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GH MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES SEP 1 5 1995 REC'D MINE REVIEW AND PERMITTING BRANCH

George Headley Mine Review and Permitting Branch Ministry of Energy, Mines and Petroleum Resources 4th Floor, 1810 Blanshard Street Victoria, B.C.

Dear George;

## Re: Mt. Polley Tailings Storage Facility Sediment Pond

At the request of Imperial Metals Corporation, Ken Embree participated in a site inspection of the Mt. Polley Project September 12, 1995. Ken accompanied Mr. Henry Ewanchuk and Mr. Pierre Lebel for the helicopter flight in and met up with Mr. Bill Ruffo and Mr. Malcolm Swallow on the site. The site inspection included a fly over of the entire project area, with a closer look at the tailings embankment area and the mill site.

The mill site earthworks are underway and looked very good. The interior drainage ditches are complete and appear to be doing a good job as no standing water was observed. Topsoil stripping is well under way and the material is being stored in the berm area as per the design. The mill site sump has not yet been constructed. An equipment fleet including four scrapers is being used. The contractor, Pederson, is local hire from Williams Lake.

The section of the proposed Bootjack-Morehead Connector which was designed to function as a sediment pond for tailings area construction was inspected in detail. The pond location was surveyed by Imperial Metals Corporation personnel. The area is very swampy and pond excavation and embankment construction would be quite difficult because of soft, wet foundation conditions. Also, quite a large disturbance would be created because of logging requirements on the flanks of the swamp crossing.



After looking at the proposed road crossing/sediment pond, the area between the crossing and the main embankment and seepage collection pond was inspected. Here, two large swampy areas were identified. The first swamp (250 to 300 m downstream from the embankment) is near the perimeter of the proposed sediment pond and has water at surface with tall marsh grasses and has an old beaver dam with a pond that probably has a maximum depth of 1m. The entire swamp is approximately 1 ha in size, but the pond is much smaller. The second swamp falls within the sediment pond area (350 to 400m downstream from the embankment) and has water at surface with tall marsh grasses and is approximately 0.25 to 0.5 ha in size (see photos).

With a slight modification to the proposed road alignment we can protect these two areas of wetlands in their natural state. We would like to move the road alignment to the downstream edge of the seepage collection pond. By doing this, there will not be any need to inundate the wetland areas.

With regard to sediment control, in case of an extreme rainfall event these two swamps will function naturally as sediment control structures as the swamp basins are very flat. Also, the presence of the marsh grasses will certainly cause any runoff to slow down and deposit any sediment. In addition, there is already a small pond present at the first swamp and the old beaver dam appears to have the capacity to store an additional 0.75 m of water within the swamp basin.

In conclusion, it seems unnecessary to construct Bootjack-Morehead Connector / Sediment Pond as previously designed for the following reasons:

- Additional logging and ground disturbance in difficult areas will be avoided.
- Minimal stripping will be completed this year (the embankment footprint only) and a temporary sediment pond will be excavated in the area of the seepage collection pond to control any sedimentation as a result of this.
- The site will be well drained next year because of the work to be done at the embankment this year.
- The seepage collection pond will function as a sediment pond at the start of construction next year.



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• The embankment will function as a sediment berm as soon as the first fill is placed.

 Natural sediment control measures are already provided by the presence of two swamps which are in the vicinity of the designed sediment pond.

Two photos are included with this letter. Should the relocation of the Bootjack-Morehead Connector on to the downstream berm for the seepage collection pond be approved, the berm section will have to be widened by a few metres. A sketch showing the proposed road alignment change is also included. We will wait for the approval of the Ministry before authorizing the changes to Imperial Metals.

Yours very truly,

KNIGHT PIESOLD LTD.

Z Brown

K.J. Brouwer, P.Eng.

Director

kde

cc: Mr. Henry Ewanchuk (IMC)

Mr. Bob Hallam (HKP)



Two swamps located downstream of the Mt. Polley tailings embankment, in the vicinity of the proposed Sediment Control Pond. View looking west.



First swamp (250 to 300m downstream from the tailings embankment) from the ground. View of old beaver dam and standing water looking west.

