage pad. A seep survey on the Wolverine side of the watershed divide is recommended to confirm that potentially contaminated underground water is not migrating from the decline through rock structures to the northwest.

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Security

This proposed Mining Land Use amendment has an expiry date of December 1, 2008. The ultimate fate of the potentially acid generating waste rock proposed for temporary placement at the storage facility will hinge on a production decision which may or may not be made before that expiry date.


Some form of security from the proponent is therefore necessary to ensure the temporary storage pad in particular, and project site in general, can achieve long-term stability and water quality objectives in a care and maintenance situation. The amount and form of this security needs to be given realistic and careful consideration.

Effects of the Advanced Exploration Project

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. We request notification should project parameters be modified beyond the present conceptual design including access alternatives & management, waste rock storage design and settling ponds.

If you have any questions please call me at 667-3696.

Regards,


Chuck Hubert
EA Analyst

Attachment

- c. Expatriate Resources Ltd.
Yukon Water Board
Nancy Moore, Mining Lands, Watson Lake

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QZ01-051