IZOK CORRIDOR PROJECT
PROJECT PROPOSAL

Volume 2: Appendices













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August 2012

VOLUME 2: APPENDICES

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Non-Technical Project Description

Mineral and Metals Group ("MMG") has prepared this Project Proposal to start the formal review process for the Izok Corridor Project (the "Project"). The Project is a proposed zinc mine with a road and port located in the Kitikmeot region of the Nunavut.The purpose of the Project is to mine zinc deposits located close to High Lake and Izok Lake and extract the zinc concentrate from the rock. Zinc concentrate looks like fine black sand and is sold in large quantities. The processing of the rocks will also produce some copper and minor amounts of lead concentrate. The concentrate will be shipped to smelters in Europe and Asia for further processing. Zinc is used mostly for construction and industrial use (e.g., galvanized metal products).

The Project is owned by MMG, an Australian Company with a Canadian office located in Vancouver, BC. MMG is a wholly owned subsidiary of Minmetals Resources Limited, which is one of the world's largest producers of zinc and a substantial producer of copper. MMG operates mines in Australia, Asia and Africa. MMG does not yet have operating mines in Canada, only exploration properties located in Nunavut, British Columbia and Ontario.

This Project is an important part of MMG's plan to continue to meet its current contracts and to grow its business as a major zinc producer. One of MMG's operating zinc mines will run out of ore in the next 4 to 5 years and MMG hopes to replace part of its production with zinc concentrate from the High Lake and Izok sites. A direct benefit of meeting global demands for zinc is the economic spin-off for Nunavut resulting from increased local and regional economic development opportunities, new jobs, and increased investment and/or new business operations that will be attracted to the Kitikmeot, Nunavut and Canada.

The Project is composed of four major parts:

1. Open pit and underground mines, as well as primary crushers at the Izok Mine and High Lake Mine
2. A processing plant at the Izok Mine that will process ore from both the Izok and High Lake deposits
3. A port, fuel storage facility anda concentrate storage facility at Grays Bay on the Coronation Gulf
4. A 347 km all-season road linking the High Lake Mine and Izok Mine to the port at Grays Bay

The Project will also include camps, storage areas, maintenance warehouses, fuel tanks, tailings (at Izok Mine only) and waste rock piles, airstrips, and local access roads. In addition, the construction phase will require commissioning of two temporary winter roads (Grays Bay-High Lake and Izok Lake-Lupin or Jericho), as well as temporary construction camps and quarries.

The Izok Mine will require drainage of Izok Lake to access the zinc-rich deposits that are located directly under the lake bed. This will require construction of a diversion dam to cutoff inflows from Iznogoudh Lake and a diversion channel to re-route water around the Izok Mine and into Itchen Lake. The diversion channel will be designed to provide fish passage between Itchen and Iznogoudh lakes. Waste rock and dry stacked tailings from the Izok and High Lake mines will be isolated from any water flows, covered and kept in a frozen condition to manage acid rock drainage and metal leaching. As the processing plant will be located at the Izok Mine, there will be no tailings at High Lake.

The High Lake and Izok mines and plant will operate for about 12 years. The Project will employ about 710 people during the operational phase, with 400 people on site at any one time because of the fly in/fly out rotational schedule. The average on-site work force during construction is expected to be about 670 people.

Concentrate, ore, fuel and supplies will be transported between the mines and the port along the 347 km all-season road ("Izok Road"). Trucks on the road will include covered transport trucks hauling concentrate, fuel transport trucks, transport trucks moving sea-containers and maintenance trucks. There will be no large mining trucks traveling on the road. Approximately 20 to 25 vehicles will travel on the road each day. Concentrate will be trucked from the processing plant at the Izok Mine to the port and on the way back south, the trucks will stop at the High Lake Mine to pick up ore and bring it to the processing plan at the Izok Mine. Concentrate will be delivered to the port year round; however, MMG is planning to reduce or stop traffic during caribou migration or calving periods. At the port concentrate will be stored in a large, enclosed shed.

Large bulk-carrier ships will come to the port and pick up loads of concentrate during the open water shipping season (approximately mid-July through October). The ships will follow existing shipping routes through the Northwest Passage to the east and west. Although shipping will only occur during the normal open-water season, ice-breaker assistance may be required to move or break ice floes that drift intothe path of ships. The Project will not involve breaking of land-fast ice.

At end of mine life, MMG intends to remove all facilities and undertake reclamation. Progressive reclamation will occur through the life of the Project. Final site reclamation will occur over two to three years, followed by post-closure monitoring over about seven years.

Alternative means of carrying out the Project are being evaluated to identify options that are technically and economically feasible, meet regulatory requirements, minimize environmental and social effects, and provide opportunities for economic and social development. Various components of the Project (e.g., tailings and rock containment, access road routing, port site design) are currently being analyzed for alternative assessment as part of the feasibility study. MMG is now looking at options for the road routing to determine if it could be located farther west to avoid being close to calving ground.

MMG has started engagement and consultation activities with Kitikmeot residents, leaders, government departments and Inuit organization. A series of meetings and site visits were held by previous owners between 2004 and 2007 in relation to the High Lake project, and again in 2007 and 2008 in relation to the Izok Lake Project. Between 2009 and 2011, MMG's community liaison officer in Kugluktuk continued with low-key activities, such as sponsorship programs, updates to the KIA, and facilitating short-term employment opportunities. As part of advancing the Izok Corridor Project, MMG initiated information sessions with government agencies and the Kitikmeot Inuit Association and began a new engagement program in April 2012 to inform communities and regulators about the Project. Future engagement will focus on gathering information and feedback from residents, developing mitigation measures and preparing management plans for the Project.

MMG is also continuing the traditional knowledge program first started in 2004 for the High Lake project, which involved compilation of previously documented traditional knowledge, collection of knowledge from elders and hunters and trappers, and site visits. MMG also plans to collect traditional knowledge for the region south of High Lake and for the shipping routes. Traditional knowledge will play an important role in scoping and informing the Environmental Impact Statement (EIS) for the Project.

The socio-economic baseline considers communities and regional assets (human, economic, physical, social and natural) that can be maintained or enhanced to achieve desired outcomes of the Project. The area of study encompasses the entire Kitikmeot region.

The biophysical baseline studies include many aspects of the environment including climate and air quality, noise on land and under water, fresh and marine water and fish, wildlife of which caribou is very important, habitat and vegetation, archaeology, groundwater, marine mammals and marine environments that could be directly or indirectly affected by the Project near Grays Bay and along the shipping routes. For most components, existing baseline studies include field programs conducted in 2004-2007 for the High Lake to Grays Bay part of the Project, and from 2007 and 2008 in relation to Izok and road south of High Lake. Additional baseline data collection is ongoing in 2012.

The Izok Corridor Project has the potential to affect the biophysical and human environment through activities and components associated with all phases of the Project life (construction, operations, closure and post closure).

Potential direct effects of the Project on the socio-economic environment are largely determined by measuring employment directly with MMG or with a MMG contractor, payment of royalties, taxes and other forms of compensation, and physical changes to the environment. Potential adverse socio-economic effects will be addressed through measures aimed at managing human resources, protecting public and workers safety, protecting cultural and heritage resources, and enhancing business development.

Some of the potential biophysical effects of the Project may include changes in air quality, surface water drainage and water quality, freshwater and marine aquatic organisms, fish and fish habitat, terrestrial (including caribou) and marine wildlife, and vegetation. MMG is trying to design the Project to reduce and mitigate these potential effects. In addition to MMG's Environmental Management System, an Environmental Protection Program will also be developed for the Project to support the implementation of adaptive management measures to address unanticipated adverse environmental effects of the Project.

While the majorityof potential Project effects are anticipated to be localized, there is the potential for some effects to be broader. Further, there is the potential for some Project effects to interact spatially and temporally with the effects of other project and activities in the region. The potential for transboundary and cumulative effects will be fully considered in the EIS, with particular consideration given to the potential effects of marine shipping on marine mammals, changes to water quality and quantity, and potential interactions with wide-ranging terrestrial wildlife such as caribou.

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ᐅᓴᕋᐸᑦ ᓴᖃᓕᕆᓚᓪᓕᐊ ("MMG") ᐊᑦᑭᒃᓯᐃᒪᐅᑦᕋᑦ ᐱᓕᕆᐊᖅᓭᒪᑦ ᑐᒃᓯᕋᐅᓯᐊᖅ ᐱᒋᐊᕈᒪᓴᓪᓗᒃ ᖃᑎᖅᑭᐃᓂᓕᖅᑕᒃ (Izok Corridor Project) ᐃᓴᓴᒃ ᑯᓚᑐ ᐱᓕᕆᐊᖅᑕᒃ ("ᐱᓕᕆᐊᖅ"). ᐱᓕᕆᐊᖅ ᑐᒃᓯᕋᖅᑕᐅᐅᕐᓴᖅ (zinc) ᓴᵅᒃ – ᖃᐅᓂᖅᑕᐅᐅᖅᓭᒪᑦ ᐅᓴᕋᒃᑕᕆᐊᖅ ᐊᑦᕋᑯᓂᖅᑐᓂᐊᖅ ᐊᒪᓗ ᐅᒥᐊᖅᓄᑦ ᑐᓪᓚᒃᑲᒃᑐᓂᐊᖅ ᖃᑎᖅᑭᐃᓂᓕᖅᑕᒃ. ᑐᒃᓯᕋᖅᑕᐅᐅᖅ ᐱᓕᕆᐊᖅ ᐅᓴᕋᒃᑕᕆᐊᖅᖃᓕᖅᓴᖅ ᓴᵅᒃᓄᑦ (High Lake) ᖃᔪᑎᒃᑐᖅ ᑕᓯᖅᑕᒥ ᐊᒪᓗ (Izok Lake) ᐃᓴᒃ ᑕᓯᐅᖅᑕᒥ ᓴᵅᒃ – ᖃᒃᖃᑐᒃ ᐊᖏᓯᓂᐊᖅᑕᒃ ᐅᓴᕋᖅᑕᒥ. ᓴᵅᒃ – ᖃᒃᖃᑐᖅ ᖃᕋᖅᓂᖅᑐᑦᓂᐊᖅ ᓯᐅᕋᐅᓵᖅ ᐊᒪᓗ ᓂᐅᐃᐊᖅᓯᒪᓂᐅᑐᓄᑦ ᐅᑎᓯᑦᓂᒥᑦ. ᐅᓴᕋᑦ ᐱᓕᕆᐊᖅ ᐃᓅᓪᓗᒥᓂᖅ (copper) ᑲᐳᑎᒃ – ᐊᐅᑕᓂᑐᖅ ᓴᐃᒃ – ᐱᑕᖃᖅᓂᓂᐊᖅᑐᓄᑦ ᐊᒪᓗ ᒥᑭᔪᓂᒃ ᓴᐃᒃᓄᓯᓯᒪᔪᓂᒃ (lead) ᑕᑦᓂᒃ – ᖃᒃᖅᓄᓂ ᓄᑲᑎᓴᐅᖅᑐᓂᒃ. ᑲᑎᖅᓯᓯᒪᔪᖅ ᐊᐅᑕᖅᑎᑕᐅᖃᖅᑕᑦᓂᓂᐊᖅᑐᖅ ᓴᐃᔨᐃᔪᑦᑕᓚᐃᖅᓗᑦ ᑕᓚᐅᐳ ᐊᑭᐊᓄᑦ ᐊᒪᓗ ᐃᓴᓗᑦ ᐱᓕᕆᐊᖅᓱᖏᓐᓄᐊᖅᑐᓕᖅᑐᓄᑦ. ᓴᵅᒃ ᐊᑐᖅᑕᐅᖅᑕᖅᑐᖅ ᐃᓗᓪᓕᔪᑦᑕᓚᐅᖅᑎᓄᑦ ᐊᒪᓗ ᐱᓕᕆᓚᓴᔪᐊᓂᑦ (ᐅᐅᑐᑎᑭᓗᒍ ᓴᐃᓕᕆᖏᖅᑕᖅᑐᑦ ᖃᑎᖅᑭᐃᓂᖅᑐᓄᑦ).

ᐱᓕᕆᐊᖅ ᓇᖏᒥᓂᓴᐅᔪᖅ MMGᑯᓄᑦ, ᑕᓚᐅᐳ ᐊᑭᐊᓂ ᐊᑲᑐᓕᕆᔨ – ᖃᐅᓂᖅᑕᐅᔪᒥᑦ ᑲᓪᕿᓂᐅᔪᖅ ᑲᓇᑦ. MMG ᑯᑦ ᓇᖏᒥᓂᓴᐅᔪᖅ (Minmetals Resources Limited) ᒥᓚᑐᑦᓴ ᓱᓕᔪᓕᔭᓂᒥᑦᓄᓄᑦ, ᐊᖏᕈᓐᓇᖅᑐᑕᐅᔪᖅ ᓄᓇᑦᕈᐅᖅᑎᐅᔪᓂᒃ ᐊᒪᓗ ᐊᖏᕐᓯᒥᑦᑕᐅᖅ ᑲᐳᑎᒃ – ᐊᐅᓚᑐᑦᓂᖅ ᓴᐃᒃ – ᐊᐅᓚᖅᑎᑕᐅᖃᖅᑕᖅᑐᖅ ᐊᒪᓗ ᐃᓴᓗᑦ ᐊᒪᓚᕆᐊᖅᑕᒃ ᐱᓕᕆᐊᖅᓱᖏᓐᓄᐊᖅᑐᓕᖅᑐᓄᑦ. ᓴᵅᒃ ᐊᑐᖅᑕᐅᖅᑕᖅᑐᖅ ᐃᓗᓪᓕᔪᑦᑕᓚᐅᖅᑎᓄᑦ ᐊᒪᓗ ᐱᓕᕆᓕᓴᔪᐊᓂᑦ (ᐅᓐᑎᑎᒋᓗᒍ ᓴᐃᓕᕆᖏᖅᑕᖅᑐᑦ ᖃᑎᖅᑭᐃᓂᖅᑐᓄᑦ).

ᐱᓕᕆᐊᖅ ᓇᖏᒥᓂᓴᐅᔪᖅ MMGᑯᓄᑦ, ᑕᓚᐅᐳ ᐊᑭᐊᓂ ᐊᑲᑐᓕᕆᔨ – ᖃᐅᓂᖅᑕᐅᔪᒥᑦ ᑲᓪᕿᓂᐅᔪᖅ ᑲᓇᑦ. MMG ᑯᑦ ᓇᖏᒥᓂᓴᐅᔪᖅ (Minmetals Resources Limited) ᒥᓚᑐᑦᓴ ᓱᓕᔪᓕᔭᓂᒥᑦᓄᓄᑦ, ᐊᖏᕈᓐᓇᖅᑐᑕᐅᔪᖅ ᓄᓇᑦᕈᐅᖅᑎᐅᔪᓂᒃ ᐊᒪᓗ ᐊᖏᕐᓯᒥᑦᑕᐅᖅ ᑲᐳᑎᒃ – ᐊᐅᓚᑐᑦᓂᖅ ᓴᐃᒃ – ᐊᐅᓚᖅᑎᑕᐅᖃᖅᑕᖅᑐᖅ ᐊᒪᓗ ᐃᓴᓗᑦ ᐊᒪᓚᕆᐊᖅᑕᒃ ᓴᐃᔨᐃᔪᑦᑕᓚᐃᖅᓗᑦ ᑕᓚᐅᐳ ᐊᑭᐊᓄᑦ ᐊᑲᑐᓕᕆᔨ

ᐅᓴᖅᑕᒪᐊᖏᑕ ᓯᓚᑦᔪᑦ ᐊᒪᓗ (Itchen Lake) ᐃᑦᓯᓄ ᑕᓯᖓᓗᐊᖅᓗᓂᓐᓂ. ᓴᖓᑎᑦᑎᓂᐊᕐᕆᖅᑐᖅ ᓴᓇᓴᐅᓂᐊᕐᕆᖅᑐᖅ ᐃᖅᑲᓗᐃᑦ ᐃᖏᕐᕋᔭᖏᓇᖅᑎᑦᓗᑎᑦ ᐃᑦᓯᓄᓪᓗ (iznogoudh Lake) ᐃᓕᓄᑲᑦ ᑕᓯᖏᑦᑎᐅᒍᑦ. ᐊᑐᕐᑕᕆᖅᑐᑦ ᐅᓴᕋᐃᑦ ᐊᒪᓗ <ᓂᕐᖅᑐᑦ ᑲᑎᕐᕆᔨᐃᑦ ᐃᓱᒃ ᐊᒪᓗ ᖃᐅᕎᑎᖅᑐᖅ ᑕᓯᖓᑕᒪᐊᓂᖏᓐᓄᖅᑐᑦ ᑯᐃᖏᑦᑕᐊᔪᓂᑦ ᐃᒪᖏᓪᓗᐊᔪᓂᑦ ᐃᒃᑐᐊ]ᓴᖏᑦᑐᑦ, ᓴᐅᓴᐅᓯᒪᓗᑎᒃ ᐊᒪᓗ ᖃᐅᔨᑎᑎᑕᐅᓯᒪᓗᑎᒃ 9ᖓᓴᖅᑲᓂᖃᐅ ᑭᓪᓕᖅᓄ0 ᐊᑦᓯᑦ – ᖃᖅᑐᑦᖅ ᐅᓴᕋᖅ ᐊᒪᓗ ᓴᐃᖏᓂᖓᓂᖏᓐᓄᖅᑐᑦᖅᑎᑦᑯᓐᔪᒃ.

ᓴᓇᓕᖅᑐᖅ ᑕᓯᖅ ᐊᒪᓗ ᐃᑦᓱᒃ ᐅᓴᕋᖅᑕᒪᐊᑦ ᐊᒪᓗ ᓴᐃᓪᓕᓐᓄᐃᒃ ᐊᐅᓯᖏᓐᓂᐊᕐᕆᖅᑐᑦ ᐅᑭᐅᓄᑦ 12ᓗᐊᖏᓐᓄᑦ. ᐱᓕᓐᓄᐊᖅ ᐱᓕᓐᓇᓴᖅᑎᖏᓐᓂᐊᕐᕆᖅᑐᖅ 710 ᓗᐊᖏᓐᓄᒃ ᐃᓄᖏᓐᓄᑦ ᐊᐅᓯᖏᓐᓂᖃᖅᑎᓂᓗᑎᑦ, 400 ᐅᓴᕋᖅᑕᒪᐊᑐᓗᑎᒃ ᐊᑕᐅᑎᒃᑯᑦ ᐱᓵᕐᓂᓗᐊ ᑎᖏᑎᓴᒃᑯᑦ ᑎᑭᕐᑕᖅᑕᓴᓐᓂᓗ ᐊᐅᓪᓚᕆ

ᐱᓕᕆᐊᖏᓪᓗᒍ. 2009ᓗ 2011ᓗ ᐊᑯᓂᖅᓱᓕᓂ, ᓕᓕ(ᑯᑦ ᓄᓇᓕᖅᑎᑦ ᐱᓕᕆᔨᖅᓱᒻᒥᑦ ᓴᑯᔪᓐᓇᖅᑎᑦ ᑲᔪᓯᖏᓕᕆᔨᒃᑲᓇᖅ ᐱᓕᕆᐊᓗᓴᐳᐊᖏᖅᓯᓂᖅ, ᓱᓴᓗ ᐱᖏᑎᑎᓂᐊᖅᑐᓄᓇᑦ ᓱᓕᕆᑎᑎᓂᕆᓗᒃᑐᓄᑦ, ᐃᓂᓄᓇᒥᖅᓱᒻᒥᖅᑐᑦ ᖃᐅᑎᖅᑎᕐᕆᓂ ᐃᓄᐃᓗᑦ ᑲᑎᓐᖅᑎᑎᑦᑐᓄᑦ, ᐊᒻᒪᓗ ᐱᙵᓴᖏᖅᑲᖅᑎᑎᓂᐊᖅᑐᓂᖅ ᐱᓕᕆᑎᑎᓕᕆᐊᒃᓕᓪᓚᖅᑐᓂᖅ. ᑲᔪᓯᑎᓂᐊᕆᔨ ᐃᓕᓕᓂᖅᓱᓄᓇᑦ (Izok Corridor) ᐃᓴᓵᒍᑦ ᐱᓕᕆᐊᖏᖅᑎᑦ, MMGᑯᑦ ᑐᐳᕆᒪᓴᐃᓂᖅᑎᑦ ᐱᒋᖏᖅᑎᑎᓕᕆᔨᒃᑲᑦ ᑲᙱᓕᓄᑦ ᑭᖑᓂᖅᑐᓂᖅᑐᓄᑦ ᐊᒻᒪᓗ ᖃᐅᑎᖅᑎᕐᕆᓂ ᐃᓄᐃᓗᑦ ᑲᑎᓐᖅᑎᑎᓕᕆᔨᒃᑲᓇᖅ ᐊᒻᒪᓗ ᓄᑎᒥᑦ ᐱᓕᕆᖏᖅᑎᑦ ᐃᓴᒪᓐᓇᖅᑐᒥᖅᑕᒪ. ᐅᓇᓱᖅᓯᒪᓕᖅᑐᑦ ᐱᓕᕆᖏᖅᑎᑦ ᐊᔪᕐᑎᑎᓴᒍ. ᓯᐅᓂᖅᓯᒪᓕᑦ ᐱᓕᕆᖏᖅᑎᑦ ᑕᐅᑐᓂᖅᑐᓄᑦ ᑐᐳᑕᓐᓂᕆᔨᒃᑲᓇᖅ ᐊᒻᒪᓗ ᑐᐳᕆᒪᓂᖅᑐᓄᑦ ᐃᓄᐃᓗᑦ ᑲᑎᓐᖅᑎᑎᓕᕆᔨᒃᑲᓇᖅ ᓄᓇᓕᖅᑎᑦ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᕐᕆᔨᒃᑲᓇᖅ ᐊᑐᓕᖅᑎᑦ ᐊᒻᒪᓗ ᓄᑎᒥᑦ ᐱᓕᕆᖏ

ᐊᑐᓕᖅᑎᑎᒋᓂᖅᓯᒪᔪᑦ ᐊᑐᖅᑕᐅᓕᕆᓂᖅᓯᒪᔪᑦ ᐊᐅᓪᓚᑎᒋᓂᖅᓯᒪᔪᑦ ᐅᖅᑲᐅᓴᖅᑯᓪᓗᑎᑦ ᖃᐅᐸᒪᕐᐅᑦᑐᑦ ᐊᐅᑐᖅᑕᐅᓕᕆᓂᖅᑐᑦ ᐱᓕᕆᔨᒃᑯᑦ ᐱᓕᕆᔨᒋᓗᒍ.

ᐊᒥᓱᒃᑲᓪᓚᐃᑦ ᐱᓕᕆᔨᖅᓯᒪᔪᑦ ᐊᒃᑐᖅᓂᖅᑲᑕᐅᔨᖅᓀᐃᐧᐃᓀᖅᑎᔨᖅᑲᖅᑎᑦᓗᑎᑦ ᑕᑯᓂᑦᑕᐃᓀᒥᑕᐅᔨᒪᔨᑦ, ᐊᒃᑐᑎᓂᖅᑲᖅᓂᕆᔨᓂᖅᓂᕆᔨᐃᓀᖅᓂᖅᓴᒪᑕ. ᐊᒪᓗᒃᖯᓂᖅᓂᖅ, ᐃᓕᖅᑎᑦ ᐱᓕᕆᔨᖅᓯᒪᔪᑦ ᐊᒃᑐᑎᓂᖅᑲᖅᓀᖅᑐᑦ ᐊᓯᖅᑎᓐᓂᓗᓄᑦ ᓄᓀᓄᑦ ᐊᒃᑐᑎᓂᕆᔨᓄᑦ ᐊᓯᖅᑎᓐᓄᑦ ᐱᓕᕆᔨᖅᓄᑦ ᐊᒪᓗ ᖃᓄᐃᓕᓕᕆᓂᖅᓂᕆᓴᖅᑎᓐᓄᑦ ᖃᑎᖅᖁᒥᑦ. ᑭᓱᓕᕆᔨᒪᔨᑦ ᐅᖃᓱᑕᐅᑎᓂᖅᑕᖃᖅᓂᖅᓂᖅ ᐊᒪᓗ ᐊᖅᑎᓕᕐᓕᐊᓂᖅ ᐊᒃᑐᖅᑕᐅᔨᕆᑕᐅᔨᖅᓀᖅᑐᖅᑐᖅ EISᒥᑦ, ᐃᓱᒪᑎᓴᐅᖅᑎᑕᐅᓗᓂ ᐊᒃᑐᑎᓂᖅᑲᖅᓂᕆᔨᖅᓀᖅᑐᑦ ᑕᓚᐅᖅᑲ ᐊᑐᖅᑕᐅᔨᓗᓂ ᐊᐅᓪᓚᖅᑎᓂᖅᑕᖅᑲᖅᓂᖅᑲ ᑕᓚᐅᖅᑲᖅᑕᖅᓂᖅᑲ, ᐊᓱᐊᖓᖅᓱᓂᒃᑯᑦ ᐃᒪᖅᑲᒃ ᐊᒪᓗ ᖃᓄᐃᓕᓕᕆᓂᖅᓯᒪᓂᒃ ᐊᒪᓗ ᖃᓄᐃᓕᐅᑎᓂᒃ, ᐊᒪᓗ ᑎᑭᐅᑎᖅᑕᑦᑐᐃᓀᓚᐊᖅᑲᖅᓂᖅᑲᒃ ᓄᓀᐅᔨᓄᖅᓂᖅᓂᒃ ᓴᐧᓗ ᑐᖅᑐᓂ.

Ilihimayaingitun naonaitkutin pikutit

Oyagahukyuitlo katakyuitlo pikatigiit (MMG) itkanaiyagiahimaliktain hapkoa havaan mighainut Izok-kut mighainun naonaikutainighain piligiaknikata Hamnali apkuhiuknighak Kitikmeot-kun mighani oyagalikiyut mighainilo Nunvutmi. Hafomali pikutigha imaitok, hamna oyakatlo iluini High Lake-lo Izok-lo ahigoktiktaolutik piniahuan tahamani. Hapkoali oyakan hiugaktun iligangamik taitai niovguyaovakmata Hapkoalo ila ilangin oyakan kanoyaktutlo alamiklo ilivaktun hanayaogangamik. Inigangataok taitai ahinun nuanut takupkaktitaovaktun ihivgiuktaolutik Asia-mutlo, Europe-mutlo, talvani kanoginiakmangaita taotuktaoniakut. Kakoktavalo oyagak atoktaovaktun iklun mighainun iklokpiagangamik (imatunlo, Havigaliknulo)

Hapkoali piktuin monagiyaoyun MMg-kunit, nunan takyum akianin, pikataigiiktut Kanatami iluini Vancouvermi. Hapkoa MMG-kun kihimi hapkoa oyakan mighaini inmiknik monagiyain, hapkoali nunai ila angiluaktun monakniitnit nunani, kanuyatlo mighani. MMG-kunlo havakpaktun hapkoa mighaini Autralliamilo, Asiamilo, Africamilo. MMG-kun kihimi Kanatami havaktiitut tasa, kihimi opalungaiyaiyunik Nunavutmilo, British Columbiamilo, Ontariomilo.

Hamnali pikuta ihuaktok MMG-kun mighainun, oplaungaiyaiyuntlo kanok piyaghamiknik taimunga, havaghatlo mighainun piplutik oktokpaktun. Ataohikli MMG-kun ikayukta hitamanikloniit talimanikloniit ukiuni inikniaktok piigumi havaghanik, imalo hapkoa inikata, taitai alanik oktugumayun huli, High Lakemilo, Izokmilo iluini. Hapkoatli pikutighat mighaini ihuagiyaoyun Nunavutmi atogutighain, nunakatigiiniklo pikatigilugin, pivalialikiyiitkulo humilikak ils, havaghatlo mighainu ikayutighainutlo oktugumayunun, aklivaligutaoniakmatalo, imaloniit, nutanik oktugumayunun piktuikaliogumik, imalo hapkoa Kitikmeonilo Kanatamilo ila ikayuluakniakmata atoktaokugomiklo.

Piligiakniiit hitamanik pikutikaktut:

1) Angmakhimayutlo, nunatlo atanitut pikutin, hapkoalo ahioktigutin oyagaknik Izok-kun haningani, High Lake-milo.
2) Piligiakningit Izok-mi itun, imalo havigaliknitlo pihimayun hiugak pilugit Izok-nitloHigh Lake-nitlo pihimayain.
3) Hapkoalo kasiliinilo, okhukyuatlo ikakvigiayain pikutit Grays Baymiitut, Kiilinguyan iluini.
4) Hamna 347hivitunia ukiuktaotimni apkutit pikatigiikhimain High Lake-lo, Izok-kutlo pikatigiikimayut Grays Bay ilanganun.

Hamnali imainiaktutlo, nunaviulutiklo, tamayakaviolutiklo, warhousikhatlo tamayakakvighamik, okhuyuakakvighatlo (, Izok-kuni kihimi,) hapkoalo ikakvighat apkutit naonaikutiovighat piligiagomik. Imalo, hapkoalo apkutighan kihimi malgoknik piomayun ukiukmi atogutighat, (Grays Baymilo, high lakemilo, Unalo Izok-kutlo, Lupinkutlo, imaloniit Jerichutkut), initoklighatlo humilikak pigiaklugitlo.

Izok-kut kihimi kuvilikunikun piyaktun Izok-min tahianin, hapkoa nalvagatik ila nakuatut piyainilo ataniitut imam. Apkutighainlo ila alanut havaktuniluinun piligomik, Izogoudh-nin tahianit, imanginutlo Izok-kut mighainun, uvungalo Itchen-kun tahiitnun. Hapkoatlo ilaa ikalukni ihuaktun ingilgavighain Itchen-kunlo, Iznogoudh-kutlo. Imalo ukuaot ila iniaktun, hamna imaklo hiugatlo piyatik tutkukhimaniatun Izok-kunlo High lakekutlo tahiinit, imalo ukiuni kikomaviginiakmagitlo, kuklukvighainlo ila ihuakutighainta. Hapkoat iniakmata Izok-kuni, taitai hamna pitakhimayun hiukan pilaitut High lakemi.

Hapkoalo monaginiit Izok-kunilo, High lakenilo ukiuni 12ni havagiyaoniaktun. Havaligiagomiklo 710-nikloniit inuknik havaktitiniaktun, angmaomagaikpata, imalo 400nik inuknik talvani havaktughanik pihimayun, imalo hapkoali ilani himiutikatikgiiklutik piniaktun piligiakata. Hamnalo naonaitkutaoyut inuin havakniaktun 670nikloniit ilani.

Hapkoalo oyakan hiuganloniit, tamayatlo ikataoniaktun tahafoma iluini 347nik akliyutani apkutin ukiuni atoknighain. (Izok-kun apkutaini) Hapkoalo akhalutit ukumaitunik akyakpakniaktun tamayaniklo, atoktaghaniklo akhalutinik, ukhuyuaniklo akyaotgihan, imaknilu atugutighat nunanilo akyaagutaoyughan ila. Hapkoali angatain akhalutit atolaitun kihimi ilangit 20niloniit, 25loniit atoktaoniaktun apkutini atogumigit. Hapkoalo piyatik akyakniakmiyain Izok-kunut, taitai talvanga aolaktitaokatakniakmata, High lakenit akyaklugit, imalo taitai pikataklogit tamayan tongavighainun Izok-kunut. Imalo hapkoa maliktatik piomayain, ukiugalok, kihimilo tuktun aolalikata ukuat MMG-kun nutkatinalaktain, nuganuitlo inulikata ila. Talvani nunaghain tamayan, ilihimayaoniaktun tutkutiaklogit atolimailakpata.

Imalo umiyan taitai aoyami pivakniakai ailugit toyutaoyughan humutlikak, hapkoali ila aolaktitaoyughat (aoyami Julaimiloniit, Oktobaminloniit) Hapkoalo umiyan aighiktuk nunani nutkakataklotik piniaktun kivatanitlo hivuanitlo. Imalo hapkoa umiyan hikokaktilogo ikayutaovakniaktun ilani, tamayan aolaktiniagomigit, apkutighaitlo umiyan ila pilakmata havakniiit angmaktinagin. Imalo hamna piligiaknighak imailaitok, nuna ahigoyaolaitok, hikulikiyuni.

Iniliknigumiklo, MMg-kun ima pilaktun, hapkoa atogutitk pilatain, nanminitiklo atokningin. Hapkoalo ila nanminiyuhiktik pilakmagin hapkoa havaktitik iluini. Iniknighain ihuaghakniit, malogoknikloniit pingahunikloniit ukiuni inilaktun, taimalo 7nik ukiuni kihimi initiaknighain itut.

Hapkoali ila naonaitkutin imaitun, pikutin taotutiaktaoyutlo ihuagiyaoyangini, imalo ihuakniita okamalotigilugit ihuakhakniit pivagait, kanoktutlikalo ila nakuaktunatogutighain taimunga atogumigit, imalo oktugumayun ihumayutiginiakmagitlo piligiaknigomik mighainun. Hapkoali pikutighan imaitun, (hiugatun ilihimayun, oyakatlo, apkutighanutlo ihumaliokhimayain) ihumagiyaoyutlo tasa apkutinun atoghakhat, ilihaoyutaplutiklo ila. MMg-kun kinikhiayun hapkoa apkutin mighainun atogutighait, imalo ila tuktun ivaligomik hanivalanut piomaginamiklo.

MMG-kun hapkoat katimayiin Kitikmeonilo, kavamanginilo, kitkutlo monaktiuyun mighaini katimaktigiliktain. Hapkononga mighainun. Hapkoalo inuit polaktitaohiamyun tahapkononga nunanut 2004mi-2007mon High lakekun mighainun, 2007min-2008mon taitai Izok-kun nunanun takoyuaktuktitaoplotik. Iluini 2009lo-2011lo, MMg-kun nunatak ikayuktiat Kukluktomi takoligiakhimayain hapkoa pikutighan, kanoklo ikayugomagomik tahapkoa mighainun, havatlonit mighainun, ilaoyumagomik. Imalo apkutigha ila haofoma Izok-kun mighainun, MMG-kun naonaiktiligiakhimayun kavamat iluini, Kitikmeot-kutlo iluini, Epu 2012mi okaotiplogin nunan hapkoa ihumagiyatik pikutighan. Imalo kakogolikak inuknit tohagomainaktun kanok hapkoa ihumagiyaovan, imalo ihumaliokhimayanginlo, oktugutigiomayangitlo, pikataklutiklo ihuagiyaoyun ihumayaoyun ila.

MMG-kun ila nanminigutitlo ihumagiplogin pivaktun, 2004mi High lake iluini, kanokloli iniknigin ihumavakpan hapkoninga taimanilo kanokli ihumakakan, polaktitaogamik, hapkoalo angohikiyiitkut nunanun tahamonga piligiagamik. MMG-kun ihumalioktunlo hapkoa atogutighan mighainun High lake-ilanganiimalo kanok aolavakniakningait aitutikagomik nunanun ahinun. Ila hapkoa ihumaliogutain iniknit ikayutiakniakmatalo taimunga atoknighainu, Okayuhighainu katimayita nunaliogutin (EIS) piligiaknighaknik.

Ihumanitiaknighain hapkoa ila imaitun, nunatli pikatigiikltuik pigumik ila, (inhuknitlo, piligiakninitlo, nakoyuhinitlo timimit, ihumaniitnitnitlo) imaloli ila atoknighain hapkoa ikayuyutaotiakniakmatalo. Nunali ihumagiyaotiaktok Kitikmeot-kun iluini.

Hapkoalo ila ihumagiyaotiaktun havaknighain nunani, ima hapkoa hogayat inmatalo , imaklo ihumagiplogolo, hilalo kanok inmangan oblok taman havakangamik, nuna ila nigivigikmagolo hugayat koyaginak humilikak, kihimi hapkoa havaviita iluini ihumaloknakmatalo, Grays Bay haningani nunatlo hanianitun ila, aolavikniitlo aolagangamik humon, 2004min-2007mon hapkoa ilihaoyutin piligiakhimayun High lakemi, imalo Grays Bay iluinun 2007min-2008mon, Izok-kun haningani uatani high lakekun. Hapkoalo pikataknighan huli 2012mon pivagain.

Hanma Izok-kun apkuta piligutain imainiaktun ihumaloknaktun itkaomagiyaovakniaktutlo piligiakniit piligumik, (hanavilikniitlo, piligiakniitlo, taimalikniitlo).

Hapkoalo ima monakniit atoktaoniaktun havaktughaniklo inuknik pivakniit mighainun, monaginiagain MMG-kun, imaloniit MMG-kun akiliktokighain mighainun akiliuyuhiitlo naonaikutain pikutighamiknut atokningin, nunalikiyiyin mighainutlo. Hapkoalo pikutighan naonaitkutighain havaktun togaktitaovakniakun, ihuaktumik ihumaloknaitumiklo ila havaktunut, ihumagilugin ila hilamiutat humilikaklo, taima nakuatut havakniit ihuakmata.

Imalo hapkoa piligiakniit mighainu ilani alangoktitaklogin pivakniaktun, naonakman hilakpun, imaklo aolania, ikaluitlo ila imakmi, (tuktutlo) Hogayatlo nunani nikingin ihumagiyaoyun pinigomik ihumaloknakmatalo. MMG-kunli ila ihumalioktuno kanok ihuaktunik atoktaghanik pivaktun, ihumaluknakhigiakan. Ilanginut hapkoa MMG-kun iluini, ilihaoyutighatlo itkaomagiyaoyun ila, naonaitkutitlo naonaiktitkataklogin kitkunut tohayunun, ayinit ililimainamigit kihimi inmiknit ila, taima ihualuakman atogutighain.

Hapkoalo naonaiktutighan piligaomik ihuakluakmatalo atoktaogumik ila, nunani ilihimayaotiagomiklo, imalo aklivalikniakmata taimunga. Imalo; hapkoali pikutighan mighaini amigainmata piomaniitlo, ilikuhigutighatlo nunai ila humilikak. Imalo hapkoa ihumagiyaoniaktun ikayutaoniakmatalo ila, EIS-kun mighainin, imalo kanok aolaniit ila itkaomagiyaotloakmata, kanoklo piligiaknighain mighainun atokniita, ihumagiplogin lo tuktun kihimi nunani, hogayatlo ila.

APPENDIX B
NIRB FORMS

B1 NIRB Part 1 Form – English, Inuktitut, Inuinnaqtun

B2 Project –Environment Interaction Matrices

B3 NIRB Part 2 Form

B1 NIRB Part 1 Form – English, Inuktitut, Inuinnaqtun

PART 1 FORM
PROJECT PROPOSAL INFORMATION REQUIREMENTS

To access NIRB documents, project screenings, and project reviews please visit the Nunavut Impact Review Board's ftp site http://ftp.nirb.ca/. The NIRB's website (www.nirb.ca) is currently under construction. Please contact info@nirb.ca should you have any questions or require further information.

IMPORTANT!
Please be advised that your application will not be processed until the Sections 1 - 9 are completed in their entirety, in both English and Inuktitut (+ Inuinnaqtun, if in the Kitikmeot).

SECTION 1: APPLICANT INFORMATION

1. Project Name **Izok Corridor Project**

2. Applicant's full name and mailing address:

MMG Minerals and Metals Group	Phone:	778-373-5600
Level 26, 1177 West Hastings Street	Fax:	778-373-5598
Vancouver, BC V6E 2K3 Canada	Email:	Scott.Trusler@mmg.com

3. Primary contact's full name and mailing address:

Scott Trusler– Environmental Permitting Lead	Phone:	778-373-5586
Level 26, 1177 West Hastings Street	Fax:	778-373-5598
Vancouver, BC V6E 2K3 Canada	Email:	Scott.Trusler@mmg.com

SECTION 2: AUTHORIZATION NEEDED

1. Indicate <u>all</u> authorizations associated with the project proposal:

X	Regional Inuit Association (RIA)		Canadian Launch Safety (CLS)
X	Nunavut Water Board (NWB)	X	Environment Canada (EC)
X	Nunavut Planning Commission (NPC)	X	Government of Nunavut (GN)
X	Indian and Northern Affairs Canada (INAC)		Department of National Defense (DND)
X	Department of Fisheries and Oceans (DFO)		Hamlet
	Community Government & Services (CG&S)		Parks Canada (PC)
	Nunavut Research Institute (NRI)		Canadian Wildlife Service (CWS)
X	Department of Culture, Language, Elders, and Youth (CLEY)	X	Other (please specify): Transport Canada, National Resources Canada

2. List the <u>active</u> permits, licenses, or other authorizations related to the project proposal, and their expiry date(s):

Name	Expiry Date
High Lake - KIA Inuit Owned Land Use License - High Lake - KTL308C008-Amended	01/06/13

High Lake - AANDC Land Use Permit - High Lake - #N2011C0033 (formerly N2007C0009)	01/29/14
High Lake - NTI Exploration Agreement - CO29-01-01R	09/30/21
High Lake - NWB Water Licence - 2BE-HIG1217 (formerly 2BE-HIG0712)	05/31/17
Izok - AANDC Land Use Permit - Izok Lake - #N2012C0005 (Formerly N2006C0027)	02/28/14
Izok - NWB Water Licence - 2BE-IZO0712	12/31/12
Izok - Wek'èezhìi Land and Water Board - Land Use Permit : W2008C0002	03/16/13
Izok/Hood - KIA Inuit Owned Land Use Licence - KTL306C019	02/15/13
Izok/Hood - Nunavut Impact Review Board - Izok and Hood Project - #06EN066	
MMG Resources Inc - WSCC Extended Working Hours Permit - Nunavut - High Lake and Izok : File #50-063-868	12/30/12
MMG Resources Inc - GN Nunavut Business License - #12-007	03/31/13
MMG Resources Inc - AANDC Nunavut Prospecting Permit - #N33023	03/31/13
Research Permits for Summer 2012 Field Programs	
NRI Social Sciences; #05 004 12R-M	12/31/2012
NRI Traditional Knowledge: #05 005 12R-M	12/31/2012
NRI Biological and Physical Sciences: #04 054 12N-M	12/31/2012
DOE, GN Wildlife Research Permit: # WL 2012-12	12/31/2012
DOE, GNWT Wildlife Research Permit: #WL 006891	12/31/2012
DFO Animal Use Protocol (Freshwater - Izok): # FWI-ACC-2012-025	10/1/2012
DFO Animal Use Protocol (Freshwater – High Lake): # FWI-ACC-2012-030	10/1/2012
DFO Licence to Fish for Scientific Purposes (Freshwater-Izok): # S-12/13-1009-NU	10/1/2012
DFO Licence to Fish for Scientific Purposes (Freshwater-High Lake): # S-12/13-1012-NU	10/1/2012
Aurora Research Institute Bio Physical Research Licence: #1505	12/31/2012

3. List the <u>pending</u> permits, licenses, or other authorizations related to the project proposal:

Water License (Type A) – Nunavut Water Board
Fisheries Authorization – DFO
Inuit Owned Land Use License - KIA
Application for Crown Land - AANDC

Research Permits for Summer 2012 Field Programs
CLEY, GN Archaeology and Paleontology Permit
DFO License to Fish for Scientific Purposes (Marine)
DFO Animal Use Protocol Permit (Marine)
DOE, GN Wildlife Research Permit (HHERA)

4. **Has this project or <u>any components of this project</u> been previously screened or reviewed by NIRB?**

X YES ☐ **NO**

If YES, indicate the previous project name and NIRB File No.

High Lake Project, NIRB File No. 06MN082
Izok and Hood Project, NIRB File No. 06EN066

SECTION 3: PROJECT PROPOSAL DESCRIPTION

1. **Indicate the type of project proposal (check all that apply)[1,2]:**
(See Appendix A for Project Type Definitions)

1	All-Weather Road/Access Trail	**X**	**9**	Site Cleanup/Remediation	
2	Winter Road/ Winter Trail	**X**	**10**	Oil and Natural Gas Exploration/Activities	
3	Mineral Exploration		**11**	Marine Based Activities	**X**
4	Advanced Mineral Exploration		**12**	Scientific/International Polar Year Research*	
5	Mine Development /Bulk Sampling	**X**	**13**	Harvesting Activities*	
6	Pits and quarries	**X**	**14**	Tourism Activities*	
7	Offshore Infrastructure (port, break water, dock)	**X**	**15**	Other[2]:	
8	Seismic Survey				

<u>Please note:</u>

1. All project types listed above, except those marked with an asterisk (*), will also require the Proponent to submit a **Part 2 Project Specific Information Requirement (PSIR) Form**. The NIRB application process will not be considered complete without the Part 2 PSIR Form.
2. Please be advised that in order to complete the NIRB process, the NIRB may request additional information at any time during the process.
3. If "Other" is selected, contact NIRB for direction on whether a Part 2 PSIR Form is required.

2. If Project Type 3, 4 or 5 was selected above, please indicate the mineral of interest that is being extracted. Include a brief description.

X	Base Metals	2 Open pit and 1 underground at Izok- zinc, copper and lead
	Diamonds	2 Open pit and 1 underground at High Lake – zinc and lead
	Uranium	
	Other: _____	

3a. If Project Type 12, 13 or 14 was selected above, complete the table and questions below.

Transportation Type	Quantity	Proposed Use	Length of Use
n/a			

3b. Describe any docks, piers, air strips or related structures that are to be used in conjunction with the proposed project activities. **Please note**: *the building of new structures may require a Part 2 Form.*

Please note that the Project Information provided is based on current state of knowledge, is preliminary and as proposed based on Prefeasibility Studies (2011). MMG Is undertaking Feasibility level engineering studies in 2012 and 2013.

A port facility will be located at Grays Bay in the Coronation Gulf for loading concentrate onto ships and unloading the in-bound supply of general cargo and fuel. The wharf will be laid out so that ships will berth parallel to the shore and barges will berth perpendicular along one site. The berth will be a steel sheet pile cell bulkhead. The berth face will be approximately100 m in length. The port facility will include a concentrate storage shed, power and water supply, refuse disposal and sewage treatment, fuel storage and dispensing, and container storage. The site will also provide administration offices, warehousing, a permanent camp, security and communications.

It is uncertain at this time whether an airstrip will be required at Grays Bay, given that there is an existing airstrip 40 km south at Sand Lake. Studies are ongoing to investigate the need for an additional airstrip at the port.

Air service will be needed at the Izok Mine site for regular resupply of consumable or perishable goods and cargo, as well as transportation of personnel. The airport may be located Ham Lake, about 11 km to the northwest of the proposed mine site. It is the current location of a 900 m gravel airstrip, which has been used for a number of years for exploration activities. The airstrip will be extended to between 1,500 and 2,000 m, will be gravel surfaced, and be capable of landing a Boeing 737 or similar. Infrastructure at the airstrip will include a building, a generator set and air traffic navigation and guidance systems. An alternate airport location about 8 km east of Izok is currently being studied.

The High Lake Mine airstrip will be an upgrade to the airstrip at Sand Lake, which is about 10km from the mine site. The runway will be 2,000 m long and will be capable of handling a Boeing 737 or similar. The current airstrip at Sand Lake is 900 m long and is unimproved gravel.

The airstrip will require the same infrastructure as described above for Izok.

There are emergency and fire services at all points on projects. Planes will not refuel at the airstrips.

The proposed Izok road, an all-season road, the will be constructed concurrently from three to four locations the (or headings) and construction will only take two years.

3c. If a temporary camp site is to be established, describe the proposed structures in detail and indicate the type and source of power for the camp site if applicable.

In addition to permanent base camps at Izok, High Lake and Grays Bay, three to four mobile camps will be used during construction of the Izok Road. The camps are expected to have 50 to 75 personnel with support road and bridge construction equipment.
A camp barge may also be brought by sea to Grays Bay to support construction of the port and associated facilities capable of housing 250 people. Diesel-generated electric power would be used to power the camps.
Construction camps at Ham Camp using the existing exploration camp may be augmented to support 400 people.

4. Personnel

Construction

Total No. of personnel on site = (A)	670 to 800	Total No. of days on-site = (B)	365/year	**Total No. of Person days (A) × (B) = 244,550 to 292,000**

Operation

Total No. of personnel on site = (A)	400 to 500	Total No. of days on-site = (B)	365/year	**Total No. of Person days (A) × (B) = 146,000 to 182,500**

5. Timing

Period of operation: from 2015 (start construction) to 2028

Proposed term of authorization: from 2015 to 2037

6a. Region (check all that apply):

- [ ] North Baffin
- [ ] South Baffin
- [ ] Kivalliq
- [ ] National Park
- [X] Kitikmeot
- [ ] Transboundary: _____

6b. Describe the location of the proposed project activities in a regional context, noting the proximity to the nearest communities and any protected areas.

The Izok Corridor Project is located in the West Kitikmeot region of the Nunavut. Key components of the Project include the Izok Mine Site, High Lake Mine Site, a port at Grays Bay in Coronation Gulf and the Izok Road, an all-season road that links the Izok and High Lake sites to the proposed port. The Izok Mine site is situated approximately 360 km north of Yellowknife, Northwest Territories, and 250 km south of the Coronation Gulf. The High Lake Mine Site is situated approximately 50 km northeast

of the Izok site. The Grays Bay Port will be located approximately 328 km north of the Izok Mine and about 2.5 km west of the mouth of the Kennarctic River.
The nearest communities to the Izok Corridor Project are Kugluktuk (180 km to the northwest of the High Lake site). The Project sites are not located near any existing or proposed conservation areas.
An eastern and western shipping route will be used for transporting goods in and concentrate out of the port.

There are several terrestrial and marine areas that are recognized for their wildlife and habitat values within the Kitikmeot and North Baffin Land Use Planning regions of Nunavut, and the Inuvialuit Settlement Region of the Northwest Territories (NWT). These include National Parks, Territorial Parks, Migratory Bird Sanctuaries (federal protection) and Wetlands of International Importance (Ramsar Sites). These areas are protected through various federal and territorial legislation including the *Nunavut Wildlife Act, NWT Wildlife Act, Canadian Wildlife Act, Migratory Birds Convention Act* and the Ramsar treaty. There are also a number of other sites of importance in the region of the Project, including International Biological Program (IBP) sites, Canadian Heritage Rivers, key marine and terrestrial habitat sites and wildlife areas of special interest and importance. These areas are recognized as conservation areas under Article 9 of the Nunavut Land Claims Agreement (NLCA) but are currently not legally protected.

The footprint of the Izok Corridor Project does not overlap with the boundaries of any protected areas. There are portions of the proposed eastern and western shipping routes that will be in proximity to some marine conservation areas and polar bear areas of importance; however, ship passage will be limited to the ice-free season when there is limited or no use of these areas by wildlife. See Section 5.2 of the Project Proposal for more details.

6c. Discuss the history of the site if it has been used for any project activities in the past.

Geological exploration activities have taken place around the Izok and High Lake Mine site area since the mid 1950s to present. Comprehensive environmental baseline studies were conducted in 2004, 2005, 2007 and 2008 and will continue in 2012. Currently MMG has exploration camps at Izok (Ham Camp) and at High Lake.

6d. Indicate if there are any known archaeological/palaeontological historical sites in the area.

There are approximately 150 recorded archaeological sites that potentially exist within the Izok Corridor Project Local Study area. The Local Study Area (LSA) comprises the proposed Project facilities with a 1 km buffer (0.5 km on each side). While some of these sites are scattered through the study area, many are concentrated in specific areas around Grays Bay, Itchen Lake, Iznogoudh Lake, Ham Lake, Hood River, and James River.
Additional studies are being undertaken in 2012. The final number of recorded sites will be detailed in the required permit report for CLEY.

7. Land Status (check all that applies):

[x]	Crown	[ ]	Commissioners'	[ ]	Municipal
[x]	Inuit Owned Surface Lands	[x]	Inuit Owned Sub-Surface Lands		

8a. Co-ordinates: See Figure 1 (Attached)

Min Lat (degree/minute) _____ Min Long (degree/minute) _____
Max Lat (degree/minute) _____ Max Long (degree/minute) _____

NTS Map Sheet No: 86H/10, 86H/9, 76E/14, 76E/13, 76E/12, 76E/11, 76L/15, 76L/14,76L/11, 76L/10,

76L/6, 76L/3, 76M/15, 76M/14, 76M/10, 76M/7, 76M/2

(Please ensure that maps of the project are attached (1:50,000 **if available**, 1:250, 000 **Mandatory**) available from Natural Resources Canada)

8b. If the project proposal includes a **camp**, please provide the coordinates of the camp location

Grays Bay Camp			
Lat (degree/minute)	67.805N	Long (degree/minute)	-110.869W
High Lake Camp			
Lat (degree/minute)	67.380N	Long (degree/minute)	-110.844W
Ham Lake Camp (Izok)			
Lat (degree/minute)	65.686N	Long (degree/minute)	-112.585W

If different from above for the camp:

NTS Map Sheet No:

Please ensure that maps of the project are attached (1:50,000 **if available**, 1:250, 000 **Mandatory**) available from Natural Resources Canada

Please note that additional location information may be required in a subsequent Project Specific Information Requirement (PSIR) submission. This may take the form of a digital Geographic Information Systems (GIS) file.

SECTION 4: NON-TECHNICAL PROJECT PROPOSAL DESCRIPTION

Please include a non-technical description of the project proposal, no more than 500 words, in English and Inuktitut (+Inuinnaqtun, if in the Kitikmeot). The project description should outline the following:

- The project activities, their necessity and duration;
- Method of transportation;
- Any structures that will be erected (permanent/ temporary);
- Alternatives considered; and
- Long-term developments, the projected outcome of the development for the area and its timeline.

IMPORTANT: IF THE PROPOSED ACTIVITIES REQUIRE SUBMISSION OF A NIRB PART 2 PSIR FORM, PLEASE COMPLETE SECTION 8 ONLY, OTHERWISE CONTINUE ON WITH SECTION 5.

SECTION 5: MATERIAL USE

1. List equipment to be used (including drills, pumps, aircraft, vehicles, etc.):

Equipment type and number	Size – dimensions	Proposed use

2a. Detail fuel and hazardous material use:

Fuel	Number of Containers	Total Amount of Fuel (in	Proposed Storage Methods

	and Capacity of Containers	Litres)	
Diesel			
Gasoline			
Aviation fuel			
Propane			
Other			
Hazardous Materials and Chemicals		**Total Amount of Hazardous Materials and Chemicals (in Litres)**	

2b. Describe the proposed Spill Prevention Plan.

3a. Detail the anticipated daily water consumption rates

Daily amount (m^3)	Proposed water retrieval methods	Proposed water retrieval location

3b. Have you applied for a water License with the Nunavut Water Board?

☐ **YES** ☐ **NO**

If yes, what class of licence?

☐ **Class A Water Licence** ☐ **Class B Water Licence**

SECTION 6: WASTE DISPOSAL AND TREATMENT METHODS

1. List the types of waste associated with the proposed project activities:

Type of waste	Projected amount generated	Method of Disposal	Additional treatment procedures
Sewage (human waste)			
Greywater			
Combustible wastes			
Non-Combustible wastes			
Overburden (organic soil, waste material, tailings)			
Hazardous waste			
Other:			

2. **Describe the proposed Waste Management Plan.**

SECTION 7: COMMUNITY INVOLVEMENT & REGIONAL BENEFITS

1. **List the community representatives that have been contacted and provide the minutes of the meetings if available:**

Community	Name	Organization	Date Contacted

SECTION 8: GENERAL QUESTIONS

1. **Will you be disturbing any known archaeological sites?**

X YES **NO**

SECTION 9: APPLICANT SIGNATURE

Please sign and date your application:



Signature	Title	Date
	Environmental Permitting Lead	**August 20, 2012**

APPENDIX A
Project Type Definitions

Access Trail: A project proposal with the objective of providing vehicular access to an area of interest involving minimal alteration to the terrain.

Advanced Exploration: A project proposal with the objective of identifying size, grade, and physical characteristics of a mineral occurrence and to assess the economic and technical feasibility of developing the mineral deposit into a producing mine

All-Weather Road: A project proposal with the objective of road construction for use in all seasons.

Bulk Sampling: A project proposal with the objective of extracting of large samples of mineralized material involving hundreds to thousands of tonnes. Samples are selected as representative of the potential mineral deposit being sampled. May involve crushing/milling (on small-scale)

Harvesting activities: A project proposal with the objective of harvesting animals, marine mammals and/or fish from their natural habitats by means of hunting or trapping for traditional and commercial use.

Marine Based Activities: Any activity occurring in the marine environment, such as vessel use associated with land-based activities or disposal at sea.

*Please note that normal community re-supply or individual ship movements not associated with land-based project proposals shall not be screened by NIRB (Section 12.12.2 of NLCA).

Mine Development: A project proposal with the objective of extracting broken rock with mineralization of sufficient grade and tonnage to sustain commercial mining operations (ore). Mining a body of ore can be achieved by either open pit and/or underground development. Mine development may involve milling. Milling involves treatment of the extracted ore through a combination of mechanical and chemical processes to selectively recover the valuable mineral.

Mineral Exploration: A project proposal with the objective of exploring an area to find geological anomalies. It involves site reconnaissance (ground and/or air) to locate broad and fiscal mineral deposits.

Offshore Infrastructure: A project proposal with the objective of building off loading facilities constructed off the shoreline and connected to the mainland of the marine or freshwater environment. Examples include a jetty, dock, or port facility.

Oil and Gas Exploration/Activities: A project proposal that includes 1) exploration, such as seismic or geological mapping, 2) drilling of oil and gas wells, 3) construction and operation of a pipeline, a gas processing plant or any oil and gas facility within Nunavut.

Pits and Quarries: A project proposal with the objective of pitting, which involves the extraction of granular material (i.e. sands and gravels) and quarrying, which involves the removal of consolidated rock (i.e. bedrock, frozen soil).

Scientific Research: A project proposal with the objective of implementing a series of site activities comprised of observation of phenomena, measurement and collection of data necessary for scientific investigation in designated areas within a limited time period.

Seismic Survey: A project proposal with the objective of conducting a survey to map the depths and contours of rock strata by timing the reflections of sound waves released from the surface. Survey site locations may be offshore (not within 12 nautical miles of any coast), near shore, and extended onshore.

Site Cleanups: A project proposal with the objective of site cleanups (includes DEW line site cleanups), which focuses on the remediation of chemically contaminated soils, stabilization of landfills and dumps, demolition/disposal of infrastructure and debris and monitoring after cleanup is completed.

Tourism Activity: A project proposal with the objective of conducting travel predominantly for recreational, sport or leisure purposes within a designated area and limited time period.

Winter Road: A project proposal with the objective of building a road for winter use by leveling and compacting surface snow and ice. Winter road is removed at end of season.

Winter Trail: A project proposal with the objective of building a trail for winter use by a single pass of a tracked vehicle using a blade, if necessary.

ᐃᓕᖅ PART 1-ᒥ
ᐱᓕᕆᐊᖃᖅᖢᖅ ᑐᐱᓯᖅᖢᖅ ᑐᓴᒃᑯᖃᖅᖢᖅ ᐱᔨᔪᑎᓕᒃ ᐊᑐᑕᐅᔨᕆᓕᕆᓕᖅᓂᒃ

ᐱᖅᐅᔨᓐᓇᖅᑐᑦ ᑐᓴᒃᑯᓴᑦ ᓄᓇᕗᑦ ᐊᐅᑎᓕᓕᒫᓂᑦ ᑲᑎᒪᓂᖅᑕᑦ ᐊᑦᓭᓱᓯᒪᔨᖅᑎᓗᒍ, ᐱᓕᕆᐊᖃᑦᓕᕆᔨᑎᓄᑦᓯᒪᔪᑦ ᖃᓄᐃᑦᑐᒍᑎᑦ ᐅᖃᖅᑎᒋᔭᐅᓇᖅᑕᑎᑦ ᐅᑭᓇ ᖃᓄᕈᐅᕗᖅᑯᑦ http://ftp.nirb.ca/. ᓄᓇᕗᑦ ᐊᐅᑎᓕᓕᒫᓂᑦ ᑲᑎᒪᓂᖅᑕᑐᓂᒃ ᐅᓂᒃᑳᑦ ᒪᖅᐱᖅᑕᐅᔨᓐᓇᖅᑐᑦ ᓯᓚᐅᒪᔪᑦ ᐅᖃᖅᑎᒋᔭᐅᓇᖅᑕᑎᑦ ᐅᑭᓇ (www.nirb.ca) ᒫᓐᓇ ᐊᑦᑭᓯᖅᑕᐅᔪᓐᓇᖅᓯᓕᒪᒪᓕᒃ. ᑐᑭᓯᒋᐊᖅᐱᒪᔨᓐᓇᖅᑕᓯ ᑐᓴᒃᑯᖅᑯᓯᒪᔪᑦ ᐅᑭᓇ info@nirb.ca ᖃᓄᑐᐃᓐᓇᖅ ᐊᐱᕐᔪᐊᑎᖅᑕᓯ ᐅᕙᓪᓕᐊᓂᖅ ᑐᑭᓯᒋᐊᖅᑲᓐᓂᖅᑐᓯ ᑐᓴᒃᑯᖅᑯᓯᒪᔪᑦ.

ᐅᓇ ᖃᐅᔨᒪᔨᐅᑦᓯᐊᓕᓕᒃᑲ!
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ᐃᓕᓐᓄ 1: ᑐᑭᓯᖅᑐᑦ ᑐᓴᒃᑯᖅᑯᓯ

1 ᐱᓕᕆᐊᖃᐅᔨ ᑕᐃᔨᐅᔨᔪᓯᐊ ᐊᑎᖅᓄ: ᐅᕐᓂ Izok–ᒥ ᐊᖏᑕᐅᖃᖅᑕᕐᕕᖅᑐᑦᑐᖅ ᐱᓕᕆᓚᒃᑯᖅᑯᓯ

2. ᑐᑭᓯᖅᑐᑦ ᐊᑎᖅᓄ ᐊᓗᒪᓗ ᑐᖃᖅᑕᒃ:

MMG Minerals and Metals Group	ᐅᖃᖅᑎᑕᐅᑦ:	778-373-5600
Level 26, 1177 West Hastings Street	ᓯᓚᒃᑲᓴᒃᑯᑦ:	778-373-5598
Vancouver, BC V6E 2K3 Canada	ᐃᒥᐅᓪᓗᑦ:	Scott. Trusler@mmg.com

3.

Scott Trusler – Environmental Permitting Lead		
Level 26, 1177 West Hastings Street	ᐅᖃᖅᑎᑕᐅᑦ:	778-373-5586
Vancouver, BC V6E 2K3 Canada	ᓯᓚᒃᑲᓴᒃᑯᑦ:	778-373-5598
	ᐃᒥᐅᓪᓗᑦ:	Scott. Trusler@mmg.com

ᐃᓕᓐᓄ 2: ᑲᔪᓯᑎᑕᐅᔪᓐᓇᖅᑐᑦ ᓴᖅᐱᒪᒋᐊᓕᓕᒃ

1. ᑕᒪᖅᑐᒃ ᓇᓗᓇᐃᖅᑕᐃᓇᓚᑕᒋᓕ ᑲᔪᓯᑎᑕᓯᔨᓕᑦ ᐊᒃᑐᐊᓂᓕᓐᓂᒃ ᐱᓕᕆᐊᖃᖅᐱᐅᔪᒍᓐᓇᖅᑐᒃ ᑐᑭᓯᖅᑐᑦ:

X	ᐊᐃᒃᑐᖅᓯᒪᔨᓂ ᐃᓄᐃᓕᓐᓄ ᑲᑐᔨᖅᑲᑎᑦᑕ (RIA)		ᑲᓇᑕᒥ ᑲᔪᓯᑎᑕᐅᔨᔪᓕᑦ ᐊᑦᑕᓇᖅᑕᐃᓕᓚᑎᑦᑎᓯᓂᖅᓴᓕᑦ (CLS)
X	ᓄᓇᕗᑦᑕ ᐃᒪᓕᓚᒋᔭᐅ ᑲᑎᒪᔨᖅᑎᑦ (NWB)	X	ᑲᓇᑕᒥ ᐊᐅᑎᓕᓕᒫᓂᑦ (EC)
X	ᓄᓇᕗᑦᑕ ᐸᖅᓇᐃᔨᓂ (NPC)	X	ᓄᓇᕗᑦ ᓴᖅᒪᒃ (GN)
X	ᐃᓄᓕᓚᔨᑐᖅᑯᓂ (INAC)		ᐅᓇᓕᓴᖅᑯᓂ (DND)
X	ᐃᖅᑲᓕᑎᓚᐅᖅᑯᓂ ᐊᓗᒪᓗ ᐃᒪᖅᐅᑕᓕᑎᓚᐅᖅᑯᓂ (DFO)		ᕼᓗᒪᓕᓚᖅᑯᓂ
	ᓄᓇᕗᓐᓂ ᓴᖅᒪᒃᑕᑎᔨᓂ, ᐱᔨᓯᕐᐅᑎᓕᑎᔨᓕᓗ (CG&S)		ᑲᓇᑕᒥ ᒥᖅᐳᐃᓯᓴᖅᑲᓕᑎᓚᐅᖅᑯᓂ (PC)
	ᓄᓇᕗᑦᑕ ᖃᐅᔨᔪᓴᖅᑯᑦ (NRI)		ᑲᓇᑕᒥ ᐅᒪᔨᓕᑎᓚᐅᖅᑯᓐᓄᓂ ᐱᔨᓯᕐᔪᓴᖅᑯᑦ (CWS)
X	ᐃᓕᖅᑯᓯᓕᑎᓚᐅᖅᑯᓂ (CLEY)	X	ᐊᓯᖅᑎᑦ (ᑎᑎᕈᑦ ᓇᓗᓇᐃᖅᑕᓕᑎᑦ): ᑲᓇᑕᒥ ᐃᖅᑎᖅᔪᓕᑎᓚᐅᖅᑯᓂ, ᓄᓇᒥᐅᑕᓕᑎᓚᐅᖅᑯᓂ ᑲᓇᑕᒥ

2. ᑎᑎᖅᑕᑦ ᐊᐅᑎᓕᓕᒫᓂᑦ ᐱᔨᓐᓇᕐᓂᑦᓯᒪᓕᒃ, ᓪᓚᐃᓴᑦ, ᐊᓯᖅᑎᓪᓗᓂᒃ ᑲᔪᓯᑎᑕᓯᔨᔪᓐᓇᖅᑎᑦᑎᓯᓂᖅᓴᓕᑦ ᐱᓕᕆᓚᐅᖅᔪᓕᔨᔪᓕᑦ ᑐᑭᓯᖅᑐᓕᑦ ᐊᒻᒪᓗ ᐃᓕᓴᕐᔪᐊᑎᑦᑎᓂᒃ ᐃᓕᓴᕐᔪᐊᑎᑦᑎᓂᒃ ᑎᑎᖅᑕᑦ ᐃᓕᓴᕐᔪᐊᑎᑦᑎᓂᒃ ᐅᓪᓗᕈᓯᖅᓴᓕᑦ:

ᐊᑎᖅᓄᑦ	ᐃᓕᓴᕐᔪᐊᑎᑦᑎᓂᒃ ᐅᓪᓗᕈᓯ
High Lake–ᒥ - ᖃᐅᔨᒥᐅᑦ ᐃᓄᐃᓕᓐᓄ ᑲᑐᔨᖅᑲᑎᑦᑕ ᓄᓇᖅᑐᓂᖅᓴᓕᑦᑐᒃ ᓪᓚᐃᖅᑲᖅᑕᑦ High Lake–ᒥ KTL308C008-ᐊᖅᑭᑎᐊᖅᑕᖅᓯᖅ	01/06/13
High Lake–ᒥ - ᐃᓄᓕᓚᔨᑐᖅᑯᓂᑎᑦᑎᓂᒃ ᓄᓇᕗᓚᓴᓂᑦ ᓪᓚᐃᓴᑦ - High Lake–ᒧᑦ - #N2011C0033 (ᐃᒪᓐᓇᐃᑦᑕᒋᔭᓂᑦ N2007C0009)	01/29/14
High Lake–ᒥ - ᓄᓇᕗᑦ ᑐᓂᓴᐃᖅᑯᓂ ᐅᔪᕆᓴᖅᑭᑎᐅᑕᑎᑎᖅᑕᑦ ᐊᓂᑎᑕᑎᑦ - CO29-01-01R	09/30/21
High Lake–ᒥ - ᓄᓇᕗᑦ ᐃᒪᓕᓚᒋᔭᐅ ᑲᑎᒪᔨᖅᑎᑦᑎᒍᑦ ᐃᒥᓚᓴᐸᑎᑎᖅᑕᖅᓴᓕᑦ ᓪᓚᐃᓴᑦ - 2BE-HIG1217	

(ᐃᒪᓐᓇᐃᑦᑐᖅᓯᒪᔪᑦ 2BE-HIG0712) 05/31/17
Izok - ᐃᓄᓕᓴᐃᑐᖃᓄᑦᑐᑦ ᓄᓇᕗᓴᖅᓯᓂ ᓕᐃᓴ - Izok Lake–Γ #N2012C0005
(ᐃᒪᓐᓇᐃᑦᑐᖅᓯᖅ N2006C0027) 02/28/14
Izok - ᓄᓇᕗᒥ ᐃᒪᓕᓴᐃᓂ ᑲᑎᒪᓐᔨᐅᑎᓄᑦ ᐃᒥᓕᓴᖅᑎᑦᑎᓄᑦ ᓕᐃᓴ - 2BE-IZO0712 12/31/12
Izok - Wek'èezhìi ᓄᓇᕗᓴᖅᓯᓂ ᐊᓚᒪᓗ ᐃᒥᓕᓴᖅᓯᓂ - ᓄᓇᕗᓴᖅᑎᑦᑎᓄᑦ ᐱᔨᓐᓇᐅᑦᓯ:
W2008C0002 03/16/13
Izok/Hood - ᖃᑎᖅᑎᐅᑦ ᐃᓄᐃᑦ ᑲᑐᔪᖃᑎᒋᑦ ᐃᓄᐃᑦ ᓄᓇᖅᑯᑦᑐᓂ ᓕᐃᓴ - KTL306C019 02/15/13
Izok/Hood - ᓄᓇᕗᒥ ᐊᐅᑎᓕᓴᐅᓂ ᑲᑎᓂᐅᓂ - Izok ᐊᓚᒪᓗ Hood ᐱᓕᓴᐁᖅᓴᖅ - #06EN066
MMG Resources Inc - WSCC–ᓄᑦ ᐊᑐᐅᐳᖃᓄᖅᑎᑕᖏᓐᓄᐃᓕᓐᓄᑦ ᐃᑲᖅᑎᖃᑦᑕ ᐱᓕᓴᐁᖅᓴᓂᑦ ᐱᔨᓐᓇᐅᑦᓯ,
ᓄᓇᕗᑦ High Lake ᐊᓚᒪᓗ Izok : File #50-063-868 12/30/12
MMG Resources Inc - ᓄᓇᕗᑦ ᑲᓛᒃᓄᑦ ᐱᓕᓴᔨᓐᓇᐅᑎᒋ ᐱᓕᓴᕐᓄᑎᓕᖅᓄᓂᓐᓄᑦ ᓕᐃᓴ #12-007 03/31/13
MMG Resources Inc - ᐃᓄᓕᓴᐃᑐᖃᓄᑦᑐᑦ ᓄᓇᕗᒥ ᐅᓴᖅᓴᖅᓯᐅᑕᑦ ᐱᔨᓐᓇᐅᑦᓯ - #N33023 03/31/13

ᖃᐅᔨᓴᕕᖅᓴᓂ ᐱᔨᓐᓇᐅᑎᑦᓯ ᐊᐅᓚᖏᓐᓄᑦ 2012 ᓄᓇᒥ ᐱᓕᓴᔪᑎᖅᓴᓂ
ᓄᓇᕗᒥ ᖃᐅᔨᓴᖃᖅᑐᑦ ᐃᓄᓯᔾᔨᖏᓚᐅᓂᒃ ᓯᕐᔪᐃᓴᕐᐃᓐᓇᑦ; #05 004 12R-M 12/31/2012
ᓄᓇᕗᒥ ᖃᐅᔨᓴᖃᖅᑐᑦ ᐃᓕᓴᔪᓕᓚᓂᕐᒧᖏᓚᐅᓂᒃ #05 005 12R-M 12/31/2012
ᓄᓇᕗᒥ ᖃᐅᔨᓴᖃᖅᑐᑦ ᐅᒪᔨᓴᓂᒃ ᖃᐅᔨᓴᖃᖅᑐᑦ, ᖃᐅᓄᐃᑦᑐᖏᓐᓄᐃᓕᓐᓂᑦ: #04 054 12N-M 12/31/2012
ᑲᖏᒪᔪᑦ ᐊᐅᑎᓕᓴᐅᓂ, ᓄᓇᕗᑦ ᑲᖏᒪᑦ ᐅᒪᔨᓕᓴᐅᓂᒪᔪᑦ ᖃᐅᔨᓴᖅᑭᑦ ᐱᔨᓐᓇᐅᑦᓯ: # WL 2012-12 12/31/2012
ᑲᖏᒪᔪᑦ ᐊᐅᑎᓕᓴᐅᓂᕐᓂ, ᓄᓇᕗᑦ ᑲᖏᒪᑦ ᐅᒪᔨᓕᓴᐅᓂᒪᔪᑦ ᖃᐅᔨᓴᖅᑭᑦ ᐱᔨᓐᓇᐅᑦᓯ: #WL 006891 12/31/2012
ᐃᒪᖏᐅᑕᓕᓴᐅᓂᒪᔪᑦ ᓂᖅᔪᑎᓵᖏᓚᐅᓂᑦ ᐊᑐᑕᐅᑎᖅᓯᒪᔪᑦ ᒪᓕᑐᖅᑎᒧᑦ (ᐃᒥᖅᓯᐊᐅᖅ-Izok): # FWI-ACC-2012-025 10/1/2012
ᐃᒪᖏᐅᑕᓕᓴᐅᓂᒪᔪᑦ ᓂᖅᔪᑎᓵᖏᓚᐅᓂᒃ ᐊᑐᑕᐅᑎᖅᓯᒪᔪᑦ ᒪᓕᑐᖅᑎᒧᑦ (ᐃᒥᖅᓯᐊᐅᖅ–High Lake):
FWI-ACC-2012-030 10/1/2012
ᐃᒪᖏᐅᑕᓕᓴᐅᓂᒪᔪᑦ ᓕᐃᓴ ᐃᖅᑲᓕᓕᓴᓂ ᖃᐅᔨᓴᖅᑐᑐᖅᑎᓂᓕᔭᒍ (ᐃᒥᖅᓯᐊᐅᖅ-Izok): # S-12/13-1009-NU 10/1/2012
ᐃᒪᖏᐅᑕᓕᓴᐅᓂᒪᔪᑦ ᓕᐃᓴ ᐃᖅᑲᓕᓕᓴᓂ ᖃᐅᔨᓴᖅᑐᑐᖅᑎᓂᓕᔭᒍ (ᐃᒥᖅᓯᐊᐅᖅ–High Lake):
S-12/13-1012-NU 10/1/2012
Aurora–ᓄᑦ ᖃᐅᔨᓴᖅᑭᑦ ᐅᒪᔨᓕᓴᐅᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᑎᖅᓯᓐᓂᑦ ᐱᔨᓐᓇᐅᑦᓯᑦ ᓕᐃᓴ: #1505 12/31/2012

3. **ᑎᑎᕋᓂᑦ <u>ᐊᑐᑕᐅᔨᓂ ᓇᓕᓕᐊᓇᖏᓚᔨᓂ</u> ᐱᔨᓐᓇᕈᑦᑕᑦ, ᓕᐃᓴᓂ, ᐊᓯᖏᓕᓂᔭᐅᐊᖅ ᑲᔪᓯᑎᑕᐅᔨᓐᓇᖅᑐᑦᓯ ᐱᓕᓴᐊᕐᓂᒍᖏᓚᔨᓂ ᑐᓴᓯᖏᒧᑦ**:

ᐃᒥᓕᓴᐃᓂ ᓕᐃᓴ (Type A) – ᓄᓇᕗᑦ ᐃᒥᓕᓴᐃᓂ ᑲᑎᒪᓐᔨᖏᓐᓂᒃ
ᐃᓴᖃᑕᓴᐃᑎᖅᓴᖅ ᑲᔪᓯᔨᑎᖅᓴᖅ ᐱᔨᓐᓇᐅᑎᑦᓕᓴᒃ – ᐃᓴᖃᑕᓴᐅᑲᓐᓂᐅᓐᓂᒃ ᐃᒪᖏᐅᑕᓕᓴᐅᑲᓐᓂᒃ
ᐃᓄᐃᑦ ᓄᓇᕗᑦᑕᓐᓂ ᓄᓇᕗᓴᐃᓴᖅᑎᓴᖅ ᓕᐃᓴ – ᖃᑎᖅᑎᐅᑦ ᐃᓄᐃᑦ ᑲᑐᔪᖃᑎᒋᑦᖏᓐᓂᒃ
ᑐᓂᓯᖅᑐᑦ ᓚᖏᒪᑲᖏᓐᓂᒃ ᑲᓇᑕᐅᑦ, ᓄᓇᕗᓴᐃᓴᖅᑎᓴᖅ – ᐃᓄᓕᓴᐃᑐᖃᓄᑦᑐᑦᓂᒃ

ᖃᐅᔨᓴᕕᖅᓴᓂ ᐱᔨᓐᓇᐅᑎᑦᓯ ᐊᐅᓚᖏᓐᓄᑦ 2012 ᓄᓇᒥ ᐱᓕᓴᐊᕐᓂᒍᖏᓚᔨᓂ
ᐃᓕᓴᕐᓄᑎᓕᓴᐅᓂᒪᔪᑦ, ᓄᓇᕗᑦ ᑲᖏᒪᑦ ᐃᓕᓴᕐᓂᕈᓕᓴᐅᓂᒃ ᐊᓚᒪᓗ ᐃᓄᓐᓂᒃ ᓯᕐᓕᓴᓕᓴᐅᓂᕐᓂᒍᖏᓚᔨᓂ ᐱᔨᓐᓇᐅᑎᑦᓯ
ᐃᒪᖏᐅᑕᓕᓴᐅᓂᒪᔪᑦ ᓕᐃᓴᓂ ᐃᓴᖃᑕᓴᐅᓂᒃ ᖃᐅᔨᓴᖅᑐᑐᖅᑎᓂᓕᔭᒍ (ᑕᓚᐅᕐᒥ)
ᐃᒪᖏᐅᑕᓕᓴᐅᓂᒪᔪᑦ ᐅᒪᔨᓕᓴᐅᓂᒪᔪᑦ ᐱᔨᓐᓇᐅᑎᑦᓯ ᐊᓯᔪᖅᑐᑎᒍᑦ ᐱᔨᓐᓇᐅᑎᑦᓯ (ᑕᓚᐅᕐᒥ)
ᑲᖏᒪᔪᑦ ᐊᐅᑎᓕᓴᐅᓂᕐᓂᒍᖏᓚᔨᓂ, ᓄᓇᕗᒥ ᑲᖏᒪᑦ ᖃᐅᔨᓴᖅᑐᑎᓂ ᐱᔨᓐᓇᐅᑎᑦᓯ (HHERA)

4. **ᐅᔪᓄᖏᓐᓄᓚᒃᑦ ᐱᓕᓚᐅᖅᓱᒧᑦ ᐅᕐᐊᓗᐅᐊᖅᑐᑦ ᓇᓕᓕᐊᓇᖏᓚᔨᓂ ᑕᑯᖏᓐᓄᓐᓄᓚᒃᑦ ᐱᓕᓚᐅᖅᓴᖅᓱᒧᑦ ᐱᔨᓐᓇᐅᑎᑦᓯ ᖃᑎᖅᑭᑕᒪᓕᖅᓴᖅᓱᒪᓕᕐᑕ ᐅᕐᐊᓗᐅᐊᖅᑐᑦ ᐅᓴᖅᓴᖃᑕᐅᔪᓂᓕᒪᓕᖅᑐᒃ ᓄᓇᕗᑦ ᐊᐅᑎᓕᓴᐅᓂᕐᓂᒍᖏᓚᔨᓂ ᑲᑎᒪᓐᔨᖏᓐᓂᒃ?**

■ x Ả ☐ ᐊᖏᓚ

Ả%J<<ᑦ, ᓇᓕᓕᐊᓇᓄᑦ ᐱᓕᓚᐅᖅᓴᖅᓱᒧᑦ ᐊᓚᒪᓗ ᑎᑎᕋᓂᑦ ᓄᓇᕗᑦ ᐊᐅᑎᓕᓴᐅᓂᒃ ᑲᑎᒪᓐᔨᖏᓐᓂᒃ ᐊᓕᓴᐅᔪᓂᕐᓂᒍᖏᓚᔨᓂᑦ ᐃᓱᒪᒃᑯ

High Lake–Γ ᐱᓕᓚᐅᖅ, ᓄᓇᕗᒥ ᐊᐅᑎᓕᓴᐅᓂᒃ ᑲᑎᒪᓐᔨᖏᓐᓂᒃ ᑎᑎᖅᑎᓂ No. 06MN082
Izok–Γ ᐊᓚᒪᓗ Hood–Γ ᐱᓕᓚᐅᖅᓴᖅ, ᓄᓇᕗᒥ ᐊᐅᑎᓕᓴᐅᓂᒃ ᑲᑎᒪᓐᔨᖏᓐᓂᒃ ᑎᑎᖅᑎᓂ No. 06EN066

ᐃᓕᖅ 3: ᐱᓕᓚᐊᖅᑕᐅᓕᓱᐊᓱᑦ ᑐᓴᓯᖏᓱᑦ ᖃᑲᓄᐃᓕᓐᓂᔾᔨᓂᒃ ᑕᓂᒃᑲᖅ ᐱᔭᐊᑎᓕᒃ

1. **ᓇᓗᓇᐃᔨᓗᓂᑦ ᖃᓄᖅ ᐱᓕᕆᐊᖓᔪᐊᖅᓯᖅᓂᑦᑕ ᑐᑭᐊ ᑐᑦᓯᔨᑦ ᐱᓕᕆᓇᐅᔾᔪᓕᐅᓗᓂ (ᑎᑎᖅᓯᐊᖅᓂᑦ ᐃᓗᓐᓇᐅᑎᓂ ᐊᑐᖅᑕᐅᔪᐊᖅᑐᑦ ᑐᑭᓯᐊᖅᑐᑦ): (ᑕᔪᓗᓂᑦ ᐃᓕᓴᕐᓂᐅᑎᓯᒪᔨᑦ A-Γ ᐱᓕᕆᓇᖅᓴᓇᖅᓱᓕᑦ ᓇᑦᓕᐊᖅᔪᑦ ᐊᐅᓕᑕᐅᓂᐊᖅᑐᑦ ᑐᑭᖓᑦ)**[1,2]:

1	ᖃᖅᖏᓕᒻᒥᖅ ᐊᖏᔪᑕᐅᖅᖢᓂᐊᖅᑐᑦ/ᓄᓇᑐᐃᓇᔪᓐᓇ	X	**9**	ᓄᓇᒪᒃ ᓴᑐᒪᖅᓴᐃᓂᖅ/ᓄᓇᒪᒃ ᐅᑎᖅᑎᕆᓂᖅ	☐
2	ᐅᑭᐅᒥ ᐊᖏᔪᑦ/ᐅᑭᐅᒥ ᓄᓇᒃᔪᑦ ᐊᖏᔪᑦ	X	**10**	ᐅᖅᓯᐊᑐᖓᓂᒃ, ᓄᓇᒥ ᐱᐅᓯᖅᓯᖅᑐᑐᓂᒃ ᐳᓪᓕᖏᓂᒃ ᐱᑕᖅᒪᒐᒍᖅ ᖃᓄᖅᑎᑦ/ᐊᐅᓕᑕᑦ	☐
3	ᖃᓄᖅᑎᑦ ᖃᓄᖅᑐᑦ ᐊᑐᑎᓵᒃᓴᖅᑕᖅᒪᒐᒍᖅ ᓄᑦᖅ ᐊᓯᓂ ᓄᓇᓕᒫᖅᐅᑐᓂ ᑐᐱᖅᓚᕆᖅ		**11**	ᑕᕆᐅᒪᒥ ᐱᓕᕆᐊᖓ ᐊᐅᓕᑕᑦ	X
4	ᓯᐅᖏᒪᔪᑦ ᖃᓄᖅᑎᑦ ᐅᓴᖅᐳᕆᐊᖓ		**12**	ᖃᖅᐅᓵᓴᖅᑎᑦ/ᓄᓇᖅᓯᐊᖓᑦ ᑲᓵᖏᒪᓂᓴᖅ ᐊᑐᐳᔪᑦ ᖃᖅᐅᓵᓴᖅᑎᓄᑦ*	☐
5	ᐅᓴᖅᐳᕆᐊᖓ ᐱᓕᑦᓯᐊᑎᓯᓚᖏᓪᓕ/ᐊᖏᑭᓇᖅᓯᒪᔨᓂᖅ ᖃᖅᐅᓵᓴᖅᑐᑦ	X	**13**	ᐄᒪᔨᓯᓯᖅᑎᓄᑦ ᐊᐅᓕᑕᑦ*	☐
6	ᓄᓇᒥ ᐃᑎᖅᓴᓕᐊᑦ ᐊᓚᒪᓗ ᐅᓴᖅᑲᓂᖅ ᓯᖅᑲᓕᓇᓕᑦ	X	**14**	ᐳᓭᖅᑐᑕᓚᓂᖅᓱᒍᑦ ᐊᐅᓕᑕᑦ*	☐
7	ᓄᓇᓕᓂᑦ ᓯᒪᒋᑦᓂ ᓴᓇᓕᑦ (ᑐᒪᑲᑕᖅᓕᖅ, ᖃᖏᑎᑲᑯᑎᑦ, ᓂᐅᕋᐃᓕᖅᖢ)	X	**15**	ᐊᓯᖏᑭᓐᓂᖅ ᐱᔨᔪᑎᓕᓂᑦ[2]:	☐
8	ᐃᓗᐊᓂ ᓄᓇᐅᑦ ᐃᐸᖏᓚᖅ ᓄᑕᕋᓂᖅ ᖃᖅᐅᓵᓴᖅᑎᑦ ᓯᔨᖅᐱᓗᖏᓂᐅᓴᕐᓴᖅᑲᓚᖏᓪᓕᖅ	☐			☐

<u>ᐅᑯᐊ ᖃᖅᓴᒪᔨᐅᓴᕆᓚᐊᓕᓂᑦ</u>:

1. ᐃᓗᐣᓇᑎᖅ ᐱᓕᕆᓚᖏᑉ ᓇᑦᓕᐊᐣᓄᖏᓪᓕᔪᑦ ᑎᑎᖅᓯᒪᔨᑦ ᐅᑯᐊ ᖃᑯᓕᓂᑦ, ᐊᖑᓪᓗᐊᖅ ᐅᑦᓗᑎᓚᖏᓪᓕᐊᓕᓂᑦ ᐃᒧᒃ(*), ᓇᖏᒥᓂᓕᑦ ᑐᓂᒥᐊᖅᑲᓂᐊᖅᑕᖏᑦ ᐊᑦᓕᒃᓯᓯᒪᔪᑦ ᐅᑯᐊᔪᓇ **ᐃᓕᖏᓪᓚ 2 ᐱᔭᔪᑎᓕᓂᑦ ᐱᓕᕆᓚᖅᓴᓇᔾᔪᓚᔪᓂᓂᒃ ᑐᔪᖅᓚᖅᓯᑦ ᑕᑕᑎᓴᖅᑎᔪᑦ ᑎᑎᖅᓯᒪᔨᐅᑦᓕᓕᓂᑦ**. ᓄᓇᕗᑦ ᐊᖓᑎᓕᓚᓵᓴᑯᑦ ᑲᑎᒪᔨᖏᑦᑎᔪᑦ ᑕᑕᑎᓴᖅᑕᐅᑎᐊᓕᓂᑦ ᑭᖓᔪᓂᖅᑕᕆᖅᓯᑦᑕ ᐱᔨᐅᔾᔨᖏᑦᑐᑦ ᐅᑯᐊᔪᓇ ᐃᓕᖏᓪᓚ 2-Γ ᐱᔭᔪᑎᓕᓂᑦ ᐱᓕᕆᓚᖅᓴᓇᔾᔪᓚᔪᓂᓂᒃ ᑐᔪᖅᓚᖅᓯᑦ ᑕᑕᑎᑕᖅᑎᔪᑦ ᑎᑎᖅᓯᒪᔨᐅᑦᓕᓕᓂᑦ.
2. ᖃᐅᔨᓴᒪᓂᖅᓯᒪᔪ ᐊᑕᖏᓐᓄᑐᓂᒃ ᓄᓇᕗᑦ ᐊᖓᑎᓕᓚᓵᓴᑯᑦ ᑲᑎᒪᔨᖏᑦ ᐱᒋᐊᖅᑲᒪᒃᑕ, ᓄᓇᕗᑦ ᐊᖓᑎᓕᓚᓵᓴᑯᑦ ᑲᑎᒪᔨᖏᑦ ᑐᐱᔪᓐᓇᖅᑐᓂᑦ ᐃᓕᑎᓕᐅᑎᔪᓐᓇᖅᑐᖅ ᑐᖓᔾᔪᑎᒃᓴᓇᔾᔪᓂᑦ ᐱᒋᐊᖅᑲᒪᒃᑕ ᖃᖅᐅᓵᓴᖅᑐᑦ ᐃᓕᑎᓕᐅᑎᔪᓐᓇᖅᑐᖅ ᐊᖑᓪᓗᐊᖅᑐᑦ ᐱᔭᔪᑎᓕᓂᑦ.
3. ᐊᑐᐃᓐᓇᖅᑐᑦ “ᐊᓯᖏᑭᓐᓂᑐᑦ” ᓂᕆᐊᖅᑕᐅᓂᖅᓴᑕ, ᐅᖅᑲᐅᖅᓴᐅᑎᐊᓕᓂᑦ ᓄᓇᕗᑦ ᐊᖓᑎᓕᓚᓵᓴᑯᑦ ᑲᑎᒪᔨᖏᑦ ᐊᐱᓚᐅᔾᔪᓂᒃ ᖃᖅᐅᓵᓴᖅᑐᑦ ᐃᓕᓴᕐᓂᐅᑎᓯᒪᔨᑦ A-Γ ᐱᓕᕆᓚᖅᓴᓇᔾᔪᓚᔪᓂᓂᒃ ᑐᔪᖅᓚᖅᓯᑦ ᑕᑕᑎᓴᖅᑕᐅᑎᔪᑦ ᑎᑎᖅᓯᒪᔨᐅᑦᓕᓕᓂᑦ.

2. ᓇᓕᓕᐅᑦᑯᓄ ᐊᐅᓪᓚᑕᐅᓂᐊᖅᖢᑦ ᐅᑯᑎᒍᓇ 3, 4, 5-ᑯᓪᓗᑭᐊᖅ ᐅᑯᐊ ᖃᑯᓇᓂᑦᑐᓄ ᓂᕈᐊᖅᑕᐅᓂᐊᖅᖢᑦ, ᓇᓗᐊᗅᑦᑭᓄ ᖁᓇᐃᓕᑐᑦᑐᓄ ᐱᓕᕆᑕᐅᓂᐊᖅᑐᑦ ᐅᓴᖃᓂᐊᖅᑕᐅᓗᑎᒃ. ᐃᓚᒋᓪᓚᐅᑎᓄᑭᓄ ᐅᓂᒃᑲᓇᓄᑭᓄ ᖁᓇᐃᓕᑐᑦᑐᓕᒫᓐᓇᒃ ᓇᐃᐸᓗᓂᑦ.

X	ᓴᐃᕆᑦᓴᕆᑕᓪᓕᐊᑦ, ᒪᖏᑐᒃ ᐃᑎᖅᓴᓪᓕᐊᕐᒪᓂᒃ, ᐊᑕᐅᓂᖅ ᓄᓇᐅᑦ ᐃᓗᐊᓂᑦ izok-ᒥ ᔨᵒᒃ, ᑲᵒᓄᐊᖅᓯ, ᐃᒃᑕᑎᑐᖅ
	ᑕᐃᒪᵒ ᐅᓴᖅᑭᑦ ᓯᑎᓕᑦ ᒪᖏᑐᒃ ᐃᑎᖅᓴᓪᓕᐊᕐᒪᓂᒃ, ᐊᑕᐅᓂᖅ ᓄᓇᐅᑦ ᐃᓗᐊᓂᑦᑐᖅ ᐅᕐᓂ High Lake–ᒥ – ᔨᵒᒃ ᐊᖏᓗᓗ ᐃᒃᑕᑎᑐᖅ
	ᓄᖅᓯᐊᐃᑐᖅ
	ᐊᓯᖅᑎᑦ:_____

3a. ᐅᑯᓄᖅᖃᖅᑐᑦ ᐱᓕᑎᐊᒃᓴᖅᖢᑦ ᓇᓕᓕᐅᑦᑯᓄ 12, 13, 14-ᑯᓪᓗᑭᐊᖅ ᖃᑯᓂᓂ ᐅᑯᐊ ᓂᕈᐊᖅᑕᐅᓂᖅᖢᑦ, ᐱᓱᓪᓗᑎᑦ ᐅᑯᐊ ᐊᓪᓕᐊᓕᕐᓂᒪᑦ ᐊᖏᓗᓗ ᑭᐅᓗᑎᑦ ᐊᐱᖅᓯᓇᑦ ᐅᐊᓪᓚᑕᐅᓂᖅ.

ᐅᓯᒍᑕᐅᓴᓐᓂᐊᖅᑐᑦ ᖃᐅᔨᓴᑦ	ᖃᐅᓯᑦ	ᑐᓴᕆᑦ ᐊᑐᑕᐅᔪᓚᑦ	ᖃᐅᓄᑎᑦ
ᐅᑯᓄᖅᖃᖅᑐᒃᓴ ᐱᑕᖃᖅᑎᑕᑐᖅ			

3b. ᖃᐅᓇᐃᑎᑐᖅᓯᒪᓕᑦ ᑭᓯᑐᐃᓇᓕᑦ ᐅᓂᒃᑲᓚᒍᑎᑦ ᒪᑯᐊ ᑐᓚᒃᑕᖅᐸᑦ, ᓂᐅᕆᐃᐸᑦ, ᖃᐅᖅᑕᓚᑦᓄ ᒥᕐᐸᓪᓚᑦᑎᓪᓗᖅᑕᖅ ᐊᑐᖅᑕᐅᓴᖅᑐᑦ ᐅᑎᕐᓂᓚᐅᑦᑎᓪᓗᖅᑕᖅ ᐱᓕᕆᑕᐅᓂᐊᖅᑐᑦ ᐅᑎᕐᓂᓚᐅᑦᑎᓪᓗᖅᑕᖅ ᐅᑎᒍᓐᓇᖅᑐᑦ ᐅᑎᒍᓐᓇᖅᑐᑦ ᐅᑎᒍᓐᓇᖅᑐᑦ

Δ◁ᵊᓇᕆᓂᵊᓂᒃ ᐱᑕᓪᓂ ᒪᑯᐊ ᑐᐊᐃᖏᓇᒃᑐᑕᓂᕐᔪᓯᑎᓂ ᐊᒪᒪᓗ ᖃᖅᑎᓚᒍᑎᓂ Δᑭᓂᖅᑲᓂᓄᖅᐸᓂ ᓇᒥᑐᐃᓇᓇᖅᑐᓂ ᐱᑕᓚᐃᖏᓂ. ᖃᖏᓪᓕᔪᓂ ᐅᓄᕆᓂᖅᑐᖅᓯᓚᖅᑐᓂᑐᓂ ᒥᖏᐃᖏᓂ.

ᑐᓴᔪᖅᖁ ᐅᙵᓂ Izok–Γ ᐊᖏᑯᑎᓄᖁᖅ, ᖃᖏᓪᓕᒧᖅ ᐊᖏᑯᑕᐅᖅᑕᑕᓴᖅᑐᖅᖁ ᐅᑭᐅᓴᑯᓂ ᐊᐅᓴᑯᔪᒥᓪ ᓴᓇᓴᐅᔪᒪᓯᓇᖅᑐᖅᖁ ᓴᓇᓴᐅᓕᕐᖅᐸᑕ ᐊᑕᐅᔪᑯᑯᓂ Δᐃᒪᑎᑐᐃᓇᖅ ᒪᖏᐅᖅ ᐊᖏᑯᒍᓂ.

3c. ᐊᖏᑲᔪᒪᓴᐅᔪᓯᖏᓇᓂᖅᐸᑦ ᖃᑭᒥᑲᑯᓂ ᐊᔪᓂ ᓄᓇᕆᑎᓴᐅᑲᐃᓇᓂᖅᐸᑦ, ᖃᓄᐃᔅᑑᓚᖏᓚᖅ ᐅᓂᑲᑎᓇᓗᐃ ᑐᔪᖏᐸ ᓴᓇᓴᐅᔪᒪᓴᖅᑎᓂᖅᑐᓂ ᐃᓗᐊᓂᓂᓄᖅᐸᑦ ᐊᑐᑕᐅᓴᖅᑐᑦ ᐊᔪᓂ ᓄᓇᕆᐸᑦ ᐊᑐᑕᐅᔪᓯᓇᖅᐸᑕ.

Δᓚᒋᓂᐅᑎᓴᖅᑐᖅ ᐅᑑᖏᓖᓚᔪᓂ ᑕΔᒪᖏᓪᓕᒧᖅ ᐊᖏᑲᔪᒪᔪᒧᑦ ᐊᔪᓂ ᓄᓇᕆᑎᓴᓂ ᐅᑯᓇᓂ Izok–Γ, High Lake–Γ, Grays Bay–Γ⊃, Ċᒃᑯᐊ ᐱᙵᓚᔪᓂ ᔪᑕᒪᓴᐅᐊᖅᖁ ᐊᔪᓂ ᓄᓇᐃᓂ ᐊᑐᖅᑕᐅᖅᑕᑕᓂᓪᓕᒪᑕ ᓴᓇᔪᖅᑲᒋᐸᑦ ᐊᑭᑑᑎᓂᒃ ᐃᓄᖅᐲᖅᑎᒥᒃ ᓴᓇᓴᐅᓕᕐᖅᐸᑦ ᐅᙵᓂ, Izok–Γ ᐊᖏᑎᑕᒃᑎᒥᒃ. ᓄᓇᐃᑦ ᐊᔪᓂ Δᓄᖅᑲᓪᓚᓂ 50–ᓂᒃ ᑎᑭᐅᑎᔪᒪᔪᓂᒃ 75–ᓄᑦ Δᖏᓴᐃᓴᖅᑎᑦ ᐊᖏᑯᔪᖅᑐᖅᑕᑎᓪᓚᔭᒍ ᐊᒪᒪᓗ Δᐃᒃᖃᐃᓕᒥᒃ ᓴᓇᓴᐅᓕᕐᖅᐸᑕ ᓴᓇᔭᖅᑎᑕᖅᑲᓪᓚᓂ. ᓄᓇᕆᑎᓴᒥ ᐊᔪᓂ ᐅᔪᖅᑲᑕᐅᑎᑕᖅᑲᓪᓚᓂ ᑕᑲᓂᓴ ᑎᑭᑕᒥᓂᖅᑲᓪᓚᓂ ᓄᓇᓕᒥᓂ Δᓄᖅᑲᓂᓕᖅᑐᓂ Δᐃᒪᑎᑎ 250–ᓂᒃ. ᐊᐅᑕᐅᑎᑦ ᐅᐊᖅᓭᒍᖅᑐᑦ ᐊᑐᖅᑕᐅᖅᑕᑕᖅᑲᓪᓚᓂ ᓄᓇᕆᑎᓴᐅᔪᓂ ᐊᔪᓂ. ᓴᓇᓀᑦ ᓇᔪᖅᑕᓴᑎᑦ Δᐅᖅᑲᓪᓚᓂ Ham ᓄᓇᓴᓂ Ċᓂᓇ ᒧᓂᓇ Δᓄᖅᑲᓂᓇᓪᓚᖅᑐᖅ 400–ᓂᒃ.

4. Δᖏᓇᐃᓴᖅᑎᑦᓴᓇᓀᓂᒃ ᓴᓇᔪᖅᑕᑎᑦᓪᓚᔪ

ᐊᑕᓴᖅᑐᑦ ᑕᒪᓂ ᐱᑕᓚᔪᑦ = (A)	670 - 800	ᖃᖅᑕᔪᑦ ᐅᑦᓪᐃᐃᑦ ᐱᑕᓚᕕᕕᓂᑦ = (B)	365 ᐅᑦᓪᐃᐃᑦ ᐊᖏᕿᔪᑕᒧᖅ	**ᑲᑎᖅᑐᖅᖁᓚᔪᑦ ᐅᑦᓪᐃᐃᑦ** **ᐱᑕᓚᓴᓇᐃᑦ** **(A) x (B) =**344,550 – 292,000

ᐊᐅᑕᔪᖁᔪᖅᑎᑦᓪᓚᔪ

ᐊᑕᓴᖅᑐᑦ ᑕᒪᓂ ᐱᑕᓚᔪᑦ = (A)	400 - 500	ᖃᖅᑕᔪᑦ ᐅᑦᓪᐃᐃᑦ ᐱᑕᓚᕕᕕᓂᑦ = (B)	365 ᐅᑦᓪᐃᐃᑦ ᐊᖏᕿᔪᑕᒧᖅ	**ᑲᑎᖅᑐᖅᖁᓚᔪᑦ ᐅᑦᓪᐃᐃᑦ** **ᐱᑕᓚᓴᓇᐃᑦ** **(A) x (B) =**146,000 – 182,500

5. ᖃᓄᓂᑎ ᐱᑕᓚᐊᓂᐊᖅᑐᑦ

ᐊᐅᑕᑕᐅᑎᓪᓚᔪᑕ: ᐅᓴᓇᑦ 2015 (ᐱᑎᐊᖅᕕᒃᖏᓇᑦ ᓴᓇᔪᑦ) ᐅᙵᓇ 2028-ᒧᑦ

ᑐᒃᔪᖁᒧᓇᔪᑦ ᐱᑕᓚᔪᓄᓇᕕᖅᕕᒃ:
ᐅᓴᓇᑦ 2015–Γᒃ ᐅᙵᓇ 2037-ᒧᑦ

6a. ᓄᓇᓂ ᐊᕕᒃᑐᖅᓯᒪᔪᓂ (ᓇᓪᑕᐊᓇᓄᑦᑐᓂᑦ ᑎᑎᕐᓚᑎᑦ):

☐	ᑲᓇᓇᓚᓂ ᖃᑭᖅᑲᒋᓕᔪᑦ	☐	ᑭᓴᓪᑕᖅᑐ	X	ᖃᑭᑎᖃᐅᑦ	☐	ᑭᒃᑕᓇᓕᓄᓇᕕᖅᕕᒃ ᓇᒥ ᓄᓇᓕᒧᑦ:
☐	ᐅᐊᓇᓇᓚᓂ ᖃᑭᖅᑲᒋᓕᔪᑦ	☐	ᒥᕐᔭᐃᐱᓯᕕᒃ				

6b. ᖃᓄᐃᔅᑑᓚᖏᓚᖅ ᐅᓂᑲᑎᓇᓗᐃ ᓇᒧᑦᓭᓪᓕᓇᓂᓚᖏᓚ ᓄᓇᐅᑦ ᑐᔪᖏᐸ ᐱᑕᓚᕕᐅᔪᒪᓪᑕᓂᓄ ᐊᐅᑕᓴᖁᕕᐅᔪᓂᖅᑐᖅᖁ ᓄᓇᒥ ᐊᕕᒃᑐᖅᖁᓚᔪᑦᑐᓂᑦ ᓄᓇᓕᒥ ᐊᐅᑐᖅᑐᐅᑎᓂᖅᑐᖅᖁ ᓄᓇᓕᒥᓂ ᖃᖅᑎᓚᒍᑎᓂ ᐊᐅᑕᓴᖁᕕᐅᔪᓂᖅᑐᖅᖁ ᓄᓇᓕᒥᓂ.

ᐅᓇ ᓄᓇ Izok ᐱᑕᓚᕕᐅᓪᓚᓇᓪᓚᑦ ᐊᖏᑯᑕᐅᓄᓂ Δᑲᑉᓂᑐᖅ ᐅᐊᓪᓚᓂᐊᑉᓂᑐᖅ ᖃᑎᖅᑎᒥᐅᓂ ᓄᓇᒪᓂ. ᑕᒡᓭᓂ ᐱᑕᓚᐊᖏᑉᓪᓚᓇᓪᓚᖅᑐᑦ ᐅᔪᓇᓂ Izok ᐅᔨᖅᓴᖅᑭᕕᖅᕕᒃᓴᒥᒃ, High Lake ᐅᔨᖅᓴᖅᑭᕕᖅᕕᒃᓴᐊᓂ, ᑐᓪᑲᑕᖅᕕᒃᓴᖅᓴᑦᑐᓂ ᐅᓭᓂ Grays Bay–Γ ᒪᑐᒪ Coronation Δᓪᓴᓂ, ᐊᒪᓪᑐ Izok–Γ ᐊᖏᑎᑕᒃᑎᒥᒃ, ᖃᓄᐃᔅᑑᓚᖏᓚᖅ ᐃᔭᖏᓄᓚᔪᖅᖁ Izok–ᒧᑦ ᐅᙵᓄᓪᑐ High Lake–ᒧᑦ ᑐᓴᔪᖅᖁ ᑐᓪᑲᑕᖅᕕᒃᓴᐅᔪᓂᖅᑐᖅᖁ. ᐅᓭᓂ Izok–Γ ᐅᔨᖅᓴᖅᑭᕕᖅᕕᒃᓴᒃ Δᑲᑉᓂᑐᖅ Δᐃᒪᑎᑎ Γᒃᓴᐅᔨᖅᑯᖅᖁ ᐅᓄᓪᑐᓄᓄᖅ 360 km ᑲᓪᒋᑕᐃᑦ ᑲᓇᓇᓄᓚᓂᑐᖅᖁ ᔨᐊᑐᓇᐃᖅ, ᓄᓇᕆᓪᓕᒥ ᐊᒪᒪᓗ Δᐃᒪᑎᑎ 250 km ᑲᓪᒋᑕᐃᑦ ᐅᐊᓇᓇᓚᓂ ᒪᑐᒪ Coronation Δᓪᓴᓂ. ᐅᓭᓂ High Lake–Γ ᐅᔨᖅᓴᖅᑭᕕᖅᕕᒃᓴᒃ Δᑲᑉᓂᑐᖅ Γᒃᓴᐅᔨᖅᑯᖅ 50 km ᑲᓪᒋᑕᐃᑦ ᑲᓇᓇᓚᓂ ᐅᖏᐊᓂᑐᖅᖁ Izok–Γ. ᐅᓭᓂ High Lake–Γ ᐅᔨᖅᓴᖅᑭᕕᖅᕕᒃᓴᒃ Δᑲᑉᓂᑐᖅ Γᒃᓴᐅᔨᖅᑯᖅ 50 km ᑲᓪᒋᑕᐃᑦ ᑲᓇᓇᓚᓂ ᐅᖏᐊᓂᑐᖅᖁ Izok. ᐅᓭᓂ Grays Bay–Γ ᑐᓴᔪᖅᖁᓴᖅᑭᕕᖅᕕᒃᓴᒃ Δᑲᑉᓂᑐᖅ Γᒃᓴᐅᔨᖅᑯᖅ 328 km ᑲᓪᒋᑕᐃᑦ Izok ᐅᔨᖅᓂᓂᐊᖅᕕᒃᓴᓄᑦ ᐊᒪᒪᓗ Δᐃᒪᑎᑎ 2.5 km ᑲᓪᒋᑕᐃᑦ ᐅᐊᓪᓚᓂᐊᓂ ᕿᓴᓂᓄ ᒪᑐᒪ Kennarctic ᑯᓴᓪᑕ.

ᖃᓄᓂᑎᓪᓕᑦ ᓄᓇᓪᓕᑦ ᐅᙵᓴᓴᓚᔪᒧᑦ Izok ᐊᖏᑯᑎᓄᖁᒧᑦ ᐱᑕᓚᕕᐅᓪᓕᔪᓂᖅᑐᖅᖁᒧᑦ ᖃᑯᔪᓂᖅᑐᖅᖁᓂᖅ (180 km ᑲᓪᒋᑕᐃᑦ ᑲᓇᓇᓚᓂᑐᖅᖁᓂᖅ ᐅᐊᓪᓚᓂᐊᓂ High Lake –ᒧᑦ). ᐱᑕᓚᕕᒃᖏᐃᑦ ᓄᓇᐃᑦ ᖃᓄᓂᑎᓂᑐᑦ ᖃᓄᐃᔅᑑᓚᖏᓚᖅᑐᓂᓪᓕᖅᓂᒃ ᐱᑕᓂᓂᓂᒃ ᐅᐸᑕᐅᑎᑦᓴᖅᑭᕐᑐᑦᓂᒃ ᓄᓇᓂᒃ.

ᐅᖃᐊᒍᑦ ᐊᓚᓗ ᐅᐊᓕᓂᐊᒍᑦ ᐊᖃᑎᒌᖅᑕᕐᕕᖏᖅᑐᑐᖅᑐᑦ ᐅᓱᓴᓄᑦ ᐊᒥᐊᖅᓯᐊᒃᑯᑦ ᐊᑐᖅᑕᐅᖃᖅᑕᕐᓂᖅᑐᑦ ᐅᓱᓯᓄᑦ ᐊᓚᓗᓗ ᐅᖃᖅᑕᖅᑕᒥᓂᖅᓂᒃ ᓱᖅᓯᓕᓱᓯᒃ ᑐᓴᐅᑦᓴᐅᕐᓇᖅᑐᖅᓂᒃ.
“ᐊᒥᓱᓰᒪᑕ ᓄᓇᒥᐅᑕᓂᒃ ᐅᒪᔪᖅᑕᓪᓕᑦ ᐊᓚᓗᓗ ᑕᓇᐅᖏᒥ, ᓂᖅᔪᐊᑎᑦ ᐊᓚᓗᓗ ᐅᒪᔪᖅᑕᓪᓕᑦ ᐊᑐᑎᓂᖅᑎᓇᓚᒪᑕ ᖃᑎᖏᒥᐅᓄᑦ ᐊᓚᓗᓗ ᑲᓇᖃᖅᑐᓂᒃ ᖃᖅᐳᓂᒃᑯᑦ ᓄᓇᖃᖅᑐᓂᒃ, ᐃᓄᓐᓇᐊᓚᓂᓪᓗ ᓄᓇᖃᖅᑐᓂᒃ ᐊᑐᖅᑕᐅᖃᖅᑐᓂᒃ ᓄᓇᖃᖅᑐᓂᒃ ᐊᑐᖅᑕᐅᖃᖅᑐᓂᒃ. ᐃᓕᓴᐅᔪᓂᒃ ᒥᖅᖢᒪᓂᒃ ᐊᑐᖅᑕᐅᖃᖅᑐ

High Lake–Γ ᓄᓇᓕᕐᓴᖅ
Lat (degree/minute) 67.380N Long (degree/minute) -110.844W

Ham Lake–Γ ᓄᓇᓕᕐᓴᖅ (Izok–Γ)
Lat (degree/minute) 65.686N Long (degree/minute) -112.585W

ᐊᐳᑎᖏᑦᑕᑦ ᐅᑯᐊ ᖃᐅᓚᖅᑕᑐᑦ ᐱᔨᐊᑎᓪᓗᑦ ᐊᓯᓂ ᓄᓇᓕᕐᓴᐅᓪᓚᐅᕐᑐᖅ:
ᓄᓇᖓᐊᑎᒍᑦ:
ᐃᓕᑎᓕᐅᑎᑎᑦ ᐅᑯᓄᖓ ᐊᑦᓚᖅᓯᒪᔪᒍᑦ ᓄᓇᖓᐊᑦ ᐱᓕᕆᓚᐅᖏᓐᓇᖅᑐᖓᓄᖅ ᐱᔨᐊᑎᓪᓗᑦ (1:50,000 **ᐊᑐᐃᓐᓇᐅᑎᕐᕈᑦ**, 1:250, 000 **ᐱᑕᖃᑦᓚᕈᐊᓪᓗᑦ ᐱᖁᔭᖅᓴᐊᖅᑎᑎᒍᒍᑦ**) ᑕᒪᑦᑯᐊ ᐊᑐᐃᓐᓇᑦ ᓄᓇᒥᐅᑕᕈᓚᐅᑦᑯᓐᓄ ᑲᓇᑕᒥ.

ᖃᐅᔨᒪᑎᑦᓯ ᐱᑕᖃᑦᑕᑦ ᐃᓕᑎᑕᐅᑎᒋᐊᕐᓂᖅ ᐱᔨᐊᑎᓐᖅᓂ ᓇᒥ ᓄᓇᒧᖓᓕᒃ ᐱᖃᓐᓂᕆᒪᑕᐃᓐᓇᖅᑐᒥ ᖃᐅᔨᒪᔨᐊᑎᖃᖅᑐᓂᖅᓂᖅ ᑐᓴᒪᖃᖅᓂᖅ ᐅᖃᖓᑕᒪᓂᖅ ᐱᖁᔭᓕᕆᓂᖅ ᐱᔨᐊᑎᓐᖅᓂ ᑐᓴᒪᖃᖅ ᐱᖁᔭᑎᐊᕈᓐ ᑐᓴᓯᖏᓐᓂᖅᑐᒥ ᐊᑐᐃᓐᓇᐅᑎᖅᑕᒥ. ᐊᐅᑭᒃᓯᒪᓕᕆᖅᑐᑦ ᐊᐳᑲᖓᓕᒫᓂᒪᓂᑎᑐᒃ ᖃᓄᖅᑕᐅᔪᖅᑯᑦ ᑕᓯᐅᓴᐃᓐᓇᖅᓴᖅ ᓄᓇᖓᓕᒫᓂᓱᐊᖅᑐᑦ ᐊᑦᓚᖅᓯᒪᓕᕆᖅᑐᑦ.

ᐃᓕᓐᓄ 4: ᑐᓴᒪᖃᑦ ᐅᓂᒃᑲᑦ ᐱᔨᐊᑎᓪᓗᑦ ᐱᓕᕆᓚᖅᓴᖅᑎᒃ ᑐᑭᓯᖅᑦ ᖃᓄᐃᓕᑐᐃᓐᓇᓂᒃ

ᐃᓕᑎᓕᐅᑎᓂᑦ ᐱᔪᓚᐊᑐᖏᑐᓂᒃ ᐱᓕᕆᓚᖅᓴᖅᑎᓚᐅᓂᒃ ᖃᓄᐃᓕᑐᐃᓐᓇᓂᒃ ᐅᓂᒃᑲᑦ ᑐᑭᓯᖅᓗᑦ ᐱᓕᕆᓚᖅᐅᔨᒡᓗᓂᓂ, ᐅᖃᓕᓵᖃᓐᓇᖏᑦᑕᑦ ᐊᓚᓗᓐ ᖃᓄᐃᓕᑐᐃᓐᓇᓂᒃ ᐊᑦᓚᐅᕐᓇᖅᑐᑦ 500 ᐅᖃᐅᓯᓄᑦ, ᖃᒡᓗᓵᓇᑎᑦᓯ, ᐃᓄᒃᑎᑦᓯ (ᐃᓕᖃᒡᓗᓂᒃ ᐃᓄᐃᓐᓇᖃᑐᓐ, ᐱᔨᐊᑕᐅᔨᖃᑦᑕᑦ ᖁᑎᖅᑎᐅᓂ). ᐱᔨᐊᑎᓕᒃ ᐱᓕᕆᐊᖅᓯᒪᒃ ᐅᓂᒃᑲᖃᖅᑐᓂᒃ ᖃᓄᐃᓕᑐᐃᓐᓇᓂᒃ, ᓇᓗᓇᐃᔨᖃᖅᓯᒪᔨᓯᐊᓂᖅᓂᖅᑐᓂ ᑐᓂᓯᓂ ᐃᒪᒃ ᐅᑯᐊᑎᑐᓂ:

- ᐱᓕᕆᓚᖅᓯ ᐊᐅᓚᓯᓯᒪᑎᓂ, ᖃᓄᐃᓕᖅ ᐊᑐᑎᓂᓯᖃᖅᓴᓂᓯᓂᐊᖅᑕᖅᓯᓂ ᐊᓯᒪᓗ ᖃᓄᐃᓕᑎᑎ ᐊᑯᓂᐅᑎᑎᕐᓂᖅ;
- ᖃᓄᐃᓕᑐᓂᒃ ᐊᑐᖏᓐᓂᖅᑕᑦ ᐃᖅᑎᖏᓐᓇᑎᑎᖃᖅᑎᖅᑕᖅᓯᓗᑎᑎᒃ;
- ᖃᓄᐃᓕᑐᐃᓐᓇᖅ ᐊᑦᑭᒃᓯᒪᓕᐅᓂᐊᖅᑐᑐᖅ ᓇᑦᑕᖅᑕᓂ ᐱᓕᕆᐊᓂ (ᑕᐃᒪᖅᑕᓂᒪᖅ/ᖁᑕᒥᓗᑐᐊᖅ);
- ᐊᓯᐊᔪᓂ ᐊᑐᑕᐅᓴᖅᑎᓪᓂ ᐃᓯᒪᒃᖁᖅᓴᐅᑎᑎᒃᖁᖅᑕᖅᓯᓗᑎᑎᒃ; ᐊᓚᓗᓐ ᓯᓂ
- ᐊᐅᓂ ᐱᓐᓂᕆᐊᕐᐅᓂᐊᖅᑐᑦ, ᖃᓄᐃᓕᑦᑐᓂ ᓯᑲᖅᖁᔪᓂ ᖃᓄᐃᓕᑐᐃᓐᓇᖅᑐᑦ ᓴᖁᑭᓪᓚᖅᑐᑦ ᐱᓐᓂᕆᐊᕐᐅᓂ ᑕᐃᓐᓄ ᓄᓇᒥ ᖃᓄᐃᓕᑎᑎᒃ ᐊᐅᓂᐅᑎᑎᕐᓂᖅ.

ᐅᓇ ᖃᓄᐅᔨᒪᑐᐃᓕᓐᓄ: ᑐᓴᒪᖁᔭᓐᖅᓂ ᐊᐅᓚᕆᒪᔨᐅᓂᐊᖅᑐᑦ ᐊᑐᑕᐅᓂᐊᖅᑎᑦᑕ ᓄᓇᑲᓚᐅᓴᓂ ᑲᑎᒪᔨᖅᑎᑦᑕ ᐊᑐᑕᐅᓂᐊᖅᑎᓯᓗᑎᑎᒃ ᐅᑲᓇᑕ ᐃᓕᓐᓄ 2 ᐱᔨᐊᑎᓪᓗᑦ ᐱᓕᕆᓚᖅᓴᖅᑎᓚᐅᓂᒃ ᑐᓴᒪᖃᑦ ᑕᑎᑎᖅᑎᑦᑕ ᑎᑎᖅᑯᓂᖅᓴᐅᑎᑎᕐᓂᑦ, ᐱᔨᓴᕆᓯᐊᓪᓚᖅᑎᑦ ᐅᓄᐊᓂᓕᒫᑦ ᐃᓕᓐᓄ 8-Γ ᑭᓯᐊᓂ, ᐊᓯᐊᓈᖅᑎᑦᑕ ᑲᔪᓯᓚᑎᑎᒃ ᐅᓄᐊᔪᓇ ᐃᓕᓐᓄ 5-ᓄᑦ.

ᐃᓕᓐᓄ 5: ᖃᓄᐃᓕᑐᑦ ᐊᑐᖏᓐᓂᐊᖅᑐᑐᑦ ᓴᓇᔨᓄᑦ

1. ᑎᑎᕋᓚᑦ ᓴᓇᕐᑎᑦ ᐊᑐᖏᓐᓂᐊᖅᑐᑐᑦ (ᐃᓕᑦᑲᐅᓚᑎᒃ ᐃᓄᑦᑕᑎᑦ, ᒥᓚᐊᑕᑎᑦ, ᖃᒃᖏᓕᕆᔨ, ᓄᓇᕗᐅᑦ ᐊᓯᖏᓪᓚ):

ᓴᓇᕐᑎᑦ ᖃᓄᐃᓕᑐᑦ, ᖃᑦᕿᐅᓂᖏᓪᓚ	ᐊᖏᕐᓂᖏᓪᓕ - ᖃᑦᕿᐅᓂᖏᓪᓕ	ᑐᓴᒪᖃᑦ ᐊᑐᑕᐅᔨᓴᑦ

2a. ᐱᔨᐊᑎᓪᓗᒃ ᐅᖃᓕᓴᐊᓚᕐᓗᒃ ᐊᓚᓗᓐ ᐊᑦᑕᕆᔭᔨᖃᑐᐃᓐᓇᓚᐊᓪᓗᒃ ᐊᑐᖃᖅᑕᐅᓚᑎᒃ ᐱᓕᕆᓚᖅᓴᖅᑎᑦ:

ᐅᖃᓕᓴᐊᓚᓗᒃ	ᖃᖅᑎᑦ ᐳᖏᑦ ᐊᓚᓗᓐ ᖃᓄᐃᓕᑐᐃᓐᓇᓂᒃ ᐃᓚᖃᖅᓯᓂ	ᖃᓄᐃᓕᑐᐃᓐᓇᓂᒃ ᐅᖃᓕᓴᐊᓚᓗᒃ ᐊᑐᖃᖅᑕᖅᓯᓗᑎᑎᒃ (ᓴᑦᑕᐃᑦ)	ᑐᓴᒪᖁᔭᓕᕆᓚᖅᓴᖅ ᐃᓕᑦᑲᐅᓚᑎᒃᐃᓚᖅᑎᑦ ᓚᐃᓄᖏᓐ
ᐊᐅᓚᐅᑎᓯᐅᑦ			
ᐃᓚᓵᖏ			
ᖃᖅᖏᓚᑦᓴᖅᓯᐅᑦ			
ᐳᑦᓚᖅ			
ᐊᓯᖏᑦ			
ᐊᑦᑕᓇᖅᑐᖃᖅᑎᑦᓯ ᐊᓚᓗᓐ ᐃᓕᓐᓄᑦᑲᓂᖅ		ᐃᓵᖅᓇᑎᒃ ᖃᖅᑎᑦᓯᐅᑎᕐᓂᑦ ᐊᑦᑕᓇᖅᑐᖃᖅᑎᑦᓯ ᐊᓚᓗᓐ ᐃᓕᓐᓄᑦᑲᓂᖅ	

		(ᓂᓪᑕᐃᑦ)	

2b. ᐅᓂᖅᑲᓗᓂᑦ ᑐᖅᓯᖏᑦ ᐱᔨᔪᑎᓪᓗ ᓇᑦᓂᐅᕆᐊᒥᓂ ᐊᔪᕐᖅᑲᖅᑎᓂᓂᕐᕿᑦ ᐊᑐᑕᐅᔪᒍᒪᕐᓂᐊᕐᕿᑐᐃᓂᖅ.

3a. ᐅᓂᖅᑲᓗᓂᑦ ᐊᑐᖅᑎᑕᓯᓵᖕᖓᔪᓂᑕ ᐃᒋᖅᑭᑎᒃᖏᓐᓂᑦ ᖃᓄᐃᑦᓗᐊᖅᑎᑎᕐᒥᑦ

ᖃᐅᑕᐅᓯᒪᑦ ᐃᒪᐃᑦᓗᐊᖏᑐᑦ (m³)	ᑐᓴᕐᓯᑦ ᐃᒋᖅᑭᑎᒃᖏᑦ ᐊᑐᑕᐅᖅᑎᑎᕐᓯᖅᑐᑦ	ᑐᓴᕐᓯᖅᑐ ᐃᒋᖅᑎᑦᖅᐱᐅᖅᑎᑎᕐᓯᖅᑐᑐᒍᑦ ᓇᓕᖅᓂᖅ

3b. ᑐᓴᕐᓯᖅᓯᒪᓕᕐᕿᓕᑦ ᐃᒋᓕᓚᕕᓂᒃᖏᓐᓄᑦ ᓕᐃᓴᒃᖏᓐᓄᑦ ᓄᓇᕗᑦᓕ ᐃᒪᓕᓚᓗᑦ ᑲᑎᒪᔨᖓᑦᓂᑎᒍᑦ?

Ⅾ □ ᐊᑲᑎ

Ⅾᖓᔪᑦᑦ, ᓇᑦᓕᐊᒍᑦ ᓕᐃᓴᑦ ᐊᑐᑕᐅᔪᐤᓇᖅᑐᑦ?

□ ᐊᑐᑕᐅᔪᐤᓇᖅᑐᑦ ᐅᕐᒪᓇ A-ᓄᑦ ᐃᒪᓕᓚᕕᓂᒃᖏᓐᓄᑦ ᓕᐃᓴᑦ

ᐊᑐᑕᐅᔪᐤᓇᖅᑐᑦ ᐅᕐᒪᓇ B-ᓄᑦ ᐃᒪᓕᓚᕕᓂᒃᖏᓐᓄᑦ ᓕᐃᓴᑦ

ᐃᓕᖏᑲ 6: ᐊᒃᑕᕈᑎᒃᖏᓐᓄᑦ ᐊᒻᒪᓗ ᖃᓄᐃᖅ ᓴᓗᒪᖏᒃᓴᐃᔨᑎᑦ ᐊᐅᓕᕆᔨᕕᑎᒃᖏᓐᓄᑦ

1. ᑎᑎᕋᑦᑕ ᖃᓄᐃᓕᑦᑐᑦ ᐊᒃᑕᖏᑕᐅᑦᖃᑦᓕᓂᐊᖅᑐᑦ ᑐᓴᕐᓯᔪᖏᒪᓕᕐᓂ ᐱᓕᕆᓂᐅᔨᒪᔪᓕ ᐊᐅᓕᑕᐅᓂᐊᖅᑐᓗᓄᑦ:

ᖃᓄᐃᓕᑦᑐᑦ ᐊᒃᑕᑯᑦ	ᓯᐅᖏᖓᒪᔨᑦ ᐅᐱᓗᒪᐅᓯᕐᓇᖅᑐᑦ ᖃᓄᐃᓕᓚᐊᖅᑐᑦ ᐊᑕᖓᕆᖅᑎᓕᕐᑕᑦ	ᖃᓄᐃᓕᑦᑐᑦ ᐊᒃᑕᑕᐅᑎᑦ	ᐃᓕᓴᐅᑎᓕᓚᑕᑦ ᓴᓗᒪᖏᒃᓴᐃᔨᑎᑦ
ᖃᑯᖅᑕᑯᖓᑦ (ᐃᓄᐃᑦ)			
ᐃᒥᖅᑲ ᐅᐊᓴᕐᑎᑎᓂᖅᑲᑦ			
ᐃᑭᓯᑦ ᐊᒃᑕᑯᑦ			
ᐃᑭᔪᓇᖓᑦᑐᑦ ᐊᒃᑕᑯᑦ			
ᓄᓇᐅᐸᑦ ᖃᐅᖓᓇᓂᖅᑲᖅᑕᐅᓂᑯᑦ (ᓴᓴᒋᑦ ᓄᓇᓴᑦ, ᐊᒃᑕᑯᑦ, ᐃᓕᔪᑕᓪᓕᑦ ᓴᖃᖅᑎᓪᓕᐊᑎᒥᓂᑦ)			
ᖃᑯᒃᓴᓇᖅᑐᑎᑕᓪᓕᑦ ᐊᒃᑕᑯᑦ			
ᐊᓴᖓᑦ:			

2. ᐅᖃᖅᐅᓴᓗᑎᑦ ᖃᓄᐃᓕᑦᑐᑦ ᑐᓴᕐᓯᑦ ᐊᒃᑕᑕᑕᐅᑦᖃᑦᓕᓂᐊᖅᑐᑦ.

ᐃᓕᖏᑲ 7: ᓄᓇᕗᒻᒥᔪᑦ ᐃᓕᐅᑎᑦᓴᔪᕐᓂᑦ ᐊᒻᒪᓗ ᓄᓇᓂ ᐊᓚᒃᑐᑎᖅᓴᓕᕐᕆᐅᓂ ᐊᑐᑎᓂᓕᓪᓂ

1. ᑎᑎᕋᑦᑕ ᐊᑎᖓᑦ ᓄᓇᕗᖓᓂ ᑭᖑᓕᖅᑐᑎᖅᑐᑦ ᐅᖃᖅᐅᓵᖅᑐᑦᓴᔪᕐᓂ ᒪᑎᒪᔨᖅᑐᑎᑕᓪᓕᐊᑎᒥᓂᑦ ᒪᑎᒪᔨᖃᑦᑎᕋᓂᓄᑦ ᒪᑎᒪᔨᖃᑦᑎᕋᓂᓄᑦ ᐊᑐᑕᐃᓐᓇᕐᓂᐊᕐᕿᑦ ᐊᑐᑎᓂᓕᓪᓂ ᒪᑎᒪᔨᖃᑦᑎᕋᓂᓄᑦ ᐊᑐᑕᐃᓐᓇᕐᓂᐊᕐᕿᑦ:

ᓄᓇᕗᑦ	ᐊᑎᖓᑦ	ᒪᑐᐃᓐᖃᑎᒋᑦ	ᖃᓄᖅ ᐅᔨᑐᖅ ᐅᖃᖅᖃᑕᐅᔪᓂ

ᐃᓕᖅ 8: ᖃᓄᐃᑦᑐᖅ ᐱᓱᒋᑎᓕᒃ ᐊᐱᖏᓪᓗ

1. ᑕᒪᓐ <ᓴᕐᓴᖃᖏᑦᓭᖅᓯ ᖃᓄᐃᖏᑐᑐᐃᑦᑐᖅᓂᒃ ᖃᓄᐅᓕᒪᓂᒃ ᐃᖏᑦᓂᓕᖏᑦᓭᒃᓂᒃ ᓄᓇᕗᒻᒥ?

X ᐃ ᐊᑲᓗ

ᐊᑎᓕᐅᖅᑲᐃᑎᑐᐃ ᐊᑎᓕᐅᑭᓯᓵᑦ ᐊᓘᒪᓐ ᑎᑎᖏᑐᐃ ᐅᑦᑐᖅᑕᑎᑦ: ᑕᑕᑎᖅᑕᑎᑦ:

Environmental Permitting Lead August 20, 2012

ᐊᑎᓕᐅᑭᓯᕆᔨᑦ ᐱᓕᕆᐊᓗᖓᓐᓂᒃ ᑕᐃᓴᐃᓵᓯᐊ ᐅᕐᓐᖓᓐ

ᐃᓕᒋᓕᐅᑎᓯᒪᔪᓄ A
ᐱᓕᕆᐊᖅᓯᐅᓂ ᖃᓄᐃᔅᑐᓂᓐᖓᓄᖅ ᐅᖃᖅᐅᓯᑦ ᑐᑭᖅᓴᖅ

ᐊᖃᑎᑕᐅᖃᖅᑕᕐᕋᖃᖅᑐᖅ ᓄᓇᑐᐃᓐᓇᖅᑎᑦ: ᐱᓕᕆᓇᖅᓯᐅᔪᓚᖅ ᑐᓴᓂᖅ ᐊᖃᑎᑎᓕᐅᔅᓴᑎᓄᖅ ᓄᓇᓯᐅᑎᓄᑦ ᐊᖃᑎᑕᐅᖃᖅᑕᕐᕋᖃᖅᑐᖅ ᓴᖅᑭᐃᓚᐊᖃᖅᑕᐃᓕᓴᑎᓄᖅ ᓄᓇᑐᐃᓐᓇᖅᑎᑦ ᐱᐅᓯᖅᓯᖅᑐᑎᒃ.

ᖃᓄᖅᑎᑦ ᐊᖏᕐᓵᖅᓯᒪᔪᒥᒃ ᖃᓄᖅᓴᑎᓄᖅ: ᐱᓕᕆᓇᐅᔪᓚᖅ ᑐᓴᓂᖅ ᓇᓴᓇᐃᖅᑕᐅᓴᑎᓄᖅ ᖃᓄᐃᔅᓴᓴᐊᖅᑐᑦ ᐊᖏᕐᓂᖏᑦ, ᖃᓄᐃᓇᑐᑎᓄᖅ ᐱᑕᖅᓱᒪᖏᓪᓕ, ᖃᓄᐃᔅᓴᓴ ᑕᐅᑐᖅᓂᖏᑦ ᐱᑕᓂᓴ ᐊᒪᓚᓴ ᖃᑭᒋᖅᐅᐅᓂᖅᑐᑦ ᑭᓇᐅᔨᖅᓴᐅᑎᓄᖅᓴᑦ ᐊᒪᓚᓴ ᐅᓪᓴᖅᑐᖅᑕᐅᓴᑎᓄᖅ ᐱᓕᕆᓂᔾᔪᑎᓄᖅᓴᑦᑐᑎᓄᖅ ᖃᓄᐃᓇᖅᑐᖅ ᐊᑐᓂᓕᐊᖅᑐᑦ ᐱᖓᓱᖅᑐᑦ ᐱᑕᓂᓴ ᐊᑐᑎᓂᖃᓄᖅᓯᖏᓐᓂᖏᑦ ᐱᓇᓂᓕᐊᖅᑐᑦ ᐅᖅᓯᖅᑐᑦ ᐱᑕᓂᓴ ᐊᑐᑎᓂᖃᓄᖅᓯᖏᓐᓂᖏᑦ ᐱᓕᕆᓂᔾᔪᑎᓄᖅᓴᑦᑐᑎᓄᖅ ᖃᓄᐃᓇᖅᑐᖅ ᓴᖅᑭᖅᓯᒪᓕᕆᓂᖅᓴᑦ ᐱᓕᕆᓂᔾᔪᑎᓄᖅᓴᑦᑐᑎᓄᖅ ᖃᓄᐃᓇᖅᑐᖅ ᓴᖅᑭᐃᓚᐊᖃᖅᑕᐃᓕᓴ

ᑭᖏᑕᕐᓯᐅᐊᖅᑎᑦ ᖃᐅᔨᓴᖅᑎᑦ: ᐱᓕᕆᔨᒃᑲᐅᔪᓐᓇᖅ ᑐᖅᓯᖏᖅ ᒪᔭᓄᖏᖓᔪᓂᒃ ᓴᓇᓗᑎᑦ ᓇᒥᑐᓴᐅᓐᓇᖅ ᓄᓇᒥ ᐊᐅᓪᓚᑦ ᐃᓚᖃᖅᑎᓗᑎᑦ ᓴᖅᑭᑐᖅᑎᓗᒍ ᓴᓇᓕᕆᓂᖅ ᐊᓯᐅᓯᖏᓐᓂᖅᑐᒃ ᐊᐱᐅᖏᓪᓕᖅᑐᒃ ᓴᖅᑭᖑᓂᖅᑐᒃ, ᐅᖅᑐᖃᓕᕆᓂᖅᑎᑦ ᖃᓄᖅᑎᑦ ᐊᖏᕐᓂᓚᖓᒃ ᐊᒻᒪᓗ ᓄᐊᕐᓯᖃᓕᕆᓂᖅᑎᑦ ᖃᐅᔨᓴᖅᑎᑦ ᑕᐃᒪᓐᓇ ᖃᐅᔨᓴᓂᑦ ᓇᒡᒐᐃᓐᓇᖅᑐᖓ ᓄᓇᒥ ᖃᓄᖅᑎᑦ ᐱᓇᕐᓂᖅᑕᐊᖅᑎᑦ.

ᓄᓇᒥ ᓂᐯᐱᓗᖓᓂᐅᓴᐊᖅᑲᓂᖏᓐᓇᓕᖓᓐᓄᑦ ᖃᐅᔨᓴᖅᑎᑦ: ᐱᓕᕆᔨᒃᑲᐅᔪᓐᓇᖅ ᑐᖅᓯᖏᖅ ᐊᐅᓕᕋᓕᐊᑦ ᖃᐅᔨᓴᖅᑐᑦ ᓄᓇᖓᔪᐊᑎᒍᑦ ᖃᓄᖅᑎᑦ ᐃᑎᓂᖅᑕᖏᓐᓂᖅᑕᖅᑐᖅ ᐅᑭᖃᖅᑦ ᐃᐸᖅᑕᒃᑯᓕᓪᓚᖅᑕᖅᑐᖅ ᐅᑭᖃᖅᑦ ᐃᓕᓴᖅᑎᒍᑦ ᖃᓄᖅᑎᑦ ᑎᑭᐅᑎᒍᑦ ᐊᐸᐊᕋᑦ ᐱᐊᓂᖅ ᐱᓕᕆᓂᖅᑐᒃ ᐃᓚᖃᖅᑎᑦ. ᖃᐅᔨᓴᖅᑲᐃᑦ ᓇᒥ ᓄᓇᓂ ᒪᓕᓇᓕᖅᑐᓂᒃ ᐃᓚᖃᖅᑎᑦ ᐊᐸᐊᕋᑦ ᐱᓕᕆᓂᖅᑐᒃ ᐃᓚᖃᖅᑎᑦ ᓄᓇᕗᒻᒥ ᐊᐅᓚᑦ ᓄᓇᒥ ᐃᓚᖃᖅᑎᑦ ᐊᐸᐊᕋᑦ ᐱᓕᕆᓂᖅᑐᒃ

Ilaga 1 Titigakhak
HAVAGIYAOYUMAYUMIK HIVUNIKHIYUTIKHANIK PIKAGEAKAKNIGA

Hivonikhivaligomagovin Nonavomi Avatilikiyin Katimayenik (NIGB-kon) takoenagealgin kagitaoyami kongeakhan ovani www.nirb.ca tapkoatlunet piyanginik Avatilikiyit titigakotae, havangoyot naonaeyaotae, tapkoatlo havangoyot naonaeyakne takoinagealgit tapkoat Nonavot Avatiligiyit Katimayit ftp kagitaoyakakvea http://ftp.nirb.ca.

ATOKLOAKTOK!
Kaoyimaneakutin una tukhigaotin havagiyaolimaetok ukoa ilagani 1-min 9-mun inikaktilogin tamaeta Kavlunatun Inuktitulo (Inoenaktulo, Kitikmeonetpan).

ILAGA 1: TUKHIGAKTUP KANOGINIGAGUN HIVONIKHIYUTIN

1. b) Havap Atea **Izok Corridor Havagiyakhak**

2. Tokhigaktum tamaeta aten titigakakvikulo tugaktakvea:

MMG Oyagak Havegaelo Katimayet	Hivayaota:	778-373-5600
Level 26,1177 West Hastings Street	Kayumiktokon:	778-373-5598
Vancouver, BC V6E 2K3 Canada	Kagitaoyakun:	Scott.Trusler@mmg.com

3. Okakvigiyaoloaktukham tamaeta aten titigakakvikulo tugaktakvea:

Scott Trusler-Environmental Permitting Lead	Hivayaota:	778-373-5586
Level 26,1177 West Hastings Street	Kayomiktokon:	778-373-5598
Vancouver, BC V6E 2K3 Canada	Kagitaoyakun:	Scott.Trusler@mmg.com

ILAGA 2: AGIGUTAOYAGEAKAKTOK UKUNANGA

1. Titiklogit tamaeta agigeakaktun tugagayunik havagiyaoyumayumun:

x	Aviktokhimayuni Inoen Katimayen (RIA-guyun)		Kanatami Aolaktitigeagutinun Aneaknaetukun (CLS-kun)
x	Nunavumi Imalikiyin Katimayin (NWB-kun)	x	Avatilikiyin Kanatami (EC-kun)
x	Nunavumi Paknaeyaeyin Katimayin (NPC-kun)	x	Kavaman Nunavumi (GN-kun)
x	Kavamatukani Inulikiyin (INAC-kun)		Kavamatukani Aguyaktulikiyin (DND-kun)
x	Kavamatukani Imakmeotalikiyin (DFO-kun)		Hamleoyok
	Nunalikni Kavamalikinikun Ikayutiniklo (CG&S-kun)		Mingeokhikvilikiyin Kanatami (PC-kun)
	Nunavumi Ilitokhaeyin Havakvean (NRI-kun)		Kanatami Umayulikiyin (CWS-kun)
x	Ilitkuhilikiyin, Okaohikniklo, Inutkuyalo, Inulgamelo (CLEY-kun)	**x**	Ahelo (Okateayavatin):

2. Titigaklogit atokhimaktun piyunaotit, laesaoyulo, tapkoatlonet ahenik ihumakhutaoyun togagayun havagiyaoyumayumun ihulilvikhaelo:

Atea **Iniktikhanon Obloanit**
High Lake –KIA Inuit Nanminigiyangit Nunakutait Atoktitiyot Laeseat-High Lake-KTL308C008-Ehoakhaktaohimayot 01/06/13

High Lake – AANDC Nunanot Atoktitiyot Atogiakaktot –High Lake - #N2011C0033 (atokhimayaloangit N2007C0009) 01/29/14
High Lake –NTI Kaoyeehaeyonot Angigotata –CO29-01-01R 09/3021

High Lake - NWB Imap Laeseat - 2BE-HIG1217 (atokhimayaloangit 2BE-HIG0712)	05/31/17
Izok – AANDC Nunanot Atoktitiyot Atogialik - Izok Lake - #N2012C0005 (atokhimayaloangit N2006C0027)	02/28/14
Izok - NWB Imap Laeseat - 2BE-IZO0712	12/31/12
Izok - Wek'èezhìi Nunanot Imaoplo Katimayit Nunanot Atoktitiyot Atogialik: W2008C0002	03/16/13
Izok/Hood - KIA Inuit Nanminigiyangit Nunakutait Atoktitiyot Laeseat - KTL306C019	02/15/13
Izok/Hood - Nunavut Avatilikiyit Katimayit - Izok onalo Hood Havangit - #06EN066	
MMG Avatikhait Inc - WSCC Havaffaaktakhait Havaktot Ikakkot Atogialik- Nunavut - High Lake onalo Izok : Naonaogot #50-063-868	12/30/12
MMG Avatikhait Inc - GN Nunavut Nanminikaktot Laeseat - #12-007	03/31/13
MMG Avatikhait Inc - AANDC Nunavut Oyagakhioktot Atogialik - #N33023	03/31/13
Kaoyihaeyot Atogialik Aoyamut 2012 Manigakmi Havaktot	
NRI Enohilikiniknot Kaoyihaeyot ; #05 004 12R-M	12/31/2012
NRI Pitkohitigot Kaoyimayagit : #05 005 12R-M	12/31/2012
NRI Nanminigit Ilitkohiat Kaoyihaeyot : #04 054 12N-M	12/31/2012
DOE, GN Omayonot Kaoyihaiyot Atogialik: # WL 2012-12	12/31/2012
DOE, GNWT Omayonot Kaoyihaktot Atogialik : #WL 006891	12/31/2012
DFO Hogat Atoktangit Atokataktangit (Imitkiktot imak - Izok): # FWI-ACC-2012-025	10/1/2012
DFO Hogat Atoktangit Atokataktangit (Imitkiktot imak – High Lake): # FWI-ACC-2012-030	10/1/2012
DFO Laeseat Ekalokheonik Kaoyihaeyonot Mikhaagot (Imitkiktot Imak -Izok): # S-12/13-1009-NU	10/1/2012
DFO Laeseat Ekalokheonik Kaoyihaeyonot Mikhaagot (Imitkiktot Imak -High Lake): # S-12/13-1012-NU	10/1/2012
Aurora Kaoyihaekakviat Ilitkohit Nanminit Kaoyihaeyot Laeseat : #1505	12/31/2012

3.Titigaklogit <u>nahugiyaoyun</u> piyunaotit,laesaoyulo,tapkoatlonet ahenik ihumahoktaoyon togagayon havagoyaoyomayumun:

Imap Laeseat (Imaittot A) – Nunavut Emalikiyet Katimayet
Ekalokhionekot Amigiyaoyot – DFO

Inuit Nanminik Nunakotaet Atogealik Laeseat - KIA
Atogealik omingat Kavamat Nunakotaet - AANDC

Kaoyehaeyot Atogealik Aoyamut 2012 Manigakmi Havaagit
CLEY, GN Itaknitaligiyit onalo Oyagaet Atogealik
DFO Laeseat Ekalokinikkot Kaoyihaeyot Mikhagot (Imakmeot)
DFO Hogat Atogealik Atoktakhaet (Imakmeot)
DOE, GN Omayonot Kaoyehaeyot Atogealik (HHERA)

4. Una havak, <u>ilagiyaelunen havam</u> hivoagun ilitokhaktaohimavan ihivgeoktaohimavalunen NIRB-kunin?

X IYA ☐ **IMANAK**

Agiguvin, okayavan atigiyagaloaga havam NIRB-kunilo titigagiyaeni napa.

High Lake Havat, NIRB Naonaegot No. 06MN082
Izok onalo Hood Havat, NIRB Naonaegot No. 06EN066

ILAGA 3: HAVAGIYAOYUMAYUM KANOGITUNIGA

1. Titiklogo kanogituniga havagiyaoyumayum (titigaklogin tamaeta atoktun)([1,2]):
(Takulogo Oegoa A Havam Kanogituniganik Okaoheoyunik)

1	Ukeogalok Apkutaoyok/Aolakveoyok Nunanun	X	**9**	Inigiyatik Kiklimaktiklogo / Utiktigeaklogolo Ilitkuhigaloaganun	☐
2	Ukeomi Apkutaoyok / Ukeomi Aolakveoyok	X	**10**	Okhokyoakheoknik Kasileniklo	☐
3	Oyagakheokvikhakheoknik	☐	**11**	Takyumi Havaguyun	X
4	Oyagakheokvikhakheoveokhaktok	☐	**12**	Naonaeyaenik/Hilakyoami Ukeoktaktumi Ilitokhaenik*	☐
5	Oyagakheoktun / Agiyunik Naonaeyaeyun	X	**13**	Angunahoaknen*	☐
6	Oyagaktaken	X	**14**	Polakpaktun hulilugagutikhaen *	☐
7	Takyumi pikutin (tulaktakvik, malelgumeovik, tunmigak)	X	**15**	Ahea [(2)]:	☐
8	Nunanik Ilitokhaenik Havivalukaknikata	☐			☐

Kaoyimaneakutin:

1. Tamaeta havan titigakhimayun havuma kulanetuni, ukoagugitok titigakaktunik (*)-mik, piyageakakneakok Havakagumayok tunihiyagan **Ilaga 2-mik Havakhamun Hivunikhiyutaoyunik Piyageakaktunik (PSIR-mik) Titigakhamik**. NIRB-kun tukhiknikun aolaniga ihumagiyaolimagitok pikagitpan Ilaga 2 PSIR-mik Titigakhamik.
2. Ilihimaneakuhi iniktigeagani taman NIRB-kun aolaniga, NIRB-kun tukhikneagunakhiyun ilageagutikhanik hivunikhiyutikhanik kagugulika aolanigiyamikni.
3. “Ahea” titigakhimakpan, okakatigiyavatin NIRB-kun kanogileoguhikhamik piyavikni Ilaga 2 PSIR-mik Titigakhamik piyageakakmaga.

2. Havam Kanogituniganik 3, 4-lunen 5-lunen titigakhimakpan havuma kulanetuni, okayavan kanogitunik oyagakhakakmaga. Naetugaloamik okateayavan hunaokmaga.

X	Havivaloen (zinc, kanoyak, Kuli, Kivliktulo, taemaetunik)
	Pinikutikhanik
	Nuguyoetunik
	Ahenik:

3a. Havam Kanogituniganik 12, 13-lunen 14-lunen titigakhimakpan havuma lulanetuni, iniktiyavan naonaepkun apkutaoyulo havuma atanetuni.

Aolagutim Kanogituniga	Kavin	Kanok Atoktaoneakmaga	Hivituniga Atoknigagun
Imatun, Hanikaptak	*Ataohik*	*Nunanin nunanun akyaktoelotik*	*Siksini upluni*

3b. Okateaklogin tulaktakven, tunmikalo, milvelo atoktulo pikutin havagiyaoyumayumi. Kaoyimaneakutin: napaktigiyagani nutanik pikutinik atugeakakneagunakhiyutin Ilaga 2-mik Titigakhamik.

Naonaeyaktakhatit ona Havat Naonaigotata ilaliotilik hevoleotaoyok eneanit omingat Aktomayaohimayok Oktoktagit Aktomayaoyok oktogaotainit havaktaohimayonot ovani 2012 ovanilo 2013.

Ekagohikhat inikhaotaoneaktok ovani Grays Bay eloani Eloelikmi agyaktoevekhat omiaktoveat Ilaoni akyaktokveanit paknakohikhaet okhoyoakhaenlo. Ona kihakveat iliyaoneakot taema omiat Ikageangat ayigiloni henani agyaktoeyot ikageangat havigayamik atogeangat.
Tamna ikakvikhak polahimaloni 100 mitastigot angiyaktomi.
Ona ikakvikhak ilaleotaoloni totkomavikhat onalo kovikhaenit, okhokyoat totkomaveat Totkomavikhat . Ona nayokvikhat ilaliotaoloni amigiyakhanot havageat, oviahaosikhat, Ataknakotait togagotikhanolo.

Kaoyimatagitot ovani kanok milvikhanit 40 km atogianiakoni hivogani atogiami ovani Grays Lake. Kaoyimayaovloni holi ilitoknakhoni ihivgiogiangani ilanganit milvikhat ikakvikmi.

Tingmeat ikayotit piyaoloni ovani Izok Oyagakviokvigmi piyomagangat hogolaktomik Atoktakhainnit agyaktonolo, agyaktot havaktikhaenilo. Tamna milvikhat eneakhoni ovani Ham Lake, 11 km ongahiknia hivoani oata oyagakhioveani. Taja atokataktagit 900 m hiogainak milvik, atokataktangit kangagalok kaoyihailigangat. Ona milvik tahiyaoloni 1,500 onalo 2,000 m, hiogalikloni kolani,
Angiyaktomik tingmiak milakhonilo 737 ajikutanilonet. Milvikhalioktot iglolioklotik, onakotikhak Nahitatot amikhaivikhanolo. Himaohikloni tingmeakakvikhanot ovani 8 km kivanmi Izok taja ihivgioktaoyok.

High Lake Oyagakhioveat milvik ehoakhaktaoloni ovani Sand Lake, 10km hivuganitoni . Milvik takiyaloni 2,000 m iyaktomik tingmiak milakhonilotakinia taima 737 ajikutanilunit. Taja milvik ovani Sand Lake 900 m takiyaktok hioga ihoakhiyaohimaetok.

Ona milvik ajikutanit milvilioktaoloni tokimot kolanit Izok.

Taima kilamioktomik ikayoktaogiangani kaptikotait ikayoktot tamat milvingmit. Tingmiat

Ona havat ovani Izok apkotani, apkotit atogaktangit, ihoaktaoloni hitamanit inikhat (hivonikhat) taima malgoenak okiot havaktaoloni.

3c. Hiniktakveokavuktukhamik pineaknikata, okayavatin hunaokmaga napayukhan kanogituniginiklo kanoklo alguyaktutikakneakmaga iglukpakakvikhami atugeakaknikan.

Ilaleotinot nayokvikhaotaoloni ovani Izok, High Lake Grays Baymilo, pingahot hitamanilonit nayokvikhat Atoklotik apkoleokvikhanit ovani Izok Apkotanit. Nayokvikhat nahogiyaolotik 50 nit 75 lonit havaktot ikayoktaolotik apkotikhat ikakvikhainilo apkotiliovikhamik ingilgotaenit. Nayokvikhaet agyaktoeyot agyaktaoloni takyokot ovani Grays Bay ikakvileokhamik elaleotaoloni ihoakotikhait Ikloleoklotik 250 inoknit. Okhokyoat onakotikaklotik atogeakaktot nayokvikhame.

Igloleoklotik nayokvikhaet ovani Ham Camp atoklotik atokhimayaenit kaoyihaeyot angikliktilotik ikayogeanganit 400 nit havaktinot.

4. Havakteoyun

Tamaeta kaveonigin havaktun havakvikmi = (A)	670 to 800	Tamaeta uplun havakviknetun = B		**Tamaeta uplun inukakneaknigagun (A) × (B) = 244,550 to 292,000**

Havat

Tamatkioyot havaktot havakvikmi = (A)	400 to 500	Tamaeta uplun havakviknetun = (B)	365/okio	**Tamaeta uplun inukakneaknigagun (A) × (B) = 146,000 to 182,500**

5. Kakongukan Pigeagutikhan

Kanok havakveoneakmaga:	2015 (havalihakton)	*talvonga*	2028
Atugumayanik hivitunikhata piyunaotim:	2015	*talvonga*	2037

6a. Nonalet Aviktokhimanea (titiklogit tamaeta atoknilgit):

☐	Tununga Kigiktalok	☐	Kivalik	☒	Kitikmeot	☐	Nonani ataohenaogitumi:
☐	Hivuga Kigiktalok	☐	Mingoekhikvik	☐		☐	

6b. Okaklogin humenigin havagiyaoyumayun nunan aviktokniga atoklogo, okaklogolo kanitoanenikhak nunagiyaoyok monagiyaoyulo pikaknikan nunanik.

Ona Izok Ikavikhak Havat nayokviat iloani Oatani Kitikmeot aviktohimayomi Nunavunmi. Ilaliotaovikhat hapfomingat Havat ilaliotaoyot Izok Oyagakheoveat, High Lake Oyagakheoveat, ikakvik ovani Grays Bay Iloelekmi onalo Izok Apkotikhat,

tamat okiami apkotikhat katilvioyok ona Izok High Lake milo nayokvikhat ikakvik. Ona Izok Oyagakheovik nayogata 360 km hivugani Yalunaimit, Nunatiakmi, onalo 250 km tonganit Eloelikmit. Ona High Lake nayokveata 50 km hivoga kivanmitok hapfomingat Izok nayokvianit. Ona Grays Bay Ikakvik nayokvikhat 328 km hivoganit Izok Oyagaheoviani onalo 2.5 km oata hivoani Kennarctic Kogani. Hamna kanelgoanitok nonakatigit omingat Izok Ikakvikhat Havat ovani Kugluktuk (180 km hivogani uata hapfomingat High Lake nayokveani). Ona Havak nayokveat inikangitot atoktamiknit atokataktagit hapomiyaoyomi. Kivanmit Uatamilo agyaktoeyot ikak atokataklotik paknakotikhanot onalo atoklotik ikakviknit.

Amihoyot nonainat takyokmeotaenlo ineat eletagiyaoyot angoniavikhanot omayonilo atokataktangit iloani Kitikmeonmi Kikitalokmi Nonanot Atokataktangit Paknaeyaeyot aviktohimayomi Nunavunmi, onalo Inuvialuit Nonatagiyaohimayot Aviktohimayomi hapfomingat Nunatiakmi (NWT). Hapkoat ilaleotaoyot Eletagiyaohimayot Mingoevikhak, Aviktohimayomi Mingoevikt, Tingmiat Otikataktonot Onagoehiveat (kavamatokaet hapomiviat) onalo Keneopayot tahelet Nunakyoap Ihomagiyangit (Ramsar Nayokveat).

Hapkoat hapomeyaoyot okoningat amihoyot kavamatokaet aviktokhimayomili maligaotaenet ilaleotaoyolo *Nunavut Omayonit Maligak, NWT Omayonit Maligak, Kanitean Omayonit Maligak, Otikataktot Tingmiat Ilaokataoyot Maligak* onaloRamsar paknakatigit. Amihoyot alat nayokviat ihomagiyaovaktagit iloani aviktokhimayomi hapfomingat Havat, ilaleotaoyot Nunakyoap Nunalikiyion Havangit (IBP) nayokvit,Kanitian Pitkohikakvit Kugait, nanminigiyangit imakmiotaet nunakmeotaet omayot nayokvilo ihomageyaovlotik. Hapkoat iniat eletagiyaovlotik hapomiviat iniat malikhogo Atayok 9 hapfomingat Nunavut Nunatagiyaoyonot Angigotata (NLCA) keheme maligaotaenet hapomiyaohimaetot.

Hamna tomigit hapfomingat Izok Ikavikhak Havat kaligikhimaetot kigleanit hapfomingat hapomihimayaoyonot iniat. Ilainat hapfomingat havaktakhaet kivanmi uatamilo agyaktoeyot ikagohiat taima kaglihimaetot takyokmiotait hapomihimayaoyot onalo nanot nayokveanit ihomagiyaoyot; keheane, omiat ikakveat atokatalaetangit okoningat kihoelgomi piniakhotik omayot itpata. Takologo Atayok 5.2 hapfomingat Havat Tokhiotaoyot naonaeteageanganit.

6c. Nipligeloget pitkoheanet nayokveanet atoktaoyot koyagiank havat holipkaeyot kingoanit.

Avataet kaoyehaeyot holiyonot havakpakhotik haneane Izok High Lake Oyagakheokvikmi nayoganit kangagalok 1950 milikak oblomimot. Elaleotaoyot avatinot kigleanit kaoyihaeyot kaoyehaktot ovani

2004, 2005, 2007, 2008 milo holi kaoyihaegaklotik 2012 milo. Taja MMG kaoyihaikakvilik nayoganit ovani Izok (Ham Camp) onalo High Lake milo.

6d. Takopkaelotik kaoyimageakagomik itaknitanik/otokakaknikagomik pitkohinit nayokviat uvani nunami.

Ihomagiyaovlotik inianit haniani Grays Bay, Itchen Lake, Iznogoudh Lake, Ham Lake, Hood River, onalo James River.

Ilaleotaovlotik kaoyihaeyovlotik ovani 2012 mi. Kingoanit kafeoyot titigaktaohimayot nayokviat titigakhimalotik iloani kiogialik onipkaanmi CLEY konit.

7. Kiya Nunagikmaga (titiklogit tamaeta atoknilgit):

X	Koen		Kamisinaop		Hamleoyun
X	Inoenaet Nanminea Nunaplo Kaginaenetun	X	Inoenaet Nanminea Nunaplo Iloanetun		

8a. Humeniga Nunam:

Mikinikha Nunaoyami Hanimon (nahaotaen) _____ Mikinikha Nunaoyuami Tokimon (nahaotaen) _____
Anginikha Nunaoyami Hanimon (nahaotaen) _____ Anginikha Nunaoyami Tokimon (nahaotaen) _____

NTS Nunaoyami Ilagata Napa: 86H/10, 86H/9, 76E/14, 76E/13, 76E/12, 76E/11, 76L/15, 76L/14,76L/11, 76L/10, 76L/6, 76L/3, 76M/15, 76M/14, 76M/10, 76M/7, 76M/2

(Ilaoyavun nunaoyan humeniginik havan pikaktunik (1:50,000 **pikakat**, 1:250, 000 **Piyakakpeaktok**) piyaolat talvaga Nunameotalikiyinin Kanatami.)

8b. Havakun **hiniktakvikakneaknikata**, titigatyavot nahaotaen hiniktakveoyun.

Hanimon (nahaotaen) _____ Tokimon (nahaotaen) _____
Hanimon (nahaotaen) 67.805N Tokimon (nahaotaen) -110.869W

Alagakpata huvuma kulanetunin hiniktakveoyok:
NTS Nunaoyami Ilagata Napa: _____

High Lake Camp
Hanimon (nahaotaen) 67.380N Tokimon (nahaotaen) -110.844W

Ham Lake Camp (Izok)
Hanimon (nahaotaen) 65.686N Tokimon (nahaotaen) -112.585W

Nunavumi Avatilikiyin Katimayin piyumaneagunakhiyun hivunikhivaligutikhanik humeniganik ilagani Havam Kanoginigagun Hivunikhiyutikhani (PSIR-guyok). Imaetuneagunakhiyok Nunan Kanoginigagun Nunaoyani Naonaepkutini (GIS-guyun

ILAGA 4: TUKIHEANAKTUNIK HAVAGIYAOYUMAYUMIK OKAOHEOYUN

Ilaopkayavan tukiheanaktok kanogitunikha havam, avatkutaelilogo 500 taegohet, Kavlunatut Inuktitoto (Inoenaktolo, Kitikmeonetpata). Havam kanoginiga ilakaktukhaogaloak ukuniga:

- Havami havagiyaoyukhan, piyakakne hivitonikhalo;
- Kanoktut aolagutikakneakmaga
- Kitulikak napaktakhat hanayaoneat (ilihimaenaktokhat / atokaphoktakhat);
- Aheagugutikhat ihumagiyaoyun; unalo

- Hivunikhami havakhan, kanoklo kigoagun kanogiliyutikha nunani hunaolikalo pivikhakaknigagun.

ATUGEALIK: HAVAGIYAOYUMAYUMI HULILUGAGUTIN TUNIHIYUTIKAGEAKAKNIKATA NIRB-KUN ILAGA 2 PSIR-MIK TITIGAKHAMIK, INIKTIYAVAN ILAGANI 8-METUN TALVATOAK, TAEMAEGITPAN INIKTIKHIMAYAVAN ILAGANI 5-METUN.

ILAGA 5: IHOAKUTIVALOEN ATOKTAOYUKHAN

1. Titiklogit Pikutin (ikutavaloelo, papaotilo, tikmiyan, akhalutivaloelo taemaetun).:

Pikun hunaokmaga napalo	Agitilaga - uktaotitigulo	Kanok atoktaoneakmaga

2a. Oniktoteaknea okhokhat hivoganaktulo honat atoktaone:

Okhokhat	Kaveone Puguyut, Agitilagilo	Ataotimun Okhokhat (Litres-guyuni)	Kanok Tutkumayaoneakmaga
• Okhokyoak			
• Kasilek			
• Tikmiyutin okhokhae			
• Puplakhat			
• Ahenik			
Hivuganaktot Pikutin Kuviyaktulo		**Ataotimun Hivuganak-tun Kuviyaktulo (litaoyuni)**	

2b. Okaohigiyavatin Kuvegitagani Paknaeyaotin.

3a. Oniktokteaknea uplotoagagan imaknik atoknigin kanogalok:

Uplutoagagan (m^3-guyuni)	Atugumayaen imavaloen utiktitagani kanok	Atuligumayaen imavaloen utiktitagani humi

4. Tukhikhimavin Napagiya A-mik Laeseoyumik Nunavumi Imalikiyinin Katimayinin?

☐ **IYA** ☐ **IMANAK**

Agiguvin, hunaova napagiya laeseoyum?

☐ **Napagiya A Imaknik Atugeagani Laeseoyok**

☐ **Napagiya B Imaknik Atugeagani Laeseoyok**

ILAGA 6: IKAGUKNIKUN IMAVALOELO HALUMAGANIGEAGANI HAVAN

1. Titigaklogin kanogitunigin ikaguvaloen:

Kanogituniga ikaguyum	Nalaonealogin kanogalok ikagukakneakmaga	Kanok ikaguneakmaga	Halumaktiganigutikhan piyutin
Anagun (Inoen anagoen)			
Oakhitin			
Ikulalaktun ikaguvaloen			
Ikulalimagitun ikaguvaloen			
Atakoen (halumaektun nunan, ikaguvaloelo, ataguvaloelo oyakikivikmin)			
Hivuganaktun ikaguvaloen			
Ahelo			

2. Okaohigiyavan Ikaguvaloknik Paknaeyaotin.

ILAGA 7: NUNALEN ILAOYUN, AVIKTOKHIMAYUNETUNULO IKAYUHEAGUYUN

1. Titigaklogit nunaliknin kivgaktokte okakatigiyaohimayun, tunilogilo titigakniginik katimayutinun kahaknikata:

Nunaoyok	Atea	Timeoyok	Uploani okakatigiyaokmata

ILAGA 8: HUNALIKA APIKUTIKHAN

1. Kahaknikneakihi kaoyimayaoyunik igilgan inituklenik?

X IYA ☐ **IMANAK**

ILAGA 9: TUKHIGAKTUP SAENEOTA

Saeniyavan uploaniklo titigaklogo tukhiktutin:

Saeneota:	Havanga:	Uploa:
	Environmental Permitting Lead	August 20, 2012

OEGUYOK A
Havami Kanogituniginik Tukitagutin

Tikitagani Ineoyun Nunami: Havagiyaoyumayumi ihumagiyakaknikata akhalutikun tikitagani ihumagiyaoyumun aktoknikakpalalimaginikan manikanik.

Nalvakheokveokhaktok: Havagiyaoyumayumi naonaeyaeneakata agitilaginik, peoteaknigilo, kanogitunigilo oyagaktakhan naonaeyageaganilo manileogutaoteakneakmaga havatigulo namateakneakmaga oyagaktakveoliknikan.

Ukeogalok Apkutaoyok: Havagiyaoyumayumi apkutuleogumakpata atoktaoyukhamik ukeogalok.

Uyagaktakhanik Naonaeyaenik: Havagiyaoyumayumi ahivaeneakgumik agiyunik havivalokaktunik oyakanik ukumaeyoaktunik pineaknikata. Naonaeyaevaktun oyagaktakveoyukhamin naonaeyaktaoyumin. Hikuptigilaktun oyakikivikmi (mikaogaloamik).

Angunahoaknik: Havagiyaoyumayumi agunahoakneakata umayunik, takyumeotaniklo huganik ikalokniklunen nunaginaeyin agunahoaklogin nanigeaktoklogilunen nanminik atoktakhamiknik neovgutigiyakhamikniklunen.

Takyumi Hulilugagutin: Hulilugagutin takyumi avataoyumi, umiyanik atoknikata nunami havamikni ikagumiklunen takyumun.

*Kaoyimaneakutin nunaliknun umiyan tikitpaktun akyaktun pikutinik ilaoginman nunami havagiyaoyumayunun ilitokhaktaolimagitun NIRB-kunin (Ilagani 12.12.2-mi NLCA-mi).

Oyagaktakvikhamik Pivaleanik: Havagiyaoyumayumi ahivaeneakata hikuptikhimayunik oyakanik havivalukaktunik ukumaeyoaktuniklo manileogutaotealakan oyagakheokveoligumi (oyagaktak). Oyagaktageagani oyagaktanik anmukpalealotik nunam kaganin iloanugakpalealotiklunen nunamun. Oyagaktaknik oyakikivikalaktok. Oyakikinik ahivakpaleayagani atoklogin pikutin kuviyaktulo piyutin atoktaolaktun ugavageagani akituyok oyagaktakhak.

Oyagaktakvikhakheoknik: Havagiyaoyumayumi kinikheaneakata oyagaktakveoneaktunik nunanik. Nunanik ihivgeoknik (nunakun tikmeakulunen) nanihiyagani agiyunik takunaktuniklo oyagaktakhanik.

Takyumi Pikutin: Havagiyaoyumayumi hananeakata uheyakvikhanik pikutinik hinanin takyumi atanikata nunaloamun takyumin imavaloknilunen avataoyumin. Ayikutaen ukoa tulaktakvik, tunmigaklo, umiyanilune atoktaoyunik.

Ohokyoanik Kasileniklo Nalvakheoknik/Hulilugagutilo: Havagiyaoyumayumi ilakaktumik 1) nalvakheoknikmik, ima kukulaktunoen atoklogin nunaoyatigulunen, 2) ikutakan okhokyoaktakvikhanik kasileniklo, 3) hanakpan atukalo tukhoakyoanik, kasileniklo hanakivikmik okhokyoakakvelunen kasilekakvelunen Nunavumi.

Heogaktakveoyun: Havagiyaoyumayumi heogaktakneagumik, ahivaeneakata heogavaloknik (imaetun, heokan oyagalealo) oyagaktakatalo, ahivaeneakata ataotimetunik oyakanik (imaetun, kaektunik, kikumayuniklo nunanik).

Naonaktunik Naonaeyaenik: Havagiyaoyumayumi atuligeagani iglukakveoyumi hulilugagutinik taotuklogin akliknaktun, naonaeyaklogilo katitigeaklogilo naonaepkutikhan piyageakaktun naonaktunik ilitokhaenikun tikoaktaohimayuni nunani pivikhakaklaktilogilo.

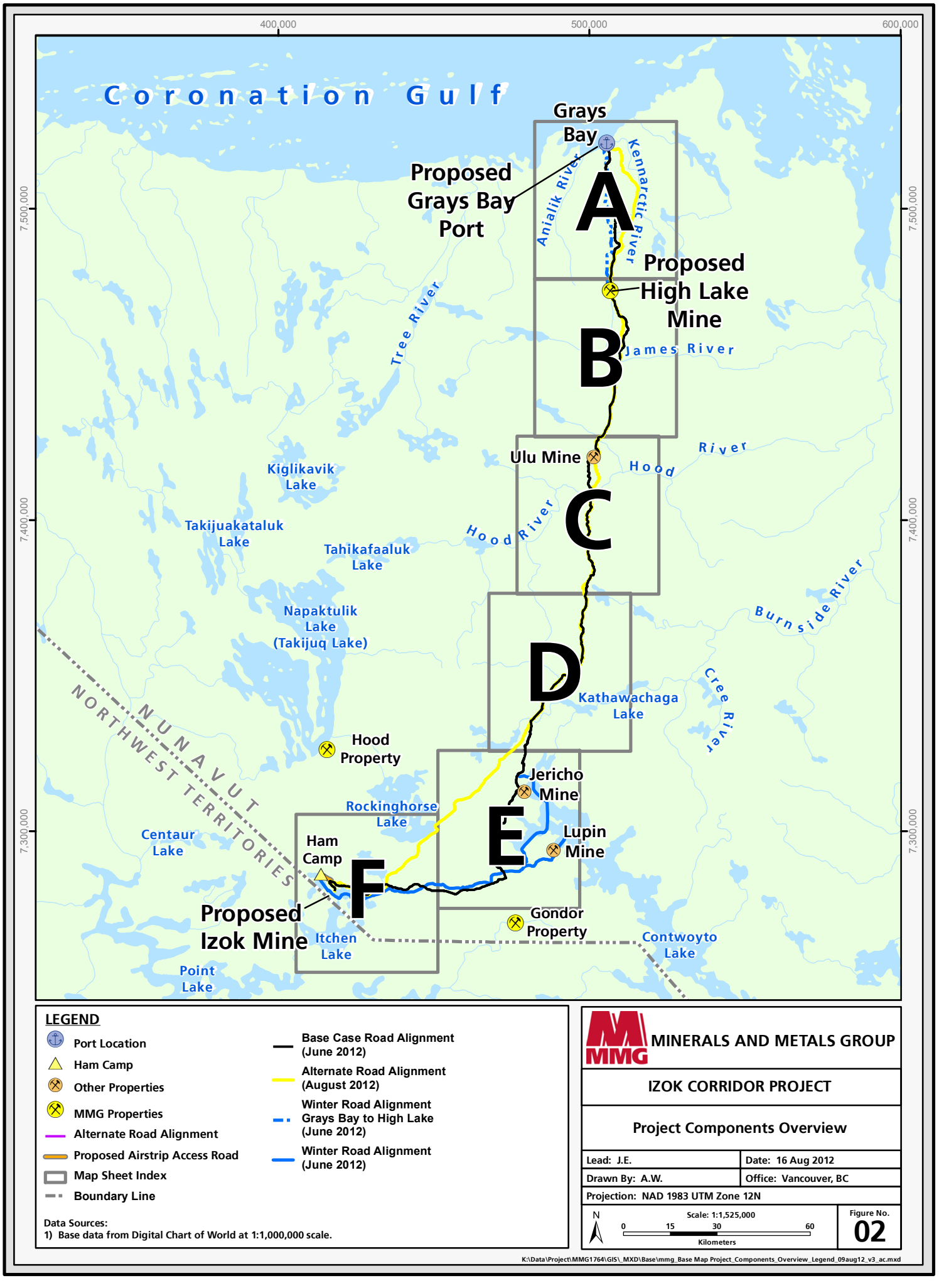
Kokulaktunoanun Naonaeyaenik: Havagiyaoyumayumi naonaeyaeneakata nunaoyeogeagani hiliktilagin unugagalok oyakan nalgulogin kanok kokuktunoak utikniga naonaegutaoneakman hiliktilaganik nunam kaganin. Naonaeyaeven takyumelaktun (iloanelimagitun 12-nik maelinik ugahiktilaganik hinanin imam), hinatalo kanitoanilo, unanilaloklo takyumi.

Inigiyaoyun Kiklimaktiknigin: Havagiyaoyumayumi inigiyaoyun kiklimaktikneakata (ukoalo Tulaekakven kiklimaktiktaonigin), ihumagiloakhugin utiktitagani ilitkuheanun kuviyaktuvaloknin halumaekhimayun nunavaloen, aolalimaegeaganilo haohimayun kuvelo, agiptikniginiklo / ikaklogilo napayun pikutin ikaguvaloelo amigilogilo kanogilivaleanigagun kigoagun kiklimaktiktaotakan.

Polaktulikiyutin Havan: Havagiyaoyumayumi aolaktitiyagani tugagaloaktunik tunikgoektigiyutinun, ulapkiyutinulo neamgiyaginageaganilunen tikoaktaohimayumi nunami pivikhakaktilogo hivitunigagun

Ukeoginakmi Apkun: Havagiyaoyumayumi apkutileokneakata ukeomi atoktukhamik atagikhaklogin kikhoktiklogilo kaginaen aputin hikulo. Ukeomi apkutoayok ahivaktaoneakok kikumanaekan ukeom ilagani.

Ukeoginakmi Inin: Havagiyaoyumayumi hananeakata inimik ukeomi atoktukhamik ataotimin tulakaktumin akhalunmin atoklotik poalgiyaonmik, piyageakaknikan.



LEGEND

- Port Location
- Ham Camp
- Other Properties
- MMG Properties
- Alternate Road Alignment
- Proposed Airstrip Access Road
- Map Sheet Index
- Boundary Line
- Base Case Road Alignment (June 2012)
- Alternate Road Alignment (August 2012)
- Winter Road Alignment Grays Bay to High Lake (June 2012)
- Winter Road Alignment (June 2012)

Data Sources:
1) Base data from Digital Chart of World at 1:1,000,000 scale.

MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Project Components Overview

Lead: J.E.	Date: 16 Aug 2012
Drawn By: A.W.	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

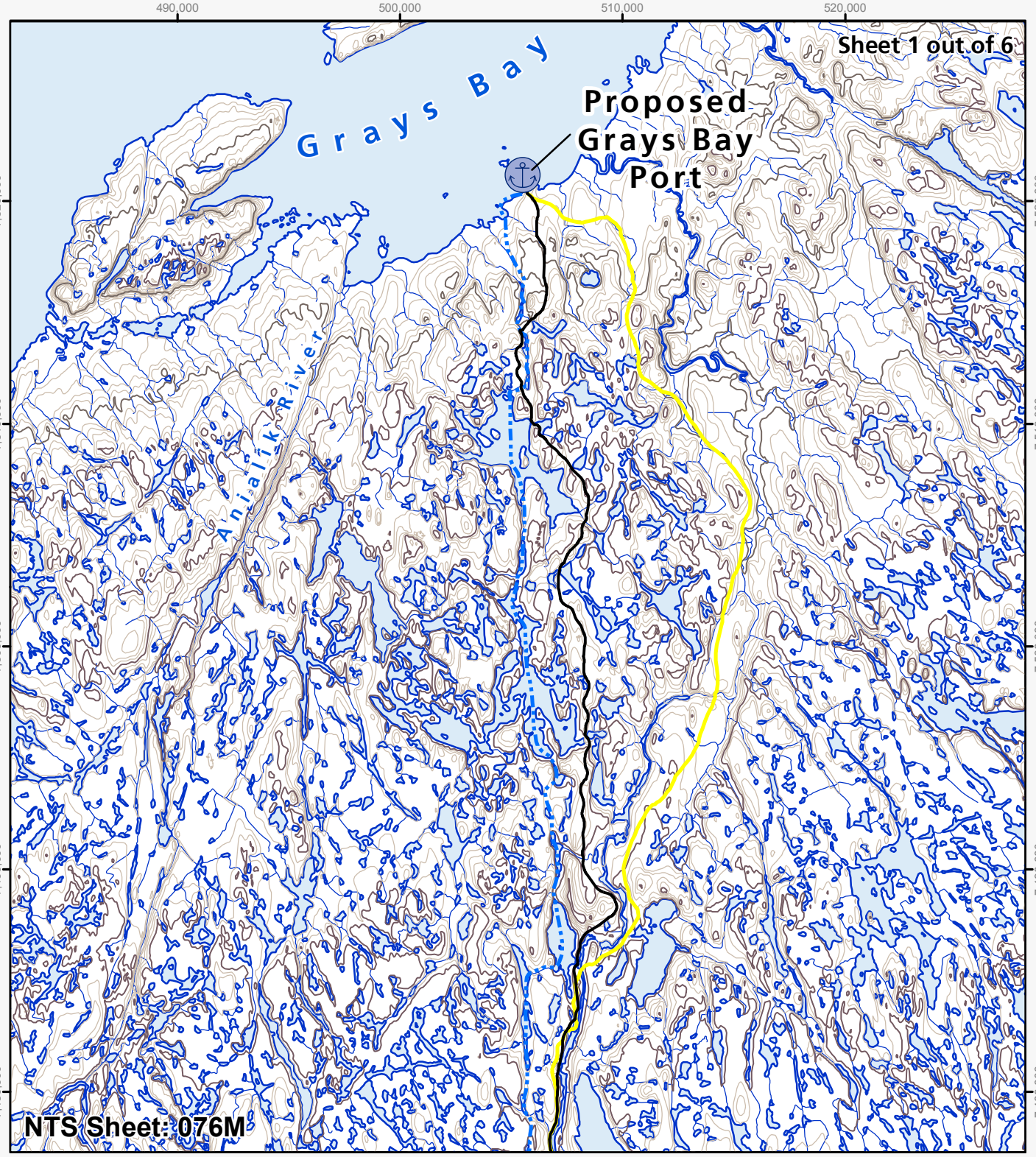
Scale: 1:1,525,000

0 15 30 60

Kilometers

Figure No. 02

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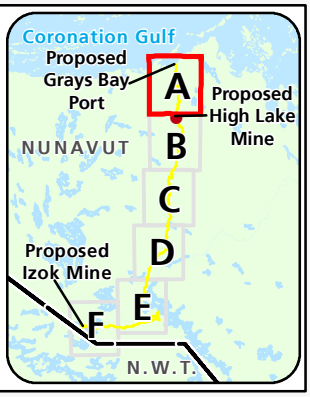


LEGEND

- MMG Properties
- Other Properties
- HamCamp
- Proposed Grays Bay Port
- Boundary Line
- Contour (20 meter)
- Watercourse
- Waterbody
- Base Case Road Alignment (June 2012)
- Alternate Road Alignment (August 2012)
- Winter Road Alignment Grays Bay to High Lake (June 2012)
- Winter Road Alignment (June 2012)

Data Sources:

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2) Proposed road alignments, potential borrow sources, Ham Camp, proposed port site and mine locations provided by MMG.



MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Project Components Overview

Lead: J.E.	Date: 16 Aug 2012
Drawn By: A.W.	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

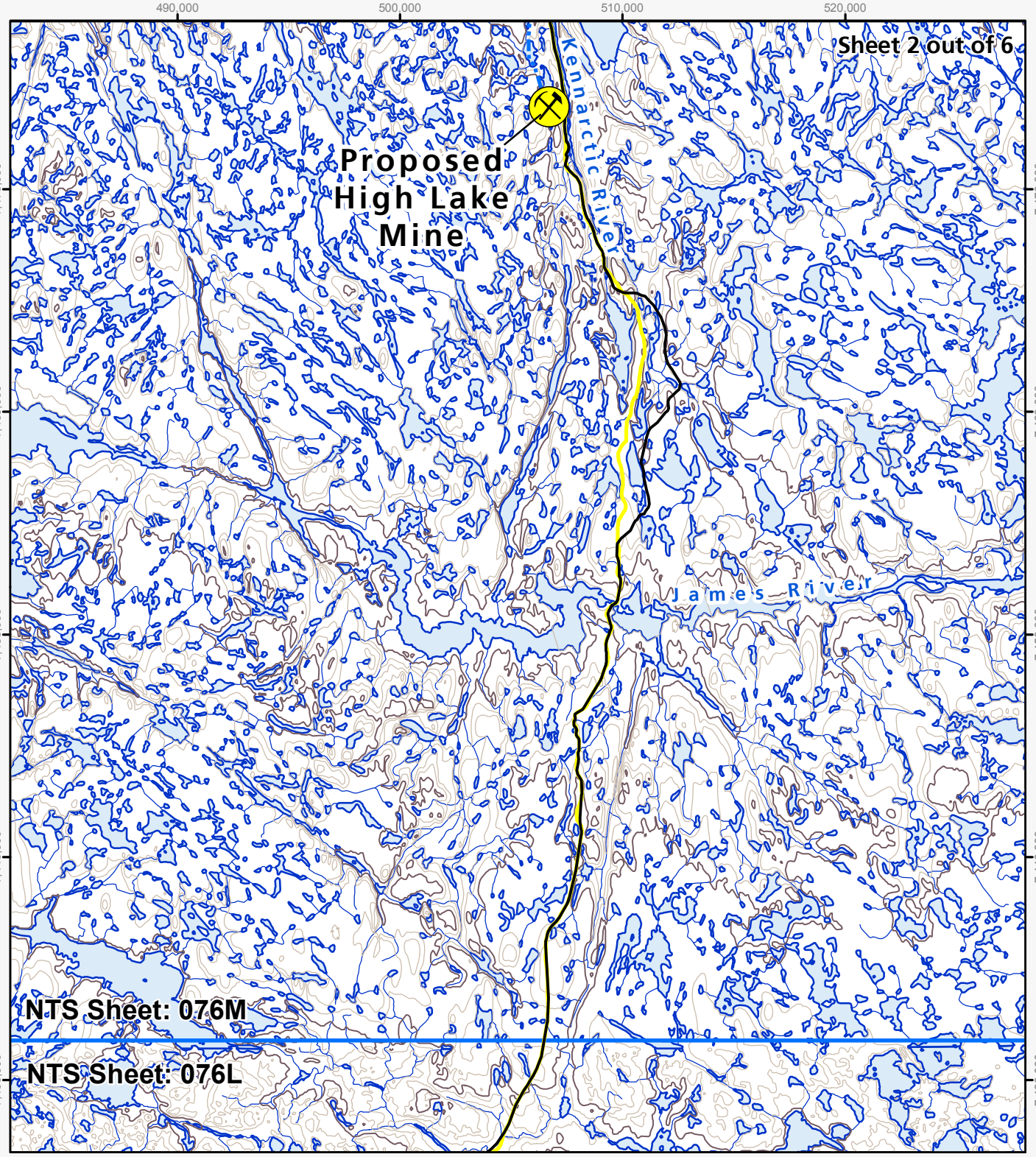
Scale: 1:250,000

0 2.5 5 10

kilometers

Figure No. 02A

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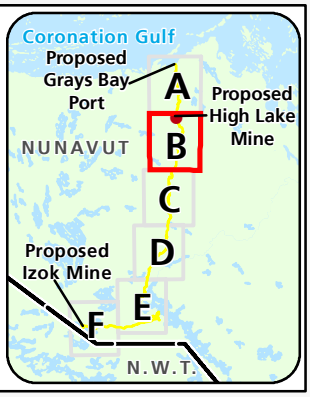


LEGEND

- MMG Properties
- Other Properties
- HamCamp
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MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

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N

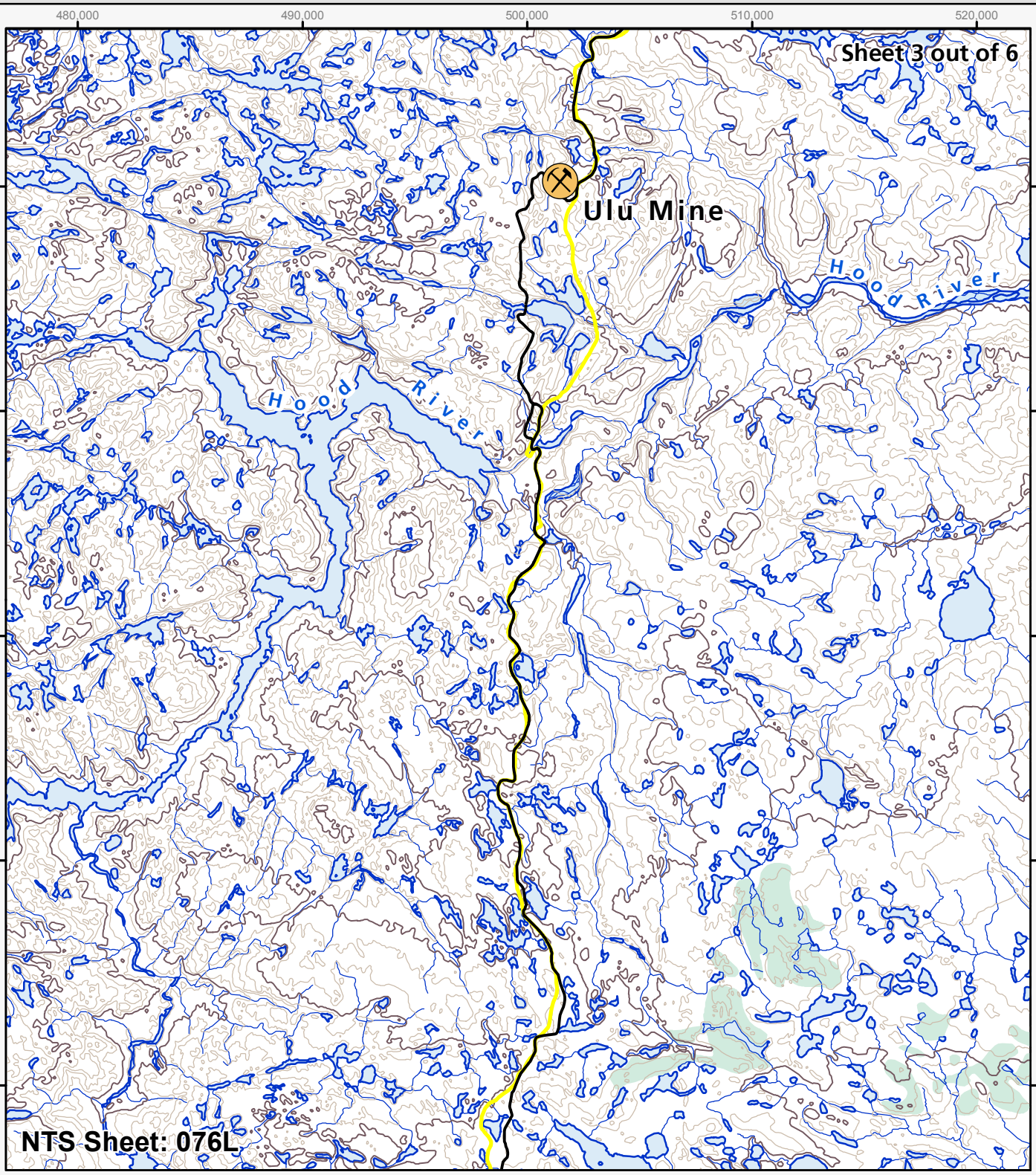
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0 2.5 5 10

kilometers

Figure No. 02B

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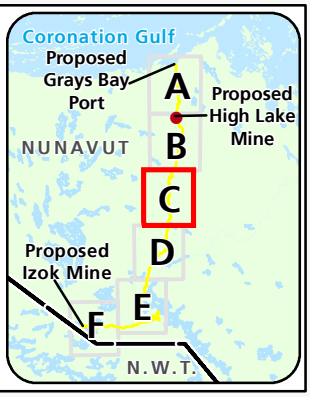


LEGEND

- MMG Properties
- Other Properties
- HamCamp
- Proposed Grays Bay Port
- Boundary Line
- Contour (20 meter)
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MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Project Components Overview

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Drawn By: A.W.	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

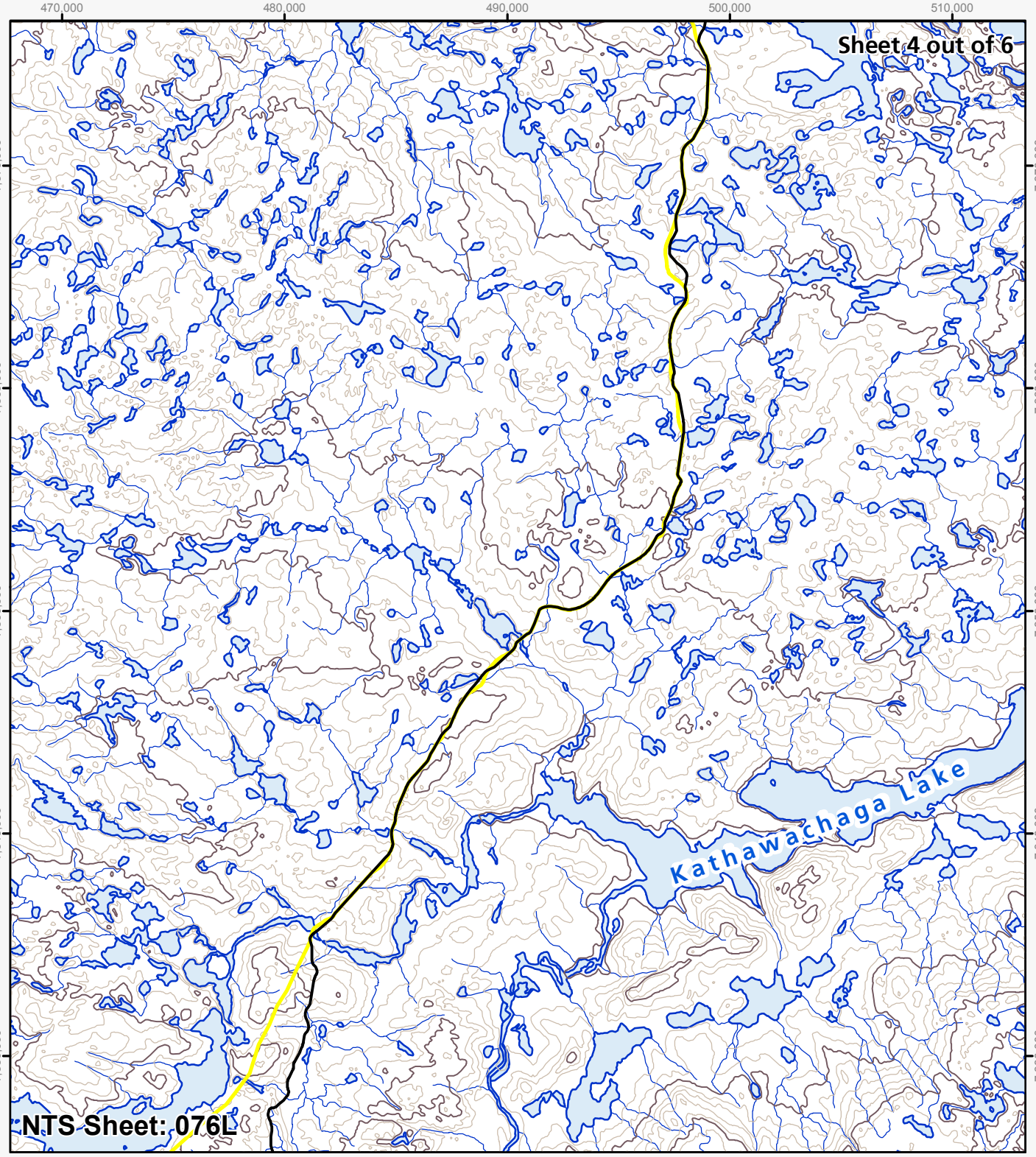
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0 2.5 5 10

kilometers

Figure No. 02C

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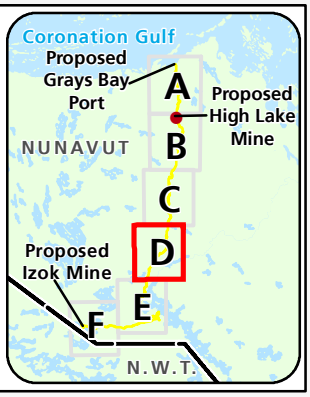


LEGEND

- MMG Properties
- Other Properties
- HamCamp
- Proposed Grays Bay Port
- Boundary Line
- Contour (20 meter)
- Watercourse
- Waterbody
- Base Case Road Alignment (June 2012)
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MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Project Components Overview

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Drawn By: A.W.	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

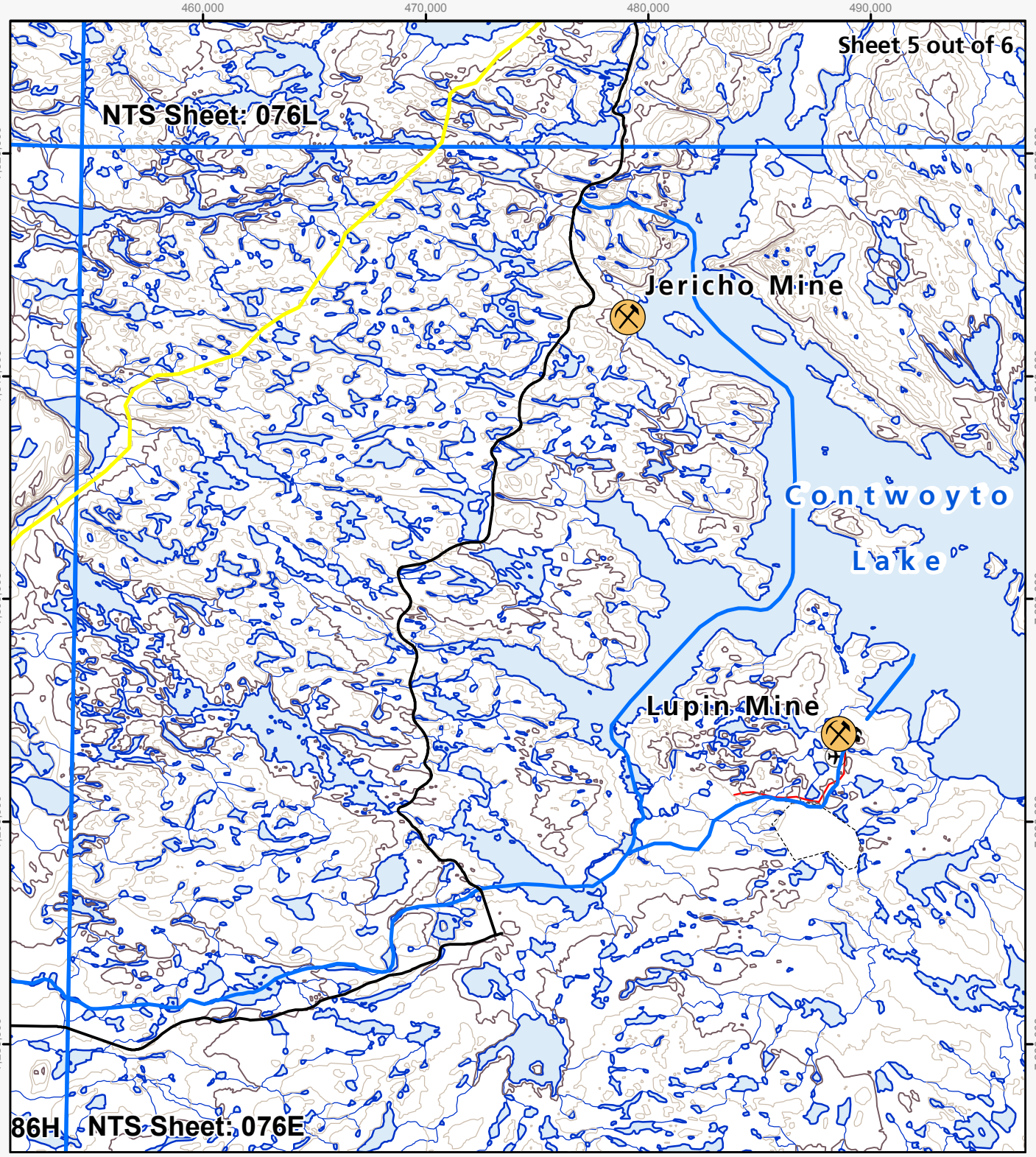
Scale: 1:250,000

0 2.5 5 10

kilometers

Figure No. 02D

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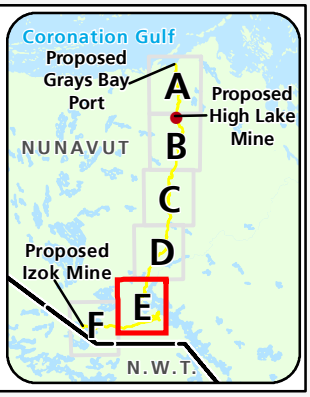


LEGEND

- MMG Properties
- Other Properties
- HamCamp
- Proposed Grays Bay Port
- Boundary Line
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- Watercourse
- Waterbody
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- Winter Road Alignment (June 2012)

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MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Project Components Overview

Lead: J.E.	Date: 16 Aug 2012
Drawn By: A.W.	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

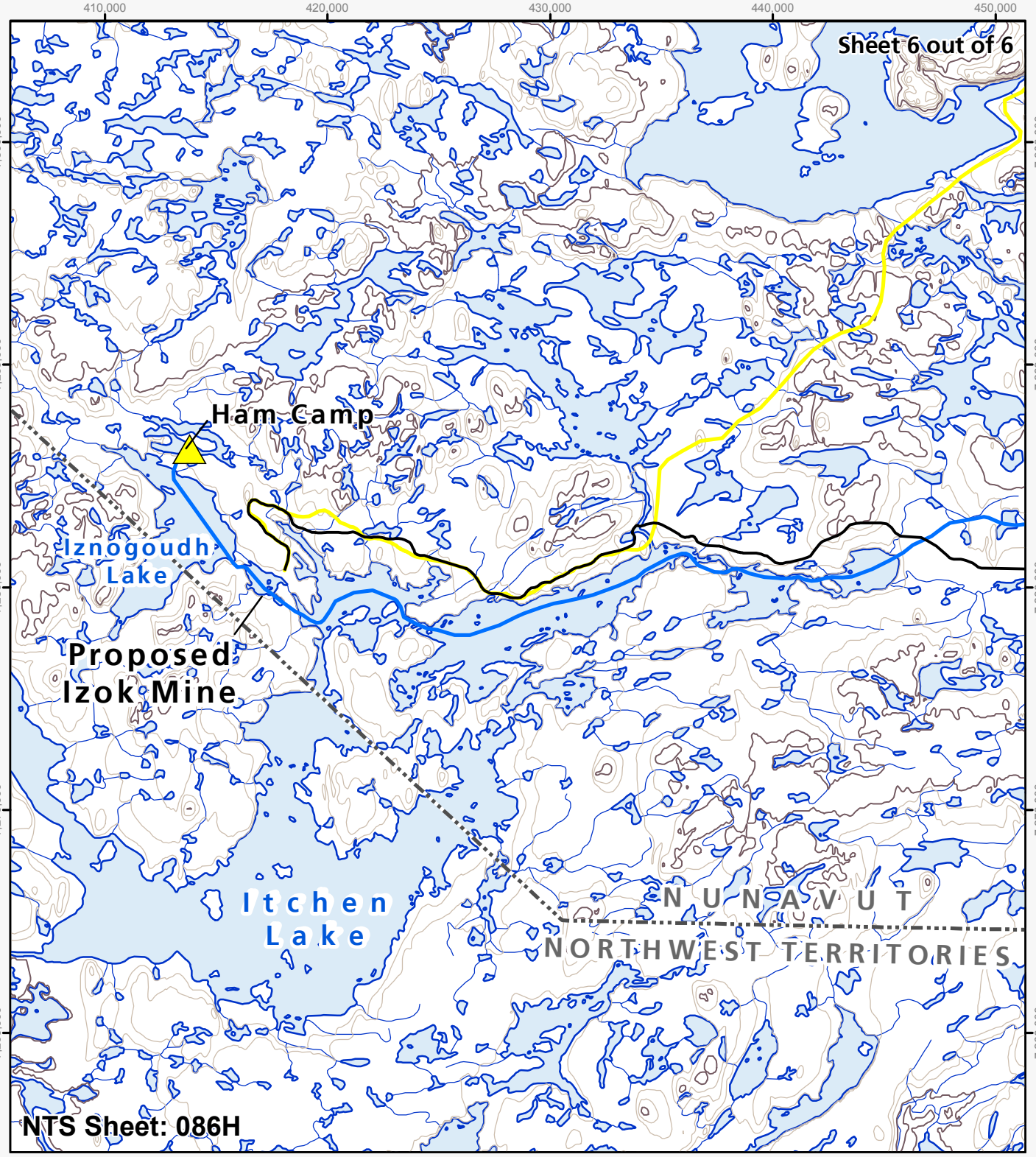
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0 2.5 5 10

kilometers

Figure No. 02E

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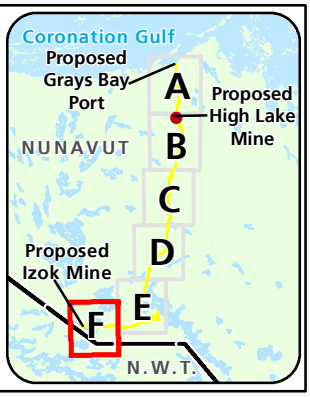


LEGEND

- MMG Properties
- Other Properties
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- Proposed Grays Bay Port
- Boundary Line
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MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Project Components Overview

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Drawn By: A.W.	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

Scale: 1:250,000

0 2.5 5 10

kilometers

Figure No. 02F

K:\Data\Project\MMG1764\GIS_MXD\Base\mmg_Base Map Project_Components_Overview_DDP_09aug12_v4_ac.mxd

B2 Project –Environment Interaction Matrices

TABLE 3-1 IDENTIFICATION OF ENVIRONMENTAL IMPACTS

		ENVIRONMENTAL COMPONENTS	Physical	Air Quality	Noise and Vibration	Climate Conditions	Ground Stability and Permafrost	Landforms	Soil Quality	Soil Quantity	Surface Hydrology	Surface Water Quality	Freshwater Sediment Quality	Hydrogeology and Ground water	Marine Water Quality	Marine Sediment Quality	Biological	Vegetation	Wildlife and Wildlife Habitat	Terrestrial Birds and Habitat	Marine Aquatic Organisms and Habitat	Marine Mammals and Habitat	Marine Birds	Freshwater Fish and Fish Habitat	Heritage Resources	Cultural, Archaeological and Paleontological Resources
Project Activities/Physical Works																										
Construction																										
In-Water Construction	Construct freshwater diversions and site drainage containment systems (dykes, berms, collection ponds)			0	2	0	2	2	2	2	2	1	1	0	1	1		2	1	1	0	0	0	2		2
	Construct in-water/shoreline structures			0	1	0	2	2	2	2	2	2	2	0	2	2		2	1	1	2	0	2	2		2
	Water transfers and discharge			0	0	0	0	0	0	0	2	2	2	2	1	1		2	2	2	1	0	1	2		0
	Water withdrawal (freshwater and marine)			0	0	0	2	2	2	2	2	1	1	0	2	0		0	0	0	0	0	0	1		0
	Marine dredging			0	1	0	0	0	0	0	1	0	0	0	2	2		0	0	0	2	2	2	0		0
	Marine blasting, drilling			0	2	0	0	0	0	0	0	0	0	0	2	2		0	0	0	2	2	2	0		0
	Barge dock construction			1	2	0	0	0	0	0	0	0	0	0	2	2		2	1	1	1	1	1	0		2
	Marine filling			0	2	0	0	0	0	0	0	0	0	0	2	2		2	0	0	1	0	2	0		2
On-Land Construction	Site clearing and construction (blasting, earth moving, grading, loading, hauling, dumping) (*Assumes all site clearing including pits is complete during the construction phase*)			1	2	0	2	2	2	2	2	1	1	0	0	0		2	2	2	0	0	2	1		2
	Vegetation clearing and stripping			1	1	0	2	2	2	2	0	1	1	0	0	0		2	2	2	0	0	0	1		2
	Snow clearing and stockpiling			0	1	0	2	2	2	2	2	1	1	0	0	0		1	2	2	0	0	0	1		2
	Install windbreaks			0	0	0	0	0	0	0	0	0	0	0	0	0		1	2	1	0	0	0	0		2
	Concrete manufacture and handling			1	1	0	2	2	2	2	0	1	1	1	1	1		0	0	0	0	0	0	0		0
	Construct foundations			0	1	0	2	2	2	2	0	1	1	0	0	0		0	0	0	0	0	0	1		2
	Construct buildings			0	1	0	2	0	0	0	1	1	1	0	0	0		0	1	1	0	0	1	1		2
	Install equipment			0	1	0	2	0	0	0	0	1	1	0	0	0		0	0	0	0	0	0	0		0
	Construct airstrip			1	1	0	2	2	2	2	1	1	1	0	0	0		2	2	2	0	0	0	1		2
	Mill commissioning (water only)			0	0	0	0	0	0	0	1	2	2	0	0	0		0	0	0	0	0	0	2		0
	Quarrying and aggregate crushing			1	2	0	2	2	2	2	1	1	1	1	0	0		2	2	2	0	0	0	1		2
Supporting Activities	Transport fuel and construction materials			1	1	0	0	0	0	0	2	1	1	1	1	1		0	2	0	0	0	2	1		0
	Air transport of personnel and supplies			1	2	0	0	0	0	0	0	0	0	0	0	0		0	2	2	0	0	0	0		0
	Hazardous materials storage and use (reagents, fuel and hydrocarbons)			1	1	0	0	0	0	0	0	1	1	1	0	0		1	0	0	0	0	0	1		0
	Explosives storage and transport			1	1	0	0	0	0	0	0	1	1	1	0	0		1	0	0	0	0	0	1		2
	Waste and water management			1	0	0	0	0	0	0	2	2	2	1	0	0		2	0	2	1	0	2	2		2
	Industrial machinery operation			0	1	0	0	0	0	0	0	1	1	0	0	0		1	1	1	0	0	1	1		0
	Power generation and distribution			1	1	0	0	0	1	0	0	1	1	0	0	0		1	1	1	0	0	1	1		2

PROJECT SPECIFIC INFORMATION REQUIREMENT – PART 2 FORM

TABLE 3-1 IDENTIFICATION OF ENVIRONMENTAL IMPACTS

		ENVIRONMENTAL COMPONENTS	Physical	Air Quality	Noise and Vibration	Climate Conditions	Ground Stability and Permafrost	Landforms	Soil Quality	Soil Quantity	Surface Hydrology	Surface Water Quality	Freshwater Sediment Quality	Hydrogeology and Ground water	Marine Water Quality	Marine Sediment Quality	Biological	Vegetation	Wildlife and Wildlife Habitat	Terrestrial Birds and Habitat	Marine Aquatic Organisms and Habitat	Marine Mammals and Habitat	Marine Birds	Freshwater Fish and Fish Habitat	Heritage Resources	Cultural, Archaeological and Paleontological Resources
Project Activities/Physical Works																										
Operations																										
Mining	Open pit ore mining (blasting, loading, hauling)			2	2	0	1	1	1	1	2	2	2	1	0	0		2	2	2	0	0	0	1		1
	Underground ore mining (blasting, loading, hauling)			0	0	0	0	0	0	0	2	0	0	1	0	0		0	1	1	0	0	0	1		0
	Ore stockpiling			2	1	1	0	0	1	0	2	1	1	1	0	0		2	0	0	0	0	0	1		1
	PAG waste stockpiling			2	1	0	0	0	0	0	2	2	2	1	0	0		2	0	0	0	0	0	2		1
	NAG mining waste (blasting, loading, hauling)			2	2	0	0	0	0	0	2	1	1	1	0	0		2	0	0	0	0	0	1		1
	PAG rock crushing and stockpiling			2	2	1	0	0	0	0	2	1	1	2	0	0		2	0	0	0	0	0	1		0
	Mine dewatering			0	0	1	0	0	0	0	2	2	2	2	0	0		0	0	0	0	0	0	2		0
	Underground ventilation			0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0		0
Milling	Ore handling and transport			2	1	0	0	0	1	0	0	1	1	1	0	0		2	2	2	0	0	0	1		1
	Ore crushing and grinding			2	2	0	0	0	1	0	0	1	1	0	0	0		2	0	0	0	0	0	0		0
	Reagents preparation and use			0	0	0	0	0	0	0	0	1	1	0	0	0		0	0	0	0	0	0	0		0
Waste and Water Management	Tailings management			1	0	1	2	2	2	2	2	2	2	2	0	0		2	2	2	0	0	0	2		2
	Water withdrawal (for process water, potable water, firewater supply)			0	0	1	0	0	0	0	2	1	1	0	2	2		1	0	0	0	0	0	1		0
	Water treatment (holding ponds, process water, sewage plant effluent)			1	0	0	0	0	0	0	2	2	2	0	1	1		2	0	2	1	0	2	2		0
	Collection of drainage			0	0	0	0	0	0	0	2	2	2	0	1	1		1	0	0	1	0	0	2		0
	Sewage effluent			1	0	0	0	0	0	0	2	2	2	0	1	1		0	0	2	1	0	2	2		0
	Disposal of sewage sludge			1	1	0	0	0	0	0	1	1	1	1	0	0		2	0	0	0	0	0	1		2
	Discharge of treated effluents (including grey water)			1	0	0	0	0	2	0	2	2	2	2	0	0		1	0	2	0	0	0	2		0
	Disposal of industrial waste			0	1	0	0	0	1	0	0	1	1	1	0	0		0	0	0	0	0	0	2		0
	Management of hazardous waste (e.g., waste oil)			0	0	1	0	0	1	0	0	1	1	1	0	0		0	0	0	0	0	0	1		0
	Disposal of domestic waste			0	1	0	0	0	0	0	0	1	1	1	0	0		0	0	2	0	0	0	0		1
	Incineration and handling of burnables			2	1	0	0	0	1	0	0	1	1	0	0	0		1	0	0	0	0	0	1		0
General Services	Power generation and distribution			2	1	0	0	0	1	0	0	1	1	0	0	0		0	0	0	0	0	0	0		2
	Operate accommodations complex			0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0		0
	Snow clearing and stockpiling			0	1	1	0	0	2	0	2	1	1	0	0	0		1	2	0	0	0	0	1		1
	Maintain vehicles and equipment			1	0	0	0	0	0	0	1	1	1	1	0	0		0	0	0	0	0	0	0		0

PROJECT SPECIFIC INFORMATION REQUIREMENT – PART 2 FORM

TABLE 3-1 IDENTIFICATION OF ENVIRONMENTAL IMPACTS

		ENVIRONMENTAL COMPONENTS	Physical	Air Quality	Noise and Vibration	Climate Conditions	Ground Stability and Permafrost	Landforms	Soil Quality	Soil Quantity	Surface Hydrology	Surface Water Quality	Freshwater Sediment Quality	Hydrogeology and Ground water	Marine Water Quality	Marine Sediment Quality	Biological	Vegetation	Wildlife and Wildlife Habitat	Terrestrial Birds and Habitat	Marine Aquatic Organisms and Habitat	Marine Mammals and Habitat	Marine Birds	Freshwater Fish and Fish Habitat	Heritage Resources	Cultural, Archaeological and Paleontological Resources
Project Activities/Physical Works																										
General Services	Maintain infrastructure			1	1	0	0	0	0	0	1	1	1	0	1	1		0	0	0	1	0	0	0		1
	Hazardous materials storage and handling (reagents, fuel and hydrocarbons)			0	0	0	0	0	0	0	0	1	1	1	0	0		0	0	0	1	1	0	1		0
	Explosives storage and handling			0	0	0	0	0	0	0	0	1	1	1	0	0		0	0	0	0	0	0	1		0
Transportation	Ship docking, Offloading ships (fuel, reagents and supplies), Loading ships (concentrate)			2	1	0	0	0	0	0	0	0	0	0	2	2		2	0	0	2	1	2	0		0
	Marine transportation			2	1	0	0	0	0	0	0	0	0	0	0	0		0	2	0	0	2	2	0		0
	Ship waste management and materials handling & storage (Ballast water discharge, fuels, oils)			1	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	1	1	2	0		0
	Truck transportation (ore, concentrate, fuel, reagents and supplies)			2	1	1	0	0	1	0	1	1	1	1	0	0		2	2	1	0	0	0	1		0
	General Project-related traffic (personnel)			1	1	1	0	0	1	0	0	0	0	0	0	0		0	2	1	0	0	0	0		0
	Air transportation of personnel, goods and supplies			1	1	1	0	0	1	0	0	0	0	0	0	0		1	2	2	0	0	0	0		0
	General air transportation support (airplanes, helicopters, medivac, inspections, exploration, monitoring)			0	1	0	0	0	1	0	0	0	0	0	0	0		0	2	2	0	1	0	0		0
On-going Exploration	Aerial surveys			0	1	0	0	0	0	0	0	0	0	0	0	0		0	2	2	0	0	0	0		0
	Ground surveys			0	1	1	0	0	0	0	0	1	1	0	0	0		0	0	0	0	0	0	0		2
	Drilling			0	2	1	0	1	1	1	0	1	1	1	0	0		1	1	0	0	0	0	1		2
Final Closure																										
General	Hazardous materials storage			0	0	0	0	0	1	2	0	1	1	0	0	0		0	0	0	0	0	0	1		0
	Industrial machinery operation			0	1	0	0	0	1	0	0	1	1	0	0	0		0	1	1	0	0	1	0		0
	Withdrawal, treatment and release of water, including domestic wastewater			0	0	1	0	0	0	0	2	2	2	0	1	1		0	0	0	1	0	0	2		0
In-water Decommissioning	Remove freshwater diversions; re-establish natural drainage			0	1	1	2	2	2	2	2	2	2	0				2	0	0	0	0	0	2		1
	Remove surface drainage containment			0	1	1	2	2	2	2	2	2	2	0	2	2		2	0	0	1	0	0	2		1
	Remove in-water/shoreline structures			0	2	1	2	2	2	2	2	1	1	0	2	2		1	1	0	1	2	1	1		1
	Water transfers and discharge (domestic wastewater, Izok Lake flooding)			0	0	1	0	0	0	0	2	2	2	2	1	1		0	0	0	1	0	0	2		0
	Construct fish habitat as per FHCP			0	1	1	0	0	0	0	0	1	1	0	0	0		2	0	0	1	0	1	2		0
	Remove site pads (blasting, earth moving, loading, hauling, dumping)			1	2	0	2	2	2	2	2	1	1	0	1	1		2	1	1	0	0	0	1		1
	Backfilling			1	1	0	2	2	2	2	1	1	1	0				0	0	0	0	0	0	1		0
	Contouring			1	1	0	2	2	2	2	1	2	2	0	0	0		2	1	2	1	0	0	2		1
	Covering			1	1	0	2	2	2	2	1	2	2	0				2	2	2	0	0	0	2		1

TABLE 3-1 IDENTIFICATION OF ENVIRONMENTAL IMPACTS

		ENVIRONMENTAL COMPONENTS	Physical	Air Quality	Noise and Vibration	Climate Conditions	Ground Stability and Permafrost	Landforms	Soil Quality	Soil Quantity	Surface Hydrology	Surface Water Quality	Freshwater Sediment Quality	Hydrogeology and Ground water	Marine Water Quality	Marine Sediment Quality	Biological	Vegetation	Wildlife and Wildlife Habitat	Terrestrial Birds and Habitat	Marine Aquatic Organisms and Habitat	Marine Mammals and Habitat	Marine Birds	Freshwater Fish and Fish Habitat	Heritage Resources	Cultural, Archaeological and Paleontological Resources
Project Activities/Physical Works																										
In-water Decommissioning	Reclamation and revegetation			1	0	1	2	2	2	2	2	1	1	0	0	0		2	2	2	0	0	0	1		1
	Remove foundations			0	2	0	0	0	0	0	1	1	1	0	1	1		0	0	0	1	0	0	1		1
	Remove buildings			0	1	0	0	0	0	0	1	1	1	0	0	0		0	0	0	1	0	0	1		1
	Remove equipment			0	1	0	0	0	0	0	0	1	1	0	0	0		0	0	0	0	0	0	0		0
	Remove fuel tanks			1	1	0	0	0	0	0	0	1	1	1	0	0		0	0	0	1	1	0	0		1
Post-Closure																										
	Management of reclaimed sites			0	1	1	0	0	0	0	0	1	1	0	0	0		2	0	0	0	0	0	2		0

PROJECT SPECIFIC INFORMATION REQUIREMENT – PART 2 FORM

TABLE 3-2 IDENTIFICATION OF SOCIO-ECONOMIC EFFECTS

IZOK CORRIDOR PROJECT

	Project Activities/Physical Works	Project Area/ Component	SOCIO-ECONOMIC COMPONENTS	HUMAN ASSETS	Governance and Leadership	Population Demographics	Education and Skills Training	Health, Safety and Social Services	ECONOMIC ASSETS	Economic Development	Labour Force and Employment	Wage Income and Income Support	Non-wage or Traditional Economy	Contracting, Business Activity and Opportunities	Non-Traditional Land Use and Tourism	Financial Capacity of Government	PHYSICAL ASSETS	Housing	Community Infrastructure and Services	Transportation Infrastructure and Services	SOCIAL ASSETS	Traditional Activity and Knowledge	Community Recreational Facilities and Programs	COMMUNITY WELL-BEING OUTCOMES	Individual and Family Wellness	Community Wellness	Personal Security (i.e., financial and food security)
Construction and Operation																											
Economic Activities	Demand for, and management of the Project's workforce	All Project Components			1	0	1	1*		1	2	1	1	2	0	0		0	0	0		1*	0		1	1	1
	Direct project spending on payroll, goods and services.	All Project Components			0	0	0	0		1	1	1	1*	1	0	0		0	0	0		0	0		1	1	2
	Payment of royalties, taxes and other forms of compensation.	All Project Components			1	0	0	0		1	0	0	0	0	0	1		0	0	0		0	0		0	0	0
In-Water Construction and Operations	Activities in or near waters that are used by Inuit, other Nunavummiut, First Nations and non-traditional land users	All Project Components			0	0	0	0		0	0	0	1*	0	1*	0		0	0	0		2	0		0	0	1
On-Land Construction and Operation	Activities on land that are used by Inuit, other Nunavummiut, First Nations and non-traditional land users, or with archaeological resources	All Project Components			0	0	0	0		0	0	0	1*	0	1*	0		0	0	1*		2/2*	0		0	0	1
Final Closure																											
Economic Activities	Demand for, and management of the Project's workforce	All Project Components			0	0	0	0		2*	2*	2*	0	2*	0	1*		0	0	0		0	0		2*	2*	2*
	Direct project spending on payroll, goods and services.	All Project Components			0	0	0	0		0	2*	2*	0	2*	0	0		0	0	0		0	0		2*	2*	2*
	Payment of royalties, taxes and other forms of compensation.	All Project Components			0	0	0	0		0	0	0	0	0	0	2		0	0	0		0	0		0	0	0
In-water Decommissioning	Activities in or near waters that are used by Inuit, other Nunavummiut, First Nations and non-traditional land users	All Project Components			0	0	0	0		0	0	0	0	0	0	0		0	0	0		0	0		1	1	1

* Identifies potential negative effects

			SOCIO-ECONOMIC COMPONENTS	HUMAN ASSETS	Governance and Leadership	Population Demographics	Education and Skills Training	Health, Safety and Social Services	ECONOMIC ASSETS	Economic Development	Labour Force and Employment	Wage Income and Income Support	Non-wage or Traditional Economy	Contracting, Business Activity and Opportunities	Non-Traditional Land Use and Tourism	Financial Capacity of Government	PHYSICAL ASSETS	Housing	Community Infrastructure and Services	Transportation Infrastructure and Services	SOCIAL ASSETS	Traditional Activity and Knowledge	Community Recreational Facilities and Programs	COMMUNITY WELL-BEING OUTCOMES	Individual and Family Wellness	Community Wellness	Personal Security (i.e., financial and food security)
Project Activities/Physical Works		**Project Area/ Component**																									
On-land Decommissioning	Activities on land that are used by Inuit, other Nunavummiut, First Nations and non-traditional land users or with archaeological resources	All Project Components			0	0	0	0		0	0	0	0	0	0	0		0	0	1*		0	0		1	1	1
Post-closure																											
Economic Activities	Demand for, and management of the Project's workforce	All Project Components			0	0	0	0		0	0	0	0	0	0	0		0	0	0		0	0		0	0	0
	Direct project spending on payroll, goods and services.	All Project Components			0	0	0	0		0	0	0	0	0	0	0		0	0	0		0	0		0	0	0
	Payment of royalties, taxes and other forms of compensation	All Project Components			0	0	0	0		0	0	0	0	0	0	0		0	0	0		0	0		0	0	0

* Identifies potential negative effects

B3 NIRB Part 2 Form

SCREENING PART 2 FORM
PROJECT SPECIFIC INFORMATION REQUIREMENTS (PSIR)

1. SUBMISSIONS

The Proponent must submit all information pertaining to the Project as a whole. The information requirements below are designed for the purpose of environmental assessment and are not limited to the scope of a single permit or license application.

IMPORTANT: Please be advised of the following:

1.	NIRB does not accept references to an ftp or web sites as a submission.	Noted
2.	The Proponent must provide NIRB with 1 (one) electronic copy and 1 (one) hardcopy of the required information in English.	
3.	All maps should be shapefiles, be legible, and should include grids, be of appropriate scale, indicate the scale, include latitude and longitude references, NTS Maps numbers, title, legend and a north arrow. To the extent possible, avoid hand-drawn demarcations and faxed maps; and,	
4.	Please complete all required information in each section below. If the required information is not applicable to the project proposal, please indicate this in the response with "n/a". If the request has been provided in a different section or report, please note the section or report where the response can be found.	

2. GENERAL PROJECT INFORMATION REQUIREMENTS

Project Coordinates and Maps

	Project Specific Information Requirement	Map Title (hardcopies of all maps are appended to this form)	Digital File Name	Section in Project Proposal
1.	The preferred method for submitting project coordinates information is through the use of a Geographic Information System (GIS) compatible digital file. Although an ESRI ArcView 3.x shape file (in decimal degrees) is the preferred interchange format, the NIRB has the capacity to receive over 100 GIS and CAD related formats, including MapInfo and AutoCAD, provided proper format and projection metadata is also submitted. The NIRB requires coordinates for the project proposal which reflect the entire project area as defined by:	Project Coordinates and Regional Study Area	mmg_Project Location Overview w Coordinates_ NIRB_20aug12_v1_ac	NA
		Mining Leases and Surface Lease at Izok Mine	mmg_Figure 1 5-1_ 13aug12_v4_ac	Fig. 1.5-1
		Mining Leases and Surface Lease at High Lake Mine, and Prospecting Permits at Grays Bay	mmg_Figure 1 5-2_ 13aug12_v4_ac	Fig. 1.5-2

	▪ Area/sites of investigation; ▪ Boundaries of the foreseen land use permit/right-of-way area(s) to be applied for; ▪ Location of any proposed infrastructure or activity(s); and, ▪ Boundaries of the mineral claim block(s) where proposed activities will be undertaken.			
2.	Map of the project site within a regional context indicating the distance to the closest communities.	Communities within the Kitikmeot Region	mmg_Figure 6 2-1_ 15aug12_v4_ac	Figure 6.2-1
3.	Map of any camp site including locations of camp facilities.	Project Coordinates and Regional Study Area	mmg_Project Location Overview w Coordinates_ NIRB_20aug12_v1_ac	N/A
4.	Map of the project site indicating existing and/or proposed infrastructure, proximity to water bodies and proximity to wildlife and wildlife habitat.	Locations of Protected Areas within the Kitikmeot and North Baffin Regions and NWT. Areas of Ecological Interest within the Kitikmeot and North Baffin Regions and NWT	Fig521_ProtectedAreas_ 23July2012 Fig522_EcologicalAreas_ 23July2012	Figure 5.2-1 Figure 5.2-2

Project General Information

5.	Discuss the need and purpose of the proposed project.	Section 1.7
6.	Discuss alternatives to the project and alternative methods of carrying out the project, including the no-go alternative. Provide justification for the chosen option(s).	Section 1.9
7.	Provide a schedule for all project activities.	Figure 2.1-1
8.	List the acts, regulations and guidelines that apply to project activities.	Table 1.10-1 and 1.10-2, Section 1.10
9.	List the approvals, permits and licenses required to conduct the project.	Table 1.10-1, Section 1.10

DFO Operational Statement (OS) Conformity

10.	Indicate whether any of the following Department of Fisheries and Oceans (DFO) Operational Statement (OS) activities apply to the project proposal: ▪ Bridge Maintenance ▪ Clear Span Bridge ▪ Culvert Maintenance ▪ Ice Bridge ▪ Routine Maintenance Dredging ▪ Installation of Moorings Please see DFO's OS for specific definitions of these activities available from DFO's web-site at http://www.dfo-	Section 1.9

mpo.gc.ca/regions/central/habitat/os-eo/index-eng.htm	
11. If any of the DFO's OS apply to the project proposal, does the Proponent agree to meet the conditions and incorporate the measures to protect fish and fish habitat as outlined in the applicable OS? If yes, provide a signed statement of confirmation.	Section 1.9

Transportation

12. Describe how the project site will be accessed and how supplies will be brought to site. Provide a map showing access route(s).	Preconstruction staging – Section 2.1.2 Construction and Operations – Sections 2.6 and 2.8. Figures 2.6.3 and 2.8.1
13. If a previous airstrip is being used, provide a description of the type of airstrip (ice-strip/all-weather), including its location. Describe dust management procedures (if applicable) and provide a map showing location of airstrip.	Sections 2.4.10 and 2.5.8 Figures 2.4-21 and 2.5-4 Details regarding dust management procedures will be provided as part of the future EIS.
14. If an airstrip is being constructed, provide the following information: a. Discuss design considerations for permafrost b. Discuss construction techniques c. Describe the construction materials, type and sources, and the acid rock drainage (ARD) and metal leaching (ML) characteristics (if rock material is required for airstrip bed). d. Describe dust management procedures. e. Provide a map showing location of proposed airstrip.	N/A
15. Describe expected flight altitudes, frequency of flights and anticipated flight routes.	Details will be provided as part of the future EIS

Camp Site

16. Describe all existing and proposed camp structures and infrastructure	Question 3c of Part 1 Form, Sections 2.5.8, 2.4.10 and 2.7.12
17. Describe the type of camp: a. Mobile b. Temporary c. Seasonal d. Permanent e. Other	d. Permanent Sections 2.5.8, 2.4.10 and 2.7.12
18. Describe the maximum number of personnel expected on site, including the timing for those personnel involved with the project.	Section 2.9

Equipment

19. Provide a list of equipment required for the project and discuss the uses for the equipment.	Sections 2.4.4 and 2.5.3
20. If possible, provide digital photos of equipment.	Will be provided as part of the future EIS

Water

21. Describe the location of water source(s), the water intake methods, and all methods employed to prevent fish entrapment. Provide a map showing the water intake locations.	Sections 2.4.8 (Izok Mine) and 2.5.6 (High Lake Mine), Figure 2.4-19. Further details regarding source of water will be provided as part of the future EIS.
22. Describe the estimated rate of water consumption (m^3/day).	Details regarding available capacity and quantity of water use will be provided as part of the future EIS.
23. Describe how waste water will be managed. If relevant, provide detail regarding location of sumps, including capacity of sumps and monitoring.	Sections 2.4.9 (Izok Mine) and 2.5.7 (High Lake Mine). Further details regarding the location sumps, including capacity of sumps and monitoring will be provided as part of the future EIS.
24. If applicable, discuss how surface water and underground water will be managed and monitored.	Sections 2.4.7 and 2.5.5

Waste Water (Grey water, Sewage, Other)

25. Describe the quantities, treatment, storage, transportation, and disposal methods for the following (where relevant): ▪ Sewage ▪ Camp grey water ▪ Combustible solid waste ▪ Non-combustible solid waste, including bulky items/scrap metal ▪ Hazardous waste or oil ▪ Contaminated soils/snow ▪ Empty barrels/ fuel drums ▪ Any other waste produced	Sections 2.4.9, 2.5.7 and 2.7.9
26. If the project proposal includes a landfill or landfarm, indicate the locations on a map, provide the conceptual design parameters, and discuss waste management and contact-water management procedures.	Section 2.4.9 and 2.5.7 Additional details will be provided in the future EIA

Fuel

27. Describe the types of fuel, quantities (number of containers, type of containers and capacity of containers), method of storage and containment. Indicate the location on a map where fuel is to be stored, and method of transportation of fuel to project site.	Section 2.4.10, 2.5.8 and 2.7.10 Additional details will be provided in the future EIS
28. Describe any secondary containment measures to be employed, including the type of material or system used. If no secondary containment is to be employed, please provide justification.	Section 2.4.10, 2.5.8 and 2.7.10 Additional details will be provided in the future EIS
29. Describe the method of fuel transfer and the method of refuelling.	Section 2.4.10, 2.5.8 and 2.7.7 Additional details will be provided in the future EIS

30. Describe spill control measures in place.	Section 12.2

Please refer to Environment Canada's fuel storage tank system regulations (*Storage Tank System for Petroleum and Allied Petroleum Products*) website at http://www.ec.gc.ca/st-rs/ for details on fuel storage requirements.

Chemicals and Hazardous Materials*

**included but not limited to oils, greases, drill mud, antifreeze, calcium or sodium chloride salt, lead acid batteries and cleaners*

31. Describe the types, quantities (number of containers, the type of container and capacity of containers), method of storage and containment. Indicate the location on a map where material is to be stored, and method of transportation of materials to project site.	Section 2.4.10, 2.5.8 and 2.7 Additional details will be provided in the future EIS
32. Describe any secondary containment measures to be employed, including the type of material or system used.	Section 2.4.10, 2.5.8 and 2.7 Additional details will be provided in the future EIS
33. Describe the method of chemical transfer.	Section 2.4.10, 2.5.8 and 2.7 Additional details will be provided in the future EIS
34. Describe spill control measures in place.	Section 12.2

Workforce and Human Resources/Socio-Economic Impacts

35. Discuss opportunities for training and employment of local Inuit beneficiaries.	Section 2.9 and 12.3
36. Discuss workforce mobilization and schedule, including the duration of work and rotation length, and the transportation of workers to site.	Section 2.9
37. Discuss, where relevant, any specific hiring policies for Inuit beneficiaries.	Section 12.3

Public Involvement/ Traditional Knowledge

38. Indicate which communities, groups, or organizations would be affected by this project proposal.	Section 3 and 6.2
39. Describe any consultation with interested Parties which has occurred regarding the development of the project proposal.	Section 3
40. Provide a summary of public involvement measures, a summary of concerns expressed, and strategies employed to address any concerns.	Sections 3 and 12
41. Describe how traditional knowledge was obtained, and how it has been integrated into the project.	Section 4
42. Discuss future consultation plans.	Section 3

3. PROJECT SPECIFIC INFORMATION

The following table identifies the project types identified in Section 3 of the NIRB, Part 1 Form. Please complete all relevant sections.

It is the proponent's responsibility to review all sections in addition to the required sections to ensure a complete application form.

Table 1: Project Type and Information Required

Project Type	Type of Project Proposal	Information Request
1	All-Weather Road/Access Trail	Section A-1 and Section A-2
2	Winter Road/Winter Trail	Section A-1 and Section A-3
4	Advanced Mineral Exploration	Section B-1 through Section B-8
5	Mine Development/Bulk Sampling	Section B-1 through Section B-12
6	Pits and Quarries	Section C
11	Marine Based Activities	Section H

SECTION A: Roads/Trails

A-1. Project Information

1.	Describe any field investigations and the results of field investigations used in selecting the proposed route (e.g. geotechnical, snow pack).	Section 2.6.2
2.	Provide a conceptual plan of the road, including example road cross-sections and water crossings.	Section 2.6.2, Figures 2.6-1 and 2.6-2
3.	Discuss the type and volume of traffic using the road/trail (i.e. type of vehicles and cargo and number of trips annually).	Section 2.6.4
4.	Discuss public access to the road.	Section 2.6.4 and 12.2
5.	Describe maintenance procedures.	Section 2.6.4
6.	Describe whether any portion of the road will be located outside of the Nunavut Settlement Area and whether any other regulatory requirements must be met (e.g. CEAA).	N/A

A-2. All-Weather Road/Access Trail

7.	Discuss road design considerations for permafrost.	Section 2.6.2
8.	Describe the construction materials (type and sources for materials), and the acid rock drainage (ARD) and metal leaching characteristics of the construction materials.	Section 2.6.3
9.	Discuss construction techniques, including timing for construction activities.	Section 2.6.3

10. Indicate on a map the locations of designated refuelling areas, water crossings, culverts, and quarries/borrow sources.	Figure 2.6-1 to 2.6-9
11. Identify the proposed traffic speed and measures employed to ensure public safety.	Sections 2.6.4 and 12.2
12. Describe dust management procedures.	Section 2.6.4

A-3. Winter Road/Trail

13. Describe the surface preparation, including the use of snow berms or compaction, and any flooding. If flooding is to be used, provide the location of the water source on a map.	Section 2.6.1
14. Describe the operating time period.	Section 2.6.1
15. Identify the proposed traffic speed and measures employed to ensure public safety.	Section 2.6.1
16. Discuss whether the selected route traverses any fish-bearing water bodies.	Section 2.6.1

SECTION B: Mineral Exploration /Advanced Exploration /Development

B-1. Project Information

1. Describe the type of mineral resource under exploration.	Section 2.2 Sections 2.4.1 and 2.4.2 Sections 2.5.1 and 2.5.2

B-2. Exploration Activity

2. Indicate the type of exploration activity: ▪ Bulk Sampling (underground or other) ▪ Stripping (mining shallow bedded mineral deposits in which the overlying material is stripped off, the mineral removed and the overburden replaced) ▪ Trenching ▪ Pitting ▪ Delineation drilling ▪ Preliminary Delineation drilling ▪ Exploration drilling ▪ Geophysical work (indicate ground and/or air) ▪ Other	N/A

3.	Describe the exploration activities associated with this project: ▪ Satellite remote sensing ▪ Aircraft remote sensing ▪ Soil sampling ▪ Sediment sampling ▪ On land drilling (indicate drill type) ▪ On ice drilling (indicate drill type) ▪ Water based drilling (indicate drill type) ▪ Overburden removal ▪ Explosives transportation and storage ▪ Work within navigable waters ▪ On site sample processing ▪ Off site sample processing ▪ Waste rock storage ▪ Ore storage ▪ Tailings disposal ▪ Portal and underground ramp construction ▪ Landfilling ▪ Landfarming ▪ Other	N/A

B-3. Geosciences

4.	Indicate the geophysical operation type: a. Seismic (please complete Section E) b. Magnetic c. Gravimetric d. Electromagnetic e. Other (specify)	N/A
5.	Indicate the geological operation type: a. Geological Mapping b. Aerial Photography c. Geotechnical Survey d. Ground Penetrating Survey e. Other (specify)	N/A
6.	Indicate on a map the boundary subject to air and/or ground geophysical work.	N/A
7.	Provide flight altitudes and locations where flight altitudes will be below 610m.	N/A

B-4. Drilling

8.	Provide the number of drill holes and depths (provide estimates and maximums where possible).	N/A
9.	Discuss any drill additives to be used.	N/A
10.	Describe method for dealing with drill cuttings.	N/A

11. Describe method for dealing with drill water.	N/A
12. Describe how drill equipment will be mobilized.	N/A
13. Describe how drill holes will be abandoned.	N/A
14. If project proposal involves uranium exploration drilling, discuss the potential for radiation exposure and radiation protection measures. Please refer to the Canadian Guidelines for Naturally Occurring Radioactive Materials for more information.	N/A

B-5. Stripping/ Trenching/ Pit Excavation

15. Discuss methods employed. (i.e. mechanical, manual, hydraulic, blasting, other)	Section 2.4.4 Section 2.5.3
16. Describe expected dimensions of excavation(s) including depth(s).	Section 2.4.4 Section 2.5.3
17. Indicate the locations on a map.	Section 2.4 and 2.5
18. Discuss the expected volume material to be removed.	Table 2.4-3 Table 2.4-8 Table 2.5-3
19. Discuss methods used to determine acid rock drainage (ARD) and metal leaching potential and results.	Section 2.4.6 Section 2.5.4

B-6. Underground Activities

20. Describe underground access.	Section 2.4.4 Section 2.5.3
21. Describe underground workings and provide a conceptual plan.	Section 2.4.4, Figure 2.4-7 Section 2.5.3, Figure 2.5-3
22. Show location of underground workings on a map.	Figure 2.4-3 Figure 2.4-1
23. Describe ventilation system.	Section 2.4.4 Section 2.5.3
24. Describe the method for dealing with ground ice, groundwater and mine water when encountered.	Section 2.4.7 Section 2.5.5
25. Provide a Mine Rescue Plan.	A Mine Rescue Plan will be provided as part of the draft EIS

B-7. Waste Rock Storage and Tailings Disposal

26. Indicate on a map the location and conceptual design of waste rock storage piles and tailings disposal facility.	Figure 2.4-13 and 2.4-14
27. Discuss the anticipated volumes of waste rock and tailings.	Sections 2.4.6 and 2.4.9 Section 2.5.4
28. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.	Section 2.4.6 and 2.5.4

B-8. Stockpiles

29. Indicate on a map the location and conceptual design of all stockpiles.	figure 2.4-15 Additional details will be provided in the future EIS
30. Describe the types of material to be stockpiled. (i.e. ore, overburden)	Section 2.5.4
31. Describe the anticipated volumes of each type of material to be stockpiled.	Table 2.4-7
32. Describe any containment measures for stockpiled materials as well as treatment measures for runoff from the stockpile.	Section 2.4.6 Section 2.5.4
33. Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.	Section 2.4.6 Section 2.5.4

B-9. Mine Development Activities

34. Indicate the type(s) of mine development activity(s): ▪ Underground ▪ Open Pit ▪ Strip Mining ▪ Other	Section 2.4.4 Section 2.5.3
35. Describe mine activities. ▪ Mining development plan and methods ▪ Site access ▪ Site infrastructure (e.g. airstrip, accommodations, offshore infrastructures, mill facilities, fuel storage facilities, site service roads) ▪ Milling process ▪ Water source(s) for domestic and industrial uses, required volumes, distribution and management. ▪ Solid waste, wastewater and sewage management ▪ Water treatment systems ▪ Hazardous waste management ▪ Ore stockpile management ▪ Tailings containment and management ▪ Waste rock management ▪ Site surface water management ▪ Mine water management ▪ Pitting and quarrying activities (please complete Section C) ▪ Explosive use, supply and storage (including on site manufacturing if required) ▪ Power generation, fuel requirements and storage ▪ Continuing exploration ▪ Other	Section 2.4 Section 2.5
36. Describe the explosive type(s), hazard class, volumes, uses, location of storage (show on map), and method of storage.	Section 2.4.10 Section 2.5.8

B-10. Geology and Mineralogy

37. Describe the physical nature of the ore body, including known dimensions and approximate shape.	Section 2.4.1 Section 2.5.1
38. Describe the geology/ mineralogy of the ore deposit.	Section 2.4.1 Section 2.5.1
39. Describe the host rock in the general vicinity of the ore body.	Section 2.4.1 Section 2.5.1
40. Discuss the predicted rate of production.	Section 2.4.4 Section 2.5.3
41. Describe mine rock geochemical test programs which have been or will be performed on the ore, host rock, waste rock and tailings to determine acid generation and contaminant leaching potential. Outline methods and provide results if possible.	Section 2.4.6 Section 2.5.4

B-11. Mine

42. Discuss the expected life of the mine.	Section 2.1.3
43. Describe mine equipment to be used.	Section2.4.4 Section 2.5.3
44. Does the project proposal involve lake and/or pit dewatering? If so, describe the activity as well as the construction of water retention facilities if necessary.	Sections 2.4.3 and 2.4.7 Section 2.5.5
45. Discuss the possibility of operational changes occurring during the mine life with consideration for timing. (e.g. open pit to underground)	Section 2.4.4 Section 2.5.3
46. If project proposal involves uranium mining, consider the potential for radiation exposure and radiation protection measures. Particular attention should be paid to The Nuclear Safety and Control Act.	N/A

B-12. Mill

47. If a mill will be operating on the property in conjunction with mining, indicate whether mine-water may be directed to the mill for reuse.	Section 2.4.8
48. Describe the proposed capacity of the mill.	Section 2.4.5
49. Describe the physical and chemical characteristics of mill waste as best as possible.	Section 2.4.6
50. Will or does the mill handle custom lots of ore from other properties or mine sites?	Section 2.4.5

SECTION C: Pits and Quarries

1. Describe all activities included in this project. ▪ Pitting ▪ Quarrying ▪ Overburden removal	Sections 2.4.10, 2.5.8 and 2.6 and Section A of this form

	▪ Road use and/or construction (please complete Section A) ▪ Explosives transportation and storage ▪ Work within navigable waters ▪ Blasting ▪ Stockpiling ▪ Crushing ▪ Washing ▪ Other	
2.	Describe any field investigations and the results of field investigations used in determining new extraction sites.	Section 2.6.3
3.	Identify any carving stone deposits.	None have been identified so far, but if carving stone deposits are encountered in the future, they will be recorded and identified.
4.	Provide a conceptual design including footprint.	Figures 2.6-5 to 2.6-8 show the potential location of proposed quarry and borrow sources
5.	Describe the type and volume of material to be extracted.	Details will be provided in the draft EIS
6.	Describe the depth of overburden.	Details will be provided in the draft EIS
7.	Describe any existing and potential for thermokarst development and any thermokarst prevention measures.	Sections 2.6.2 and 5.5.2, details will be provided in the draft EIS
8.	Describe any existing or potential for flooding and any flood control measures.	Section 12.2, details will be provided in the draft EIS
9.	Describe any existing or potential for erosion and any erosion control measures.	Section 12.2, details will be provided in the draft EIS
10.	Describe any existing or potential for sedimentation and any sedimentation control measures.	Section 12.2, details will be provided in the draft EIS
11.	Describe any existing or potential for slumping and any slump control measures.	Section 12.2, details will be provided in the draft EIS
12.	Describe the moisture content of the ground.	Section 5.7.1, details will be provided in the draft EIS
13.	Describe any evidence of ice lenses.	Section 5.5.2, details will be provided in the draft EIS
14.	If blasting, describe methods employed.	Details will be provided in the draft EIS
15.	Describe the explosive type(s), hazard class, volumes, uses, location of storage (show on map), and method of storage.	Details will be provided in the draft EIS
16.	Discuss methods used to determine acid rock drainage (ARD) and metal leaching (ML) potential and results.	Details will be provided in the draft EIS
17.	Discuss safety measures for the workforce and the public.	Section 12.2 and 12.3, detailed safety Plans will be provided in the draft EIS.

SECTION C: Offshore Infrastructure

C-1. Facility

1.	Describe any field investigations and the results of field investigations used in selecting the site (i.e. aerial surveys, bathymetric surveys, tidal processes, shoreline erosion processes, geotechnical foundation conditions)	Section 2.7.2 Section 5.8
2.	Provide a conceptual plan, profile description and drawing(s) indicating shoreline, facility footprint, tidal variations, required vessel draft, keel offset, deck height freeboard	Figure 2.7-3
3.	Discuss how anticipated loads on the seabed foundation and on the offloading platform will be incorporated into the design.	Details will be provided in the draft EIS
4.	Describe how vessels will manoeuvre around the facility. (e.g. pull alongside or in front)	Section 2.7.3
5.	Discuss the anticipated life of the facility.	Section 2.1.3
6.	Describe whether part of the facility or project will be located outside of the Nunavut Settlement Area and whether any other regulatory requirements must be met (e.g. CEAA).	Section 2.7.1, Figure 2.7-1

C-2. Facility Construction

7.	Describe the types of material used for construction (i.e. granular or rock, steel piling or sheet piling, concrete). If material is granular, consider acid rock drainage potential, metal leaching potential, percentage of fines, size.	Section 2.7.2, details will be provided in the draft EIS
8.	Describe dredging activities.	Section 2.7.2, details will be provided in the draft EIS
9.	Indicate source of granular or rock material used in construction.	Section 2.7.2, details will be provided in the draft EIS
10.	List quantities of the various types of material used in construction.	Section 2.7.2, details will be provided in the draft EIS
11.	Describe construction method(s).	Section 2.7.2, details will be provided in the draft EIS
12.	Indicate whether a site engineer will be on-site to inspect construction.	Details will be provided in the draft EIS
13.	If proposed construction method involves dumping of fill into water, discuss measures for mitigating the release of suspended solids.	Section 2.7.2 and 2.7.17, details will be provided in the draft EIS

C-3. Facility Operation

14.	Describe maintenance activities associated with the facility (e.g. dredging, maintenance to account for potential settlement of facility)	Sections 2.7.17 and 2.7.18, details will be provided in the draft EIS
15.	Discuss whether the public will have access to the facility(s) and describe public safety measures.	Currently this facility is only planned for MMG's use. This will be an industrial port operation. There are no facilities for privately owned vessels planned.

16. Describe cargo and container handling, transfer and storage facilities.	Section 2.7.2, details will be provided in the draft EIS
17. Indicate whether fuel will be transferred from barges at this site and describe the method of that fuel transfer.	Section 2.7.7, details will be provided in the draft EIS
18. Discuss frequency of use.	Sections 2.7.3 and 2.8

C-4. Vessel Use in Offshore Infrastructure

19. Please complete Section H.	See Section H

SECTION D: Seismic Survey

D-1. Offshore Seismic Survey

1. Indicate whether the survey is 2D or 3D at each site.	N/A
2. Describe the type of equipment used, including: ▪ Type and number of vessels including length, beam, draft, motors, accommodation capacity, operational speeds when towing and when not towing ▪ Sound source (type and number of airguns) ▪ Type and number of hydrophones ▪ Number, length, and spacing of cables/ streamers	N/A
3. On a map, indicate the grid, number of lines and total distance covered by each line, the distance to nearby community/communities and sensitive areas (e.g., National Parks, National Wildlife Areas, Migratory Bird Sanctuaries, recognized breeding grounds or migratory routes).	N/A
4. Indicate the discharge volume of the airguns, the depth of airgun discharge, the noise levels of acoustic signal at various distances from the source (e.g.,500 metres,1000 metres), and the frequency and duration of airgun operation at each site.	N/A
5. Discuss the potential for dielectric oil to be released from the streamer array, and describe proposed mitigation measures.	N/A
6. Indicate whether additional seismic operations are required for start-up of operations, equipment testing, repeat coverage of areas.	N/A
7. Indicate whether air gun procedures will include a “ramping up” period and, if so, the proposed rate of ramping up.	N/A
8. Indicate whether the measures described in the Statement of Canadian Practice for Mitigation of Noise in the Marine Environment will be adhered to for this project.	N/A
9. Describe whether any part of the project will be located outside of the Nunavut Settlement Area and whether any other regulatory requirements must be met (e.g. CEAA).	N/A

D-2. Nearshore/Onshore Seismic Survey

10. For each site, indicate whether nearshore and onshore surveys will	N/A

be conducted during the ice season or once the ice has melted	
11. Describe how nearshore and onshore areas will be accessed.	N/A
12. Describe the survey methods to be used (e.g. explosive charge, vibration, air or water gun, other)	N/A
13. Describe equipment to be used	N/A
14. If applicable, indicate number, depth and spacing of shot holes	N/A
15. Describe explosive wastes including characteristics, quantities, treatment, storage, handling, transportation and disposal methods.	N/A

D-3. Vessel Use in Seismic Survey

16. Please complete Section H.	N/A

SECTION E: Site Cleanup/Remediation

1. Describe the location, content, and condition of any existing landfills and dumps (indicate locations on a map).	N/A
2. Identify salvageable equipment, infrastructure and/or supplies.	N/A
3. Provide a list of all contaminants to be cleaned up, anticipated volumes and a map delineating contaminated areas. This includes buildings, equipment, scrap metal and debris, and barrels as well as soil, water (surface and groundwater) and sediment.	N/A
4. Describe the degree of pollution/contamination, and list the contaminants and toxicity.	N/A
5. Describe technologies used for clean-up and/or disposal of contaminated materials. Include a list of all the physical, chemical and biological cleanup/ remediation methods, operational procedures, and the dosage/frequency of reagents and bacterial medium.	N/A
6. Identify and describe all materials to be disposed of offsite, including the proposed off site facilities, method of transport and containment measures.	N/A
7. Discuss the viability of landfarming, given site specific climate and geographic conditions.	N/A
8. Describe the explosive types, hazard classes, volumes, uses, location of storage (indicate on a map), and method of storage (if applicable).	N/A
9. If blasting, describe the methods employed.	N/A
10. Describe all methods of erosion control, dust suppression, and contouring and re-vegetation of lands.	N/A
11. Describe **all** activities included in this project. ▪ Excavation (please complete Section B-5) ▪ Road use and/or construction (please complete Section A) ▪ Airstrip use and/or construction ▪ Camp use and/or construction ▪ Stockpiling of contaminated material ▪ Pit and/or quarry (please complete Section C)	N/A

- Work within navigable waters (please complete Section H)
- Barrel crushing
- Building Demolition
- Other

SECTION F: Oil and Natural Gas Exploration/Activities

F-1. Well Authorization

1. Identify the location(s) of the well centre(s) by latitude and longitude. Attach a map drawn to scale showing locations of existing and proposed wells. — N/A

2. Indicate if the site contains any known former well sites. — N/A

3. Include the following information for each well: — N/A
   a. Well name
   b. Surface location
   c. Proposed bottomhole location
   d. Ground elevation (in metres)
   e. Spacing area (in units)
   f. Identify the well type:
      i. Production
      ii. Injection
      iii. Disposal
      iv. Observation
      v. Storage
      vi. Experimental
      vii. Other (specify)
   g. Identify the well classification:
      i. Exploratory wildcat
      ii. Exploratory outpost
      iii. Development
   h. Drilling operation (deviation):
      i. Vertical
      ii. Directional
      iii. Horizontal
      iv. Slant
   i. Objective Zones (copy chart style below)

Objective Formation	Fluid (oil/gas/water)	Depth (mTVD)	Core (Y/N)

   j. Proposed Total Depth in mTDV and mMD.
   k. Formation of Total Depth
   l. Sour well? (yes or no)
      i. If Yes: Maximum H_2S concentration in mol/kmol
         Emergency planning zone radius in km

m. Blowout Prevention (Well Class I – VI) n. Deviation Surveys i. Will be run at intervals less than 150m? (yes or no) o. Wireline logs i. Will run logs in hole for surface casing? (yes or no) ii. Will run a minimum of 2 porosity measuring logs? (yes or no)	

F-2. On-Land Exploration

4. Indicate if the site contains any known: a. Waste Dumps b. Fuel and Chemical Storage Areas c. Sump Areas d. Waste Water Discharge Locations	N/A
5. Attach maps drawn to scale showing locations of existing and proposed items identified in (2) above, as well as all proposed: a. Sumps b. Water sources c. Fuel and chemical storage facilities d. Drilling mud storage areas e. Transportation routes	N/A
6. If utilizing *fresh water*, estimate maximum drawdown and recharge capability of the river or lake from which water will be drawn.	N/A
7. Indicate if permafrost is expected to be encountered under: a. Camp Facilities b. Well Site c. Access Routes d. Sumps e. Other: _____	N/A
8. Indicate any potential for encountering artesian aquifers or lost circulation within the surface hole (to casing depth).	N/A
9. Will drilling wastes contain detrimental substances (including, but not limited to, oil-based or invert mud and high salinity fluids)? If yes, indicate the substances and estimated volumes.	N/A
10. Indicate methods for disposal of drilling wastes: a. Sump b. Down Hole (requires NEB approval) c. On-Site Treatment (provide plan) d. Off-Site (give location and method of disposal)	N/A
11. If a sump is being used, attach the following information: a. scale drawings and design of sumps b. capacity in cubic metres c. berm erosion protection d. soil permeability and type e. recycling/reclaiming waters f. surface drainage controls	N/A

g. abandonment procedures	
12. Attach the proposed or existing contingency plan which describes the course of action, mitigative measures and equipment available for use in the event of system failures and spills of hazardous materials.	N/A
13. Attach an outline of planned abandonment and restoration procedures.	N/A

F-3. Off-Shore Exploration

14. Will drilling wastes contain detrimental substances (including, but not limited to, oil-based or invert mud and high salinity fluids)? If yes, indicate the substances and estimated volumes.	N/A
15. Attach the proposed or existing contingency plan which describes the course of action, mitigative measures and equipment available for use in the event of system failures and spills of hazardous materials.	N/A
16. Attach an outline of planned abandonment and restoration procedures.	N/A
17. Please complete Section H.	N/A

F-4. Rig

18. Type of Rig. Draw works, make and model	N/A
19. Derrick/Mast make and model	N/A
20. H.P. available to draw-works	N/A

SECTION G: Marine Based Activities

G-1. Vessel Use

1. Describe the purpose of vessel operations.	Section 2.7.3, Note that MMG intends to use a qualified contractor for shipping activities and therefore the indicated level of detail is not currently available. Further details will be provided in the draft EIS
2. List classes and sizes of vessels to be used.	Section 2.7.3, Note that MMG intends to use a qualified contractor for shipping activities and therefore the indicated level of detail is not currently available. Further details will be provided in the draft EIS
3. Indicate crew size.	Note that MMG intends to use a qualified contractor for shipping activities and therefore the indicated level of detail is not currently available. Further details will be provided in the draft EIS
4. Indicate operating schedule.	Section 2.7.3, Note that MMG intends to use a qualified contractor

		for shipping activities and therefore the indicated level of detail is not currently available. Further details will be provided in the draft EIS
5.	Provide a description of route to be traveled (include map).	Section 2.8.1, Figures 2.8-1, 2.8-2, 2.8-3
6.	Indicate whether the vessel will call at any ports. If so, where and why?	N/A
7.	Describe wastes produced or carried onboard including the quantities, storage, treatment, handling and disposal methods for the following: a. Ballast water b. Bilge water c. Deck drainage d. Grey and black water e. Solid waste f. Waste oil g. Hazardous or toxic waste	Sections 2.8.2 and 2.8.3, Section 12.2.1. Note that MMG intends to use a qualified contractor for shipping activities and therefore the indicated level of detail is not currently available. Further details will be provided in the draft EIS
8.	List all applicable regulations concerning management of wastes and discharges of materials into the marine environment.	See Table 1.10-2. The Canadian Shipping Act and the Arctic Waters Pollution Prevention Act and Regulations.
9.	Provide detailed Waste Management, Emergency Response and Spill Contingency Plans.	Section 12.2 Note that MMG intends to use a qualified contractor for shipping activities and therefore the indicated level of detail is not currently available. Further details will be provided in the draft EIS
10.	Does the vessel(s) possess an Arctic Pollution Prevention Certificate? If yes, indicate the date of issue and the name of the classification society.	Note that MMG intends to use a qualified contractor for shipping activities and therefore the indicated level of detail is not currently available. Further details will be provided in the draft EIS
11.	Describe the source of fresh water and potable water.	Note that MMG intends to use a qualified contractor for shipping activities and therefore the indicated level of detail is not currently available. Further details will be provided in the draft EIS
12.	Indicate whether ice-breaking will be required, and if so, approximately where and when? Discuss any possible impacts to caribou migration, Inuit harvesting or travel routes, and outline proposed mitigation measures.	N/A
13.	Indicate whether the operation will be conducted within the Outer Land Fast Ice Zone of the East Baffin Coast. For more information on the Outer Land Fast Ice Zone, please see the Nunavut Land Claims Agreement (NLCA), Articles 1 and 16.	N/A
14.	Indicate whether Fisheries or Environmental Observers or any other Qualified Marine Observer will be onboard during the proposed project activities. If yes, describe their function and responsibilities.	Section 7.6 Further details will be provided in the DEIS

15. Describe all proposed measures for reducing impacts to marine habitat and marine wildlife (including mammals, birds, reptiles, fish, and invertebrates).	Section 7.6
16. Describe whether any part of the project will be located outside of the Nunavut Settlement Area and whether any other regulatory requirements must be met (e.g. CEAA).	See Table 1.10-2

G-2. Disposal at Sea

17. Provide confirmation you have applied for a Disposal at Sea permit with Environment Canada.	See Section 2.8.2, Note that MMG intends to use a qualified contractor for shipping activities and therefore the indicated level of detail is not currently available. Further details will be provided in the draft EIS
18. Provide a justification for the disposal at sea.	
19. Describe the substance to be disposed of, including chemical and physical properties.	
20. Indicate the location where the disposal is to take place.	
21. Describe the frequency of disposals (disposals per day/week or month).	
22. Describe the route to be followed during disposal and indicate on a map.	
23. Indicate any previous disposal methods and locations.	
24. Provide an assessment of the potential effects of the disposal substance on living marine resources.	
25. Provide an assessment of the potential of the disposal substance, once disposed of at sea, to cause long-term physical effects.	
26. Describe all mitigation measures to be employed to minimize the environmental, health, navigational and aesthetic impacts during loading, transport and disposal.	

SECTION H: Municipal and Industrial Development

43. Describe the business type, including public, private, limited, unlimited or other.	N/A
44. Describe the activity (e.g. development of quarry, development of hydroelectric facility, bulk fuel storage, power generation with nuclear fuels or hydro, tannery operations, meat processing and packing, etc.).	N/A
45. Describe the production process or service provision procedures.	N/A
46. Describe the raw materials used in this activity, the storage and transportation methods. If hazardous materials are included in raw materials, products or by-products; include safety regulations methodology.	N/A
47. Provide detailed information about the structure and/or building in which the activity will be conducted.	N/A
48. List the PPE (personal protective equipment) and tools to be used to protect personal health and safety.	N/A
49. Describe the firefighting equipment that are or will be installed.	N/A

50. Describe the noise sources, noise level in work area, technical measurements that will be adopted to abate the noise levels and regulatory requirements for noise abatement and noise levels.	N/A
51. Describe the type of gaseous emission that will be produced during this activity. Include the allowable thresholds and mitigation measures.	N/A
52. Describe odours that the activity might release and include corresponding allowable threshold. Describe mitigation measures if thresholds are exceeded.	N/A
53. Describe radiation sources that might be emitted during the activity. Include type and source and include mitigation measures. Also describe preventative measures for human exposure (i.e. PPE).	N/A
54. Discuss the employee safety and environment protection training program.	N/A
55. If the activity involves a bulk fuel storage facility, include drawings showing the bulk fuel storage facility location in proximity to natural water courses, high water marks, etc.	N/A
56. If the activity involves the development of a new quarry or expansion of an existing quarry, complete Section C.	N/A

4. DESCRIPTION OF THE EXISTING ENVIRONMENT

Describe the existing environment, including physical, biological and socioeconomic aspects. Where appropriate, identify local study areas (LSA) and regional study areas (RSA).

Please note that the detail provided in the description of the existing environment should be appropriate for the type of project proposal and its scope.

Physical Environment

Please note that a description of the physical environment is intended to cover all components of a project, including roads/trails, marine routes, etc. that are in existence at present time.	
▪ Proximity to protected areas, including: i. designated environmental areas, including parks; ii. heritage sites; iii. sensitive areas, including all sensitive marine habitat areas; iv. recreational areas; v. sport and commercial fishing areas; vi. breeding, spawning and nursery areas; vii. known migration routes of terrestrial and marine species; viii. marine resources; ix. areas of natural beauty, cultural or historical history; x. protected wildlife areas; and xi. other protected areas.	Section 5.2, Figure 5.2-1 and 5.2-2 Sections 5.7.3, 5.7.4 and 5.8.4, 5.8.5 Sections 6.4.1, 6.5.3, 6.6.4 and 6.6.5
▪ Eskers and other unique landscapes (e.g. sand hills, marshes, wetlands, floodplains)	Section 5.7.1

▪ Evidence of ground, slope or rock instability, seismicity	Section 5.7.1
▪ Evidence of thermokarsts	Section 5.5.2
▪ Evidence of ice lenses.	Section 5.5.2
▪ Surface and bedrock geology	Section 5.7.1
▪ Topography	Section 5.7.1
▪ Permafrost (e.g. stability, depth, thickness, continuity, taliks)	Section 5.5.2
• Sediment and soil quality	Sections 5.6.2 and 5.7.1
▪ Hydrology/ limnology (e.g. watershed boundaries, lakes, streams, sediment geochemistry, surface water flow, groundwater flow, flood zones).	Sections 5.5.2 and 5.6.1
▪ Tidal processes and bathymetry in the project area (if applicable).	Section 5.6.3 and 5.8.1
▪ Water quality and quantity.	Section 5.6.2
▪ Air quality	Section 5.3
▪ Climate conditions and predicted future climate trends	Section 5.3
▪ Noise levels	Section 5.4
▪ Other physical Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review	

Biological Environment

▪ Vegetation	Section 5.7.2
▪ Wildlife, including habitat and migration patterns	Sections 5.7.3 and 5.8.4
▪ Birds, including habitat and migration patterns	Sections 5.7.4 and 5.8.5
▪ Species of concern as identified by federal or territorial agencies, including any wildlife species listed under the *Species at Risk Act (SARA)*, its critical habitat or the residences of individuals of the species	Sections 5.7.3, 5.7.4 and 5.8.4, 5.8.5
▪ Aquatic (freshwater and marine) species, including habitat and migration/spawning patterns	Sections 5.6.3 and 5.8.3
▪ Other biological Valued Ecosystem Components (VEC) as determined through community consultation and/or literature review	

Socioeconomic Environment

▪ Proximity to communities	Section 6.2, Figure 6.2-1
▪ Archaeological and culturally significant sites (e.g. pingos, soap stone quarries) in the project (Local Study Area) and adjacent area (Regional Study Area)	Section 6.6.3
▪ Palaeontological component of surface and bedrock geology	Section 6.6.2
▪ Land and resource use in the area, including subsistence harvesting, tourism, trapping and guiding operations	Sections 6.4.1, 6.6.4
▪ Local and regional traffic patterns	Section 6.5.3
▪ Human Health, broadly defined as a complete state of wellbeing (including physical, social, psychological, and spiritual aspects)	Section 6.3.4, Section 9
▪ Other Valued Socioeconomic Components (VSEC) as determined	See Section 6

through community consultation and/or literature review	

5. IDENTIFICATION OF IMPACTS AND PROPOSED MITIGATION MEASURES

1.	Please complete the attached Table 1 – Identification of Environmental Impacts, taking into consideration the components/activities and project phase(s) identified in Section 4 of this document. Identify impacts in Table 1 as either positive (P), negative and mitigable (M), negative and non- mitigable (N), or unknown (U).	See Appendix B2
2.	Discuss the impacts identified in the above table.	Section 7
3.	Discuss potential socioeconomic impacts, including human health.	Sections 8 and 9
4.	Discuss potential for transboundary effects related to the project.	Section 10.2
5.	Identify any potentially adverse effects of the project proposal on species listed under the *Species at Risk Act (SARA)* and their critical habitats or residences, what measures will be taken to avoid or lessen those effects and how the effects will be monitored.	Section 7
6.	Discuss proposed measures to mitigate all identified negative impacts.	Sections 7 and 8

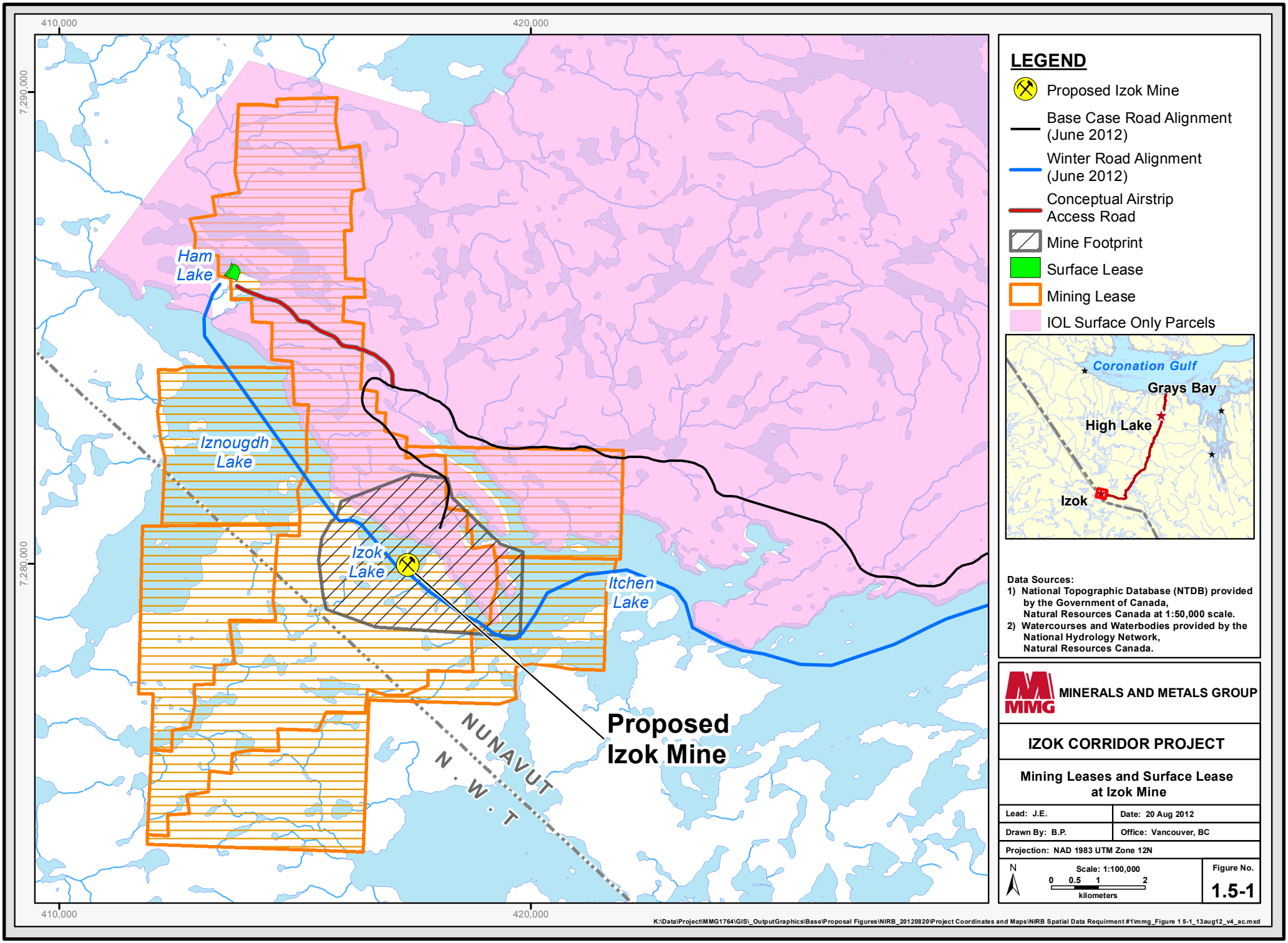
6. CUMULATIVE EFFECTS

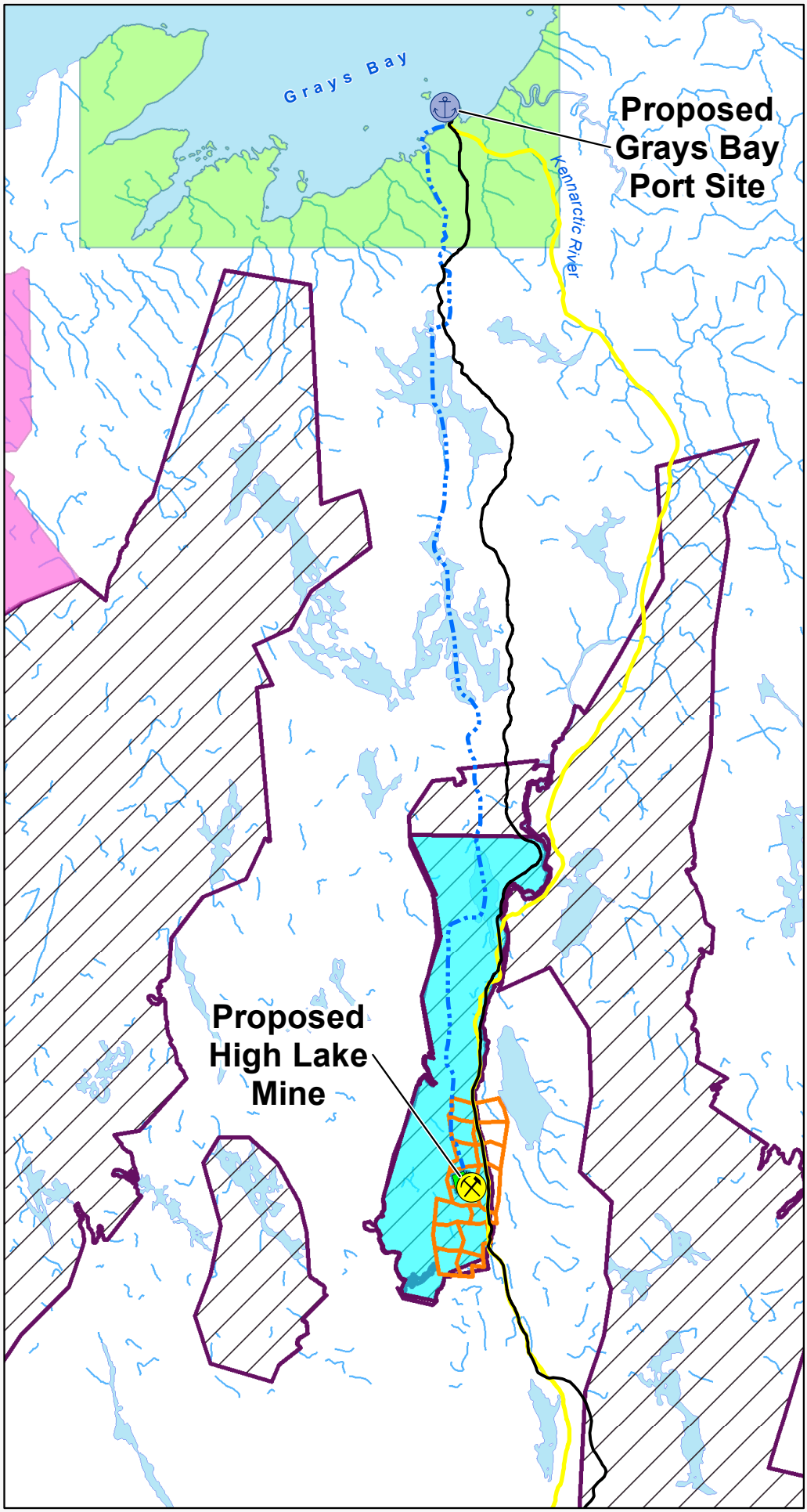
Discuss how the effects of this project interact with the effects of relevant past, present and reasonably foreseeable projects in a regional context.	Section 10

7. SUPPORTING DOCUMENTS

▪ Abandonment and Decommissioning Plan	Addressed in Section 12; Draft Plan will be included in draft EIS
▪ Existing site photos with descriptions	Addressed in Section 12; Draft Plan will be included in draft EIS
▪ Emergency Response Plan	Addressed in Section 12; Draft Plan will be included in draft EIS
▪ Comprehensive Spill Prevention/Plan (must consider hazardous waste and fuel handling, storage, disposal, spill prevention measures, staff training and emergency contacts)	Addressed in Section 12; Draft Plan will be included in draft EIS
▪ Waste Management Plan/Program	Addressed in Section 12; Draft Plan will be included in draft EIS
▪ Monitoring and Management Plans (e.g. water quality, air pollution, noise control and wildlife protection etc.)	Addressed in Section 12; Draft Plan will be included in draft EIS

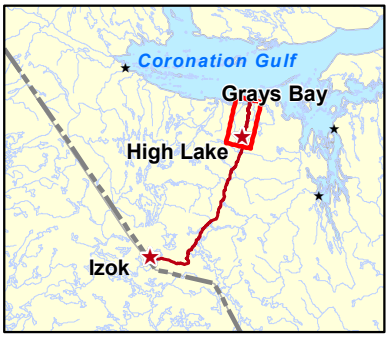
▪ If project activities are located within Caribou Protection Areas or Schedule 1 Species at Risk known locations, please provide a Wildlife Mitigation and Monitoring Plan	Addressed in Section 12; Draft Plan will be included in draft EIS
▪ For Project Type 9 (Site Cleanup), please provide the following additional supporting documents - Remediation Plan including cleanup criteria and how the criteria were derived - Human Health Risk Assessment of the contaminants at the site	N/A


410,000
420,000
7,290,000
7,280,000
Ham Lake
Iznougdh Lake
Izok Lake
Itchen Lake
Proposed Izok Mine
NUNAVUT
N . W . T
LEGEND
Proposed Izok Mine
Base Case Road Alignment (June 2012)
Winter Road Alignment (June 2012)
Conceptual Airstrip Access Road
Mine Footprint
Surface Lease
Mining Lease
IOL Surface Only Parcels
Coronation Gulf
Grays Bay
High Lake
Izok
Data Sources:
1) National Topographic Database (NTDB) provided by the Government of Canada, Natural Resources Canada at 1:50,000 scale.
2) Watercourses and Waterbodies provided by the National Hydrology Network, Natural Resources Canada.
MINERALS AND METALS GROUP
IZOK CORRIDOR PROJECT
Mining Leases and Surface Lease at Izok Mine
Lead: J.E.
Date: 20 Aug 2012
Drawn By: B.P.
Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N
N
Scale: 1:100,000
0 0.5 1 2
kilometers
Figure No.
1.5-1
K:\Data\Project\MMG1764\GIS_OutputGraphics\Base\Proposal Figures\NIRB_20120820\Project Coordinates and Maps\NIRB Spatial Data Requirment #1\mmg_Figure 1 5-1_13aug12_v4_ac.mxd



LEGEND

- Proposed High Lake Mine
- Proposed Grays Bay Port Site
- Base Case Road Alignment (June 2012)
- Winter Road Alignment Grays Bay to High Lake (June 2012)
- Mining Lease
- IOL Surface Only Parcels
- IOL Parcels
- MMG IOL Parcel
- MMG Prospecting Permits



Data Sources:
1) National Topographic Database (NTDB) provided by the Government of Canada, Natural Resources Canada at 1:50,000 scale.
2) Watercourses and Waterbodies provided by the National Hydrology Network, Natural Resources Canada.

MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Mining Leases and Surface Lease at High Lake Mine, and Prospecting Permits at Grays Bay

Lead: JE	Date: 20 Aug 2012
Drawn By: AC	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

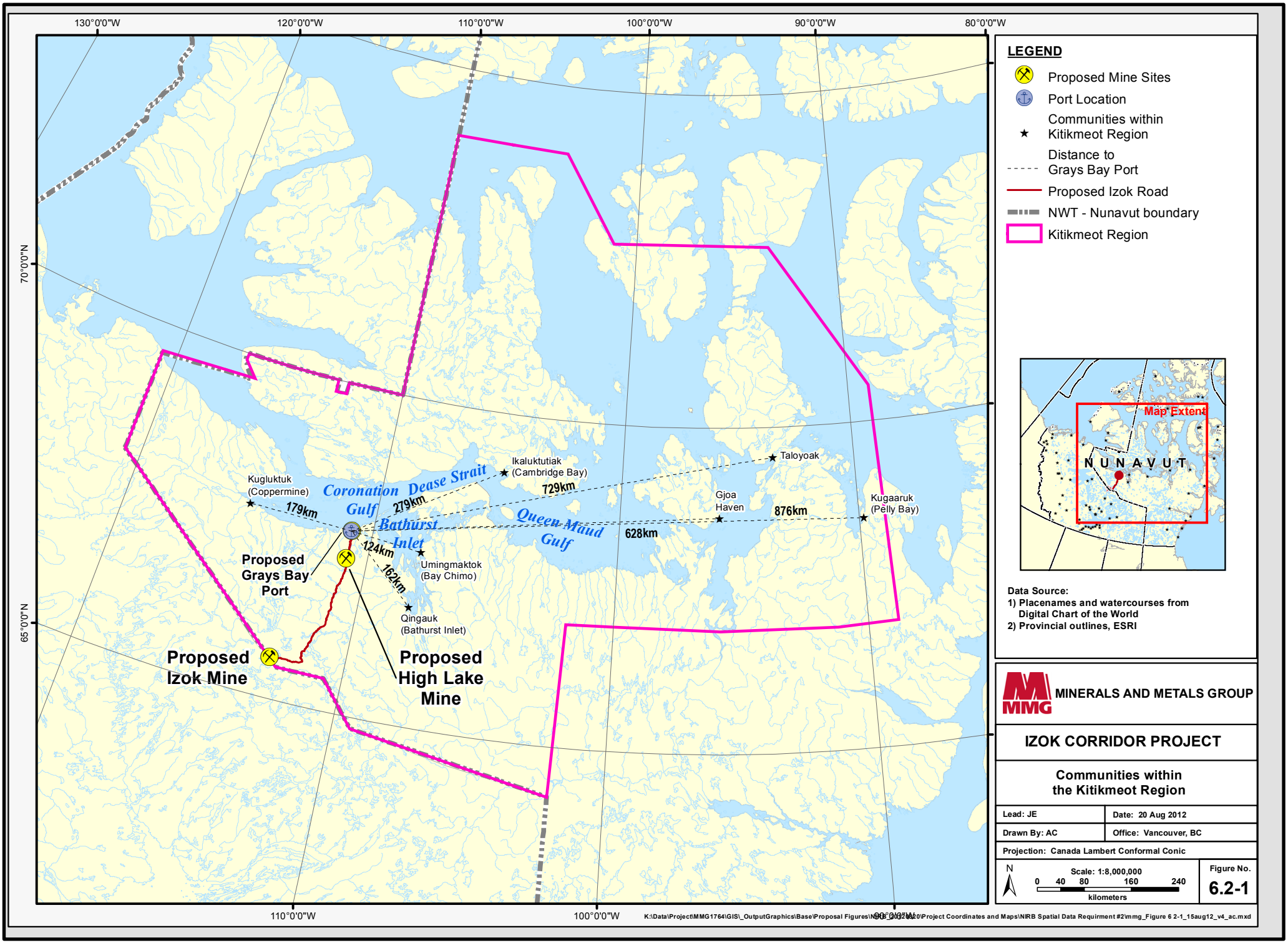
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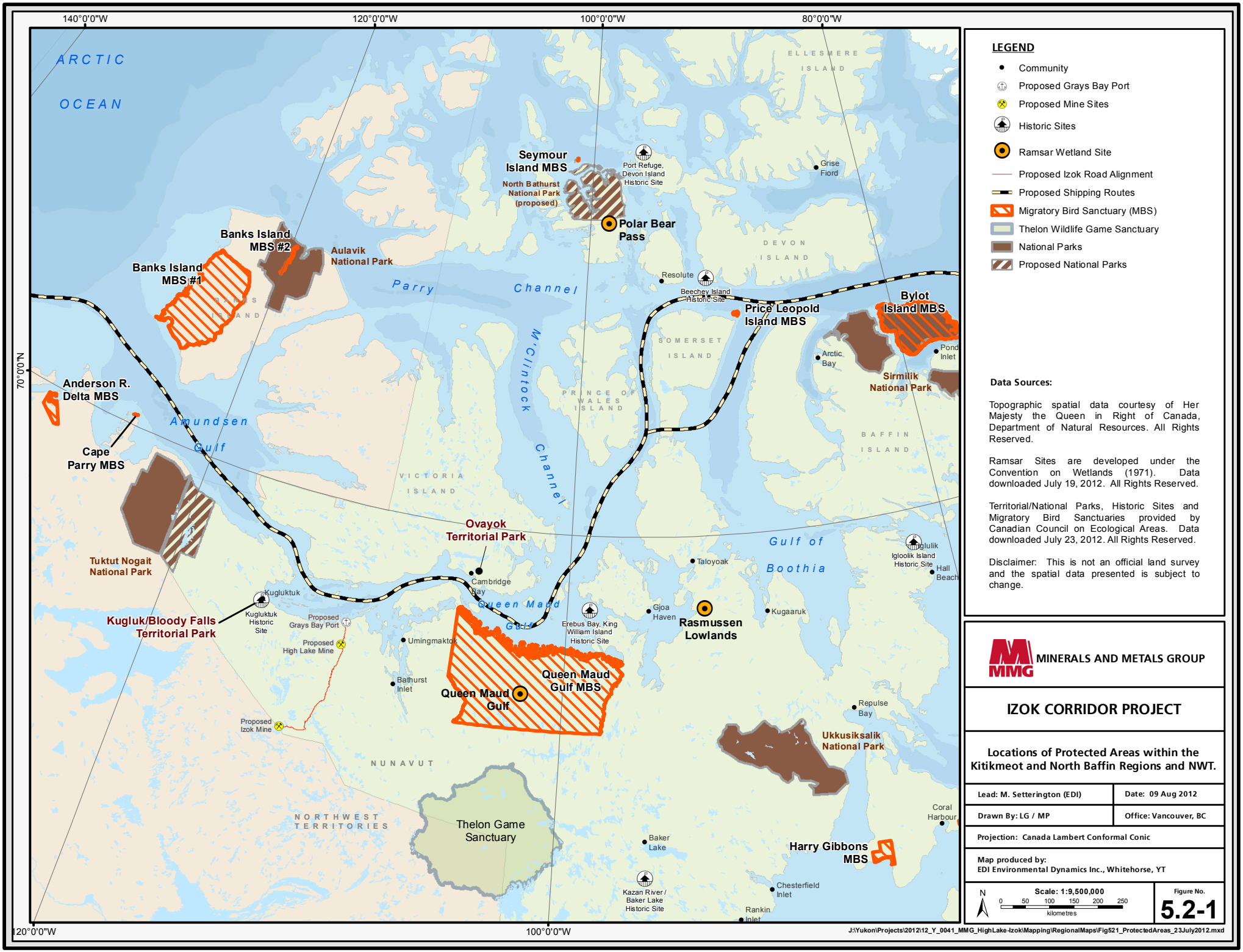
0 1.5 3 6

kilometers

Figure No. **1.5-2**

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130°0'0"W
120°0'0"W
110°0'0"W
100°0'0"W
90°0'0"W
80°0'0"W
70°0'0"N
65°0'0"N
Kugluktuk
(Coppermine)
179km
Coronation Gulf
Dease Strait
279km
Ikaluktutiak
(Cambridge Bay)
729km
Taloyoak
Gjoa
Haven
876km
Kugaaruk
(Pelly Bay)
Queen Maud
Gulf
628km
Bathurst
Inlet
124km
162km
Umingmaktok
(Bay Chimo)
Qingauk
(Bathurst Inlet)
Proposed
Grays Bay
Port
Proposed
Izok Mine
Proposed
High Lake
Mine
LEGEND
Proposed Mine Sites
Port Location
Communities within
Kitikmeot Region
Distance to
Grays Bay Port
Proposed Izok Road
NWT - Nunavut boundary
Kitikmeot Region
Map Extent
N U N A V U T
Data Source:
1) Placenames and watercourses from
Digital Chart of the World
2) Provincial outlines, ESRI
MINERALS AND METALS GROUP
IZOK CORRIDOR PROJECT
Communities within
the Kitikmeot Region
Lead: JE
Date: 20 Aug 2012
Drawn By: AC
Office: Vancouver, BC
Projection: Canada Lambert Conformal Conic
N
Scale: 1:8,000,000
0 40 80 160 240
kilometers
Figure No.
6.2-1
K:\Data\Project\MMG1764\GIS_OutputGraphics\Base\Proposal Figures\NIRB_20120820\Project Coordinates and Maps\NIRB Spatial Data Requirment #2\mmg_Figure 6 2-1_15aug12_v4_ac.mxd



LEGEND

- Community
- Proposed Grays Bay Port
- Proposed Mine Sites
- Historic Sites
- Ramsar Wetland Site
- Proposed Izok Road Alignment
- Proposed Shipping Routes
- Migratory Bird Sanctuary (MBS)
- Thelon Wildlife Game Sanctuary
- National Parks
- Proposed National Parks

Data Sources:

Topographic spatial data courtesy of Her Majesty the Queen in Right of Canada, Department of Natural Resources. All Rights Reserved.

Ramsar Sites are developed under the Convention on Wetlands (1971). Data downloaded July 19, 2012. All Rights Reserved.

Territorial/National Parks, Historic Sites and Migratory Bird Sanctuaries provided by Canadian Council on Ecological Areas. Data downloaded July 23, 2012. All Rights Reserved.

Disclaimer: This is not an official land survey and the spatial data presented is subject to change.

MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Locations of Protected Areas within the Kitikmeot and North Baffin Regions and NWT.

Lead: M. Setterington (EDI)	Date: 09 Aug 2012
Drawn By: LG / MP	Office: Vancouver, BC
Projection: Canada Lambert Conformal Conic	
Map produced by: EDI Environmental Dynamics Inc., Whitehorse, YT	

N

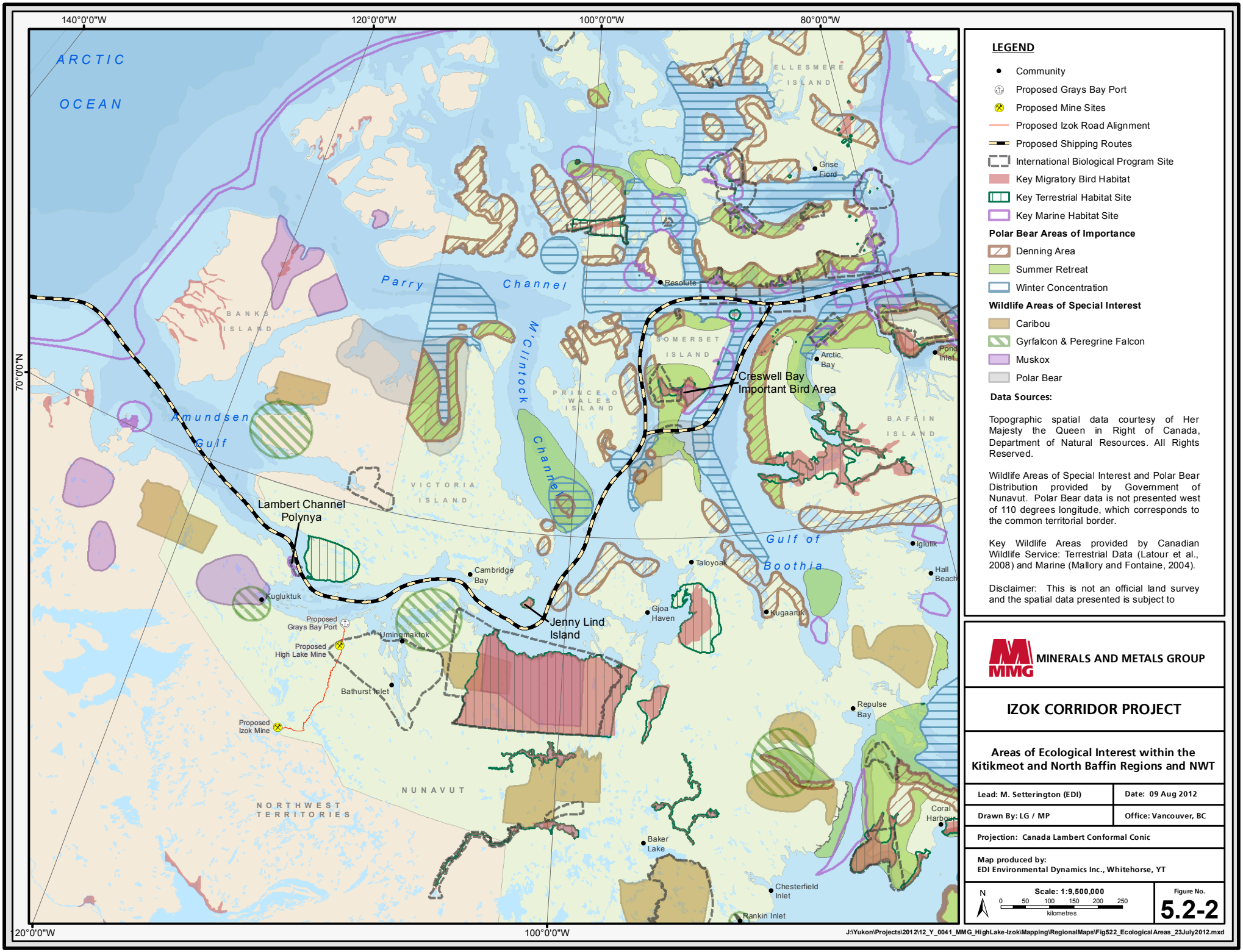
Scale: 1:9,500,000

0 50 100 150 200 250

kilometres

Figure No. 5.2-1

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LEGEND

- Community
- Proposed Grays Bay Port
- Proposed Mine Sites
- Proposed Izok Road Alignment
- Proposed Shipping Routes
- International Biological Program Site
- Key Migratory Bird Habitat
- Key Terrestrial Habitat Site
- Key Marine Habitat Site

Polar Bear Areas of Importance

- Denning Area
- Summer Retreat
- Winter Concentration

Wildlife Areas of Special Interest

- Caribou
- Gyrfalcon & Peregrine Falcon
- Muskox
- Polar Bear

Data Sources:

Topographic spatial data courtesy of Her Majesty the Queen in Right of Canada, Department of Natural Resources. All Rights Reserved.

Wildlife Areas of Special Interest and Polar Bear Distribution provided by Government of Nunavut. Polar Bear data is not presented west of 110 degrees longitude, which corresponds to the common territorial border.

Key Wildlife Areas provided by Canadian Wildlife Service: Terrestrial Data (Latour et al., 2008) and Marine (Mallory and Fontaine, 2004).

Disclaimer: This is not an official land survey and the spatial data presented is subject to

MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Areas of Ecological Interest within the Kitikmeot and North Baffin Regions and NWT

Lead: M. Setterington (EDI)	Date: 09 Aug 2012
Drawn By: LG / MP	Office: Vancouver, BC
Projection: Canada Lambert Conformal Conic	
Map produced by: EDI Environmental Dynamics Inc., Whitehorse, YT	

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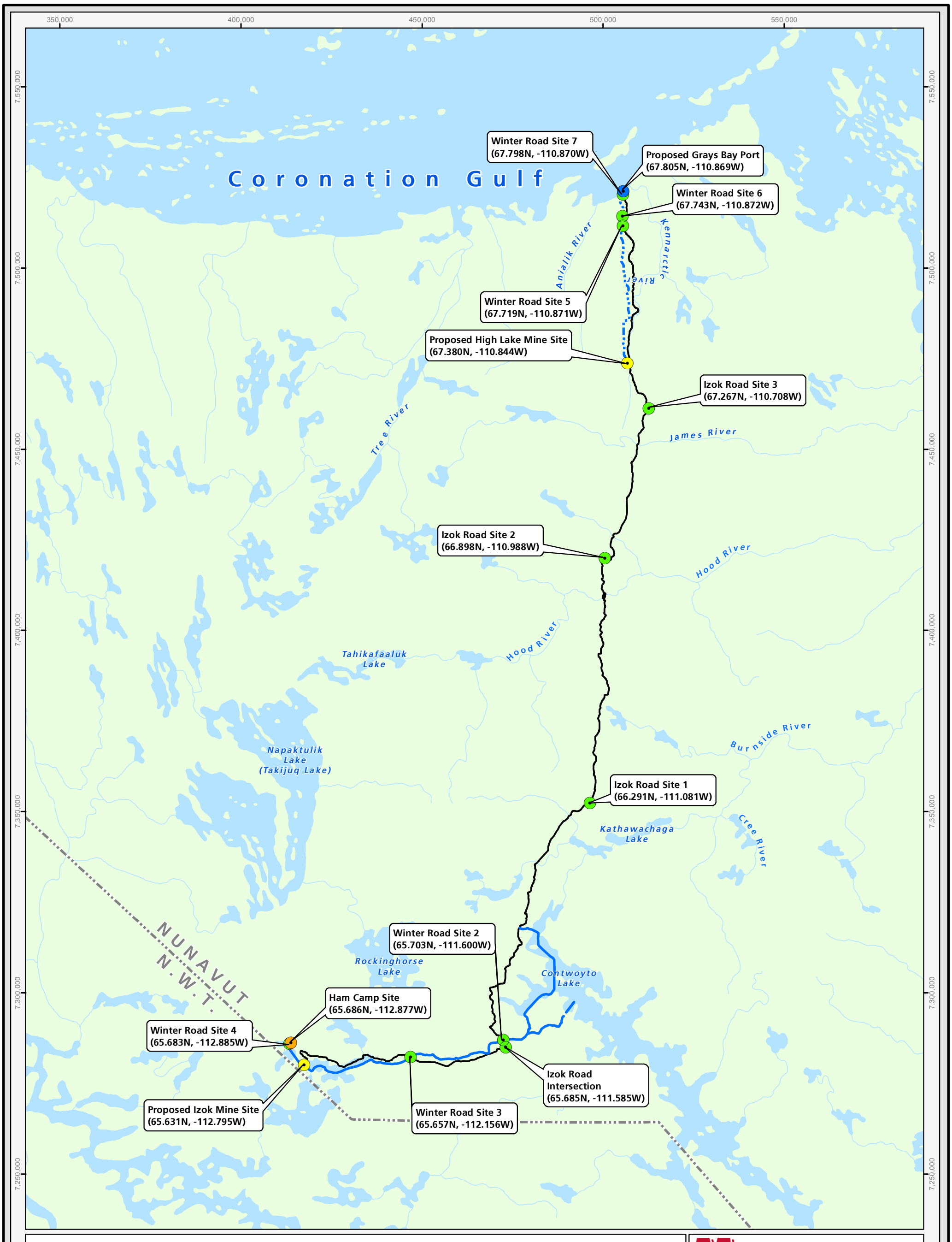
Scale: 1:9,500,000

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kilometres

Figure No. **5.2-2**

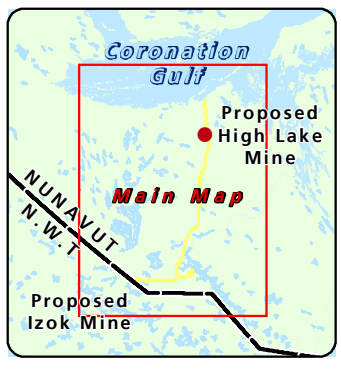
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LEGEND

- Camp Site
- Port Site
- Mine Site
- Road
- Boundary Line
- Waterbody
- Alternate Road Alignment (June 2012)
- Winter Road Alignment Grays Bay to High Lake (June 2012)
- Winter Road Alignment (June 2012)

Data Sources:
1) Canada Provincial Border provided by the Government of Canada, Natural Resources Canada.
2) Base data from Digital Chart of World at 1:1,000,000 scale.



MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Project Coordinates and Regional Study Area

Lead: J.E.	Date: 20 Aug 2012
Drawn By: AC	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

Scale: 1:961,671

0 5 10 20 30

Kilometers

Figure No. 01

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APPENDIX C
REPRESENTATIVE SITE PHOTOS

Representative Photos of the Izok Corridor Study Area



Aerial view of Grays Bay Port site facing northwest into Coronation Gulf, showing proposed access road route



Grays Bay Port site shoreline facing east



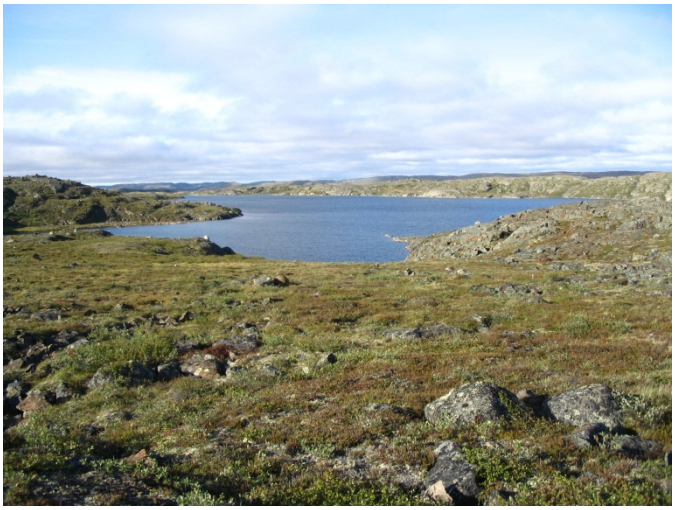
View of Hepburn Island from Grays Bay Port site



Low lying topography along proposed all-season road route from Grays Bay to High Lake Mine site



Aerial view of High Lake Camp along shore of High Lake



High Lake facing south



AB Zone outcrop facing southwest from High Lake



Location of proposed Sand Lake airstrip facing north



Aerial view of proposed all-season road route south of High Lake near the Kennarctic River



Proposed James River road crossing site



Near the proposed Hood River road crossing site



Aerial view of proposed all-season road route east of the Izok site



Ham Lake camp as of 2012



Izok Lake



Aerial view of Iznougdh Lake (foreground), Izok Lake (centre) and Itchen Lake (background)



Location of proposed diversion channel at natural inlet between Izok and Iznougdh lakes

APPENDIX D
DRAFT PERMIT APPLICATIONS

D1 NWB – Type "A" Water Licence Application

- Izok Mine
- High Lake Mine
- Grays Bay

D2 AANDC – Application for Crown Land for the Grays Bay Port

D3 KIA – Land Use Permit Application for the Izok Mine Facilities

D4 DFO – Application for a Section 35 Fisheries Act Authorization for Izok Lake

D1 NWB – Type “A” Water Licence Application

- Izok Mine
- High Lake Mine
- Grays Bay

MMG RESOURCES INC
2600-1177 WEST HASTINGS STREET
VANCOUVER BC V6E 2K3
TELEPHONE +1 778 373 5600
FAX +1 778 373 5598
WWW.MMG.COM

20 August 2012

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
PO Box 119
Gjoa Haven, NU X0B 1J0

Dear Ms. Beaulieu,

RE: IZOK CORRIDOR PROJECT – WATER LICENCE APPLICATIONS

MMG Resources Inc. (MMG) is pleased to submit the three attached draft general Water Licence applications for the Izok Lake Mine, the High Lake Mine and the all-season Izok Road in support of the proposed Izok Corridor Project.

These applications and the Project Proposal represent MMG's current understanding of the proposed Izok Corridor Project. Some of the information and design detail that will be required for the Nunavut Water Licence process is still being compiled, and we expect that the project description will undergo some revision as it is informed by the feasibility study, environmental assessment and regulatory review processes.

The following documents are being submitted as part of the Nunavut Water Licence applications for the Izok Corridor Project:

- General Water Licence Application (Application for a new Water Licence) for the Izok Mine
- Supplementary Questionnaire for Mine Development for the Izok Mine
- General Water Licence Application (Application for a new Water Licence) for the High Lake Mine
- Supplementary Questionnaire for Mine Development for the High Lake Mine
- General Water Licence Application (Application for a new Water Licence) for the all-season Izok Road
- Supplemental Technical Information Required for Water Crossings for the all-season Izok Road
- Project Proposal submitted to the Nunavut Impact Review Board in support of the Izok Corridor Project

The key components of the proposed Izok Corridor Project outlined in the Project Proposal include the following:

- Izok Mine: an open pit and an underground mining operation, including an ore processing plant, a permanent camp, and supporting infrastructure
- High Lake Mine: an open pit and underground mining operation, including minimal ore processing in the form of crushing and screening run-of-mine ore, a permanent camp, and supporting infrastructure
- Izok Road: an all-season road connecting Izok Mine, High Lake Mine and Grays Bay Port
- Grays Bay Port: a dock and land-based infrastructure to support marine transportation of concentrate and mine resupply
- Marine shipping: transport of ore concentrate from Grays Bay to ports in Europe and Asia and resupply cargo into Grays Bay during the open-water season
- Winter roads: two temporary winter roads for use during the construction phase of the Project – one from Grays Bay to High Lake Mine, and another from Jericho Mine and / or Lupin Mine to Izok Mine, which will link Izok Mine to the Tibbitt-to-Contwoyto Winter Road.

The Project Proposal and water license applications are being submitted to the Nunavut Impact Review Board (NIRB) and the Nunavut Water Board(NWB) towards a coordinated review process. MMG is assuming that appropriate streamlining of the review process can be accomplished by conducting cooperative review and hearings as contemplated by both the *Nunavut Land Claim Agreement* (NLCA) and the *Nunavut Waters* and *Nunavut Surface Rights Tribunal Act*.

We look forward to an opportunity to work with the Nunavut Water Board on the Izok Corridor Project through a coordinated NIRB-NWB regulatory review processes.

Please don't hesitate to contact me should you have any questions, concerns or specific advice in relation to these proposed activities.

Yours sincerely,



Sahba Safavi
Project Manager - Canada

T 778-373-5607
M 604-417-5589
E Sahba.Safavi@mmg.com

General Water Licence Application
(Application for a new Water Licence)

Document Date: May 2011

Application Submission Date: August 20, 2012

Month/Day/Year

P.O. BOX 119
GJOA HAVEN, NUNAVUT
XOB 1J0
TEL: (867) 360-6338
FAX: (867) 360-6369

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NUNAVUT IMALIRIYIN KATIMAYIT
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

P.O. BOX 119
GJOA HAVEN, NU X0B 1J0
TEL: (867) 360-6338
FAX: (867) 360-6369

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYIT
OFFICE DES EAUX DU NUNAVUT

GENERAL WATER LICENCE APPLICATION
(APPLICATION FOR NEW WATER LICENCE)

The applicant is referred to the NWB's Guide 4: *Guide to Completing and Submitting a Water Licence Application for a New Licence* for more information about this application form.

LICENCE NO:
(for NWB use only)

1. APPLICANT (PROPOSED LICENSEE) CONTACT INFORMATION (name, address)

MMG Minerals and Metals Group
Level 26, 1177 West Hastings Street
Vancouver British Columbia
V6E 2K3
Attention: Scott Trusler

Phone: 778-373-5586
Fax: 778-373-5598
e-mail: Scott.Trusler@mmg.com

2. APPLICANT REPRESENTATIVE CONTACT INFORMATION if different from Block 1 (name, address)

Same as contact information on left

Phone: _____
Fax: _____
e-mail: _____
(Attach authorization letter.)

3. NAME OF PROJECT (including the name of the project location)

Izok Corridor Project – Izok Mine

4. LOCATION OF UNDERTAKING

Project Extents

NW:	Latitude: (65° 38'38.4" N)	Longitude: (112°49'19.2" W)
NE:	Latitude: (65° 38'38.4" N)	Longitude: (112° 46' 4.8" W)
SE:	Latitude: (65° 37'15.6" N)	Longitude: (112° 46' 4.8" W)
SW:	Latitude: (65° 37'15.6" N)	Longitude: (112°49'19.2" W)

Camp Location(s)

Latitude: (65°38' 34.8" N) Longitude: (112° 46' 4.8" W)

5. MAP - Attach a topographical map, indicating the main components of the undertaking.

NTS Map Sheet No.: 86H Map Name: Point Lake Map Scale: 1:250,000

Please refer to Figure 2.4-17 – Izok Mine Site Plan in the Project Proposal. A more detailed topographical map showing the relative locations of the Project components, water bodies and drainage patterns will be provided as part of a future draft EIS.

6. NATURE OF INTEREST IN THE LAND - Check any of the following that are applicable to the proposed undertaking (at least one box under the 'Surface' header must be checked).

Sub-surface

☐ Mineral Lease from Nunavut Tunngavik Incorporated (NTI)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Mineral Lease from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: _____ Date of expiry: _____

Surface

☐ Crown Land Use Authorization from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: prior to construction_ Date of expiry: To be determined

☐ Inuit Owned Land (IOL) Authorization from Kitikmeot Inuit Association (KIA)
Date (expected date) of issuance: prior to construction_ Date of expiry: To be determined

☐ IOL Authorization from Kivalliq Inuit Association (KivIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ IOL Authorization from Qikiqtani Inuit Association (QIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Commissioner's Land Use Authorization
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Other: _____
Date (expected date) of issuance: _____ Date of expiry: _____

Name of entity(s) holding authorizations:
_____

7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION

Indicate the land use planning area in which the project is located.

☐ North Baffin
☐ South Baffin
☐ Akunniq
☐ Keewatin
☐ Sanikiluaq
☐ West Kitikmeot

Is a land use plan conformity determination required?

☐ Yes ☐ No

If Yes, indicate date issued and attach copy _____
If No, provide written confirmation from NPC confirming that a land use plan conformity review is not required.

is not required.

The Project Proposal is being submitting to the Nunavut Planning Commission (NPC) for a conformity review against approved land use plans. The Project footprint does not lie within a region of the Nunavut for which an approved Land Use Plan exists; the West Kitikmeot Regional Land Use Plan (WKRLUP) is still in draft form. However, the North Baffin Land Use Plan overlaps a portion of the eastward shipping route, requiring NPC review. Once NPC determines that the Project Proposal is in conformity with approved land use plans or a variance has been approved, NPC will forward the Project Proposal to the NIRB for screening.

8. NUNAVUT IMPACT REVIEW BOARD (NIRB) DETERMINATION

Is an Article 12 Part 4 screening determination required?

☐ Yes ☐ No

This application is being submitted to NIRB to initiate the environmental assessment process under the NIRB for the proposed Project. The Project Proposal and water licence application are being submitted to the NIRB and NWB towards a coordinated review process.

If Yes, indicate date issued and attach copy _____
If No, provide written confirmation from NIRB confirming that a screening determination is not required.

9. DESCRIPTION OF UNDERTAKING – List and attach plans and drawings or project proposal.

Mining – Refer to Section 2.4 (Izok Mine Site) of the Project Proposal for a detailed overview of the proposed undertaking.

10. OPTIONS – Provide a brief explanation of the alternative methods or locations that were considered to carry out the project.

A preliminary overview of the options or alternatives for each of the following key project components is provided in the Project Proposal:

- Waste Rock (Section 2.4.6)
- Tailings (Section 2.4.6)
- Izok Lake Drainage (Section 2.4.3.3 Drainage Alternatives)
- Surface Water (Section 2.4.7.2 Surface Water Management Alternatives Considered)
- Groundwater (Section 2.4.7.6 Groundwater Management Alternatives)
- Process Water Systems (Section 2.4.8.5 Water Requirements Alternatives Considered)
- Waste Treatment and Discharge Infrastructure (Section 2.4.9.7 Waste Water and Other Wastes Alternatives)

A more detailed assessment of alternatives will be provided as part of a future EIS.

11. CLASSIFICATION OF PRIMARY UNDERTAKING - Indicate the primary classification of undertaking by checking one of the following boxes.

☐ Industrial ☐ Agricultural
☒ Mining and Milling (includes exploration/drilling/exploration camps)
☐ Conservation
☐ Municipal (includes camps/lodges) ☐ Recreational
☐ Power ☐ Miscellaneous (describe below):

_____

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings.

Information in accordance with applicable Supplemental Information Guidelines (SIG) must be submitted with a New Water Licence Application. Indicate which SIG(s) are applicable to your application.

☐ Hydrostatic Testing
☐ Tannery
☐ Tourist / Remote Camp
☐ Landfarm & On-Site Storage of Hydrocarbon Contaminated Soil
☐ Onshore Oil and Gas Exploration Drilling
☐ Mineral Exploration / Remote Camp
☐ Advanced Exploration
☒ Mine Development
☐ Municipal
☐ General Water Works
☐ Power

12. **WATER USE -** Check the appropriate box(s) to indicate the type(s) of water use(s) being applied for.

☒ To obtain water for camp/ municipal purposes
☒ To obtain water for industrial purposes ☒ To divert a watercourse
☒ To cross a watercourse ☒ To modify the bed or bank of a watercourse
☐ To alter the flow of, or store water ☐ Flood control
☐ Other: _____

13. **QUANTITY AND QUALITY OF WATER INVOLVED -** For each type of water use indicated in Block 12, provide the source of water, the quality of the water source and available capacity, the estimated quantity to be used in cubic meters per day, method of extraction, as well as the quantities and qualities of water to be returned to source.

Refer to Section 2.4 (Izok Mine Site) of the Project Proposal for an overview of the proposed water use. Details, including source of water, quality of water source, available capacity and quantity of water use will be provided as part of a future draft (EIS).

Name of water source(s) (show location(s) on map):
_____

Describe the quality of the water source(s) and the available capacity: _____
_____
_____

Provide the overall estimated quantity of water to be used: _____ m^3/day

Provide the estimated quantity(s) of water to be used from each source:
_____

Indicate the estimated quantities to be used for each purpose (camp, drilling, etc.)
_____

Describe the method of extraction(s): _____

Estimated quantity(s) of water returned to source(s) _____ m^3/day

Describe the quality of water(s) returned to source(s): _____
_____
_____

14. **WASTE** – Check the appropriate box(s) to indicate the types of waste(s) generated and deposited.

- ☐ Sewage
- ☐ Solid Waste
- ☐ Hazardous
- ☐ Bulky Items/Scrap Metal
- ☐ Animal Waste
- ☐ Waste oil
- ☐ Greywater
- ☐ Sludges
- ☐ Contaminated soil and/or water
- ☐ Other (describe): Treated Mine Effluent

15. **QUANTITY AND QUALITY OF WASTE INVOLVED** – For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of treatment and method of disposal.

Refer to Section 2.4 (Izok Mine Site) of the Project Proposal for an overview of the type of wastes that will be generated and deposited as part of the proposed project. Further details will be provided as part of a future draft EIS, including composition, quantity generated, treatment and disposal methods for each type of waste.

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method

16. **OTHER AUTHORIZATIONS** – In addition to the sub-surface and surface land use authorizations provided in Block 6, indicate any other authorizations required in relation to the proposed undertaking. For each provide the following:

Refer to Section 1.10 (Regulatory Process) of the Project Proposal for an overview of the required and potential permits, approvals and licences for the proposed Project.

Authorization: _____

Administering Agency: _____

Project Activity: _____

Date (expected date) of issuance: _____ Date of expiry: _____

17. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES - Describe direct, indirect, and cumulative impacts related to water and waste.

A preliminary overview of the potential environmental effects and potential mitigation measures is provided in Section 7 (Potential Project Environmental Effects) of the Project Proposal. A detailed evaluation of the environmental effects of the project and proposed mitigation measures will be described and evaluated as part of a future draft EIS.

18. WATER RIGHTS OF EXISTING AND OTHER USERS OF WATER

Provide the names, addresses and nature of use for any known persons or properties that may be adversely affected by the proposed undertaking, including those that hold licences for water use in precedent to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature.

Advise the Board if compensation has been paid and/or agreement(s) for compensation have been reached with any existing or other users.

To be addressed in a future draft Environmental Impact Statement (EIS).

19. INUIT WATER RIGHTS

Advise the Board of any substantial affect of the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL), and advise the Board if negotiations have commenced or an agreement to pay compensation for any loss or damage has been reached with one or more Designated Inuit Organization (DIO).

To be addressed in a future Environmental Impact Statement (EIS).

20. CONSULTATION – Provide a summary of any consultation meetings including when the meetings were held, where and with whom. Include a list of concerns expressed and measures to address concerns.

Refer to Section 3 (Public Engagement) of the Project Proposal for details of past and proposed future engagement activities.

21. SECURITY INFORMATION

Provide an estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking. Estimates of reclamation costs must be based on the cost of having the necessary reclamation work done by a third party contractor if the operator defaults. The estimate must also include contingency factors appropriate to the particular work to be undertaken.

Where applicable, the financial security assessment should be prepared in a manner consistent with the principals respecting mine site reclamation and implementation found in the *Mine Site Reclamation Policy for Nunavut,* Indian and Northern Affairs Canada, 2002.

An estimate of the total financial security for the closure and reclamation of the proposed Project will be developed as part of the future EIS and water licencing processes.

22. FINANCIAL INFORMATION

Provide a statement of financial responsibility.

See attached MMG Annual Report for 2011.

If the applicant is a business entity, provide a list of the officers of the company.

See attached list of officers.

If the applicant is a business entity attach a copy of the Certificate of Incorporation or evidence of registration of the company name.

See attached Certificate of Incorporation.

23. STUDIES UNDERTAKEN TO DATE - List and attach copies of studies, reports, research, etc.

Refer to Section 5 (Existing Biophysical Environment) and Section 6 (Existing Human Environment) of the Project Proposal for an overview of studies that have been undertaken at the Izok Mine site.

24. PROPOSED TIME SCHEDULE – Indicate the proposed start and completion dates for each applicable phase of development (construction, operation, closure, and post closure).

Refer to Section 2.1.3 (Project Schedule) of the Project Proposal for details of the proposed schedule.

Construction
Proposed Start Date: 2015 (month/year) Proposed Completion Date: 2017 (month/year)

Operation
Proposed Start Date: 2017 (month/year) Proposed Completion Date: 2028 (month/year)

Closure
Proposed Start Date: 2028 (month/year) Proposed Completion Date: 2030 (month/year)

Post - Closure
Proposed Start Date: 2030 (month/year) Proposed Completion Date: 2037 (month/year)

For each applicable phase of development indicate which season(s) activities occur.

Construction

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Operation
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Closure
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Post - Closure
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

25. PROPOSED TERM OF LICENCE

Number of years (maximum of 25 years): _____22_____ years

Requested Date of Issuance: ___2015_____ (month/year) Requested Expiry Date: _____2037_____ (month/year)

(The requested date of issuance must be at least three (3) months from the date of application for a type B water licence and at least one (1) year from the date of application for a type A water licence, to allow for processing of the water licence application. These timeframes are approximate and do not account for the time to complete any pre-licensing land use planning or development impact requirements, time for the applicant to prepare and submit a water licence application in accordance with any project specific guidelines issued by the NWB, or the time for the applicant to respond to requests for additional information. See the NWB's *Guide 5: Processing Water Licence Applications* for more information)

26. ANNUAL REPORTING – If not using the NWB's *Standardized Form for Annual Reporting*, provide details regarding the content of annual reports and a proposed outline or template of the annual report.

To be provided as part of a future draft Environmental Impact Statement (EIS).

27. CHECKLIST – The following must be included with the application for the water licensing process to begin.

Written confirmation from the NPC confirming that NPC's requirements regarding land use plan conformity have been addressed.

☐ Yes ☒ No If no, date expected _____

Written confirmation from the NIRB confirming that NIRB's requirements regarding development impact assessment have been addressed.

☐ Yes ☒ No If no, date expected _____

This application is being submitted to initiate the environmental assessment process under the NIRB. The Project Proposal and water licence application are being submitted to the NIRB and NWB towards a coordinated review process.

Completed General Water Licence Application form.

☐ Yes ☐ No If no, date expected _____

Information addressing Supplemental Information Guideline (SIG) , where applicable (see Block 11)

☐ Yes ☐ No If no, date expected _____

English Summary of Application.

☐ Yes ☐ No If no, date expected _____

See Appendix A1 of the Project Proposal

Inuktitut and/or Inuinnaqtun Summary of Application.

☐ Yes ☐ No If no, date expected _____

See Appendix A2 and A3 of the Project Proposal

Application Fee of $30.00 CDN (Payee Receiver General for Canada).

☐ Yes ☐ No If no, date expected _____

Water Use Fee Deposit of $30.00 CDN (Payee Receiver General for Canada). The actual water use fee will be calculated by the NWB based upon the amount of water authorized for use in accordance with the Regulations at the time of issuance of the licence.

☐ Yes ☐ No If no, date expected _____

28. SIGNATURE

Scott Trusler	Environmental Permitting Lead		Aug 20, 2012
Name (Print)	**Title (Print)**	**Signature**	**Date**

P.O. BOX 119
GJOA HAVEN, NT X0E 1J0
TEL: (867) 360-6338
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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

Water Licence Application Supplementary Questionnaire for Mine Development

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SECTION 1:

GENERAL

1. Applicant MMG Minerals and Metals Group
(Company, corporation, owner)

Level 26, 1177 West Hastings Street, Vancouver B.C. V6E 2K3
(Postal address)

778-373-5586 (Telephone number) 778-373-5598 (Fax)

Scott.Trusler@mmg.com
(E-Mail)

Corporate Address (if different from above):

Same as above
(Corporate Office address)

(Telephone number) (Fax)

(E-Mail)

Project Name Izok Corridor Project – Izok Mine

Location Bear Slave Upland Province, Kitikmeot Region

Closest Community Kugluktuk

Latitude/Longitude 65° 43’ 22.1”N / 112° 49’ 16.5”W
Show the location of the project on a general location map (eg: 1:1,000,000)

2. Environmental Manager Scott Trusler 778-373-5586
(Environmental Permitting Lead) (Telephone No.)

or Project Manager Sahba Safavi 778-373-5607
(Project Manager - Canada) (Telephone No.)

3. Indicate the status of the mine or mill on the date of application. (Check the appropriate space.) Indicate schedule or time table of project activities.

Design	X
Under construction	
In operation	
Suspended	
Care and Maintenance	
Abandoned	

Refer to Section 2.1.2 (Project Schedule) of the Project Proposal

4. If a change in the status of the mine or mill is expected, indicate the nature and anticipated date of such change.

Refer to Section 2.1.3 (Project Schedule) of the Project Proposal for details of the proposed schedule. Anticipated timing of the major Project phases is summarized as follows:

- Construction: anticipated to begin in 2015 and last two years (i.e., 2017)
- Operation: anticipated to begin in 2017 and last 12 years (i.e., 2028)
- Progressive reclamation: ongoing over the life of the Project
- Closure and reclamation: anticipated to begin in 2028 and last two to three years
- Post closure monitoring: anticipated to last 7 years after closure (closure and reclamation and post closure monitoring will last 10 years total) (i.e., 2037)

5. Indicate the proposed schedule for the Mine/Mill operating schedule.

Hours per week	
Days per week	
Weeks per year	
Number of employees	
Number of Inuit employees	

Refer to Section 2.9 (Employment and Procurement) of the Project Proposal for preliminary information on the operating schedule and anticipated workforce requirements.

6. How will the project affect the traditional uses on Inuit Owned Lands?

Refer to Section 2.4 (Izok Mine Site) of the Project Proposal for a description of the proposed activities at the Izok Mine site and to Section 6.6.4 (Traditional Activities and Knowledge) for a brief description of the traditional uses (land and resources). Potential Project effects and mitigation related to traditional uses are briefly summarized in Section 8 (Potential Project Socioeconomic Effects) of the Project Proposal and a detailed description of the traditional uses in the area and effects will be addressed in a future draft Environmental Impact Statement (EIS).

7. Have the Elders been consulted on effects to the traditional use on Inuit Owned Land? If so, list them. If not, why not?

Refer to Sections 3 (Public Engagement) and 4 (Traditional Knowledge) of the Project Proposal for a summary of community engagement and traditional knowledge studies that have been carried out and a description of on-going and proposed studies, which will be described in detail in a future draft EIS.

8. Has the proponent consulted Inuit Organization in the Area? If so, list them.

MMG has consulted the Nunavut Tunngavik Inc. (NTI) and the Kitikmeot Inuit Association (KIA) regarding the proposed project. Recently representatives from Nunavut Tunngavik Inc. (NTI) and the Kitikmeot Inuit Association (KIA) participated in MMG's RDAG meeting in Iqaluit on April 12th and 13th. These meetings provided participants with an overview of the project and allowed them to communicate their initial impressions and concerns regarding the proposed Project. Further meetings were held in Cambridge Bay and Kugluktuk. Specifically, in Kugluktuk, MMG provided a full day presentation to the KIA and the Hunters and Trappers Organization (HTO) at their request. All aspects of the proposed project were reviewed in detail.

Refer to Section 3 (Public Engagement) of the Project Proposal for details of past and proposed future engagement activities.

9. Has the proponent consulted surrounding communities on traditional water use areas? If so, list them. If not, why not?

Yes, refer to Section 4 (Traditional Knowledge) of the Project Proposal for a summary of traditional knowledge studies that have been carried out and a description of on-going and proposed studies, which will be described in detail in a future draft EIS.

10. Attach a detailed location map (1:50,000) drawn to scale showing all on site and off site facilities and activities. Show the relative locations of the (proposed) locations of the mine, mill, water treatment facilities, sewage and solid waste facilities, and tailings containment areas. The plan should include the water intake and pumphouse, fuel and chemical storage facilities, any existing or proposed concentrate, ore and waste rock storage piles, any existing and proposed drainage controls, piping distribution systems, gas, electric and water utility route locations, and transportation access routes around the site. The map also should include elevation contours, water bodies and an indication of drainage patterns for the area.

Please refer to Figure 2.4-17 – Izok Mine Site Plan in the Project Proposal. More detailed figures showing the relative locations of the Project components, water bodies and drainage patterns will be provided as part of a future draft EIS.

11. If applicable, provide a brief history of property development which took place before the present company gained control of the site. Include shafts, adits, mills (give rated capacity, etc.) waste dumps, chemical storage areas, tailings disposal areas and effluent discharge locations. Make references to the detailed map.

A brief history of the property development is provided in Section 1.3 (Project Background) of the Project Proposal.

12. Give a short description of the proposed or current freshwater intake facility, the type and operating capacity of the pumps used, and the intake screen size.

Fresh water will be sourced from Iznogoudh or Itchen Lake. Figure 2.4-17 of the Project Proposal shows the locations of potential water inlets. The water intake method will be by submerged inlet installed on the lake bed. The inlet structure will be designed to prevent the intake of lake fauna and flora and all water intake structures will be designed and build in accordance with the Department of Fisheries and Ocean's Fresh Water Intake End-of-Pipe Fish Screen Guideline (1995). Refer to Section 2.4.8 (Izok Mine Water Requirements) of the Project Proposal for more information on the proposed freshwater intake facilities at the Izok Mine site. Further details on the fresh water requirements will be provided as part of a future EIS.

13. At the rate of intended water usage for the exploration activity, explain water balance inputs and outputs in terms of estimated maximum draw down and recharge capability of the water source from fresh water will be drawn.

An overview of the Izok Mine water requirements is presented in Section 2.4.8 (Izok Mine Water Requirements) of the Project. For the mill and water treatment plant, except for start-up water, very little freshwater will be required as the majority of the process water needs will be met by recycled and reclaimed water. A detailed water balance will be submitted, including details regarding the effect of water withdrawal on the freshwater sources, in a future EIS.

14. Will any work be done that penetrates regions of permafrost?

Yes _X_ No____ .

15. If "YES" above, is the permafrost continuous or discontinuous?

The Izok Mine site is located within the continuous permafrost zone. Refer to Section 5.7.1 (Landforms and Soils) of the Project Proposal for details regarding permafrost in the Izok Mine area. The actual mining (open pit and underground) at Izok will not be in permafrost due to the deposits lying within the talik beneath the existing lake.

16. Were (or will) any old workings or water bodies (be) dewatered in order to conduct the exploration activity (mine development activity)?

Yes _X_ No ____

17. If "YES" above, indicate the name of the water body, the total volume of water to be discharged and the chemical characteristics of the water. Also included should be the receiving water body and expected schedule of the dewatering.

As part of the proposed Project, Izok Lake will need to be drained to access the ore beneath it. An estimated 6.4 Mm^3 of water will need to be pumped from Izok Lake to Itchen Lake, which is estimated to take several months. A summary of the proposed Izok Lake dewatering can be found in Section 2.4.3 (Izok Lake Dewatering) of the Project Proposal.

18. Was (or will) the above discharge (be) treated chemically?

Yes _____ No__X____Physical treatment only (clarification)

19. If "YES" above, describe the applied treatment.

The upper half of Izok Lake water column will be of sufficient water quality (low levels of turbidity and suspended solids) that it will be pumped directly to Itchen Lake. The water from the lower half of the lake water column will be more turbid and will be routed though a settling pond for clarification (physical treatment only) prior to discharge to Itchen Lake.

SECTION 2:

GEOLOGY AND MINERALOGY

20. Physiography; Provide an analysis and interpretation of the geologic and hydrologic environment in the immediate vicinity of the mine or plant. The investigation should extend from ground surface downward to the base of the glacial drift. Include large scale topographic map(s) covering the area where the mine, mill and waste disposal basin are (or were to be) located. The map(s) should provide information on groundwater patterns and permafrost variations in the area.

Refer to Section 2.4 (Izok Mine Site) of the Project Proposal for an overview of the Izok Mine site geology, hydrology and hydrogeology. Refer to Section 5.5 (Hydrogeology) of the Project Proposal for a description of the site hydrogeology, surficial geology, bedrock geology, permafrost, and hydrology.

21. Briefly describe the physical nature of the ore body, including known dimensions and approximate shape.

The Izok zinc-copper-lead deposits are volcanogenic massive sulphide deposits hosted within and near the top of a succession of dominantly felsic volcanic (rhyolitic) rocks, with lesser intermediate (dacite) volcanics, and derived sediments. The deposits are overlain by a succession of felsic volcanoclastics, gabbroic intrusions, intermediate and mafic flows, iron formation, and turbidite sediments (Project Proposal Figure 2.4-1). This suite, collectively and informally named the "Izok Lake Belt," is approximately 18 km in length and ranges from 1 km to 5 km in width. Five sulphide deposits are known to exist under and near Izok Lake: Central, North, Northwest, Inukshuk, and South (Project Proposal Figure 2.4-3). The Central, North, Northwest and Inukshuk deposits will be mined as part of the proposed Project.

Refer to Section 2.4.1 (Regional Geology) and associated figures for details of the geology of each of these deposits.

22. Briefly describe the host rock in the general vicinity of the orebody (from the surface to the mineralized zone.)

See response to question 21 above.

23. Provide a geological description of the ore minerals of the deposit. (If possible, include the percentage of metals.)

See response to question 21 above. Refer to Section 2.4.3 (Izok Mining), Table 2.4-1, of the Project Proposal for mineral resource estimates for the Izok Lake deposits and Section 2.4.3 (Izok Mining), Table 2.4.2, for a breakdown of the estimated Izok mining inventory.

24. Describe the geochemical tests which have been (or will be) performed on the ore, host rock, and waste rock to determine their relative acid generation and contaminant leaching potential. Outline methods used (or to be used) and provide test results in an attached report (ie. Static, Kinetic tests.)

MMG has completed a comprehensive geochemical testing program at High Lake to characterize the potential for acid rock drainage (ARD) and metal leaching (ML) associated with waste rock, mine workings and infrastructure development. Additional testing is in progress to address specific gaps in each of these programs. The testing program includes acid base accounting tests, metal analyses, mineralogical analyses, leach extraction tests, humidity cell tests and column tests on both waste rock and tailings. In addition, field barrel tests are in progress to assess how the waste rock will behave under more realistic conditions in the field. The test results will be used to predict whether acidic conditions could develop, how fast this could occur, and whether there would be elevated concentrations of metals in water that comes into contact with these materials. This information will be used to develop appropriate prevention and mitigation strategies to minimize the potential for adverse effects on water quality, and to develop water quality predictions for use in the effects assessment. Details, including results, from the geochemical testing program will be provide in a future EIS.

SECTION 3:

THE MINE

25. Indicate the type of mining method to be used on the property:

Open Pit	X
Underground	X
Strip mining	
Other mining activity	

Explain:

26. Outline any possible operational changes and when that might occur. (Eg. Open pit to underground)

Mining at Izok will be by conventional open pit and underground mining methods. The pit will be mined over 11 years in three phases from 2017 to 2027. The Inukshuk deposit will be mined using underground methods for 6 years from 2021 to 2026. Refer to Section 2.4.4.6 (Production Schedule) of the Project Proposal for more details on the preliminary production schedule for the Izok Mine.

27. Describe the type(s) of explosives to be used in mining operations.

Refer to Section 2.4.10.11 (Explosives Storage and Handling) of the Project Proposal for an overview of explosives to be used at the Izok Mine site.

28. Indicate the number of shafts or other openings that are presently on the property. Signify whether or not the openings are presently in use. (Submit measurement in metres) Indicate if used seasonally.

There are no shafts or other mine openings present on the property.

29. Are any entrances to shafts, adits, etc. below ground water level.

N/A

30. Are permafrost conditions expected?

The Izok Mine site is located within the continuous permafrost zone. Refer to Section 5.7.1 (Landforms and Soil) of the Project Proposal for details regarding permafrost in the Izok Mine area. The actual mining (open pit and underground) at Izok will not be in permafrost due to the deposits lying within the talik beneath the existing lake.

31. Indicate the expected life of the mine.

Refer to Section 2.1.2 (Project Schedule) of the Project Proposal for details of the proposed schedule. Anticipated timing of the major Project phases is summarized as follows:

- Construction: anticipated to begin in 2015 and last two years
- Operation: anticipated to begin in 2017 and last 12 years
- Progressive reclamation: ongoing over the life of the Project
- Closure and reclamation: anticipated to begin in 2028 and last two to three years (~2030)
- Post closure monitoring: anticipated to last 7 years after closure to 2037 (closure and reclamation and post closure monitoring will last 10 years total)

32. Indicate the present average rate of production from all ore sources on the property.

N/A

33. Indicate the expected maximum rate of production from all ore sources on the property.

Approximately 1.4 million tonnes of ore per annum (Mtpa) will come from the Izok mines (open pit and underground). This will be combined with approximately 600 ktpa from the High Lake mines for a total nominal production rate of 2 Mtpa. Refer to Section 2.4.4.8 (Production Schedule) Table 2.4-5 for a breakdown of the preliminary production schedule for the Izok open pit and underground mines.

34. Outline all water usage in the mine. Indicating the source and volume of water for each use.

The Izok open pit and underground mine will require continuous dewatering due to their location in the talik beneath the existing Izok Lake. Information on groundwater inflows into the open pit and underground mine will be augmented by hydrogeological drilling and field test work being conducted in 2012. Details characterizing the water requirements in the mine, including sources, volumes and water quality, will be provided in a future EIS. In addition site wide water balance and water quality model will be developed for the Izok Mine site and submitted as part of the EIS. Refer to Section 2.4.7 (Izok Mine Surface and Groundwater Management) and Section 2.4.8 (Izok Mine Water Requirements) for more details on the proposed water usage and management at the Izok Mine site.

35. Indicate the volume of natural ground water presently gaining access to the mine workings.

Currently not available m^3/day

See response to question 34 above

36. Outline methods used (planned) underground to decrease minewater flow. (For example: recycling)

During mine operations, groundwater that flows into the Izok open pit and underground mine from the Izok Lake talik will be collected in sumps, and pumped to a water holding pond. From there, the groundwater will be pumped to a water treatment facility and re-cycled as process plant make-up water or released to Itchen Lake when discharge criteria have been met. Refer to Section 2.4.7.5 (Groundwater Management Plan) for more details on the proposed methods for managing mine inflows.

37. Indicate the average daily volume of water to be discharged from the mine during normal operations.

A detailed site wide water balance/water quality model is currently being developed for the Izok Mine site. The results of this model, including anticipated volumes of mine site discharges, will presented and evaluated in detail as part of a future EIS.

38. If a mill will be operating on the property in conjunction with mining, will all mine water (underground, open pit, etc.) be directed to the mill for reuse?

The mill will use recycled water from various components of the mine including water from within the plant, and contact water that comes from other parts of the mine site, such as groundwater inflows to the open pit and underground workings. Refer to Section 2.4.9 (Izok Mine Water Requirements) and Section 2.4.9 (Izok Mine Waste and Other Wastes) for more information.

39. If not, indicate the proposed point and volume of discharge for the mine water.

A detailed site wide water balance/water quality model is currently being developed for the Izok Mine site. The results of this model, including anticipated volumes and water quality of mine site discharges, will presented and evaluated in detail as part of a future EIS. Any discharges from the Izok Mine site to the receiving environment will be to Itchen Lake.

40. What are the chemical and physical characteristics of the preceding mine water?

See response to question 39 above and refer to Section 2.4.9 (Izok Mine Waste and Other Wastes) for preliminary information on the anticipated discharges from the site.

41. Are there any treatment plans for mine water and will any chemicals be used in such treatment? Explain.

Refer to Section 2.4.9.1 (Process Water Treatment and Discharge) for preliminary details on the proposed treatment system to be used at the Izok Mine site.

SECTION 4:

THE MILL (PROCESSING PLANT

42. Attach a copy of the (proposed) mill flow sheet. Indicate the points of addition of all the various reagents (chemicals) that are (or will be) used.

The ore processing plant will be a conventional crushing, grinding and flotation plant, which will produce copper, lead and zinc concentrates. Silver will be recovered with the copper and lead concentrates. Refer to Section 2.4.5 (Izok Mine Ore Processing) for an overview of the proposed ore processing plant that will be used for the project. More detailed information on the proposed mill, including mill flow sheet, will be provided as part of a future draft DEIS.

43. If milling is in progress on the property at the present time, indicate the rate of milling.

___X___ not applicable (check) OR _____ tonnes/day

44. What is the present (or proposed) maximum capacity of the mill?

The nameplate capacity of the proposed mill will be 7,000 tonnes per day (tpd) of ore and the mill throughput rate will be approximately 6,000 tpd of ore. On an annual basis, a nominal 2 million tonnes of ore per annum (Mtpa) will be milled, with approximately 1.4 Mtpa from the Izok mines and 600 ktpa from the High Lake Mines.

45. List the types and quantities of all reagent used in the mill process (in kg/tonne ore milled.)

Refer to Section 2.4.10.12 (Hazardous Materials) for a summary of potential reagent use in the mill process. More detailed information on the proposed mill, including information of reagent use, will be provided as part of a future draft DEIS.

46. Is the (proposed) milling circuit based on autogenous grinding?

Yes _____ No _____ Partially ___X

47. Indicate the amount(s) of concentrate(s) produced in the mill.

The maximum combined production rate of copper, lead and zinc concentrates will be approximately 670,000 tpa. Refer to Section 2.4.5.1 (Milling Design Considerations and Selection), Table 2.4.4, for a summary of the proposed annual concentrate production schedule.

48. Will fresh water undergo treatment prior to use in the mill process? Explain.

Any fresh water required for process make-up water will be of sufficient water quality that treatment will not be required prior to use in the mill process.

49. Indicate all uses of water in the mill. Include the quantity and source of the water for each use.

A detailed site wide water balance/water quality model is currently being developed for the Izok Mine site. The results of this model, including anticipated volumes, water quality and sources of all water required for the mill, will presented and evaluated in detail as part of a future draft EIS.

50. Indicate the total volume of water discharged from the mill.

A detailed site wide water balance/water quality model is currently being developed for the Izok Mine site. The results of this model, including anticipated volumes and water quality of water being discharged from the mill, will presented and evaluated in detail as part of a future draft EIS.

51. Of the preceding volume, what quantity is (will be) recycled to other areas on the property (mine, mill, etc.)? Indicate location of use and quantity.

Refer to Section 2.4.8 (Izok Mine Water Requirements) and Section 2.4.9 (Izok Mine Waste and Other Wastes) for preliminary information on water recycling that will be used at the Izok Mine site. Details on the quantity and location of use for the recycled water will be presented as part of a future draft EIS.

52. Based on yearly production, indicate the average quantity of tailings (Dry weight) discharged from the mill.

The total quantity of tailings to be handled at Izok Mine is 16 million tonnes (Mt). The average annual production rate is approximately 1.5 million tonnes per annum (Mtpa). Refer to Section 2.4.6 (Mineral Waste Management) of the Project Proposal for more details on tailings management.

53. What is the average liquid-solid ratio of tailings leaving the mill?

By weight: 15% - 20% liquid:85% - 80% solids

By volume: 37% - 49% liquid:63% - 51% solids

54. If applicable, identify any chemical treatment applied to the liquid phase before being discharged to the tailings area. (Attach flow sheet if available.)

The tailings will be dewatered to between 15% and 20% moisture content by mass prior to being deposited in an engineered stack tailings management system. The water from the tailings dewatering will be recycled to the process water circuit or to the water treatment plant. Run-off water and seepage from the dry stack tailings facility will be captured and also pumped to the process plant as make-up water, or to the water treatment plant.

55. Based on present production or bench test results, describe the chemical and physical characteristics of liquid mill wastes directed to the tailings area.

To be provided as part of a future draft EIS.

56. Provide a geochemical description of the solid fraction of the tailings.

Tailings deposited at Izok mine will be derived from Izok Mine and High Lake Mine ore and combined as process plant fee at approximately 2 parts Izok ore to one part High Lake ore. Key characteristics of the geochemistry of the tailings from each mine are summarized in Section 2.4.6.2 (Izok Mine Tailings) of the Project Proposal. A more detailed geochemical characterization of the tailings will be provided as part of a future draft EIS.

57. Identify the current (future) source of power production.

Diesel electrical generating units will provide electric power for the Izok Mine. Power generation capability will be approximately 15 to 20 MW, including standby and back-up units. Refer to Section 2.4.10.5 (Electric Power Generation) of the Project Proposal for more information the power production for the proposed Project.

58. At present, is the mill handling custom lots of ore from other properties (or will the mill be handling any in the future)?

The ore from the High Lake mines will also be milled/processed at the Izok processing plant. On an annual basis, a nominal 2 million tonnes of ore per annum (Mtpa) will be milled, with approximately 1.4 Mtpa from the Izok mines and 600 ktpa from the High Lake Mines.

59. If so, specify ore characteristics and describe any mill processes which will change as a result.

See response to question 56 above.

60. If tailings are being recovered in the mill or elsewhere for use as backfill etc.), indicate the quantity of solid tails (tonnes/day) recovered from the mill process.

N/A

61. Will exits be bermed to prevent spills from escaping the mill?

Details of spill control measures that will be implemented on site, including containment, will be provided as part of a future EIS.

62. Will all sumps for process tanks have the required 110% holding capacity of the largest tank?

Details of methods of storage and containment, including sump sizing, will be provided as part of a future draft EIS.

SECTION 5:

THE CONTAINMENT AREAS

63. Is the tailings containment area (being) designed for total containment?

The Izok Tailings Management Plan consists of dewatered tailings being deposited sub-aerially in an engineered stack tailings management system within or close to the Izok Lake basin. The proposed design is for storage of all the tailings generated by the proposed Project (16 Mt). Freezing of the stacked tailings will be achieved by placing tailings in thin horizontal layers. Refer to Section 2.4.6 (Izok Mineral Waste Management) of the Project Proposal for more details on the proposed tailings management. Further details will be provide as part of a future EIS.

64. Attach detailed scale plan drawings of the proposed (or present) tailings area. The drawings must include the following:

To be provided as part of a future draft EIS.

a. details of pond size and elevation;

b. precise details of all retaining structures (length, width, height, materials of construction, etc.);

c. details of the drainage basin, and existing and proposed drainage modification;

d. details of all decant, siphon mechanisms etc,. including water treatment plant facilities;

e. the plan for tailings deposition and final tailings configuration;

f. details with regard to the direction and route followed by the flow of wastes and/or waters from the ore; and

g. indication of the distance to nearby major watercourses.

Note: Individual detailed large scale drawings of any facility (dam, decant system, ditch, dike, water treatment plant, etc.) (to be) constructed must be attached. Specific details with regard to the methods of construction, materials (to be) used, etc., are required.

65. Explain your choice of location for the tailings pond design by rationalizing rejection of other options. Consider the following criteria in your comparisons; subsurface strata, permeability, abandonment of tailings, recycling/reclaiming waters, and assessment of runoff into basins. Attach a brief summation.

Refer to Section 2.4.6 (Izok Mineral Waste Management) of the Project Description for a brief overview of alternative tailings management options considered. A details assessment and evaluation of tailings disposal alternatives will be provided as part of a future draft EIS.

66. The total area for the existing tailings basin in hectares and for any proposed tailings area is _____ Hectares.

To be provided as part of a future draft EIS.

67. The average depth of the tailings basin is _____ metres.

To be provided as part of a future draft EIS.

68. Indicate the total capacity for the existing tailings area by using water balance and stage volume calculation and curves. (Attach a description of inputs and outputs along with volume calculations.)

To be provided as part of a future draft EIS.

69. Indicate the total capacity for the proposed tailings area using water balance and stage volume calculation and curves. (Attach a description of inputs and outputs along with volume calculations.)

To be provided as part of a future draft EIS.

70. Will the present tailings area contain the entire production from the mine-mill complex for the life of the project?

The proposed Tailings Management Plan is being designed to handle the total quantity of tailings to be handled at the Izok Mine (16 Mt).

71. If "NO' above, or if production output increases tailings volumes. Indicate what plans have been made for future tailings disposal on the property.

N/A

72. Has any land in the immediate area been identified as native or crown land or withdrawn pending native claim settlement?

Refer to Section 1.3 (Project Location and Land Tenure) of the Project Proposal and associated figures for an overview of the land tenure at the Izok Mine site.

73. Do the tailings area and all related treatment facilities lie on company held claims?

Refer to Section 1.3 (Project Location and Land Tenure) of the Project Proposal and associated figures for an overview of the land tenure at the Izok Mine site.

74. If not, indicate mine claim boundaries (and owners) on tailings area plan map. Also, attach a copy of all pertinent agreements signed with the owners of the claims not held by the company.

See response to question 73 above.

75. Will the proposed tailings area engulf or otherwise disturb any existing watercourse?

As part of the proposed Tailings Management Plan, tailings will be deposited largely within the footprint of Izok Lake and may also be placed on the permafrost slope to the west and south of present Izok Lake. Further details of the proposed Tailings Management Plan will be provided in a future EIS, including a description of any disturbed watercourses.

76. If "YES", attach all pertinent details (name of watercourse, present average flow, direction of flow, proposed diversions, etc.).

Further details of the proposed Tailings Management Plan will be provided in a future EIS, including a description of any disturbed watercourses.

77. If any natural watercourse will gain access to the proposed tailings area, what methods will be used to decrease the amount of runoff water entering the containment area? Indicate the volume of water which will enter the tailings area from the source(s) in question and attach all pertinent details of proposed diversions.

Surface water inflows into the tailings area will be minimized by strategically locating the piles within topography at the Izok Mine and installing surface water diversion channels and berms to intercept non-contact water prior to it entering the tailings area. An overview of the proposed methods for the management of runoff in the tailings area is provided in Section 2.4.6 (Izok Mineral Waste Management) and Section 2.4.7 (Izok Mine Surface and Ground Water Management) of the Project Proposal. Further details will be provided in a future EIS including a detailed water balance for the tailings area.

78. Indicate on the tailings area plan drawing all sources of seepage presently encountered in the vicinity of the tailing area, the volume of each seepage flow (m3/day), and the direction of each flow.

To be provided in a future draft EIS including a detailed water balance for the tailings area.

79. Are the seepage flows from the property presently being treated chemically? _____ If so, describe how.

Seepage from the tailings area will be collected and re-used in the process plant or will be treated to meet discharge criteria and released to the environment. The water treatment plant will precipitate oxidized metals using lime in a high-density sludge treatment system. An overview of the proposed management of tailing seepage is provided in Section 2.4.6 (Izok Mineral Waste Management) of the Project Proposal. Further information on the proposed water treatment system is provided in Section 2.4.9.1 (Process Water Treatment and Discharge) of the Project Proposal.

80. If NOT, explain.

N/A

81. Please attach a conceptual abandonment and restoration plan for all tailings areas being developed. Describe the measures that have been (or will be) taken to contain and stabilize the tailings area(s) against leaching and seepage after operations on the property cease.

An overview of the approach for closure of the tailings area is provided in Section 2.4.6 (Izok Mineral Waste Management) of the Project Proposal. A more detailed conceptual abandonment and restoration plan for tailings area will be developed as part of a future draft EIS.

82. Describe the proposed or present operation, maintenance and monitoring of the tailings area.

An overview of the approach for operations, maintenance and monitoring of the tailings area is provided in Section 2.4.6 (Izok Mineral Waste Management) of the Project Proposal. A more detailed operations, maintenance and monitoring plan for tailings area will be developed as part of a future draft EIS.

SECTION 6:

WATER TREATMENT

83. Describe the methods of chemical treatment that are presently being used and/or will be used to control the quality of the tailings effluent. Attach engineering drawings where applicable and a process flow chart. If a pilot test has been conducted please attach description of methodology and results.

All contact water requiring treatment will be treated using a high-density sludge lime treatment system with a capacity to treat 1,000 m3/hr of water. The treatment system will involve two tanks: one to receive input water and inject air, and the other for lime addition to raise the pH to precipitate dissolved metals. Treated water will be pumped to sedimentation ponds for solid-liquid separation prior to discharge into Itchen Lake. An overview of the proposed water treatment system is provided in Section 2.4.9.1 (Process Water Treatment and Discharge) of the Project Proposal. Further details of the treatment system will be provided as part of a future EIS.

84. List the names of chemicals to be used in the water treatment process.

See response to question 83 above.

85. What is the proposed or present <u>average</u> rate of effluent treatment of the plant (if applicable)?

N/A

86. What is the proposed or present <u>maximum</u> effluent treatment capacity of the plant (if applicable)?

See response to question 83 above.

87. Will treated effluent be discharged directly to a natural water body or will polishing or settling ponds be employed? Describe location control structures and process of water retention and transfer. Attach any relevant design drawings.

See response to question 83 above.

88. Name the first major watercourse the discharge flow enters after it leaves the area of company operations.

Water discharged from the Izok Mine site will be discharged into the receiving environment of Itchen Lake.

89. In terms of rate of effluent release and volume and flushing rate of the receiving watercourse, estimate the extent of the mixing zone within the receiving waters and where background levels of constituents for that watercourse will be attained.

To be provided as part of a future draft EIS.

90. Describe the present (proposed from pilot tests) chemical and physical characteristics of the tailings effluent (Decant).

To be provided as part of a future draft EIS.

SECTION 7:

ENVIRONMENTAL MONITORING PROGRAM

91. Have elders been consulted in the establishment of the monitoring program?

Refer to Sections 3 (Public Engagement) and 4 (Traditional Knowledge) of the Project Proposal for a summary of community engagement and traditional knowledge studies that have been carried out and a description of on-going and proposed studies, which will be described in detail in a future EIS.

92. Has Traditional Knowledge of the area been considered?

Yes, refer to Section 4 (Traditional Knowledge) of the Project Proposal.

93. Has any baseline data been collected for the main water bodies in the area prior to development?

Yes, refer to Section 5.8 (Freshwater Environment) of the Project Proposal.

94. If "YES" include all data gathered on the physical, biotic and chemical characteristics at each sampling location. Identify sampling location on a map.

Refer to Section 5.6 (Freshwater Environment) of the Project Proposal. A more detailed summary of the physical, biotic and chemical characteristics of the various water bodies in the Project area will be provided as part of a future draft EIS.

95. Provide an inventory of hazardous materials on the property and storage locations. (Attach separate Map)

An overview of the hazardous materials that will be stored at the Izok Mine site is provided in Section 2.4.10.12 (Hazardous Materials) of the Project Proposal. More specific details, including storage locations, will be presented as part of a future EIS and water licencing process.

96. Attach the present or proposed contingency plan which describes course of action, mitigative measures and equipment available for use in the event of system failures and spills or hazardous materials.

A Spill Contingency Plan is in place for the current exploration activities at the site. Details regarding the proposed contingency plan for the proposed Izok Mine will be provided in a future EIS.

97. Provide a conceptual abandonment and restoration plan for the site, detailing the costs to carry out the plan, and a proposal for a financial assurance which covers the costs to carry out the plan.

An overview of the approach for closure at the site is provided in the Project Proposal for each of the following key project components:

- Waste Rock (Section 2.4.6)
- Tailings (Section 2.4.6)
- Surface Water (Section 2.4.7.4 Surface Water Management Closure Plan)
- Groundwater (Section 2.4.7.8 Groundwater Management Closure Plan)
- Process Water Systems (Section 2.4.8.7 Water Requirements Closure Plan)
- Waste Treatment and Discharge Infrastructure (Section 2.4.9.9 Waste Water and Other Wastes Closure Plan)
- Infrastructure (Section 2.4.10.15 Infrastructure Closure Plan)

A more detailed conceptual abandonment and restoration plan for the site, including financial assurance, will be developed as part of the future EIS and licencing process.

98. Provide a detailed emergency response plan for the project.

An overview of the proposed Emergency Preparedness program is provided in Section 12 of the Project Proposal. Details regarding proposed emergency response plans for the proposed project will be provided as part of a future draft EIS.

99. Provide a description of the pollution control systems and environmental management procedures.

An overview of the proposed Environmental Management System is provided in Section 12) of the Project Proposal. A description of the proposed pollution control systems and environmental management procedures will be provided as part of a future draft EIS.

SECTION 8:

ENVIRONMENTAL ASSESSMENT AND SCREENING

100. Has this project ever undergone an initial environmental review, including previous owners.

This application is being submitted to initiate the environmental assessment process under the NIRB. The Project Proposal and water licence application are being submitted to the NIRB and NWB towards a coordinated review process. An environmental review for the proposed mine development has not been previously carried out.

101. Has any baseline data collection and evaluation been undertaken with respect to the various biophysical components of the environment potentially affected by the project (e.g. wildlife, soils, air quality), i.e. in addition to water related information requested in this questionnaire?

Refer to Section 5 (Existing Biophysical Environment) and Section 7 (Potential Project Environmental Effects) of the Project Proposal for a preliminary overview of the biophysical components that could potentially be affected by the proposed project. A detailed evaluation of the project and any potential impacts to the biophysical environment will be described and assessed in a future EIS.

102. Describe any cumulative impacts the project may create?

Refer to Section 5 (Potential Project Environmental Effects) and Section 6 (Potential Project Socioeconomic and Cultural Effects) and Section 10 (Cumulative Effects Analysis) for a preliminary overview of potential cumulative effects. A detailed assessment of cumulative effects will be addressed in a future EIS.

103. Has any meteorological data been collected at or near the site? (e.g. precipitation, evaporation, snow, wind).

a) If so, please include the data and attach copies of reports or site titles, authors and dates.

A summary of the meteorological data that has been collected at the site is provided in Section 5.3.2.2 of the Project Proposal. A detailed summary of meteorological data (historical and ongoing) collected at the Izok Mine site will be provided as part of a future EIS.

104. If no, are such studies being planned? Briefly describe the proposals.

N/A

105. Has authorization been obtained or sought from the department of fisheries and oceans for dewatering or using any water bodies for containment of waste?

MMG will be seeking authorization from the Department of Fisheries and Oceans for the dewatering of Izok Lake. Refer to Section 1.10 (Regulatory Process) for an overview of the required permits, approvals and licences for the proposed Project.

106. Please attach an outline briefly describing any options or alternatives considered or reflected for the various mine components outlined in this questionnaire (e.g. mill site, water supply sources, location for ore and waste piles).

A preliminary overview of the options or alternatives for each of the following key project components is provided in the Project Proposal:

- Waste Rock (Section 2.4.6)
- Tailings (Section 2.4.6)
- Izok Lake Drainage (Section 2.4.3.3 Drainage Alternatives)
- Surface Water (Section 2.4.7.2 Surface Water Management Alternatives Considered)
- Groundwater (Section 2.4.7.6 Groundwater Management Alternatives)
- Process Water Systems (Section 2.4.8.5 Water Requirements Alternatives Considered)
- Waste Treatment and Discharge Infrastructure (Section 2.4.9.7 Waste Water and Other Wastes Alternatives)

A more detailed assessment of alternatives will be provided as part of a future EIS.

107. Has a socio-economic impact assessment or evaluation of this project been undertaken? (This would include a review of any public concerns, and water and cultural uses of the area, implication of land claims, compensation, local employment opportunities, etc.)

Refer to Section 6 (Existing Socioeconomic Environment) and Section 7 (Potential Project Environmental Effects) of the Project Proposal for an overview of the existing socioeconomic environment that could potentially be affected by the proposed project and Section 9 (Potential Project Socioeconomic Effects). A detailed evaluation of the project and any potential socioeconomic and cultural effects will be described and assessed in a future EIS.

108. If yes, please describe the proposal briefly.

N/A

109. If no, is such a study being planned? Yes_____ (When) OR No _____.

N/A

110. Does the project alter the quantity or quality or flow of waters through Inuit Owned Lands?

This will be assessed as part of a future EIS.

111. If yes, has the applicant entered into an agreement with the Designated Inuit Organization to pay compensation for any loss or damage that may be caused by the alteration.

See response to question 111 above.

112. If no compensation arrangement has been made, how will compensation be determined?

See response to question 111 above.

General Water Licence Application
(Application for a new Water Licence)

Document Date: May 2011

Application Submission Date: August 20, 2012

Month/Day/Year

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYIT
OFFICE DES EAUX DU NUNAVUT

GENERAL WATER LICENCE APPLICATION
(APPLICATION FOR NEW WATER LICENCE)

The applicant is referred to the NWB's Guide 4: *Guide to Completing and Submitting a Water Licence Application for a New Licence* for more information about this application form.

LICENCE NO:
(for NWB use only)

1. APPLICANT (PROPOSED LICENSEE) CONTACT INFORMATION (name, address)

MMG Minerals and Metals Group
Level 26, 1177 West Hastings Street
Vancouver British Columbia
V6E 2K3
Attention: Scott Trusler

Phone: 778-373-5586
Fax: 778-373-5598
e-mail: Scott.Trusler@mmg.com

2. APPLICANT REPRESENTATIVE CONTACT INFORMATION if different from Block 1 (name, address)

Same as contact information on left

Phone: _____
Fax: _____
e-mail: _____
(Attach authorization letter.)

3. NAME OF PROJECT (including the name of the project location)

Izok Corridor Project – High Lake Mine

4. LOCATION OF UNDERTAKING

Project Extents

NW:	Latitude: (67° 24′ 3.6" N)	Longitude: (110° 49′ 37.2" W)
NE:	Latitude: (67° 24′ 3.6" N)	Longitude: (110° 53′ 16.8" W)
SE:	Latitude: (67° 21′ 28.8" N)	Longitude: (110° 53′ 16.8" W)
SW:	Latitude: (67° 21′ 28.8" N)	Longitude: (110° 49′ 37.2" W)

Camp Location(s)

Latitude: (67° 22′ 37.2" N) Longitude: (110° 51′ 28.8" W)

5. MAP - Attach a topographical map, indicating the main components of the undertaking.

NTS Map Sheet No.: 76M Map Name: Hepburn Island Map Scale: 1:250,000

Refer to Figure 2.5-3 in Section 2.5 (High Lake Mine) of the Project Proposal, for an overview of the locations of the key components of the proposed Project. A more detailed topographical map showing the relative locations of the Project components, water bodies and drainage patterns will be provided as part of a future draft EIS.

6. NATURE OF INTEREST IN THE LAND - Check any of the following that are applicable to the proposed undertaking (at least one box under the 'Surface' header must be checked).

Sub-surface

☑ Mineral Lease from Nunavut Tunngavik Incorporated (NTI)
Date (expected date) of issuance: prior to construction_ Date of expiry: To be determined

☐ Mineral Lease from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: _____ Date of expiry: _____

Surface

☑ Crown Land Use Authorization from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: prior to construction_ Date of expiry: To be determined

☑ Inuit Owned Land (IOL) Authorization from Kitikmeot Inuit Association (KIA)
Date (expected date) of issuance: prior to construction_ Date of expiry: To be determined

☐ IOL Authorization from Kivalliq Inuit Association (KivIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ IOL Authorization from Qikiqtani Inuit Association (QIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Commissioner's Land Use Authorization
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Other: _____
Date (expected date) of issuance: _____ Date of expiry: _____

Name of entity(s) holding authorizations:
_____

7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION

Indicate the land use planning area in which the project is located.

☐ North Baffin
☐ South Baffin
☐ Akunniq
☐ Keewatin
☐ Sanikiluaq
☑ West Kitikmeot

Is a land use plan conformity determination required?

☑ Yes ☐ No

If Yes, indicate date issued and attach copy _____

If No, provide written confirmation from NPC confirming that a land use plan conformity review is not required.

The Project Proposal is being submitting to the Nunavut Planning Commission (NPC) for a conformity review against approved land use plans. The Project footprint does not lie within a region of the Nunavut for which an approved Land Use Plan exists; the West Kitikmeot Regional Land Use Plan (WKRLUP) is still in draft form. However, the North Baffin Land Use Plan overlaps a portion of the eastward shipping route, requiring NPC review. Once NPC determines that the Project Proposal is in conformity with approved land use plans or a variance has been approved, NPC will forward the Project Proposal to the NIRB for screening.

8. NUNAVUT IMPACT REVIEW BOARD (NIRB) DETERMINATION

Is an Article 12 Part 4 screening determination required?

☐ Yes ☐ No

This application is being submitted to NIRB initiate the environmental assessment process under the NIRB for the proposed Project. The Project Proposal and water licence application are being submitted to the NIRB and NWB towards a coordinated review process.

If Yes, indicate date issued and attach copy _____
If No, provide written confirmation from NIRB confirming that a screening determination is not required.

9. DESCRIPTION OF UNDERTAKING – List and attach plans and drawings or project proposal.

Mining – Refer to Section 2.5 (High Lake Mine) of the Project Proposal for a detailed overview of the proposed undertaking.

10. OPTIONS – Provide a brief explanation of the alternative methods or locations that were considered to carry out the project.

A preliminary overview of the options or alternatives for each of the following key project components is provided in the Project Proposal:

- Waste Rock (Section 2.5.4.5 Waste Rock Alternatives)
- Surface Water (Section 2.5.5.2 Surface Water Management Alternatives)
- Groundwater (Section 2.5.5.6 Groundwater Management Alternatives)
- Water Systems (Section 2.5.6.2 Water Requirements Alternatives)
- Waste Treatment and Other Wastes (Section 2.5.7.7 Water Treatment and Other Wastes Alternatives)

A more detailed assessment of alternatives will be provided as part of a future EIS.

11. CLASSIFICATION OF PRIMARY UNDERTAKING - Indicate the primary classification of undertaking by checking one of the following boxes.

☐ Industrial ☐ Agricultural
☐ Mining and Milling (includes exploration/drilling/exploration camps)
☐ Conservation
☐ Municipal (includes camps/lodges) ☐ Recreational

☐ Power ☐ Miscellaneous (describe below):

_____

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings.

Information in accordance with applicable Supplemental Information Guidelines (SIG) must be submitted with a New Water Licence Application. Indicate which SIG(s) are applicable to your application.

☐ Hydrostatic Testing
☐ Tannery
☐ Tourist / Remote Camp
☐ Landfarm & On-Site Storage of Hydrocarbon Contaminated Soil
☐ Onshore Oil and Gas Exploration Drilling
☐ Mineral Exploration / Remote Camp
☐ Advanced Exploration
☐ Mine Development
☐ Municipal
☐ General Water Works
☐ Power

12. **WATER USE -** Check the appropriate box(s) to indicate the type(s) of water use(s) being applied for.

☐ To obtain water for camp/ municipal purposes
☐ To obtain water for industrial purposes
☐ To cross a watercourse
☐ To alter the flow of, or store water
☐ Other: _____
☐ To divert a watercourse
☐ To modify the bed or bank of a watercourse
☐ Flood control

13. **QUANTITY AND QUALITY OF WATER INVOLVED -** For each type of water use indicated in Block 12, provide the source of water, the quality of the water source and available capacity, the estimated quantity to be used in cubic meters per day, method of extraction, as well as the quantities and qualities of water to be returned to source.

Refer to Section 2.5 (High Lake Mine) of the Project Proposal for an overview of the proposed water use. Details, including source of water, quality of water source, available capacity and quantity of water use will be provided as part of a future draft EIS.

Name of water source(s) (show location(s) on map):
_____

Describe the quality of the water source(s) and the available capacity: _____
_____
_____

Provide the overall estimated quantity of water to be used: _____ m^3/day

Provide the estimated quantity(s) of water to be used from each source:
_____

Indicate the estimated quantities to be used for each purpose (camp, drilling, etc.)
_____

Describe the method of extraction(s): _____

Estimated quantity(s) of water returned to source(s) _____ m^3/day

Describe the quality of water(s) returned to source(s): _____
_____
_____

14. **WASTE** – Check the appropriate box(s) to indicate the types of waste(s) generated and deposited.

- ☐ Sewage
- ☐ Solid Waste
- ☐ Hazardous
- ☐ Bulky Items/Scrap Metal
- ☐ Animal Waste
- ☐ Other (describe): Treated Mine Water
- ☐ Waste oil
- ☐ Greywater
- ☐ Sludges
- ☐ Contaminated soil and/or water

15. **QUANTITY AND QUALITY OF WASTE INVOLVED** – For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of treatment and method of disposal.

Refer to Section 2.5 (High Lake Mine) of the Project Proposal for an overview of the type of wastes that will be generated and deposited as part of the proposed project. Further details will be provided as part of a future EIS, including composition, quantity generated, treatment and disposal methods for each type of waste.

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method

16. **OTHER AUTHORIZATIONS** – In addition to the sub-surface and surface land use authorizations provided in Block 6, indicate any other authorizations required in relation to the proposed undertaking. For each provide the following:

Refer to Section 1.4 (Required Permits, Approvals and Licences) of the Project Proposal for an overview of the required and potential permits, approvals and licences for the proposed Project.

Authorization: _____

Administering Agency: _____

Project Activity: _____

Date (expected date) of issuance: _____ Date of expiry: _____

17. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES - Describe direct, indirect, and cumulative impacts related to water and waste.

A preliminary overview of the potential environmental effects and potential mitigation measures is provided in Section 7 (Potential Project Environmental Effects) of the Project Proposal. A detailed evaluation of the environmental effects of the project and proposed mitigation measures will be described and evaluated as part of a future draft EIS.

18. WATER RIGHTS OF EXISTING AND OTHER USERS OF WATER

Provide the names, addresses and nature of use for any known persons or properties that may be adversely affected by the proposed undertaking, including those that hold licences for water use in precedent to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature.

Advise the Board if compensation has been paid and/or agreement(s) for compensation have been reached with any existing or other users.

To be addressed in a future draft Environmental Impact Statement (EIS).

19. INUIT WATER RIGHTS

Advise the Board of any substantial affect of the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL), and advise the Board if negotiations have commenced or an agreement to pay compensation for any loss or damage has been reached with one or more Designated Inuit Organization (DIO).

To be addressed in a future draft Environmental Impact Statement (EIS).

20. CONSULTATION – Provide a summary of any consultation meetings including when the meetings were held, where and with whom. Include a list of concerns expressed and measures to address concerns.

Refer to Section 3 (Public Engagement) of the Project Proposal for details of past and proposed future engagement activities.

21. SECURITY INFORMATION

Provide an estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking. Estimates of reclamation costs must be based on the cost of having the necessary reclamation work done by a third party contractor if the operator defaults. The estimate must also include contingency factors appropriate to the particular work to be undertaken.

Where applicable, the financial security assessment should be prepared in a manner consistent with the principals respecting mine site reclamation and implementation found in the *Mine Site Reclamation Policy for Nunavut,* Indian and Northern Affairs Canada, 2002.

An estimate of the total financial security for the closure and reclamation of the proposed Project will be developed as part of the future EIS and water licencing processes.

22. FINANCIAL INFORMATION

Provide a statement of financial responsibility.

See attached MMG Annual Report for 2011.

If the applicant is a business entity, provide a list of the officers of the company.

See attached list of officers.

If the applicant is a business entity attach a copy of the Certificate of Incorporation or evidence of registration of the company name.

See attached Certificate of Incorporation.

23. STUDIES UNDERTAKEN TO DATE - List and attach copies of studies, reports, research, etc.

Refer to Section 5 (Existing Biophysical Environment) and Section 6 (Existing Socioeconomic Environment) of the Project Proposal for an overview of studies that have been undertaken at the High Lake Mine site.

24. PROPOSED TIME SCHEDULE – Indicate the proposed start and completion dates for each applicable phase of development (construction, operation, closure, and post closure).

Refer to Section 2.1.3 (Project Schedule) of the Project Proposal for details of the proposed schedule.

Construction
Proposed Start Date: 2015 (month/year) Proposed Completion Date: 2017 (month/year)

Operation
Proposed Start Date: 2017 (month/year) Proposed Completion Date: 2028 (month/year)

Closure
Proposed Start Date: 2028 (month/year) Proposed Completion Date: 2030 (month/year)

Post - Closure
Proposed Start Date: 2030 (month/year) Proposed Completion Date: 2037 (month/year)

For each applicable phase of development indicate which season(s) activities occur.

Construction
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Operation
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Closure
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Post - Closure
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

25. PROPOSED TERM OF LICENCE

Number of years (maximum of 25 years): _____22_____ years

Requested Date of Issuance: ___2015_____ (month/year) Requested Expiry Date: _____2037_____ (month/year)

(The requested date of issuance must be at least three (3) months from the date of application for a type B water licence and at least one (1) year from the date of application for a type A water licence, to allow for processing of the water licence application. These timeframes are approximate and do not account for the time to complete any pre-licensing land use planning or development impact requirements, time for the applicant to prepare and submit a water licence application in accordance with any project specific guidelines issued by the NWB, or the time for the applicant to respond to requests for additional information. See the NWB's *Guide 5: Processing Water Licence Applications* for more information)

26. ANNUAL REPORTING – If not using the NWB's *Standardized Form for Annual Reporting*, provide details regarding the content of annual reports and a proposed outline or template of the annual report.

To be provided as part of a future draft Environmental Impact Statement (EIS).

27. CHECKLIST – The following must be included with the application for the water licensing process to begin.

Written confirmation from the NPC confirming that NPC's requirements regarding land use plan conformity have been addressed.

☐ Yes ☒ No If no, date expected _____Not required_____

Written confirmation from the NIRB confirming that NIRB's requirements regarding development impact assessment have been addressed.

☐ Yes ☒ No If no, date expected _____

This application is being submitted to initiate the environmental assessment process under the NIRB. The Project Proposal and water licence application are being submitted to the NIRB and NWB towards a coordinated review process.

Completed General Water Licence Application form.

☐ Yes ☐ No If no, date expected _____

Information addressing Supplemental Information Guideline (SIG) , where applicable (see Block 11)

☐ Yes ☐ No If no, date expected _____

English Summary of Application.

☐ Yes ☐ No If no, date expected _____

See Appendix A1 of the Project Proposal

Inuktitut and/or Inuinnaqtun Summary of Application.

☐ Yes ☐ No If no, date expected _____

See Appendix A2 and A3 of the Project Proposal

Application Fee of $30.00 CDN (Payee Receiver General for Canada).

☐ Yes ☐ No If no, date expected _____

Water Use Fee Deposit of $30.00 CDN (Payee Receiver General for Canada). The actual water use fee will be calculated by the NWB based upon the amount of water authorized for use in accordance with the Regulations at the time of issuance of the licence.

☐ Yes ☐ No If no, date expected _____

28. SIGNATURE

Scott Trusler	Environmental Permitting Lead		Aug 20, 2012
Name (Print)	**Title (Print)**	**Signature**	**Date**

P.O. BOX 119
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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

Water Licence Application
Supplementary Questionnaire
for Mine Development

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SECTION 1 :

GENERAL

1. Applicant MMG Minerals and Metals Group
(Company, corporation, owner)

Level 26, 1177 West Hastings Street, Vancouver B.C. V6E 2K3
(Postal address)

778-373-5586 778-373-5598
(Telephone number) (Fax)

Scott.Trusler@mmg.com
(E-Mail)

Corporate Address (if different from above):

Same as above
(Corporate Office address)

(Telephone number) (Fax)

(E-Mail)

Project Name Izok Corridor Project – High Lake Mine

Location Bear Slave Upland Province, Kitikmeot Region

Closest Community Kugluktuk

Latitude/Longitude 67° 27’ 17.4”N / 110° 46’ 06.4”W
Show the location of the project on a general location map (eg: 1:1,000,000)

2. Environmental Permitting Lead Scott Trusler 778-373-5586
(Name) (Telephone No.)

or Project Manager Sahba Safavi 778-373-5607
(Project Manager - Canada)

3. Indicate the status of the mine or mill on the date of application. (Check the appropriate space.) Indicate schedule or time table of project activities.

Design	X
Under construction	
In operation	
Suspended	
Care and Maintenance	
Abandoned	

Refer to Section 2.1.2 (Project Schedule) of the Project Proposal

4. If a change in the status of the mine or mill is expected, indicate the nature and anticipated date of such change.

Refer to Section 2.1.3 (Project Schedule) of the Project Proposal for details of the proposed schedule. Anticipated timing of the major Project phases is summarized as follows:

- Construction: anticipated to begin in 2015 and last two years (i.e., 2017)
- Operation: anticipated to begin in 2017 and end in 2030
- Progressive reclamation: on-going over the life of the Project
- Closure and reclamation: anticipated to begin in 2030 and last two to three years
- Post closure monitoring: anticipated to last 7 years after closure (closure and reclamation and post closure monitoring will last 10 years total)

5. Indicate the proposed schedule for the Mine/Mill operating schedule.

Hours per week	
Days per week	
Weeks per year	
Number of employees	
Number of Inuit employees	

Refer to Section 2.9 (Employment and Procurement) of the Project Proposal for preliminary information on the operating schedule and anticipated workforce requirements. Details will be provided in the future draft Environmental Impact Statement (EIS)

6. How will the project affect the traditional uses on Inuit Owned Lands?

Refer to Section 2.5 (High Lake Mine) of the Project Proposal for a description of the proposed activities at the High Lake Mine site and to Section 6.6.4 (Traditional Activities and Knowledge) for a brief description of the traditional uses (land and resources). Potential Project effects and mitigation related to traditional uses are briefly summarized in Section 8 of the Project Proposal and a detailed description of the traditional uses in the area and effects will be addressed in a future draft Environmental Impact Statement (EIS).

7. Have the Elders been consulted on effects to the traditional use on Inuit Owned Land? If so, list them. If not, why not?

Refer to Sections 3 (Public Engagement) and 4 (Traditional Knowledge) of the Project Proposal for a summary of community engagement and traditional knowledge studies that have been carried out and a description of ongoing and proposed studies, which will be described in detail in a future draft EIS.

8. Has the proponent consulted Inuit Organization in the Area? If so, list them.

MMG has consulted the Nunavut Tunngavik Inc. (NTI) and the Kitikmeot Inuit Association (KIA) regarding the proposed project. Recently representatives from Nunavut Tunngavik Inc. (NTI) and the Kitikmeot Inuit Association (KIA) participated in MMG's RDAG meeting in Iqaluit on April 12th and 13th, 2012. These meetings provided participants with an overview of the project and allowed them to communicate their initial impressions and concerns regarding the proposed Project. Further meetings were held in Cambridge Bay and Kugluktuk. Specifically, in Kugluktuk, MMG provided a full day presentation to the KIA and the Hunters and Trappers Organization (HTO) at their request. All aspects of the proposed project were reviewed in detail.

Refer to Section 3 (Public Engagement) of the Project Proposal for details of past and proposed future engagement activities.

9. Has the proponent consulted surrounding communities on traditional water use areas? If so, list them. If not, why not?

Yes, refer to Section 4 (Traditional Knowledge) of the Project Proposal for a summary of traditional knowledge studies that have been carried out and a description of on-going and proposed studies, which will be described in detail in a future EIS.

10. Attach a detailed location map (1:50,000) drawn to scale showing all on site and off site facilities and activities. Show the relative locations of the (proposed) locations of the mine, mill, water treatment facilities, sewage and solid waste facilities, and tailings containment areas. The plan should include the water intake and pumphouse, fuel and chemical storage facilities, any existing or proposed concentrate, ore and waste rock storage piles, any existing and proposed drainage controls, piping distribution systems, gas, electric and water utility route locations, and transportation access routes around the site. The map also should include elevation contours, water bodies and an indication of drainage patterns for the area.

Refer to Figure 2.5-3 in Section 2.5.8 (High Lake Mine Site Plan), for an overview of the locations of the key components of the proposed Project. A more detailed figure showing the relative

figure showing the relative locations of the Project components, water bodies and drainage patterns will be provided as part of a future draft EIS.

11. If applicable, provide a brief history of property development which took place before the present company gained control of the site. Include shafts, adits, mills (give rated capacity, etc.) waste dumps, chemical storage areas, tailings disposal areas and effluent discharge locations. Make references to the detailed map.

A brief history of the property development is provided in Section 1.2 (General Description of the Project) of the Project Proposal.

12. Give a short description of the proposed or current freshwater intake facility, the type and operating capacity of the pumps used, and the intake screen size.

Fresh water will be sourced from Lakes 4, 5 and 15 at the High Lake Mine. The water intake method will be by submerged inlet installed on the lake beds. The inlet structures will be designed to prevent the intake of lake fauna and flora and all water intake structures will be designed and build in accordance with the Department of Fisheries and Ocean's Fresh Water Intake End-of-Pipe Fish Screen Guideline (1995). Refer to Section 2.5.6 (High Lake Mine Water Requirements) of the Project Proposal for more information on the proposed freshwater intake facilities at the High Lake Mine site. Further details on the fresh water requirements will be provided as part of a future draft EIS.

13. At the rate of intended water usage for the exploration activity, explain water balance inputs and outputs in terms of estimated maximum draw down and recharge capability of the water source from fresh water will be drawn.

An overview of the High Lake Mine water requirements is presented in Section 2.5.6 (High Lake Mine Water Requirements) of the Project Proposal. The fresh water requirement will be relatively low with the majority of the fresh water requirements at the High Lake Mine being for potable water, general mine water needs and firewater. A detailed water balance will be submitted, including details regarding the effect of water withdrawal on the freshwater sources, in a future draft EIS.

14. Will any work be done that penetrates regions of permafrost?
Yes__X___ No_____

15. If "YES"above, is the permafrost continuous or discontinuous ?

The High Lake Mine site is located within the continuous permafrost zone. Refer to Section 5.7.1 (Soils and Landforms) of the Project Proposal for details regarding permafrost in the High Lake Mine area. The depth of permafrost in the area of the High Lake deposits is approximately 450 m below surface. Mining in the AB and D open pits at High Lake will occur in permafrost. Only the deepest portions of the West Zone underground mining may extend beneath the permafrost limits.

16. Were (or will) any old workings or water bodies (be) dewatered in order to conduct the exploration (mine development) activity?
Yes _____ No __X___

17. If "YES" above, indicate the name of the water body, the total volume of water to be discharged and the chemical characteristics of the water. Also included should be the receiving water body and expected schedule of the dewatering.

N/A

18. Was (or will) the above discharge (be) treated chemically?
Yes_____ No_____Physical treatment only (clarification)

N/A

19. If "YES" above, describe the applied treatment.

N/A

SECTION 2 :

GEOLOGY AND MINERALOGY

20. Physiography; Provide an analysis and interpretation of the geologic and hydrologic environment in the immediate vicinity of the mine or plant. The investigation should extend from ground surface downward to the base of the glacial drift. Include large scale topographic map(s) covering the area where the mine, mill and waste disposal basin are (or were to be) located. The map(s) should provide information on groundwater patterns and permafrost variations in the area.

Refer to Section 2.5 (High Lake Mine) of the Project Proposal for an overview of the High Lake Mine site geology, hydrology and hydrogeology. Refer to Section 5.5 (Hydrogeology) of the Project Proposal for a description of the site hydrogeology, surficial geology, bedrock geology, permafrost, and hydrology.

21. Briefly describe the physical nature of the orebody, including known dimensions and approximate shape.

The central part of the High Lake property is underlain by north-trending Archean aged basaltic to rhyolitic flows and fragmental volcanics (Figure 2.5-1 of the Project Proposal). Intercalated with the rhyolitic volcanics, and at their eastern contact with andesitic rocks, are numerous carbonate-rich exhalite lenses. Argillites and greywacke underlie the easternmost part of the property. A

large mass of Late Archean plutonic rocks intrudes the supracrustal units in the western part of the property. Several prominent northwest and north-south trending brittle faults, including the regional High Lake fault, variably displace granitoid and volcanic units before the emplacement of the diabase dikes. Partially drill-tested stratiform and stringer sulphide mineralization, typical of volcanogenic massive sulphide (VMS) deposits occur at High Lake as discrete north and northeast trending bodies at the AB, D, and West zones. Several sulfide-rich horizons remain only partially tested.

The High Lake VMS deposits are within the felsic volcanic sequence with the B and D zones at or near the contact with granodiorite intrusion. Stratigraphic tops for the AB and D zones are interpreted to face west.

The West zone is on the western side of the diorite/granodiorite intrusion, about 1.3 km west of the D zone, and is comprised of three mineralized lenses. Chalcopyrite, sphalerite and pyrite occur as stringer type, massive and semi-massive sulphide lenses, hosted in a chloritic felsic tuff. Lithologies trend north, face east and dip steeply eastward to vertical. The AB, D and West Zone deposits will be mined as part of the proposed Project.

Refer to Section 2.5.1 (High Lake Site Geology) and associated figures for details of the geology of each of these deposits.

22. Briefly describe the host rock in the general vicinity of the orebody (from the surface to the mineralized zone.)

See response to question 21 above.

23. Provide a geological description of the ore minerals of the deposit. (If possible, include the percentage of metals.)

See response to question 21 above. Refer to Table 2.5-1, of the Project Proposal for mineral resource estimates for the High Lake deposits and Table 2.5.2, for a breakdown of the estimated High Lake mining inventory.

24. Describe the geochemical tests which have been (or will be) performed on the ore, host rock, and waste rock to determine their relative acid generation and contaminant leaching potential. Outline methods used (or to be used) and provide test results in an attached report (ie. Static, Kinetic tests.)

MMG has completed a comprehensive geochemical testing program at High Lake to characterize the potential for acid rock drainage (ARD) and metal leaching (ML) associated with waste rock, mine workings and infrastructure development. Additional testing is in progress to address specific gaps in each of these programs. The testing program includes acid base accounting tests, metal analyses, mineralogical analyses, leach extraction tests, humidity cell tests and column tests on both waste rock and tailings. In addition, field barrel tests are in progress to assess how

the waste rock will behave under more realistic conditions in the field. The test results will be used to predict whether acidic conditions could develop, how fast this could occur, and whether there would be elevated concentrations of metals in water that comes into contact with these materials. This information will be used to develop appropriate prevention and mitigation strategies to minimize the potential for adverse effects on water quality, and to develop water quality predictions for use in the effects assessment. Details, including results, from the geochemical testing program will be provide in a future EIS.

SECTION 3:

THE MINE

25. Indicate the type of mining method to be used on the property:

Open Pit X
Underground X
Strip mining
Other mining activity
Explain:

26. Outline any possible operational changes and when that might occur. (Eg. Open pit to underground)

Mining at High Lake will be by conventional open pit and underground mining methods, with the AB and D deposits being open pit mined and the larger West Zone deposit being mined by underground methods. The first ore will be produced from the AB Pit from 2017 to 2022. Simultaneously, portal excavations and construction will commence at the West Zone deposits, with ore being produced from 2019 to 2027. The D Pit will be developed and mined at the end of mine life, in 2028, for approximately one year. Refer to Section 2.5.3.5 (Production Schedule) of the Project Proposal for more details on the preliminary production schedule for the High Lake Mine.

27. Describe the type(s) of explosives to be used in mining operations.

Refer to Section 2.5.8.10 (Explosives) of the Project Proposal for an overview of explosives to be used at the High Lake Mine site.

28. Indicate the number of shafts or other openings that are presently on the property. Signify whether or not the openings are presently in use. (Submit measurement in metres) Indicate if used seasonally.

There are no shafts or other mine openings present on the property.

29. Are any entrances to shafts, adits, etc. below ground water level.

N/A

30. Are permafrost conditions expected?

The High Lake Mine site is located within the continuous permafrost zone. Refer to Section 5.5.2.3 (Permafrost) of the Project Proposal for details regarding permafrost in the High Lake Mine area. The depth of permafrost in the area of the High Lake deposits is approximately 450 m below surface. Mining in the AB and D open pits and the upper portions of the West Zone underground mine will occur in permafrost. Only the deepest portions of the West Zone underground mining may extend beneath the permafrost limits.

31. Indicate the expected life of the mine.

Refer to Section 2.1.2 (Project Schedule) of the Project Proposal for details of the proposed schedule. Anticipated timing of the major Project phases is summarized as follows:

- Construction: anticipated to begin in 2015 and last two years
- Operation: anticipated to begin in 2017 and last 12 years
- Progressive reclamation: ongoing over the life of the Project
- Closure and reclamation: anticipated to begin in 2028 and last two to three years (~2030)
- Post closure monitoring: anticipated to last 7 years after closure to 2037 (closure and reclamation and post closure monitoring will last 10 years total)

32. Indicate the present average rate of production from all ore sources on the property.

N/A

33. Indicate the expected maximum rate of production from all ore sources on the property.

Approximately 600 ktpa of ore will come from the High Lake mines and be delivered to the mill at the Izok Mine site for processing. Refer to Section 2.5.3.5 (Production Schedule) Table 2.5-6 for a breakdown of the preliminary production schedule for the High Lake open pit and underground mines.

34. Outline all water usage in the mine. Indicating the source and volume of water for each use.

The High Lake Mine is situated within a region of continuous permafrost, which is generally 400 m thick. Open pit mining at High Lake will be within permafrost and therefore only negligible groundwater inflows into the excavation are anticipated. The upper part of the West Zone underground mine will be in permafrost, and no significant inflow of water is expected to occur. Below 400 m, where permafrost conditions do not exist, the quantity of inflowing groundwater is expected to increase with depth of excavation, and decrease with time as local dewatering occurs. These effects will be modelled in subsequent phases of design and mine planning. Details characterizing the water requirements in the mine, including sources, volumes and water quality, will be provided in a future EIS. In addition site wide water balance and water quality model will be developed for the High Lake Mine site and submitted as part of the EIS. Refer to Section 2.5.5 (High Lake Mine Surface and Groundwater Management) and Section 2.5.6 (High Lake Mine Water Requirements) for more details on the proposed water usage and management at the High Lake Mine site.

35. Indicate the volume of natural ground water presently gaining access to the mine workings.

Currently not available m^3/day

See response to question 34 above

36. Outline methods used (planned) underground to decrease minewater flow. (For example: recycling)

During mine operations, groundwater that flows into the open pits during operations will be collected in mine sumps, pumped to a water holding pond, and then pumped to a water treatment facility for treatment. Water pumped from the underground mine will be directed to a holding pond and then to the water treatment plant. All discharge from the water treatment plant will meet discharge criteria prior to release to the receiving environment of the Kennarctic River or High Lake. Refer to Section 2.5.5.5 (Groundwater Management Plan) for more details on the proposed methods for managing mine inflows.

37. Indicate the average daily volume of water to be discharged from the mine during normal operations.

A detailed site wide water balance/water quality model is currently being developed for the High Lake Mine site. The results of this model, including anticipated volumes of mine site discharges, will presented and evaluated in detail as part of a future EIS.

38. If a mill will be operating on the property in conjunction with mining, will all minewater (underground, open pit, etc.) be directed to the mill for reuse?

N/A. There will be no mill at the High Lake Mine site. All ore will be transferred for processing at the mill at the proposed Izok Mine.

39. If not, indicate the proposed point and volume of discharge for the minewater.

A detailed site wide water balance/water quality model is currently being developed for the High Lake Mine site. The results of this model, including anticipated volumes and water quality of mine site discharges, will presented and evaluated in detail as part of a future EIS. Any discharges from the High Lake Mine site to the receiving environment will be to either the Kennarctic River or High Lake.

40. What are the chemical and physical characteristics of the preceding minewater?

See response to question 39 above and refer to Section 2.5.7 (High Lake Mine Waste and Other Wastes) for preliminary information on the anticipated discharges from the site.

41. Are there any treatment plans for minewater and will any chemicals be used in such treatment? Explain.

Refer to Section 2.5.7.1 (Contact Water Treatment and Discharge) for preliminary details on the proposed treatment system to be used at the High Lake Mine site.

SECTION 4:

THE MILL (PROCESSING PLANT)

42. Attach a copy of the (proposed) mill flow sheet. Indicate the points of addition of all the various reagents (chemicals) that are (or will be) used.

Not applicable as there will be no mill operating at the High Lake Mine. All ore will be transferred to the mill at the Izok Mine. The only ore processing will be crushing.

43. If milling is in progress on the property at the present time, indicate the rate of milling.

___X___ not applicable (check) OR _____ tonnes/day

44. What is the present (or proposed) maximum capacity of the mill?

N/A

45. List the types and quantities of all reagent used in the mill process (in kg/tonne ore milled.)

N/A

46. Is the (proposed) milling circuit based on autogenous grinding?

Yes _____ No _____ Partially _____

N/A

47. Indicate the amount(s) of concentrate(s) produced in the mill.

N/A

48. Will fresh water undergo treatment prior to use in the mill process? Explain.

N/A

49. Indicate all uses of water in the mill. Include the quantity and source of the water for each use.

N/A

50. Indicate the total volume of water discharged from the mill.

N/A

51. Of the preceding volume, what quantity is (will be) recycled to other areas on the property (mine, mill, etc.)? Indicate location of use and quantity.

N/A

52. Based on yearly production, indicate the average quantity of tailings (Dry weight) discharged from the mill.

N/A

53. What is the average liquid-solid ratio of tailings leaving the mill?

By weight: _____ By volume: _____
Liquid:Solid Liquid:Solid

N/A

54. If applicable, identify any chemical treatment applied to the liquid phase before being discharged to the tailings area. (Attach flow sheet if available.)

N/A

55. Based on present production or bench test results, describe the chemical and physical characteristics of liquid mill wastes directed to the tailings area.

N/A

56. Provide a geochemical description of the solid fraction of the tailings.

N/A

57. Identify the current (future) source of power production.

N/A

58. At present, is the mill handling custom lots of ore from other properties (or will the mill be handling any in the future)?

N/A

59. If so, specify ore characteristics and describe any mill processes which will change as a result.

N/A

60. If tailings are being recovered in the mill or elsewhere for use as backfill etc.), indicate the quantity of solid tails (tonnes/day) recovered from the mill process.

N/A

61. Will exits be bermed to prevent spills from escaping the mill?

N/A

62. Will all sumps for process tanks have the required 110% holding capacity of the largest tank?

N/A

SECTION 5:

THE CONTAINMENT AREAS

63. Is the tailings containment area (being) designed for total containment?

There will be no tailings generated as part of the operations at the High Lake Mine.

64. Attach detailed scale plan drawings of the proposed (or present) tailings area. The drawings must include the following:

N/A

a. details of pond size and elevation;

b. precise details of all retaining structures (length, width, height, materials of construction, etc.);

c. details of the drainage basin, and existing and proposed drainage modification;

d. details of all decant, siphon mechanisms etc,. including water treatment plant facilities;

e. the plan for tailings deposition and final tailings configuration;

f. details with regard to the direction and route followed by the flow of wastes and/or waters from the ore; and

g. indication of the distance to nearby major watercourses.

Note: Individual detailed large scale drawings of any facility (dam, decant system, ditch, dike, water treatment plant, etc.) (to be) constructed must be attached. Specific details with regard to the methods of construction, materials (to be) used, etc., are required.

65. Explain your choice of location for the tailings pond design by rationalizing rejection of other options. Consider the following criteria in your comparisons; subsurface strata, permeability, abandonment of tailings, recycling/reclaiming waters, and assessment of runoff into basins. Attach a brief summation.

N/A

66. The total area for the existing tailings basin in hectares and for any proposed tailings area is _____ Hectares.

N/A

67. The average depth of the tailings basin is _____ metres.

N/A

68. Indicate the total capacity for the existing tailings area by using water balance and stage volume calculation and curves. (Attach a description of inputs and outputs along with volume calculations.)

N/A

69. Indicate the total capacity for the proposed tailings area using water balance and stage volume calculation and curves. (Attach a description of inputs and outputs along with volume calculations.)

N/A

70. Will the present tailings area contain the entire production from the mine-mill complex for the life of the project?

N/A

71. If "NO' above, or if production output increases tailings volumes. Indicate what plans have been made for future tailings disposal on the property.

N/A

72. Has any land in the immediate area been identified as native or crown land or withdrawn pending native claim settlement?

N/A

73. Do the tailings area and all related treatment facilities lie on company held claims?

N/A

74. If not, indicate mine claim boundaries (and owners) on tailings area plan map. Also, attach a copy of all pertinent agreements signed with the owners of the claims not held by the company.

N/A

75. Will the proposed tailings area engulf or otherwise disturb any existing watercourse?

N/A

76. If "YES", attach all pertinent details (name of watercourse, present average flow, direction of flow, proposed diversions, etc.).
N/A

77. If any natural watercourse will gain access to the proposed tailings area, what methods will be used to decrease the amount of runoff water entering the containment area? Indicate the volume of water which will enter the tailings area from the source(s) in question and attach all pertinent details of proposed diversions.

N/A

78. Indicate on the tailings area plan drawing all sources of seepage presently encountered in the vicinity of the tailing area, the volume of each seepage flow (m3/day), and the direction of each flow.

N/A

79. Are the seepage flows from the property presently being treated chemically? _____ If so, describe how.

N/A

80. If NOT, explain.

N/A

81. Please attach a conceptual abandonment and restoration plan for all tailings areas being developed. Describe the measures that have been (or will be) taken to contain and stabilize the tailings area(s) against leaching and seepage after operations on the property cease.

N/A

82. Describe the proposed or present operation, maintenance and monitoring of the tailings area.

N/A

SECTION 6:

WATER TREATMENT

83. Describe the methods of chemical treatment that are presently being used and/or will be used to control the quality of the tailings effluent. Attach engineering drawings where applicable and a process flow chart. If a pilot test has been conducted please attach description of methodology and results.

Although there will be not tailings generated at the High Lake Mine, water collection and treatment will be implemented for all contact water generated at the site. All contact water requiring treatment will be treated using a high-density sludge lime treatment system. The treatment system will involve two tanks: one to receive input water and inject air, and the other for lime addition to raise the pH to precipitate dissolved metals. Treated water will be pumped to sedimentation ponds for solid-liquid separation prior to discharge into the receiving environment of either the Kennarctic River or High Lake. An overview of the proposed water treatment system is provided in Section 2.5.7.1 (Contact Water Treatment and Discharge) of the Project Proposal. Further details of the treatment system will be provided as part of a future draft EIS.

84. List the names of chemicals to be used in the water treatment process.

See response to question 83 above.

85. What is the proposed or present average rate of effluent treatment of the plant (if applicable)?

N/A

86. What is the proposed or present maximum effluent treatment capacity of the plant (if applicable)?

See response to question 83 above.

87. Will treated effluent be discharged directly to a natural water body or will polishing or settling ponds be employed? Describe location control structures and process of water retention and transfer. Attach any relevant design drawings.

See response to question 83 above.

88. Name the first major watercourse the discharge flow enters after it leaves the area of company operations.

Water discharged from the High Lake Mine site will be discharged into the receiving environments of either the Kennarctic River or High Lake.

89. In terms of rate of effluent release and volume and flushing rate of the receiving watercourse, estimate the extent of the mixing zone within the receiving waters and where background levels of constituents for that watercourse will be attained.

To be provided as part of a future draft EIS.

90. Describe the present (proposed from pilot tests) chemical and physical characteristics of the tailings effluent (Decant).

To be provided as part of a future draft EIS.

SECTION 7:

ENVIRONMENTAL MONITORING PROGRAM

91. Have elders been consulted in the establishment of the monitoring program?

Yes, refer to Section 3 (Public Engagement) and Section 4 (Traditional Knowledge) of the Project Proposal.

92. Has Traditional Knowledge of the area been considered?

Yes, refer to Section 4 (Traditional Knowledge) of the Project Proposal.

93. Has any baseline data been collected for the main water bodies in the area prior to development?

Yes, refer to Section 5.6 (Freshwater Environment) of the Project Proposal.

94. If "YES" include all data gathered on the physical, biotic and chemical characteristics at each sampling location. Identify sampling location on a map.

Refer to Section 5.6 (Freshwater Environment) of the Project Proposal. A more detailed summary of the physical, biotic and chemical characteristics of the various water bodies in the Project area will be provided as part of a future EIS.

95. Provide an inventory of hazardous materials on the property and storage locations. (Attach separate Map)

An overview of the hazardous materials that will be stored at the High Lake Mine site is provided in Section 2.5.8.11 (Hazardous Materials) of the Project Proposal. More specific details, including storage locations, will be presented as part of a future EIS and water licencing process.

96. Attach the present or proposed contingency plan which describes course of action, mitigative measures and equipment available for use in the event of system failures and spills or hazardous materials.

A Spill Contingency Plan is in place for the current exploration activities at the site. Details regarding the proposed contingency plan for the proposed High Lake Mine will be provided in a future draft EIS.

97. Provide a conceptual abandonment and restoration plan for the site, detailing the costs to carry out the plan, and a proposal for a financial assurance which covers the costs to carry out the plan.

An overview of the approach for closure at the site is provided in the Project Proposal for each of the following key project components:

- Waste Rock (Section 2.5.4.7 Waste Rock Closure Plan)
- Surface Water (Section 2.5.5.4 Surface Water Management Closure Plan)

- Groundwater (Section 2.5.5.8 Mine Groundwater Closure Plan)
- Water Systems (Section 2.5.6.4 Water Requirements Closure Plan)
- Waste Treatment and Other Wastes (Section 2.5.7.9 Water Treatment and Other Wastes Closure Plan)
- Infrastructure (Section 2.5.8.14 Mine Infrastructure Closure Plan)

A more detailed conceptual abandonment and restoration plan for the site, including financial assurance, will be developed as part of the future draft EIS and licencing process.

98. Provide a detailed emergency response plan for the project.

An overview of the proposed Emergence Preparedness program is provided in Section 12.2 of the Project Proposal. Details regarding proposed emergency response plans for the proposed project will be provided as part of a future EIS.

99. Provide a description of the pollution control systems and environmental management procedures.

An overview of the proposed Environmental Management System is provided in Section 12.2 of the Project Proposal. A description of the proposed pollution control systems and environmental management procedures will be provided as part of a future draft EIS.

SECTION 8:

ENVIRONMENTAL ASSESSMENT AND SCREENING

100. Has this project ever undergone an initial environmental review, including previous owners.

This application is being submitted to initiate the environmental assessment process under the NIRB. The Project Proposal and water licence application are being submitted to the NIRB and NWB towards a coordinated review process. An environmental review for the proposed mine development has not been previously carried out.

101. Has any baseline data collection and evaluation been undertaken with respect to the various biophysical components of the environment potentially affected by the project (e.g. wildlife, soils, air quality), i.e. in addition to water related information requested in this questionnaire?

Refer to Section 5 (Existing Biophysical Environment) and Section 7 (Potential Project Environmental Effects) of the Project Proposal for a preliminary overview of the biophysical components that could potentially be affected by the proposed project. A detailed evaluation of the project and any potential impacts to the biophysical environment will be described and assessed in a future EIS.

102. Describe any cumulative impacts the project may create?

Refer to Section 7 (Potential Project Environmental Effects) and Section 8 (Potential Project Socioeconomic Effects) for a preliminary overview of potential cumulative effects. A detailed assessment of cumulative effects will be addressed in a future draft EIS.

103. Has any meteorological data been collected at or near the site? (E.g. precipitation, evaporation, snow, wind).

a) If so, please include the data and attach copies of reports or site titles, authors and dates.

A summary of the meteorological data that has been collected at the site is provided in Section 5.3.2.2 of the Project Proposal. A detailed summary of meteorological data (historical and ongoing) collected at the Izok Mine site will be provided as part of a future draft EIS.

104. If no, are such studies being planned? Briefly describe the proposals.

N/A

105. Has authorization been obtained or sought from the department of fisheries and oceans for dewatering or using any water bodies for containment of waste?

MMG will not be seeking authorization from the Department of Fisheries and Oceans dewatering or using of any water bodies for the containment of waste. Refer to Section 1.9 (Regulatory Process) for an overview of the required permits, approvals and licences for the proposed Project.

106. Please attach an outline briefly describing any options or alternatives considered or reflected for the various mine components outlined in this questionnaire (e.g. mill site, water supply sources, location for ore and waste piles).

A preliminary overview of the options or alternatives for each of the following key project components is provided in the Project Proposal:

- Waste Rock (Section 2.5.4.5 Waste Rock Alternatives)
- Surface Water (Section 2.5.5.2 Surface Water Management Alternatives)
- Groundwater (Section 2.5.5.6 Groundwater Management Alternatives)
- Water Systems (Section 2.5.6.2 Water Requirements Alternatives)
- Waste Treatment and Other Wastes (Section 2.5.7.7 Water Treatment and Other Wastes Alternatives)

A more detailed assessment of alternatives will be provided as part of a future draft EIS.

107. Has a socio-economic impact assessment or evaluation of this project been undertaken? (This would include a review of any public concerns, and water and cultural uses of the area, implication of land claims, compensation, local employment opportunities, etc.)

Refer to Section 6 (Existing Human Environment) and Section 8 (Potential Project Socioeconomic Effects). A detailed evaluation of the project and any potential socioeconomic and cultural effects will be described and assessed in a future EIS.

108. If yes, please describe the proposal briefly.

N/A

109. If no, is such a study being planned? Yes_____ (When) OR No_____

N/A

110. Does the project alter the quantity or quality or flow of waters through Inuit Owned Lands?

This will be assessed as part of a future EIS.

111. If yes, has the applicant entered into an agreement with the Designated Inuit Organization to pay compensation for any loss or damage that may be caused by the alteration.

See response to question 111 above.

112. If no compensation arrangement has been made, how will compensation be determined?

See response to question 111 above.

General Water Licence Application
(Application for a new Water Licence)

Document Date: May 2011

Application Submission Date: August 20, 2012

Month/Day/Year

P.O. BOX 119
GJOA HAVEN, NUNAVUT
XOB 1J0
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NUNAVUT IMALIRIYIN KATIMAYIT
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYIT
OFFICE DES EAUX DU NUNAVUT

GENERAL WATER LICENCE APPLICATION
(APPLICATION FOR NEW WATER LICENCE)

The applicant is referred to the NWB's Guide 4: *Guide to Completing and Submitting a Water Licence Application for a New Licence* for more information about this application form.

LICENCE NO:
(for NWB use only)

1. APPLICANT (PROPOSED LICENSEE) CONTACT INFORMATION (name, address)

MMG Minerals and Metals Group
Level 26, 1177 West Hastings Street
Vancouver British Columbia
V6E 2K3
Attention: Scott Trusler

Phone: 778-373-5586
Fax: 778-373-5598
e-mail: Scott.Trusler@mmg.com

2. APPLICANT REPRESENTATIVE CONTACT INFORMATION if different from Block 1 (name, address)

Same as contact information on left

Phone: _____
Fax: _____
e-mail: _____
(Attach authorization letter.)

3. NAME OF PROJECT (including the name of the project location)

Izok Corridor Project – Izok to Grays Bay All Season Road (Izok Road)

4. LOCATION OF UNDERTAKING

Project Extents

NW/NE: Latitude: (67° 48' 18.0" N) Longitude: (110° 52' 8.4" W)
SE: Latitude: (65° 44' 13.2" N) Longitude: (111° 21' 3.6" W)
SW: Latitude: (65° 41' 9.6" N) Longitude: (112° 53' 13.2" W)

Camp Location(s)

Not Applicable

5. MAP - Attach a topographical map, indicating the main components of the undertaking.

NTS Map Sheet No.: 86H Map Name: Point Lake Map Scale: 1:250,000
NTS Map Sheet No.: 76E Map Name: Contwoyto Lake Map Scale: 1:250,000
NTS Map Sheet No.: 76L Map Name: Kathawachaga Lake Map Scale: 1:250,000

NTS Map Sheet No.: _76M_____Map Name: Hepburn Island___ Map Scale: 1:250,000___

Refer to Section 2.6.2 (Izok Road) and Figure 2.6-3 of the Project Proposal for an overview proposed alignment. See attached Figure 1 - Izok Corridor Project – Project Location Overview with Coordinates. Further details regarding the various water crossing locations will be provided as part of a future draft Environmental Impact Statement (EIS).

6. NATURE OF INTEREST IN THE LAND - Check any of the following that are applicable to the proposed undertaking (at least one box under the 'Surface' header must be checked).

Sub-surface

☐ Mineral Lease from Nunavut Tunngavik Incorporated (NTI)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Mineral Lease from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: _____ Date of expiry: _____

Surface

☐ Crown Land Use Authorization from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: prior to construction_ Date of expiry: To be determined

☐ Inuit Owned Land (IOL) Authorization from Kitikmeot Inuit Association (KIA)
Date (expected date) of issuance: prior to construction_ Date of expiry: To be determined

☐ IOL Authorization from Kivalliq Inuit Association (KivIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ IOL Authorization from Qikiqtani Inuit Association (QIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Commissioner's Land Use Authorization
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Other: _____
Date (expected date) of issuance: _____ Date of expiry: _____

Name of entity(s) holding authorizations:
_MMG Minerals and Metals Group_____

7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION

Indicate the land use planning area in which the project is located.

☐ North Baffin
☐ South Baffin
☐ Akunniq
☐ Keewatin
☐ Sanikiluaq
☐ West Kitikmeot

Is a land use plan conformity determination required?

X Yes ☐No

If Yes, indicate date issued and attach copy _____
If No, provide written confirmation from NPC confirming that a land use plan conformity review is not required.

The Project Proposal is being submitting to the Nunavut Planning Commission (NPC) for a conformity review against approved land use plans. The Project footprint does not lie within a region of the Nunavut for which an approved Land Use Plan exists; the West Kitikmeot Regional Land Use Plan (WKRLUP) is still in draft form. However, the North Baffin Land Use Plan overlaps a portion of the eastward shipping route, requiring NPC review. Once NPC determines that the Project Proposal is in conformity with approved land use plans or a variance has been approved, NPC will forward the Project Proposal to the NIRB for screening.

8. NUNAVUT IMPACT REVIEW BOARD (NIRB) DETERMINATION

Is an Article 12 Part 4 screening determination required?

☐ Yes ☐ No

This application is being submitted to NIRB initiate the environmental assessment process under the NIRB for the proposed Project. The Project Proposal and water licence application are being submitted to the NIRB and NWB towards a coordinated review process.

If Yes, indicate date issued and attach copy _____
If No, provide written confirmation from NIRB confirming that a screening determination is not required.

9. DESCRIPTION OF UNDERTAKING – List and attach plans and drawings or project proposal.

All-Season Road – Refer to Section 2.6.2 (Izok Road) and Figure 2.6-3 of the Project Proposal for an overview proposed Izok road.

10. OPTIONS – Provide a brief explanation of the alternative methods or locations that were considered to carry out the project.

A preliminary overview of the alternatives considered for the All-season road between Grays Bay and Izok is provided in Section 2.6.5 (Alternatives Considered) of the Project Proposal. A more detailed assessment of alternatives will be provided as part of a future draft EIS.

11. CLASSIFICATION OF PRIMARY UNDERTAKING - Indicate the primary classification of undertaking by checking one of the following boxes.

☐ Industrial ☐ Agricultural
☐ Mining and Milling (includes exploration/drilling/exploration camps)
☐ Conservation
☐ Municipal (includes camps/lodges) ☐ Recreational
☐ Power ☐ Miscellaneous (describe below):
__Construction, Operation, Closure and Reclamation of an All-Season Road _____

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings.

Information in accordance with applicable Supplemental Information Guidelines (SIG) must be submitted with a New Water Licence Application. Indicate which SIG(s) are applicable to your application.

- ☐ Hydrostatic Testing
- ☐ Tannery
- ☐ Tourist / Remote Camp
- ☐ Landfarm & On-Site Storage of Hydrocarbon Contaminated Soil
- ☐ Onshore Oil and Gas Exploration Drilling
- ☐ Mineral Exploration / Remote Camp
- ☐ Advanced Exploration
- ☐ Mine Development
- ☐ Municipal
- ☐ General Water Works
- ☐ Power

12. **WATER USE -** Check the appropriate box(s) to indicate the type(s) of water use(s) being applied for.

- ☐ To obtain water for camp/ municipal purposes
- ☐ To obtain water for industrial purposes
- ☐ To divert a watercourse
- ☐ To cross a watercourse
- ☐ To modify the bed or bank of a watercourse
- ☐ To alter the flow of, or store water
- ☐ Flood control
- ☐ Other: _____

13. **QUANTITY AND QUALITY OF WATER INVOLVED -** For each type of water use indicated in Block 12, provide the source of water, the quality of the water source and available capacity, the estimated quantity to be used in cubic meters per day, method of extraction, as well as the quantities and qualities of water to be returned to source.

Not applicable – water will not be withdrawn

Name of water source(s) (show location(s) on map):
_____

Describe the quality of the water source(s) and the available capacity: _____
_____
_____

Provide the overall estimated quantity of water to be used: _____ m^3/day

Provide the estimated quantity(s) of water to be used from each source:
_____

Indicate the estimated quantities to be used for each purpose (camp, drilling, etc.)
_____

Describe the method of extraction(s): _____

Estimated quantity(s) of water returned to source(s) _____ m^3/day

Describe the quality of water(s) returned to source(s): _____
_____

_____

14. **WASTE** – Check the appropriate box(s) to indicate the types of waste(s) generated and deposited.

☐ Sewage
☐ Solid Waste
☐ Hazardous
☐ Bulky Items/Scrap Metal
☐ Animal Waste
☐ Other (describe): _____
☐ Waste oil
☐ Greywater
☐ Sludges
☐ Contaminated soil and/or water

15. **QUANTITY AND QUALITY OF WASTE INVOLVED** – For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of treatment and method of disposal.

Not applicable

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method

16. **OTHER AUTHORIZATIONS** – In addition to the sub-surface and surface land use authorizations provided in Block 6, indicate any other authorizations required in relation to the proposed undertaking. For each provide the following:

Refer to Section 1.10 (Regulatory Process) of the Project Proposal for an overview of the required and potential permits, approvals and licences for the proposed Project.

Authorization: _____

Administering Agency: _____

Project Activity: _____

Date (expected date) of issuance: _____ Date of expiry: _____

17. **PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES** - Describe direct, indirect, and cumulative impacts related to water and waste.

A preliminary overview of the potential environmental effects and potential mitigation measures is provided in Section 7 (Potential Project Environmental Effects) of the Project Proposal. A detailed evaluation of the environmental effects of the project and proposed mitigation measures will be

described and evaluated as part of a future EIS.

18. WATER RIGHTS OF EXISTING AND OTHER USERS OF WATER

Provide the names, addresses and nature of use for any known persons or properties that may be adversely affected by the proposed undertaking, including those that hold licences for water use in precedent to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature.

Advise the Board if compensation has been paid and/or agreement(s) for compensation have been reached with any existing or other users.

To be addressed in a future draft Environmental Impact Statement (EIS).

19. INUIT WATER RIGHTS

Advise the Board of any substantial affect of the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL), and advise the Board if negotiations have commenced or an agreement to pay compensation for any loss or damage has been reached with one or more Designated Inuit Organization (DIO).

To be addressed in a future Environmental Impact Statement (EIS).

20. CONSULTATION – Provide a summary of any consultation meetings including when the meetings were held, where and with whom. Include a list of concerns expressed and measures to address concerns.

Refer to Section 3 (Public Engagement) of the Project Proposal for details of past and proposed future engagement activities.

21. SECURITY INFORMATION

Provide an estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking. Estimates of reclamation costs must be based on the cost of having the necessary reclamation work done by a third party contractor if the operator defaults. The estimate must also include contingency factors appropriate to the particular work to be undertaken.

Where applicable, the financial security assessment should be prepared in a manner consistent with the principals respecting mine site reclamation and implementation found in the *Mine Site Reclamation Policy for Nunavut,* Indian and Northern Affairs Canada, 2002.

An estimate of the total financial security for the closure and reclamation of the proposed Project will be developed as part of the future draft EIS and water licencing processes.

22. FINANCIAL INFORMATION

Provide a statement of financial responsibility.

See attached MMG Annual Report for 2011.

If the applicant is a business entity, provide a list of the officers of the company.

See attached list of officers.

If the applicant is a business entity attach a copy of the Certificate of Incorporation or evidence of registration of the company name.

See attached Certificate of Incorporation.

23. **STUDIES UNDERTAKEN TO DATE** - List and attach copies of studies, reports, research, etc.

Refer to Section 5 (Existing Biophysical Environment) and Section 6 (Existing Socioeconomic Environment) of the Project Proposal for an overview of studies that have been undertaken along the proposed All-season road alignment.

24. **PROPOSED TIME SCHEDULE** – Indicate the proposed start and completion dates for each applicable phase of development (construction, operation, closure, and post closure).

Refer to Section 2.1.2 (Project Schedule) of the Project Proposal for details of the proposed schedule.

Construction
Proposed Start Date: 2015 (month/year) Proposed Completion Date: 2017 (month/year)

Operation
Proposed Start Date: 2017 (month/year) Proposed Completion Date: 2030 (month/year)

Closure
Proposed Start Date: 2030 (month/year) Proposed Completion Date: 2032 (month/year)

Post - Closure
Proposed Start Date: 2032 (month/year) Proposed Completion Date: 2037 (month/year)

For each applicable phase of development indicate which season(s) activities occur.

Construction
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Operation
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Closure
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Post - Closure
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

25. PROPOSED TERM OF LICENCE

Number of years (maximum of 25 years): _____22_____ years

Requested Date of Issuance: ___2015_____ (month/year) Requested Expiry Date: _____2037_____ (month/year)

(The requested date of issuance must be at least three (3) months from the date of application for a type B water licence and at least one (1) year from the date of application for a type A water licence, to allow for processing of the water licence application. These timeframes are approximate and do not account for the time to complete any pre-licensing land use planning or development impact requirements, time for the applicant to prepare and submit a water licence application in accordance with any project specific guidelines issued by the NWB, or the time for the applicant to respond to requests for additional information. See the NWB's *Guide 5: Processing Water Licence Applications* for more information)

26. ANNUAL REPORTING – If not using the NWB's *Standardized Form for Annual Reporting*, provide details regarding the content of annual reports and a proposed outline or template of the annual report.

To be provided as part of a future draft Environmental Impact Statement (EIS).

27. CHECKLIST – The following must be included with the application for the water licensing process to begin.

Written confirmation from the NPC confirming that NPC's requirements regarding land use plan conformity have been addressed.

☐ Yes ☒ No If no, date expected _____Not required_____

Written confirmation from the NIRB confirming that NIRB's requirements regarding development impact assessment have been addressed.

☐ Yes ☒ No If no, date expected _____

This application is being submitted to initiate the environmental assessment process under the NIRB. The Project Proposal and water licence application are being submitted to the NIRB and NWB towards a coordinated review process.

Completed General Water Licence Application form.

☒ Yes ☐ No If no, date expected _____

Information addressing Supplemental Information Guideline (SIG) , where applicable (see Block 11)

☒ Yes ☐ No If no, date expected _____

English Summary of Application.

☒ Yes ☐ No If no, date expected _____

See Appendix A1 of the Project Proposal

Inuktitut and/or Inuinnaqtun Summary of Application.

☐ Yes ☐ No If no, date expected _____

See Appendix A2 and A3 of the Project Proposal

Application Fee of $30.00 CDN (Payee Receiver General for Canada).

☐ Yes ☐ No If no, date expected _____

Water Use Fee Deposit of $30.00 CDN (Payee Receiver General for Canada). The actual water use fee will be calculated by the NWB based upon the amount of water authorized for use in accordance with the Regulations at the time of issuance of the licence.

☐ Yes ☐ No If no, date expected _____

28. SIGNATURE

Scott Trusler	Environmental Permitting Lead		Aug 20, 2012
Name (Print)	**Title (Print)**	**Signature**	**Date**

P.O. Box 119
Gjoa Haven, NU X0B 1J0
Tel: (867) 360-6338
Fax: (867) 360-6369

NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

Supplemental Technical Information Required for Water Crossings (linear/bridge/culverts)

1. Waterbody name (English and Inuktitut) and location (Lat & Long)

   A 347 km all-season road, the Izok Road, is proposed between the Izok Mine and Grays Bay port to transport concentrate from Izok to the port and backhaul High Lake ore to Izok, crossing various waterbodies along the proposed route. The preferred routing of the Izok Road travels approximately 85 km east from Izok Mine site towards Lupin Mine, then swings north past Ulu Mine 212 km to High Lake Mine site, where it continues 50 km north to the Grays Bay port site. Refer to Section 2.6.2 (Izok Road) and Figure 2.6-3 of the Project Proposal for an overview proposed alignment. See attached Figure 1 - Izok Corridor Project – Project Location Overview with Coordinates. Further details regarding the various water crossing locations will be provided as part of a future draft Environmental Impact Statement (EIS).

2. Site photo, site map or air photo detailing location

   See attached Figure 1 - Izok Corridor Project – Project Location Overview with Coordinates.

3. Other Agencies contacted to date

   Refer to Section 1.10 (Regulatory Process) of the Project Proposal for an overview of the required and potential permits, approvals and licences for the proposed Project and associated administrating agencies.

4. Need for the project and alternatives considered

   Refer to Section 1.7 (Need for and Purpose of the Project) of the Project Proposal. A preliminary overview of the alternatives considered for the All-season road between Grays Bay and Izok is provided in Section 2.6.5 (Alternatives Considered) of the Project Proposal. A more detailed assessment of alternatives will be provided as part of a future draft EIS.

5. General condition of the site (s)
   i. Slope of banks
   ii. Description of substrate
   iii. Vegetation (on banks, in-stream, to be removed)
   iv. Expected flow rates during time of construction
   v. Channel meander pattern

   Refer to Section 5.6 (Freshwater Environment) of the Project Proposal for an overview of the general conditions along the All-season road corridor. A detail summary will be provided in a baseline report that will accompany a future draft EIS.

6. Existing Habitat
   i. Fish Community (species/common names) at and near the site

ii. Use of impacted are as spawning, nursery, rearing, food supply or migration route
iii. Presence of sensitive habitat
iv. Assessment of impact to fish and fish habitat

Refer to Section 5.6.3 (Freshwater Aquatic Organisms and Habitat) of the Project Proposal for an overview of items i, ii, and iii. A detail summary of the existing aquatic habitat will be provided in a baseline report that will accompany a future draft EIS. Refer to Section 7.4.3 (Potential Changes to Aquatic Organisms and Habitat) of the Project Description for a preliminary overview of the potential project effects on fish and fish habitat. A detailed evaluation of the proposed Izok road and any potential impacts to fish and fish habitat will be described and assessed in a future draft EIS.

7. Construction Details
   i. In water work timing restriction for fishery
   ii. Proposed start date and completion date
   iii. Type of crossing,
   iv. Method of installation
   v. Dimensions of pipe or structure
   vi. Machinery to be used
   vii. Construction sequence (timing restriction may need to be taken into account)
   viii. Sedimentation and erosion control measures
   ix. Monitoring during construction
   x. Other mitigation measures
   xi. Assessment of impact to fish and fish habitat
   xii. Bank stabilization (size range of material)
   xiii. Cumulative impacts to area
   xiv. Contingency plan
   xv. Revegetation proposed
   xvi. Proposed post-construction monitoring (photos taken of the site before construction, during construction and after construction; photographs should be taken form the same reference point for easy comparison)

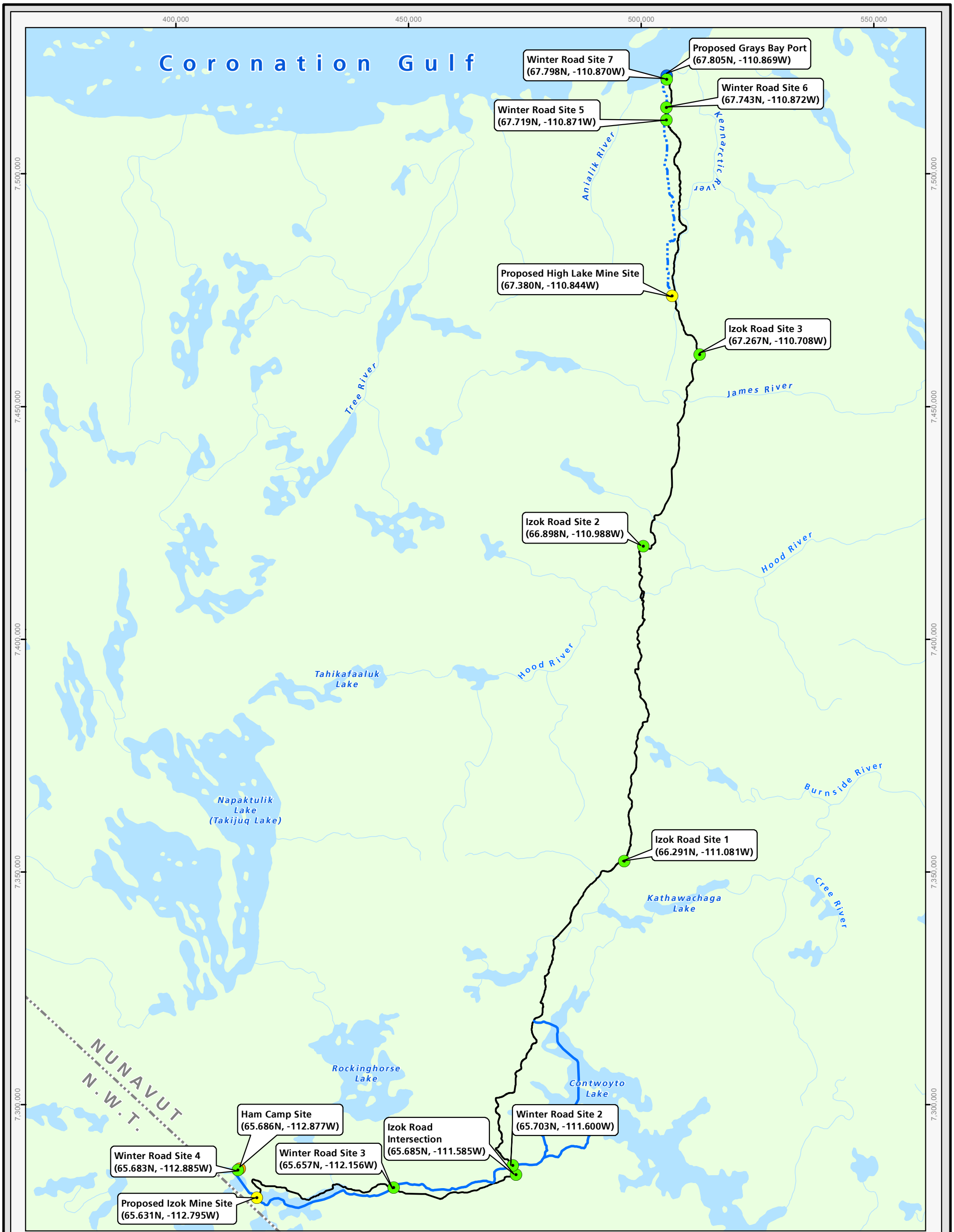
Refer to Section 2.6.2.7 (Stream Crossings) of the Project Proposal and associated figures for an overview of the conceptual water crossings along the proposed road route. Refer to Section 2.6.3 (Road Construction) of the Project Proposal for an overview of the construction methodologies and schedule. Further details regarding the above items will be provide as part of a future draft EIS.

8. Bridge
   i. Bridge dimensions and type
   ii. Any structures (abutments, pilings, piers) that will be placed in the water, on a temporary or permanent basis
   iii. Anticipated changes to the existing channel/shoreline morphology as a result of the proposed works
   iv. Activities or structures that may cause a temporary or permanent barrier to movement of fish or flow of water
   v. Coffer dams, dewatering, temporary watercourse diversions, excavation and temporary crossings
   vi. Total area of impact (m^2)
   vii. Stabilization method and materials used at bridge abutments(include details of material size range)

Refer to Section 2.6.2.7 (Stream Crossings) of the Project Proposal and associated figures for an overview of the conceptual water crossings along the proposed road route. Approximately 60 single-span bridges ranging from 10 m to 40 m in length and 10 multi-span bridge structures may be required for the Izok Road (Figure 2.6-6, 2.6-7, 2.6-8, 2.6-9 in the Project Proposal). Further details regarding the above items will be provide as part of a future draft EIS.

i. Culvert dimensions (height and width or diameter, length)
ii. Culvert type/material
iii. Impact to fisheries ability to migrate through the culvert
iv. Need to realign the channel?
v. Open bottom or natural substrate inside?
vi. Slope of culvert
vii. Installation of baffles, rock weirs or other structures

Refer to Section 2.6.2.7 (Stream Crossings) of the Project Proposal and associated figures for an overview of the conceptual water crossings along the proposed road route. Approximately 8- major culvert structures may be required for the Izok Road. Several additional culverts will be installed along the road to ensure proper drainage through the road embankment, particularly during freshet. Further details regarding the above items will be provide as part of a future draft EIS.



LEGEND

Coordinates

- Camp Site
- Port Site
- Mine Site
- Road
- Boundary Line
- Waterbodies

- Winter Road Alignment Grays Bay to High Lake (June 2012)
- Winter Road Alignment (June 2012)
- Base Case Road Alignment (June 2012)

Data Sources:
1) Canada Provincial Border provided by the Government of Canada, Natural Resources Canada.
2) Base data from Digital Chart of World at 1:1,000,000 scale.

MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Project Location Overview with Coordinates

Lead: J.E.	Date: 16 Aug 2012
Drawn By: AC	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

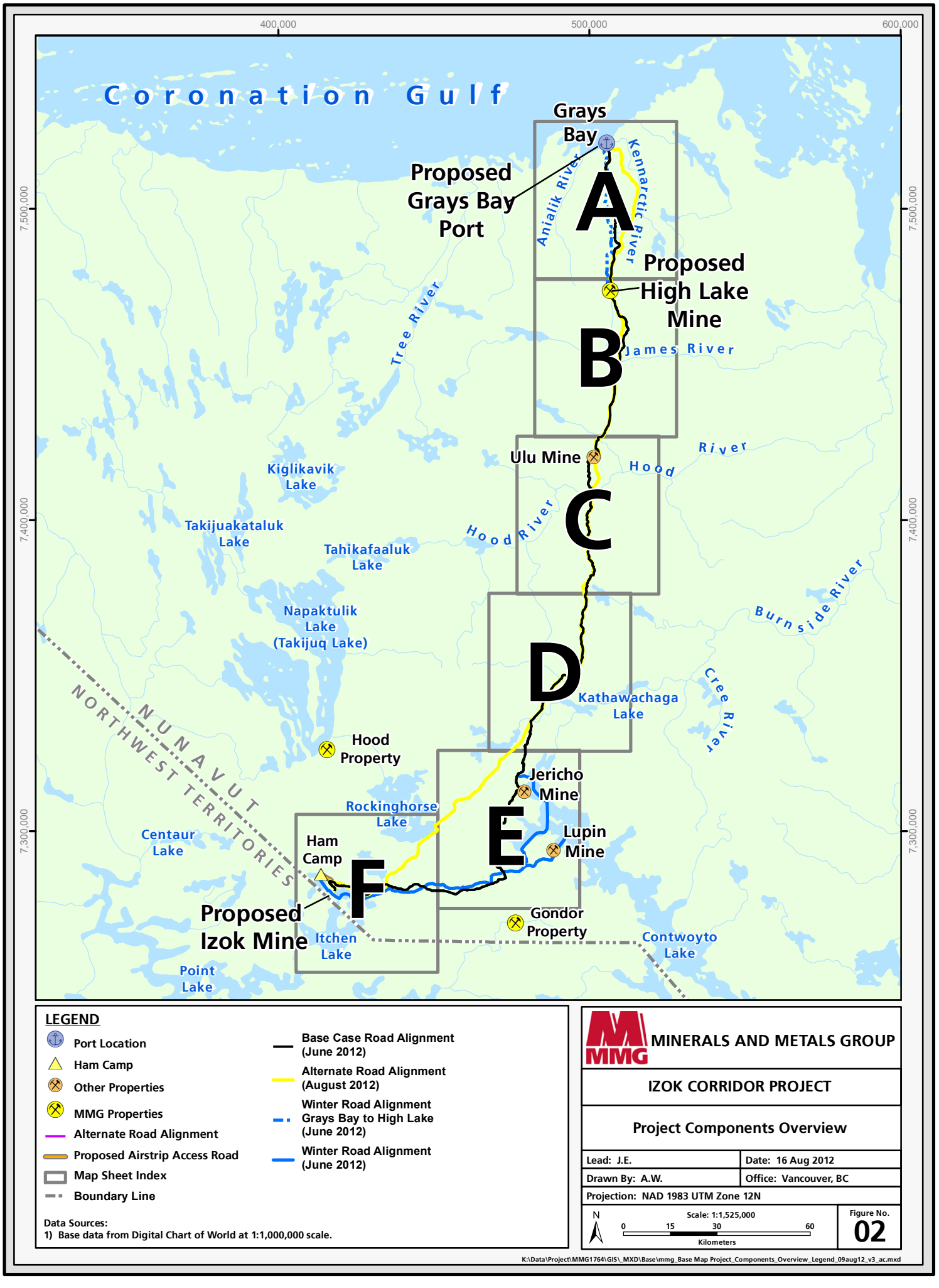
Scale: 1:750,000

0 5 10 20 30

Kilometers

Figure No. 01

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LEGEND

- Port Location
- Ham Camp
- Other Properties
- MMG Properties
- Alternate Road Alignment
- Proposed Airstrip Access Road
- Map Sheet Index
- Boundary Line
- Base Case Road Alignment (June 2012)
- Alternate Road Alignment (August 2012)
- Winter Road Alignment Grays Bay to High Lake (June 2012)
- Winter Road Alignment (June 2012)

Data Sources:
1) Base data from Digital Chart of World at 1:1,000,000 scale.

MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Project Components Overview

Lead: J.E.	Date: 16 Aug 2012
Drawn By: A.W.	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

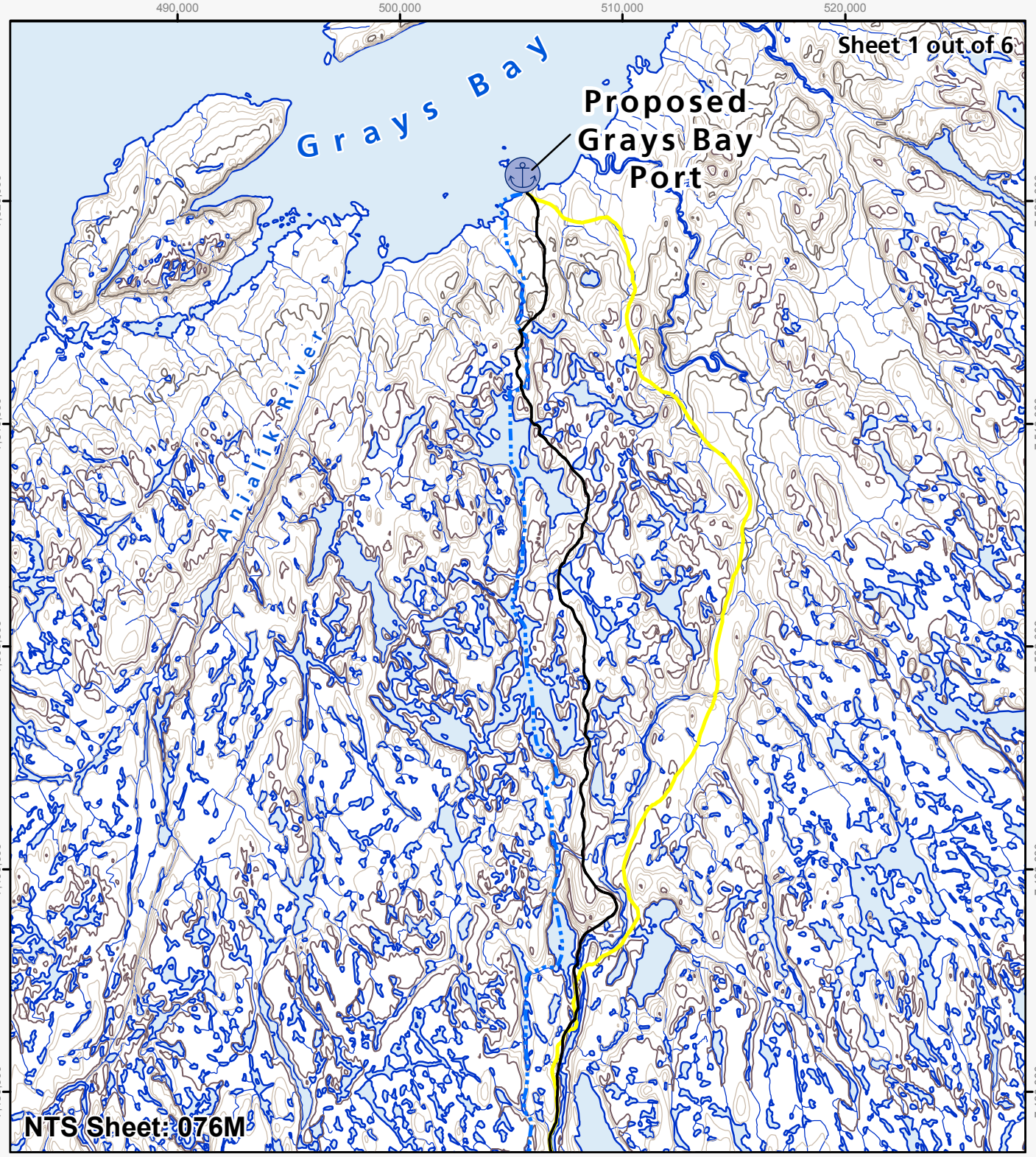
Scale: 1:1,525,000

0 15 30 60

Kilometers

Figure No. 02

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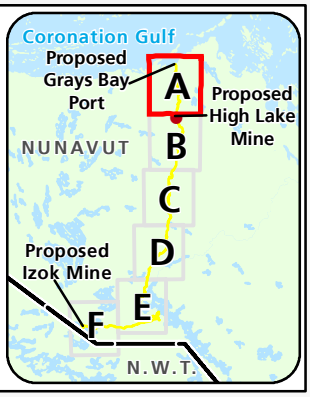


LEGEND

- MMG Properties
- Other Properties
- HamCamp
- Proposed Grays Bay Port
- Boundary Line
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- Waterbody
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MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Project Components Overview

Lead: J.E.	Date: 16 Aug 2012
Drawn By: A.W.	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

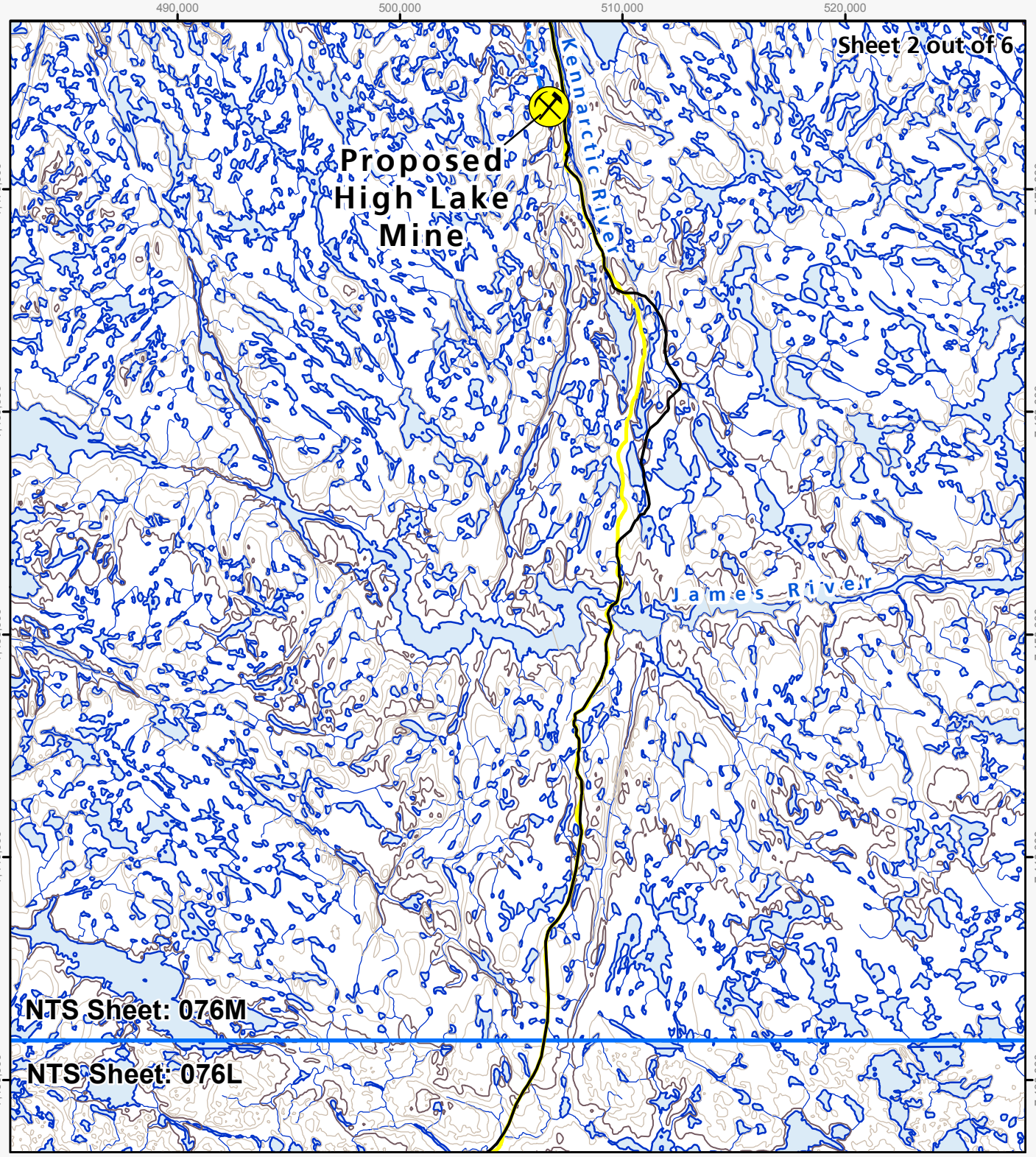
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kilometers

Figure No. 02A

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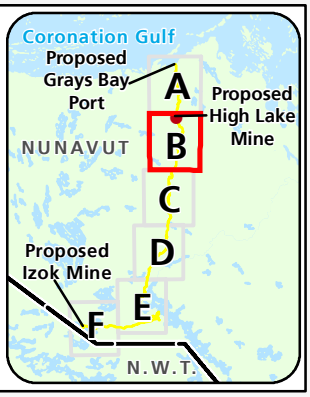


LEGEND

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MINERALS AND METALS GROUP

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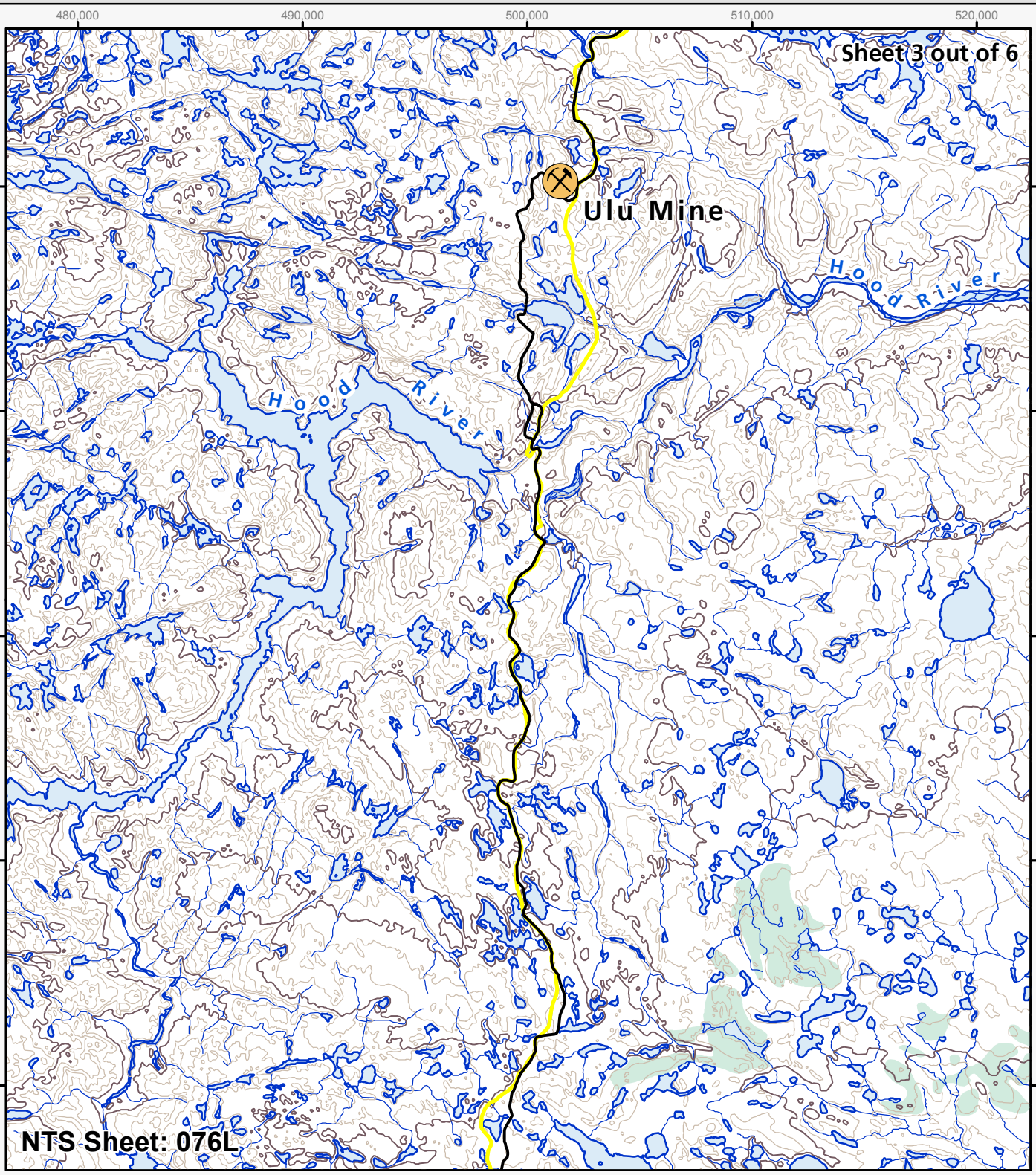
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kilometers

Figure No. 02B

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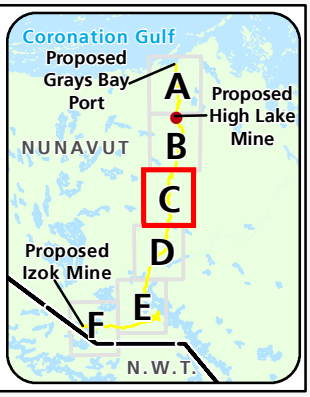


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MINERALS AND METALS GROUP

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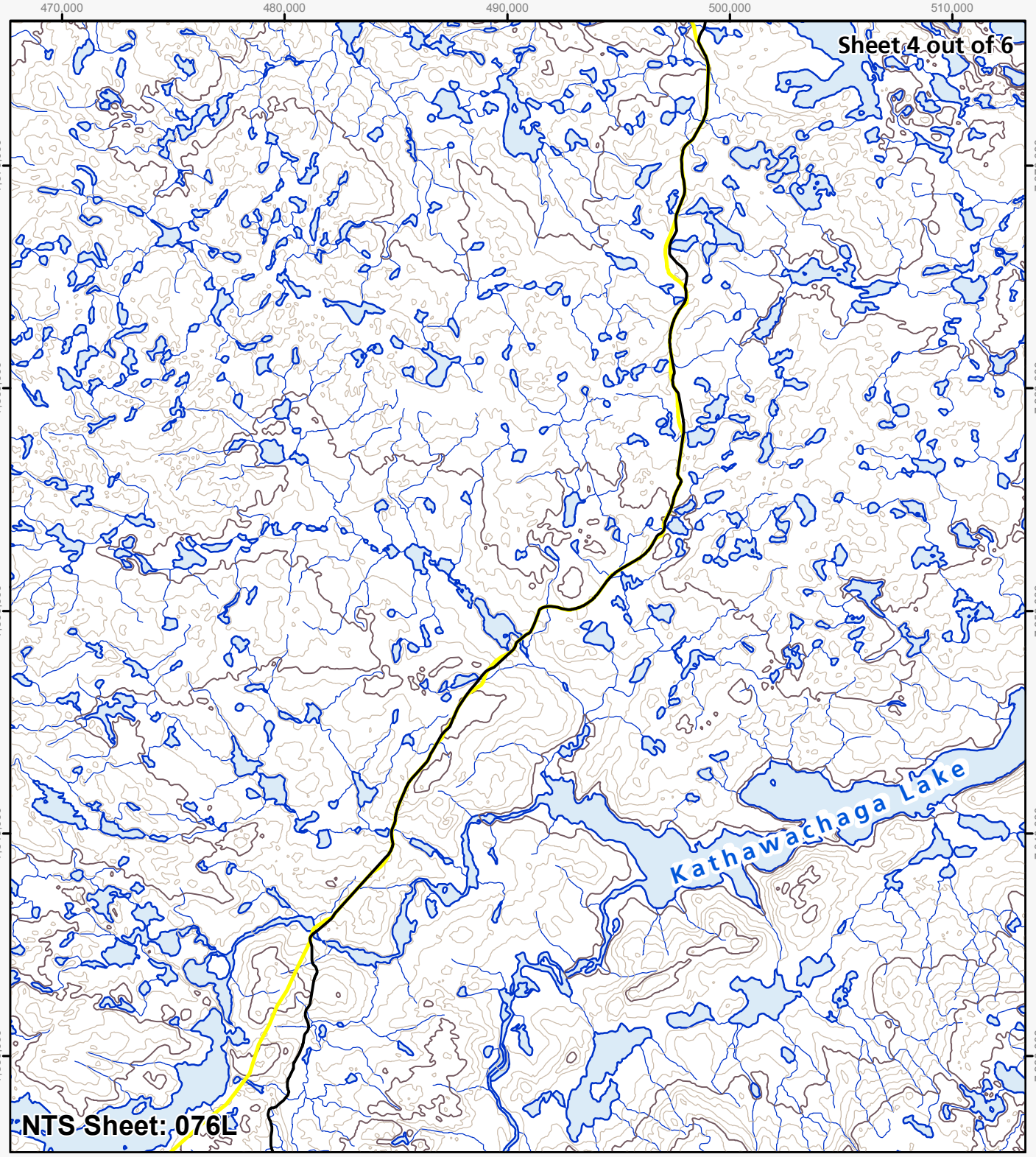
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kilometers

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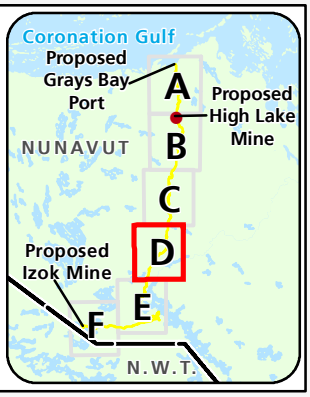


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MINERALS AND METALS GROUP

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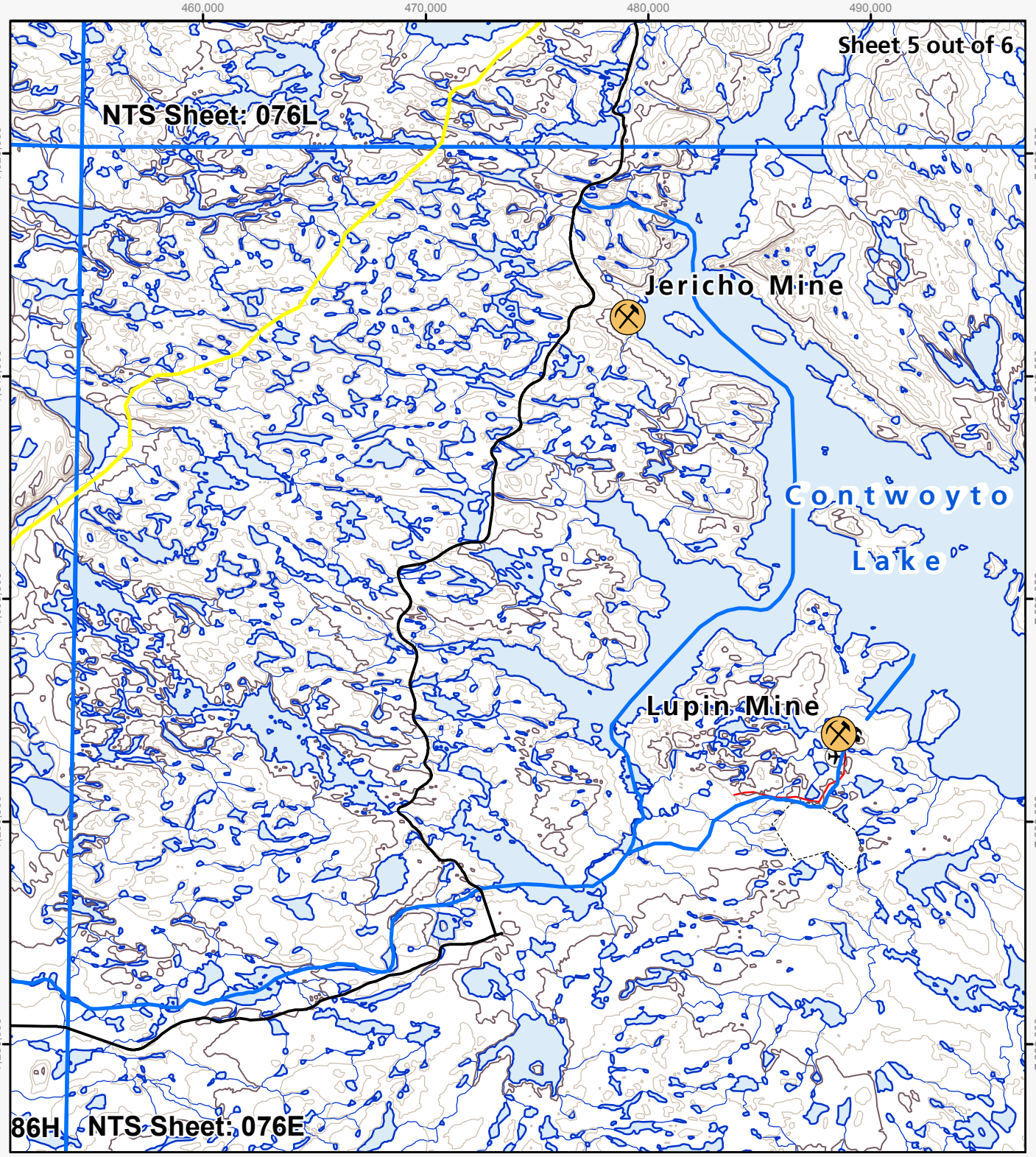
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kilometers

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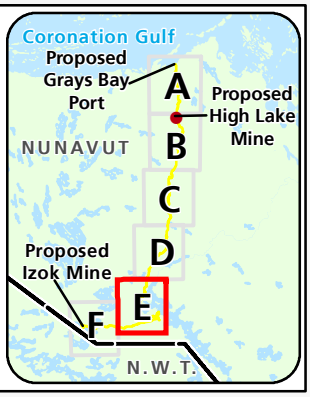


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MINERALS AND METALS GROUP

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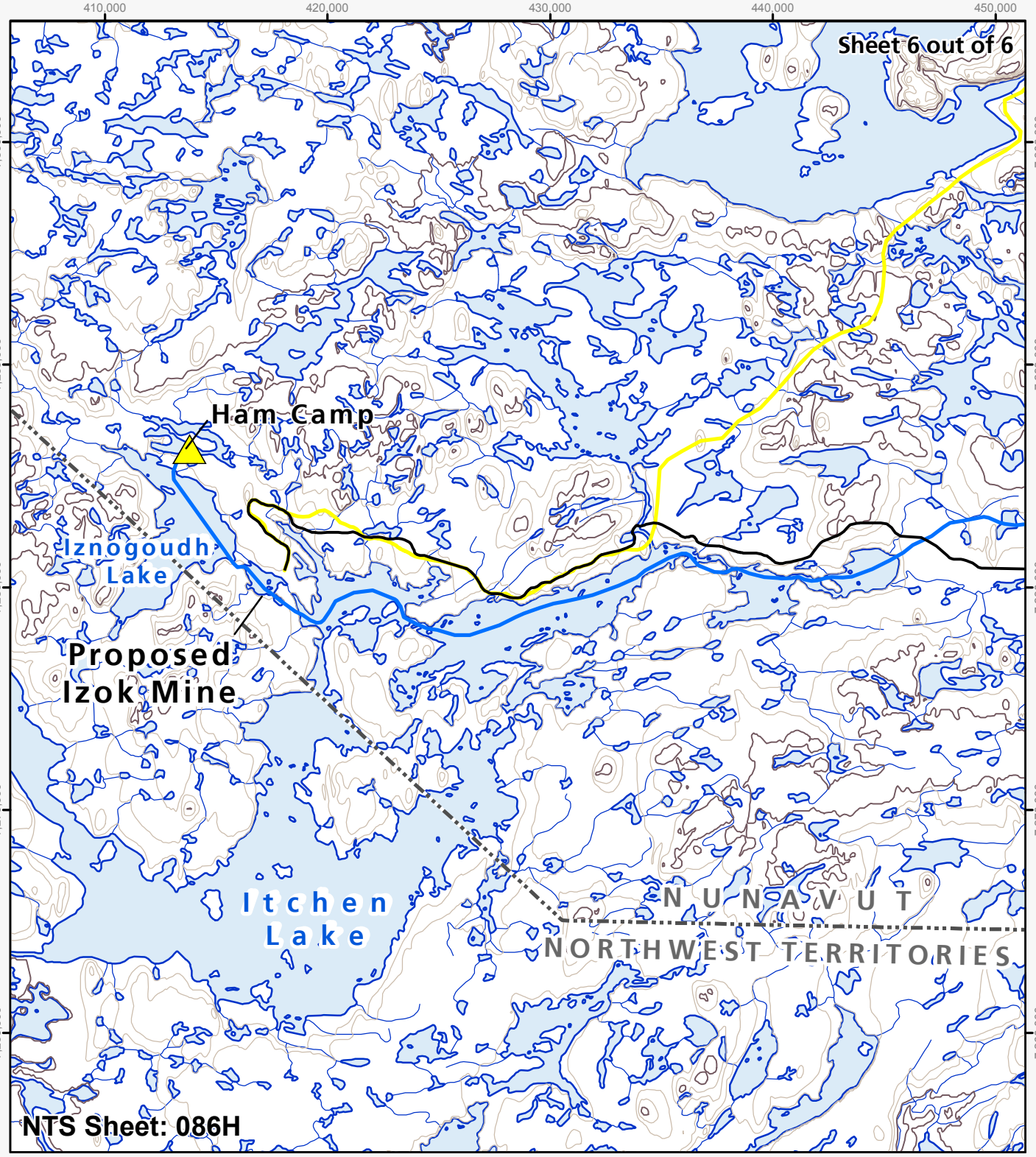
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0 2.5 5 10

kilometers

Figure No. 02E

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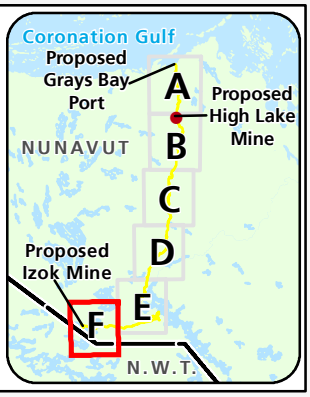


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MINERALS AND METALS GROUP

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Projection: NAD 1983 UTM Zone 12N	

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Scale: 1:250,000

0 2.5 5 10

kilometers

Figure No. 02F

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MINMETALS RESOURCES LIMITED

FOCUS PROGRESS POTENTIAL

Becoming a world leader in base metals

ANNUAL REPORT 2011



CORPORATE INFORMATION

BOARD OF DIRECTORS

Chairman
WANG Lixin (Non-executive Director)

Vice Chairman
HAO Chuanfu (Executive Director)*

Executive Directors
Andrew MICHELMORE (CEO)
David LAMONT (CFO)
LI Liangang*

Non-executive Directors
JIAO Jian
XU Jiqing
GAO Xiaoyu

Independent Non-executive Directors
Peter CASSIDY
Anthony LARKIN
LOONG Ping Kwan

AUDIT COMMITTEE

Chairman
Anthony LARKIN

Members
XU Jiqing
Peter CASSIDY
LOONG Ping Kwan

REMUNERATION AND NOMINATION COMMITTEE

Chairman
Peter CASSIDY

Members
WANG Lixin
JIAO Jian
Anthony LARKIN
LOONG Ping Kwan

SAFETY, HEALTH, ENVIRONMENT AND COMMUNITY COMMITTEE

Chairman
Peter CASSIDY

Members
Andrew MICHELMORE
GAO Xiaoyu

DISCLOSURE COMMITTEE

Members
Andrew MICHELMORE
Sally COX
Troy HEY
David LAMONT
LEUNG Suet Kam, Lucia
Nick MYERS

GENERAL COUNSEL

Nick MYERS

COMPANY SECRETARY

LEUNG Suet Kam, Lucia

LEGAL ADVISER

Deacons, Hong Kong
Linklaters, Hong Kong

AUDITOR

PricewaterhouseCoopers
Certified Public Accountants

SHARE REGISTRAR

Computershare Hong Kong Investor Services Limited
17th Floor, Hopewell Centre
183 Queen's Road East
Wanchai, Hong Kong

PRINCIPAL BANKERS

Bank of China Limited
China Development Bank Corporation
Westpac Banking Corporation
Citibank NA

INVESTOR ENQUIRIES

Colette CAMPBELL
Group Manager Investor Relations
Telephone: +61 3 9288 9165
Email: colette.campbell@mmg.com

MEDIA ENQUIRIES

Sally COX
Group Manager Communications
Telephone: +61 3 9288 0888
Email: sally.cox@mmg.com

REGISTERED OFFICE

Units 8501-8503, Level 85
International Commerce Centre
1 Austin Road West, Kowloon
Hong Kong

*Resigned on 29 March 2012

CORPORATE OFFICES AND PRINCIPAL PLACE OF BUSINESS

Hong Kong
Units 8501-8503, Level 85
International Commerce Centre
1 Austin Road West, Kowloon, Hong Kong
Telephone: +852 2216 9688
Fax: +852 2840 0580

Australia
Level 23, 28 Freshwater Place
Southbank, Victoria, Australia 3006
Telephone: +61 3 9288 0888
Fax: +61 3 9288 0800
Email: info@mmg.com

WEBSITE

www.minmetalsresources.com
www.mmg.com

SHARE LISTING

The Stock Exchange of Hong Kong Limited
Stock Code: 1208

Additional shareholder information

The Chinese version of the Annual Report is prepared based on the English version. If there is any inconsistency between the English and Chinese version of this Annual Report, the English text shall prevail to the extent of the inconsistency.

五礦資源有限公司
MINMETALS RESOURCES LIMITED

INCORPORATING MMG

FSC www.fsc.org MIX Paper from responsible sources FSC™ C100709

Minmetals Resources Limited (MMR) is a mid-tier global resources company that mines, explores and develops base metal projects in Australia and around the world.

The company is headquartered in Melbourne, Australia, and listed on the Hong Kong Stock Exchange under Stock Code: 1208. MMR owns the MMG group of companies and their operations after acquiring them on 31 December 2010.

MMR is uniquely positioned with an experienced international management team, public ownership on the Hong Kong Stock Exchange and support of its ultimate controlling shareholder, China Minmetals Corporation (CMC).

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MAP OF OPERATIONS



KINSEVERE
Acquired with the acquisition of Anvil Mining Limited



GOLDEN GROVE

2011 PRODUCTION

Zinc concentrate (t)	70,687
Copper concentrate (t)	21,661
HPM concentrate (t)	7,482
REVENUE	US$388.5M
EBIT	US$53.3M



ROSEBERY

2011 PRODUCTION

Zinc concentrate (t)	80,670
Lead concentrate (t)	25,353
Gold doré (oz)	12,163
REVENUE	US$272.5M
EBIT	US$86.8M



OPERATIONS
DEVELOPMENT PROJECTS
SUSPENDED OPERATION
ACTIVE EXPLORATION REGION
CORPORATE OFFICES
EXPLORATION OFFICES
SALES

HIGH LAKE
IZOK LAKE
CANADA
NORTH AMERICA
VANCOUVER
DENVER
SOUTH AMERICA

IZOK CORRIDOR
LOCATION
Nunavut, Canada
TARGET METALS
Copper, zinc, lead, silver



SEPON
2011 PRODUCTION

Copper cathode (t)	78,859
Gold poured (oz)	74,484
REVENUE	US$816.9M
EBIT	US$471.3M



CENTURY
2011 PRODUCTION

Zinc concentrate (t)	497,251
Lead concentrate (t)	26,536
REVENUE	US$750.4M
EBIT	US$116.2M



DUGALD RIVER
LOCATION
Queensland, Australia
TARGET METALS
Lead, zinc, silver

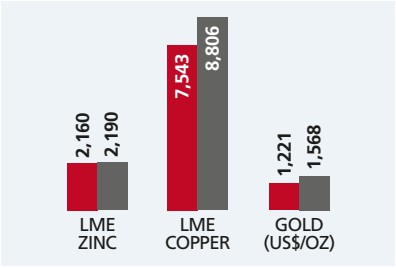


FINANCIAL HIGHLIGHTS

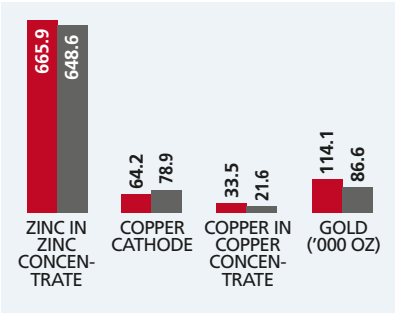
- Strong production results and base metal commodity prices resulted in full year net profit after tax attributable to equity holders of the Company of US$540.9 million.
- Effectively completed the US$726.8 million divestment of the trading, fabrication and other operations to China Minmetals Non-ferrous Metals Co. Ltd.
- Undertook a capital restructure issuing 762,612,000 new shares to raise approximately US$500 million, increasing the free float of shares to 28.4% and enhancing the institutional presence on the register.
- The Board approved a further A$157 million expenditure on the next phase of the Dugald River zinc project in Queensland, Australia, for spend up until the third quarter 2012.
- Executed C$1,330 million acquisition of Anvil Mining Limited (Anvil) and achieved expansion into the southern African copper belt.
- Increase in Mineral Resources and Ore Reserves including 103.9% increase in zinc Ore Reserves due to the inclusion of Dugald River.
- Increase in the Group's total diluted earnings per share of 18.5% to US10.71 cents in 2011.

SEGMENTAL PERFORMANCE

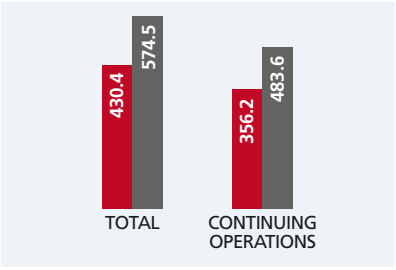
US$ MILLION CONTINUING OPERATIONS	REVENUE	EBITDA	EBIT
CENTURY	750.4	293.0	116.2
SEPON	816.9	529.4	471.3
GOLDEN GROVE	388.5	101.6	53.3
ROSEBERY	272.5	108.6	86.8
OTHER	–	31.2	27.7
TOTAL	**2,228.3**	**1,063.8**	**755.3**



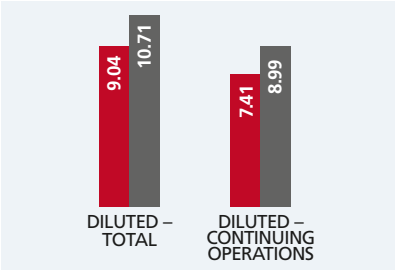
AVERAGE METAL PRICES (US$/TONNES UNLESS OTHERWISE SPECIFIED)



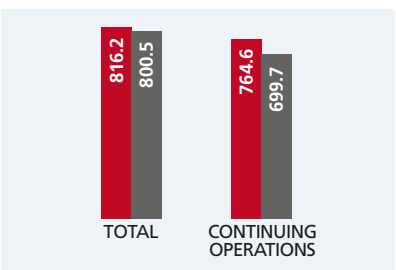
METAL PRODUCTION ('000 TONNES UNLESS OTHERWISE SPECIFIED)



PROFIT (US$ MILLION)



EARNINGS PER SHARE FOR PROFIT ATTRIBUTABLE TO EQUITY HOLDERS OF THE COMPANY (US CENTS)

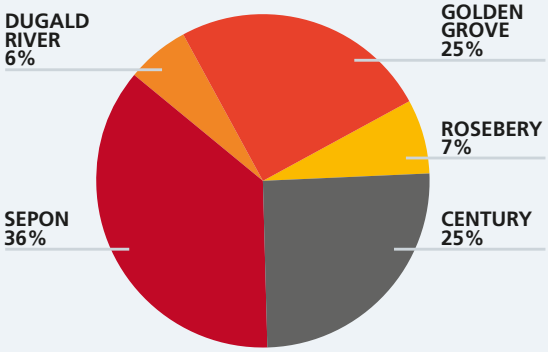


NET CASH GENERATED FROM OPERATING ACTIVITIES (US$ MILLION)

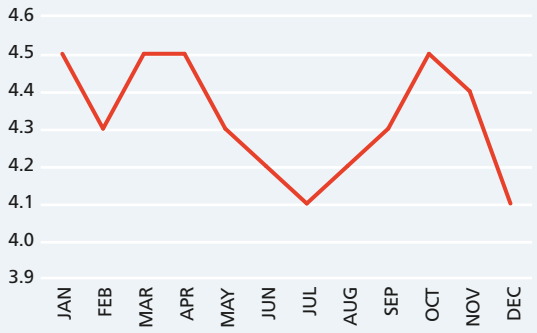
SUSTAINABILITY HIGHLIGHTS

- Alignment with the International Council on Mining and Metals 10 Sustainable Development Principles identified as a key work program for the next three years with work already well underway.
- **Health and safety:** Safety adopted as a core company value in response to feedback that while safety is a priority, it should be considered a core value.
- **People:** 87% local workforce at Sepon and 25% Indigenous employment at Century.
- **Environment:** The Dugald River Environmental Impact Statement approved by the Queensland Department of Environment and Resource Management (DERM) as suitable to proceed to the next stage of environmental approval.
- **Community:** Commenced development of a Community Relations Management System incorporating community perception survey data and a Community Trust Index.
- **Economic sustainability:** More than A$11 million invested in host communities in a range of targeted social investment projects.

SIGNIFICANT/HIGH POTENTIAL FATALITY INCIDENTS BY SITE 2011



TOTAL RECORDABLE INJURY FREQUENCY RATE 2011
(12-MONTH MOVING AVERAGE PER MILLION HOURS)



CHAIRMAN'S REVIEW

"A sustained focus on the safety of our people and extracting the maximum value from our core assets has delivered results in meeting both production and operating costs and progress on our sustainability commitments."





Mining operations at Sepon in Laos.

Dear Shareholder,

Before I discuss our annual results, it is with a heavy heart that I advise you of a fatality that occurred at our Sepon operation in Laos on 28 February 2012. Our thoughts and condolences are with the contractor's family and friends. Any incident is one incident too many and on behalf of the Company, I commit us to ensuring we do better.

I will now provide an overview of our 2011 annual results.

On behalf of the Board, I am pleased to report the Company's full-year results for 2011. The Company delivered an increased profit to its shareholders, remaining focused on maximising production, managing operating costs and pursuing our growth opportunities.

We have completed the transformation flagged to you last year with the divestment of our trading, fabrication and other operations that were no longer core to our business strategy. We have also made progress on the project development and M&A fronts in our aim to build an international, upstream diversified base metals company.

You will see these three themes – focus, progress and potential – reflected throughout this report.

The Company was pleased to report its financial performance for the full year 2011 with total net profit after tax (NPAT) attributable to equity holders of US$540.9 million, up 32.1% from the full year 2010. This result was driven by significant one-off benefits, including the gain realised on our investment in Equinox and the sale of the trading, fabrication and other operations.

Total earnings before interest and tax (EBIT) was US$808.9 million, up 44.5% from the full year 2010, however, underlying earnings before interest, taxes depreciation and amortisation (EBITDA) for the Group's continuing operations, (excluding one-off items) was US$887.8 million, 2.2% below 2010. This reflected a higher level of expenditure on process and system standardisation necessary to support the Company's growth strategy.

Our balance sheet continues to strengthen, with total 2011 liabilities decreasing 33.2%. Cash generated from operations and the proceeds from the sale of the trading, fabrication and other operations have significantly strengthened the balance sheet. Total borrowings decreased significantly as forecasted at our half-year results and the Company was effectively net cash positive US$14.8 million at the close of 2011.

Full-year production and operating costs were within revised guidance for all assets. Particular highlights included the record copper cathode production from our expanded plant at Sepon.

Costs remain a focus with the Australian dollar still strong, price increases of key inputs such as labour, energy and reagents and volume-related cost increases from our operations.

Cost management will remain a challenge and focus for the Board and management in 2012.

Significant progress was made on the business transformation flagged last year with the divestment of the trading, fabrication and other operations in December 2011 after arm's-length negotiations with our major shareholder, China Minmetals Non-ferrous Metals Co. Ltd. The sale completed another key stage in our business transformation to refocus the Company as a diversified upstream base metals company ready for growth. The US$726.8 million proceeds from the sale further strengthened our balance sheet and builds on our substantial firepower for future growth.

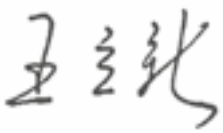
This growth strategy reached a significant milestone in early 2012 with the completion of our acquisition of Anvil Mining Limited. This expansion into the southern African copper belt is the first step in what we plan will be the building of a major mid-tier player.

Your Board is committed to high standards of sustainable development across our business, none more important than the health and safety of our employees and the communities in which we operate. We take safety seriously and have a safety vision of a 'Zero Harm and Fatality Free' workplace. Our total recordable injury frequency rate (TRIFR) ended the year at 4.1 injuries per million hours worked. In order to provide greater governance around sustainability, a Board Safety, Health, Environment and Community Committee was formed in early 2011. It meets four times a year to review the company's performance and management in this area.

During 2011 we welcomed Mr Anthony Larkin to the Board and farewelled Mr Stephen Ting Leung Huel, who resigned at the end of November. Mr Larkin's background in the Australian resources and corporate sector expands the international expertise of the Board.

With a strong balance sheet, a commitment to operating sustainably wherever we are and the expertise of our international leadership team we will continue to deliver on our potential in 2012.

On behalf of the Board I would like to thank shareholders for their continuing loyalty and welcome the many new shareholders that joined us this year. A great deal of thanks goes out to the people in our workforce and communities for their ongoing support.



Wang Lixin Chairman
28 March 2012

CHIEF EXECUTIVE OFFICER'S REVIEW

"Our role as management is to share the benefits generated by our operations with our stakeholders – shareholders, employees and the communities in which we operate – not just today, but well into the future. The progress we have made in 2011 demonstrates our capacity to deliver this value."





Concentrate operations at Century.

Dear Shareholder,

As global societal demands evolve there is ever increasing pressure on the minerals industry to keep pace. Our challenge, and role as management, is to share the benefits generated by our operations with all our stakeholders – shareholders, employees and the communities in which we operate – not just today, but well into the future.

We maintained a focus in 2011 on extracting value from our core mining assets, completing our business transformation, progressing our projects portfolio and delivering on the potential of our growth strategy.

Our first asset is our people – a diverse, skilled and experienced workforce and management team. These people are attracted to our business because of the unique opportunities to work for a globally engaged mining business backed by the long-term support of a major Chinese investor. It is our responsibility to ensure that we develop these people. In 2011 we continued to roll out technical and trades-based training as well as development programs in safety, frontline management and supervisor development, cultural awareness and continuous improvement.

Our mining assets performed within guidance for both production and operating costs. Stand-out results were seen at our Sepon copper and gold operation following completion of the copper cathode expansion project, which has increased nameplate capacity from 65,000 to 80,000 tonnes per annum.

At Golden Grove in Western Australia we commenced development of a copper open pit, above existing underground operations, that will deliver an additional 235,000 tonnes of copper concentrate.

At Rosebery our exploration programs continued to identify additional Mineral Resources and source feed for the plant, which celebrated 75 years of continuous operation in 2011. Combined with the establishment of an innovative sustainable extraction operation at the nearby South Hercules deposit, Rosebery's mine life now extends to 2024.

While the potential to discover additional discrete-style mineralisation near our Century mine is effectively exhausted, we continue to examine a number of near-mine initiatives for identification of additional feed for the processing plant from smaller vein-style occurrences nearby. The viability of using Century infrastructure to exploit the phosphate deposits that occur on our tenements will be further studied this year.

We will continue to identify opportunities to unlock the full production potential, and ultimately shareholder value, of our assets.

Our annual Mineral Resources and Ore Reserves Statement highlighted a significant increase in zinc Ore Reserves last year with the inclusion of the Dugald River Ore Reserve for the first time.

Coinciding with this, on 9 December, the Board approved a further A$157 million expenditure on the next phase of the Dugald River zinc project in Queensland, Australia, for spend up until the third quarter 2012.

In northern Canada, our Izok Corridor project progressed from pre-feasibility study to full feasibility study phase with the commencement of government and environmental permitting. The project encompasses the Izok Lake and High Lake zinc and copper deposits in Nunavut. The 2012 work program will progress field data collection and environmental baseline studies.

Importantly, when in production, Dugald River and the Izok Corridor project will replace approximately 80% of the annual zinc production lost following Century's closure in approximately 2016.

Our announcement in April 2011 to make an offer to acquire Equinox was our first step into the global M&A market and signalled our interest in expansion into the southern African copper belt.

While we chose not to pursue this acquisition, the high price of the ultimate bid for Equinox enabled the Company to realise an attractive gain on our investment of US$152.1 million (pre-tax) from the sale of our 4.2% stake.

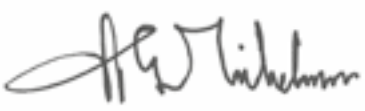
Shortly after, we announced an offer to acquire Toronto and Australian securities exchange-listed Anvil. We are pleased to have just recently completed the C$1,330 million acquisition, which brings the Kinsevere copper cathode operation in the Democratic Republic of Congo into our portfolio.

A priority focus of the integration of the Anvil assets into our business is to provide technical and management support to the Kinsevere operation to improve historical power reliability issues and ramp up production to nameplate capacity of 60,000 tonnes per annum.

The acquisition of Anvil is just the first step as we continue to identify potential acquisition targets necessary to reach our growth targets. But these will be disciplined and value-focused acquisitions to grow shareholder value.

To meet the demands of this rapid growth, we need to develop a scalable, systemised business with common operating systems and management language. This will be a focus in 2012 as we standardise and upgrade from a range of legacy systems and processes. This is an investment necessary to deliver the value from our growth.

I would like to thank all the stakeholders and local communities who work with us to make this business such a success. I would particularly like to thank our employees and contractors, without whom these results would not be possible.



Andrew Michelmore Chief Executive Officer
28 March 2012

OUR PEOPLE


Marcelo Bastos


Michael Nossal


Andrew Michelmore


Tim Scully


David Lamont


Steve Ryan

MMR is a unique business in which its people are its greatest asset. While the Company is listed on the Hong Kong Stock Exchange, its executive management team and head office are located in Melbourne, Australia. At the end of 2011, the Company had a workforce of approximately 8,500 employees and contractors.

The Company represents an innovative partnership that brings together the skills and experience of an international management team with the long-term outlook and financial support of a major Chinese resource industry shareholder.

MANAGEMENT TEAM

The management team is led by Chief Executive Officer Andrew Michelmore, who brings more than four decades' experience in the international metals industry from some of the most prosperous mineral provinces in the world. He also recently accepted the position of Chairman of the International Zinc Association, is a council member of the ICMM and a member of the Business Council of Australia.

Working alongside Mr Michelmore is the Executive Committee. It includes Chief Operating Officer Marcelo Bastos, who has more than 25 years' experience operating across the Americas and Australia, and Chief Financial Officer David Lamont, who has worked in the international chemicals, fertiliser, manufacturing and resources sectors. Executive General Manager – Exploration Steve Ryan has managed exploration projects in China, Iran and Indonesia, and Executive General Manager – Business Development Michael Nossal has worked in the resources industry in Africa, Australia, London, Russia and Turkey.

Executive General Manager – Business Support Tim Scully has led human resources and shared services functions in large Australian mining companies.

LOCAL EXPERTISE

It is a focus on local skills and experience that makes this business a success. Local employment helps build and support the communities in which we operate, ensuring that the benefits of education, skills and training leave a lasting positive legacy beyond the operation of our mines.

Indigenous employees comprise 10% of the workforce and this percentage is even higher at Century mine, where one in four employees is an Indigenous Australian.

In Laos, 87% of Sepon employees are drawn from local communities, where the Company is actively pursuing further localisation of the workforce.

DIVERSITY

The Company believes that diverse teams deliver the most progressive and dynamic results and therefore aspires to encourage diversity where possible. This includes, but is not limited to, diversity of age, gender, cultural backgrounds and religion. Women comprise approximately 17% of the total workforce.

As the Company grows, attracting and retaining a skilled local workforce and strong leadership team will remain an important focus.








"I am a supervisor of maintenance and training at Sepon mine in Laos.

New trainees often say that they have not had an opportunity to study and this is their chance.

I studied carpentry in Vientiane for three years then applied for the Carpentry Training Translator role in the 2007 intake of the apprenticeship program. I did the apprenticeship at the same time as providing the translation role – it was hard work. I learned the Australian Standard and combined this with my knowledge of the Lao Standards. The best thing about this challenging role was receiving the Certificate III from the Royal Melbourne Institute of Technology (RMIT) and the knowledge I now have.

I now supervise and mentor a group of eight trainer translators and am involved in developing short courses to bring them up to the Australian Standard."

Khamlah Vongnakhone is a Supervisor Maintenance Training at Sepon mine.



"As an Indigenous woman from the township of Normanton in Queensland's Gulf of Carpentaria, I am descendant from the Kukatj people who are one of the Traditional Owner groups party to the Gulf Communities Agreement, the Native Title Agreement under which MMG's Century mine operates.

During my 13 years working at Century, I have seen more than 300 local Indigenous people start or continue their careers at the mine.

I have seen the opportunities that working at Century has given these people. The skills they gained have allowed them to improve their lifestyle, find work in their own communities or even gain employment at other operations. I've also seen some of our trainees and apprentices recognised for excellence within the industry. These are opportunities that they would not have had without the mine.

Century mine has enabled local people like me to continue to access these wonderful opportunities. As we move towards the end of mine, we are moving our focus towards helping develop businesses that can prosper long after the mine closes. I am proud to work at Century and to be part of MMG."

Corrine Richardson is a Community and Stakeholder Relations Coordinator at Century mine.

OPERATIONAL REVIEW
CENTURY

OVERVIEW

Century is Australia's largest open pit zinc mine. It is located in north-west Queensland and has the capacity to produce approximately 500,000 tonnes of zinc in concentrate annually.

Century comprises two sites – the mine and processing operation at Lawn Hill, and associated concentrate dewatering and ship-loading facilities at the Karumba Port, on the Gulf of Carpentaria.





Pit operations at Century mine, Queensland, Australia.

Zinc, lead and silver are produced at Century. The site's life of mine has been extended by a year with closure now expected in 2016. This was driven by the inclusion of Stage 10 of the mine, which will deliver 6.6 million tonnes of ore at an average grade of 8.2%.

Concentrates are sold to smelters in Europe, Australia, China and Asia. Century zinc concentrate is highly valued by zinc smelters because of its low iron content, enabling smelters to produce minimal amounts of iron-containing by-products that can pose retreatment and disposal problems.

2011 PERFORMANCE

Despite severe wet weather events in the first quarter 2011, full-year zinc concentrate production exceeded revised guidance at 497,251 tonnes but finished 3% below 2010 driven by lower zinc feed grades partly offset by higher throughput.

Lead in lead concentrate production was within the revised guidance range at 26,536 tonnes.

Actual C1 costs for 2011 of US$0.57/lb were marginally below guidance of US$0.58–US$0.62/lb, demonstrating a renewed focus on cost management and slow-down in overburden pre-stripping required to access the ore body.

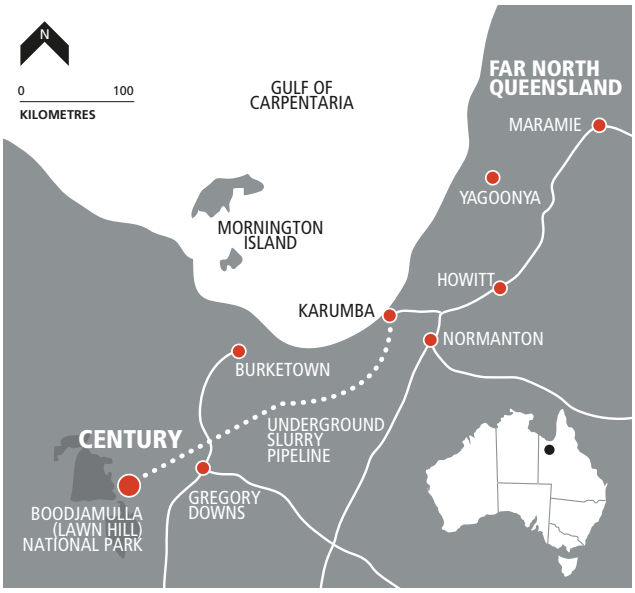
Production at Century was significantly affected by severe rainfall events in Queensland, which decreased first quarter mine and mill production. Operations were shut down when Tropical Cyclone Yasi tracked close to Century, with the cyclone also affecting loading and shipping activities in the Gulf of Carpentaria. Nevertheless, Century recovered well from this setback in the later part of the year.

December saw a new monthly record for zinc metal production at 54,264 tonnes, which exceeded the previous record by approximately 2,000 tonnes. This was achieved by balancing strong plant performance with very high throughput rates, achieving excellent zinc recovery for the month.

Century also welcomed a new general manager to its operations, with Mark Adams commencing in November 2011 and officially taking the role in January 2012.

Mr Adams brings extensive experience in managing operations in Queensland and Western Australia working for mining companies including BHP Billiton. He was most recently Chief Operating Officer at Barminco.

As General Manager Queensland Operations, Mr Adams' role also extends to operations leadership of the Dugald River development project. This will enable the transfer of expertise from Century to Dugald River, particularly its strong community focus. An example of Century's community commitment is the 25% Indigenous employment rate, equating to five times the industry average for local Indigenous participation.



CENTURY FINANCIAL DATA		
US$ MILLION	**2011**	**2010**
REVENUE	750.4	711.4
EBITDA	293.0	356.2
DEPRECIATION AND AMORTISATION	(176.8)	(219.5)
OPERATING PROFIT/(LOSS) (EBIT)	116.2	136.7
NET FINANCE COSTS	(16.0)	(14.3)
SEGMENT RESULT	100.2	122.4

CENTURY OPERATING DATA	2011	2010
ORE MINED (t)	5,217,471	5,287,749
ORE MILLED (t)	5,297,720	5,210,581
CONTAINED METAL PRODUCTION		
ZINC CONCENTRATE (t)	497,251	510,590
LEAD CONCENTRATE (t)	26,536	25,174

2011 ACTUAL C1 COSTS	
ZINC	US$0.57/lb

2012 PRODUCTION GUIDANCE	
ZINC IN ZINC CONCENTRATE (t)	495,000–505,000
LEAD IN LEAD CONCENTRATE (t)	22,000–25,000

2012 COST GUIDANCE	
ZINC	US$0.58–US$0.62/lb

OPERATIONAL REVIEW
GOLDEN GROVE

OVERVIEW

Golden Grove is a base and precious metals mine located in Western Australia's mid-west, located approximately 450 kilometres north-east of Perth and 280 kilometres east of Geraldton.

Golden Grove comprises the Scuddles and Gossan Hill underground mines and surface processing operations.





Golden Grove operations, Western Australia.

Golden Grove also commenced open pit operations in January 2012. Over its life, the copper open pit will produce approximately 235,000 tonnes of copper concentrate containing 59,600 tonnes of copper metal in concentrate at 25% copper.

2011 PERFORMANCE

Golden Grove experienced a strong recovery in the second half of 2011 based on excellent mill utilisation in relation to zinc/copper scheduling and assisted by the restart of Scuddles mine, which had been on care and maintenance since 2008.

Copper in concentrate production was within 2011 guidance at 21,661 tonnes, albeit 35% below 2010 production when the mine plan favoured copper-rich ore.

Zinc production was within guidance at 70,687 tonnes but finished 4% below 2010 driven by lower grades partly offset by higher throughput.

Actual C1 costs for 2011 of US$0.19/lb were below the guidance range for zinc and were within guidance for copper at US$2.97/lb.

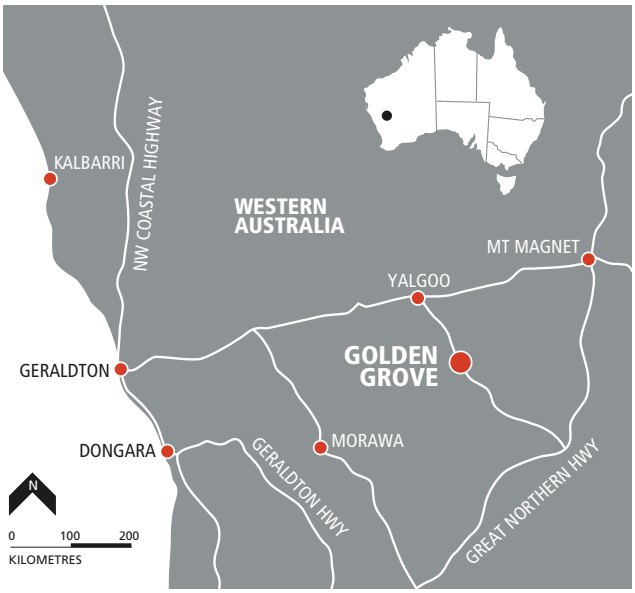
C1 cost guidance for 2012 is US$0.15–US$0.20/lb for zinc and US$2.85–US$3.00/lb for copper with all other associated by-product credits included in C1 costs for zinc.

An important achievement for Golden Grove during 2011 was the resumption of shipments of high precious metals (HPM) concentrate through the port of Geraldton, following the voluntary suspension of shipments in December 2010. Shipments recommenced based on revised limits and improved operating conditions at the port after a lengthy period involving consultation between Golden Grove, Western Australian Government health, port and transport authorities, and the close cooperation of customers.

Golden Grove also welcomed a new general manager to its operations, with Pierre Malan commencing in July 2011. Mr Malan not only brings varying Australian and South African experience working across an array of mining methods and commodities, but also an approach to supporting people to work in a team-based culture.

Golden Grove began the first drill hole in the site's new copper open pit in the fourth quarter 2011. The project is a key accomplishment in the Company's organic growth strategy, which seeks to extract value from existing operations and infrastructure. The US$22 million copper open pit adds two years of mine life to Golden Grove, extending operations from 2017 to 2019.

Production in 2012 will again target copper-rich zones and will include first production from the copper open pit operations in the second half of the year.



GOLDEN GROVE FINANCIAL DATA		
US$ MILLION	2011	2010
REVENUE	388.5	391.3
EBITDA	101.6	192.4
DEPRECIATION AND AMORTISATION	(48.3)	(36.8)
OPERATING PROFIT/(LOSS) (EBIT)	53.3	155.6
NET FINANCE COSTS	(7.2)	(7.9)
SEGMENT RESULT	46.1	147.7

GOLDEN GROVE OPERATING DATA	2011	2010
ORE MINED (t)	1,705,622	1,354,026
ORE MILLED (t)	1,566,511	1,597,026
CONTAINED METAL PRODUCTION		
ZINC CONCENTRATE (t)	70,687	73,264
COPPER CONCENTRATE (t)	21,661	33,525
HPM CONCENTRATE (t)	7,482	7,746

2011 ACTUAL C1 COSTS	
ZINC	US$0.19/lb
COPPER	US$2.97/lb

2012 PRODUCTION GUIDANCE	
ZINC IN ZINC CONCENTRATE (t)	33,000–37,000
COPPER IN CONCENTRATE (t)	29,000–32,000

2012 COST GUIDANCE	
ZINC	US$0.15–US$0.20/lb
COPPER	US$2.85–US$3.00/lb

OPERATIONAL REVIEW
ROSEBERY

OVERVIEW

Rosebery is an underground polymetallic base metal mine located in the township of Rosebery, on Tasmania's west coast, Australia. It comprises an underground mine and surface processing operation.

Rosebery mine is an important part of the regional economy and social fabric of Tasmania's north-west coast. It has operated continuously since 1936 and its mine life extends to 2024.





Portal entrance to underground operations at Rosebery, Tasmania, Australia.

The Rosebery mine has capacity to produce approximately 700,000 tonnes of ore a year, which is then processed into zinc concentrate, lead concentrate, and gold and silver doré. It also produces a small amount of copper concentrate.

The ore body extends for approximately 4 kilometres north-south and to a depth of 1.5 kilometres.

The polymetallic nature of the ore body enables a significant relative cost advantage after by-product credits compared with many mining peers.

2011 PERFORMANCE

2011 was a good year for Rosebery, with strong concentrator performance and production meeting or exceeding guidance after an outstanding performance in the second half of the year.

Full-year zinc production was within guidance at 80,670 tonnes of zinc in zinc concentrate, but finished 2% below 2010 as the increased throughput did not fully offset the declining zinc head feed grades.

Full-year lead production of 25,353 tonnes exceeded guidance of 21,000–23,000 tonnes of lead in lead concentrate and was 9% above 2010 due to higher throughput and recovery.

Full-year production of copper and gold exceeded 2010, reflecting changing mineralogy as the W and N Lenses entered the feed blend.

Actual C1 costs for 2011 of US$0.19/lb were within guidance of US$0.15–US$0.20/lb for zinc, which remains the C1 cost guidance for 2012.

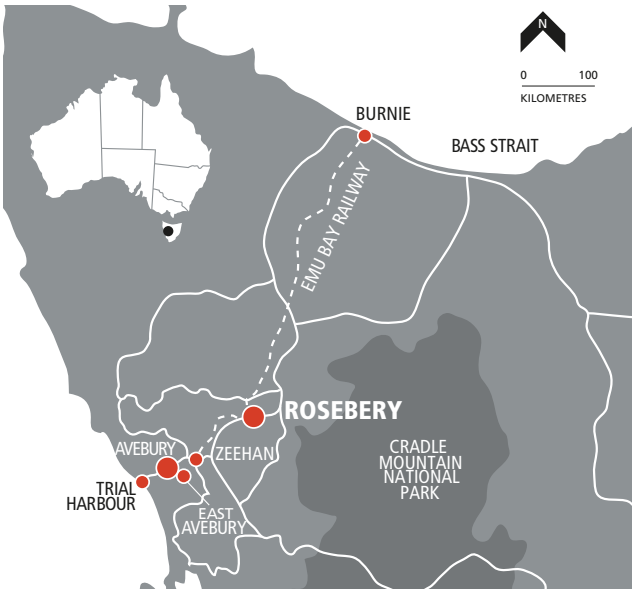
In February 2011, Rosebery reached a significant milestone celebrating 75 years of continuous mine and mill operations, a demonstration of the ongoing success of the operation and its contribution to Tasmania's north-west coast.

Rosebery also acquired a 25-kilometre long section of the most prospective Mount Read Volcanics package in western Tasmania. Consequently, the Rosebery mine Mineral Resource is at its highest in the history of operations.

Rosebery also started the development of the South Hercules deposit, located 7 kilometres from Rosebery on top of the nearby Mount Hamilton.

In April 2011, Rosebery commenced testing of South Hercules ore to determine suitability for long-term development.

The testing of 20,000 tonnes of ore was successfully completed in the fourth quarter 2011 and full development of the ore body could commence in the third quarter 2012, pending environmental approvals.



Increases to Mineral Resources in the 2011 Resources and Reserves Statement can be attributed to exploration success in lenses J South, U, X and Z. The focus on exploration will continue into 2012 to increase the Rosebery resource base beyond the current mine life.

In January 2012, Miles Naude took on the role of General Manager for Rosebery, after having been Rosebery's Concentrator Manager since August 2010. Mr Naude holds qualifications in metallurgy and a Master of Business Administration, and brings more than 20 years' experience from South Africa and Australia.

ROSEBERY FINANCIAL DATA		
US$ MILLION	**2011**	**2010**
REVENUE	272.5	220.5
EBITDA	108.6	104.5
DEPRECIATION AND AMORTISATION	(21.8)	(25.7)
OPERATING PROFIT/(LOSS) (EBIT)	86.8	78.8
NET FINANCE COSTS	(1.3)	(2.0)
SEGMENT RESULT	85.5	76.8

ROSEBERY OPERATING DATA	2011	2010
ORE MINED (t)	779,447	687,247
ORE MILLED (t)	788,411	724,792
CONTAINED METAL PRODUCTION		
ZINC CONCENTRATE (t)	80,670	82,008
LEAD CONCENTRATE (t)	25,353	23,246
GOLD DORÉ (oz)	12,163	9,528

2011 ACTUAL C1 COSTS	
ZINC	US$0.19/lb

2012 PRODUCTION GUIDANCE	
ZINC IN ZINC CONCENTRATE (t)	73,000–78,000
LEAD IN LEAD CONCENTRATE (t)	20,000–22,000

2012 COST GUIDANCE	
ZINC	US$0.15–US$0.20/lb

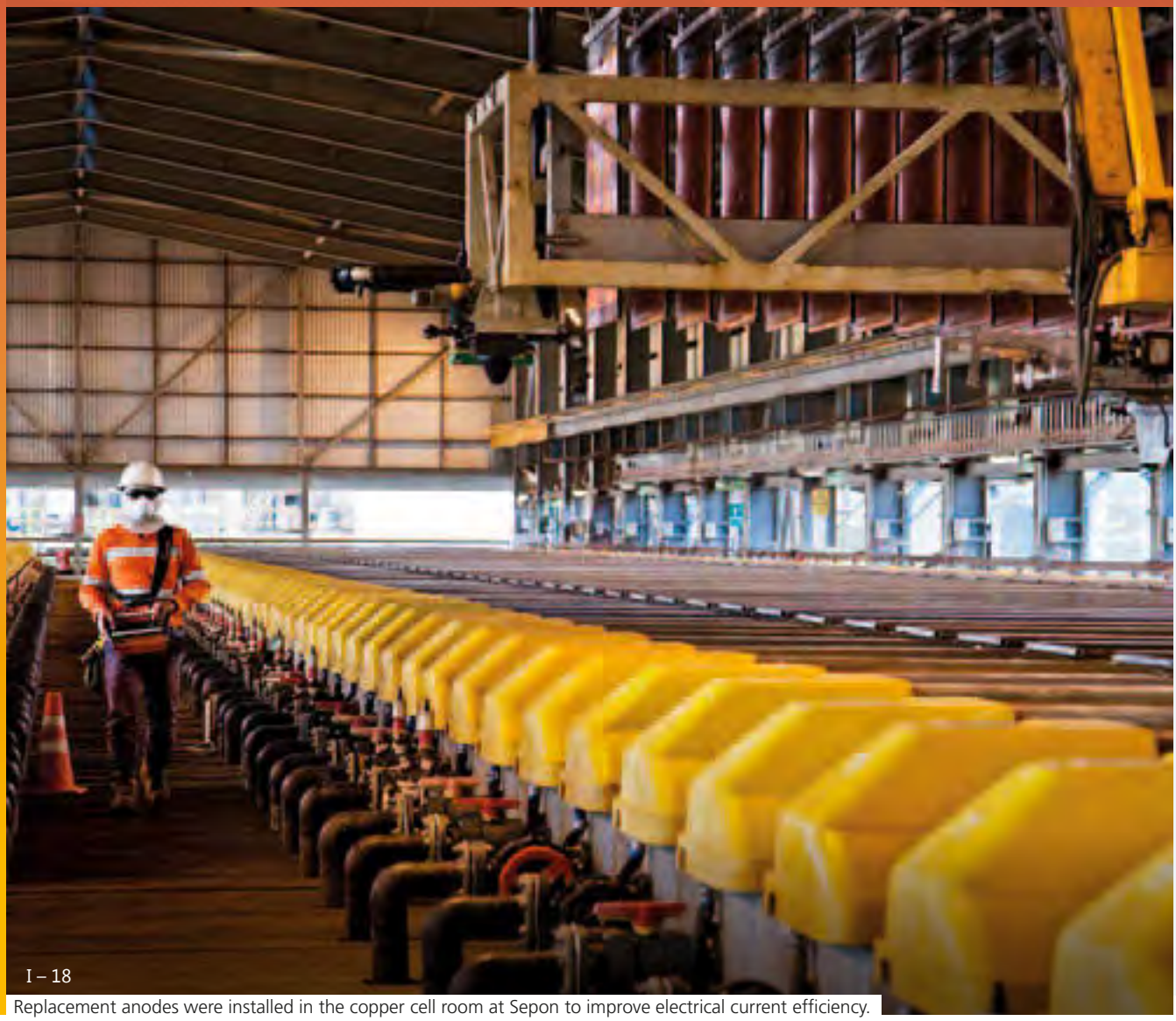
OPERATIONAL REVIEW
SEPON

OVERVIEW

Sepon is an open pit copper and gold-mining operation in southern Laos.

Lane Xang Minerals Limited (LXML) is the registered name of the company that operates Sepon. MMR owns 90% of LXML, while the Lao Government owns the other 10%. Lane Xang is Lao for "one million elephants", a historical name for the kingdom of Laos.





Replacement anodes were installed in the copper cell room at Sepon to improve electrical current efficiency.

Copper

The Sepon copper operation commenced production in 2005. In early 2011 a copper expansion project was completed that increased annual production capacity from approximately 65,000 tonnes to 80,000 tonnes of copper cathode.

Sepon's copper cathode typically attracts a premium over the London Metals Exchange (LME) copper price due to the high quality of the product, the project's proximity to customers and the reliability of supply.

Gold

The Sepon gold project yielded its first gold and silver doré in December 2002. In early 2005, an expansion of the original gold processing facility was completed, doubling the capacity of the plant to 2.5 million tonnes of ore per annum.

Since the commencement of operations, Sepon has produced more than 1 million ounces of gold through open pit mining and conventional treatment of oxide gold ore.

2011 PERFORMANCE

Copper

Sepon copper cathode production was 23% above 2010 at 78,859 tonnes, reflecting full production from the expanded copper plant during the second half of the year.

Similarly, Sepon achieved record copper cathode production of 21,178 tonnes in the third quarter 2011, exceeding pro rata nameplate capacity.

An important milestone for Sepon was achieved during the fourth quarter 2011 with the LME issuing a formal notice confirming that 'Sepon' brand copper cathode has been listed as Copper – Grade A brand, eligible for delivery to LME-approved warehouses.

Sepon also worked to improve electrical current efficiency in its cell room throughout 2011 with the installation of replacement anodes.

Actual C1 costs for 2011 of US$0.98/lb for copper were within guidance. C1 cost guidance for 2012 is expected to increase to US$1.05–US$1.10/lb due to higher mining costs.

Life of mine for Sepon copper operations remains at approximately 2020.

Gold

Full-year gold production of 74,484 ounces was towards the upper end of the guidance range but 29% below 2010 due to ore availability and feed grades.

Actual C1 costs for 2011 of US$867/oz for gold were below guidance. C1 cost guidance for 2012 is US$1,110–US$1,120/oz driven by forecasted lower gold production volume.

Oxide gold sources at Sepon have outperformed initial expectations that supply would be depleted by 2011. During the second quarter it was advised that the oxide gold ore supply was expected to be exhausted around mid-2012.



Following additional exploration efforts in late 2011, it is now expected that oxide ore will be extended until 2013, continuing to outperform initial forecasts but signalling the conclusion of oxide gold production at the operation at that time.

In July 2011, Rick Watsford commenced in the role of General Manager at Sepon, bringing more than 35 years of senior management experience in the exploration, mining and production of base metals, industrial metals and gold.

A key focus for the Company has been developing a strong leadership team with diverse, international experience in order to deliver additional value at each of the sites.

SEPON FINANCIAL DATA US$ MILLION	2011	2010
REVENUE	816.9	596.7
EBITDA	529.4	358.6
DEPRECIATION AND AMORTISATION	(58.1)	(14.9)
OPERATING PROFIT/(LOSS) (EBIT)	471.3	343.7
NET FINANCE COSTS	(14.4)	(9.5)
SEGMENT RESULT	456.9	334.2

SEPON OPERATING DATA	2011	2010
COPPER ORE MINED (t)	1,804,633	2,538,775
COPPER ORE MILLED (t)	1,734,861	1,337,491
GOLD ORE MINED (t)	1,567,432	1,915,174
GOLD ORE MILLED (t)	1,886,806	2,237,773
CONTAINED METAL PRODUCTION		
COPPER CATHODE (t)	78,859	64,241
GOLD POURED (oz)	74,484	104,564

2011 ACTUAL C1 COSTS	
COPPER	US$0.98/lb
GOLD	US$867/oz

2012 PRODUCTION GUIDANCE	
COPPER CATHODE (t)	78,000–82,000
GOLD (oz)	60,000–65,000

2012 COST GUIDANCE	
COPPER	US$1.05–US$1.10/lb
GOLD	US$1,110–US$1,120/oz

DEVELOPMENT PROJECTS

Supporting our growth aspirations will be the delivery of two important projects, Dugald River and Izok Corridor, along with other internal development projects.



Work has commenced on the development of two exploration declines at Dugald River.

DUGALD RIVER, AUSTRALIA

The Dugald River project is one of the world's largest and highest grade known undeveloped lead-zinc-silver deposits with a resource of 53 million tonnes at 12.5% zinc, 1.9% lead and 36g/t silver. At current commodity prices this equates to a combined grade of 16% zinc equivalent. Dugald River is located in north-west Queensland, approximately 65 kilometres north-west of Cloncurry.

Feasibility studies on the project were completed in 2009, 2010 and updated in 2011. These studies showed the viability of a two-million-tonne per annum underground mine with a life of more than 22 years. The ore body is open at depth, assuming the use of conventional underground mining methods. Test work has also confirmed that high metal recovery rates could be achieved with standard crushing, grinding and flotation processing. Dugald River is expected to produce an average of at least 200,000 tonnes of zinc, 25,000 tonnes of lead and 900,000 ounces of silver in concentrate per year.

The project has good access to infrastructure, with a sealed two-lane highway 10 kilometres to the east of the site and water available 11 kilometres to the north. Zinc concentrates are planned to be transported by truck to Cloncurry and then via rail to Townsville.

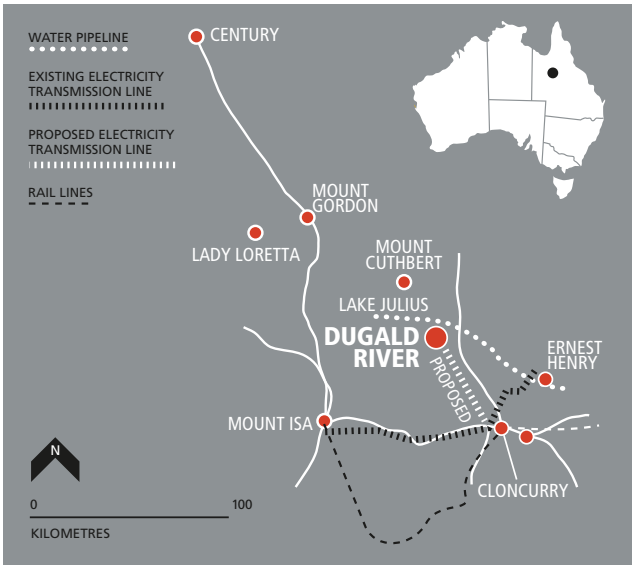
Dugald River will include a combination of a residential workforce from Cloncurry and a fly-in, fly-out workforce from a range of locations such as Mt Isa, Townsville, Cairns and Brisbane.

The project Environmental Impact Statement (EIS) was submitted during 2010 and the Company is working through the environmental permitting process.

> The final decision on whether to develop the Dugald River project is expected to be made by the Board in 2012 and, subject to other required approvals, the Company aims to have the mine in operation during 2014.

In November 2011 the EIS assessment report advised that the project was suitable to proceed to the next stage of the approval process. Full EIS approval is expected around the middle of 2012.

The Company is undertaking extensive pre-commitment activities including advancing engineering design, refining capital and operating cost estimates, and advancing power, access and infrastructure negotiations.



Early works commenced on site in October 2011 and included the development of two exploration declines, which will intersect the main part of the ore body in late 2012.

In the fourth quarter 2011, the Board approved further expenditure of A$157 million for the next stage of the project, for spend up until the third quarter 2012.

The final decision on whether to develop the Dugald River project is expected to be made by the Board in 2012 and, subject to other required approvals, the Company aims to have the mine in operation during 2014.

Project capital costs will be announced with the Board decision and are expected to be in the range of US$1–1.25 billion.

IZOK CORRIDOR PROJECT, CANADA

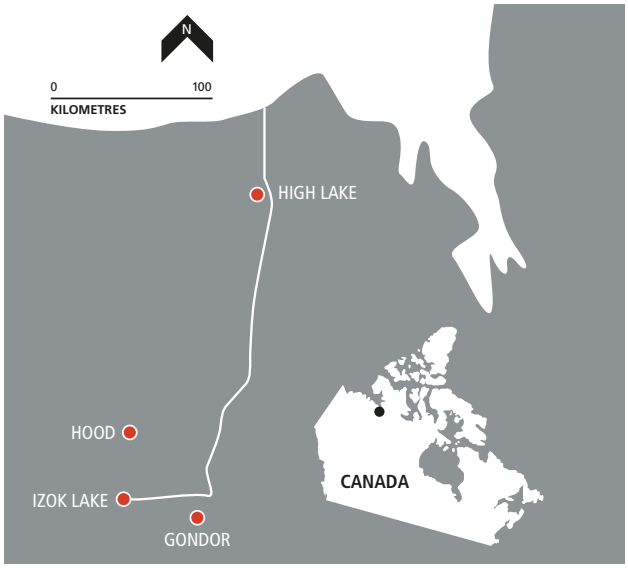
The Company has a suite of polymetallic base metal assets in the Slave Geological Province in Nunavut, northern Canada.

Izok Lake is a significant deposit with a Mineral Resource of 14.8 million tonnes at 12.8% zinc and 2.5% copper. The High Lake deposit, located north of Izok, has a classified Mineral Resource of 17.2 million tonnes at 3.4% zinc and 2.3% copper.

The Company also owns base metal deposits at Gondor and Hood and has approximately 2,000 square kilometres of exploration tenements.

During 2011, the Company sold its interest in the Lupin and Ulu gold resources as they did not align with its diversified base metals strategy.

The main focus for 2011 was finding the optimal infrastructure solution for producing and delivering concentrates of copper, zinc, lead and silver from the two principal assets – Izok Lake and High Lake.



A high-level review was undertaken on the various transportation routes from these deposits, which concluded that the best option is likely to be a 350-kilometre all-weather road connecting Izok Lake, High Lake and a new port at Gray's Bay. This is expected to extract the most value from both deposits and the greenstone belt potential between them.

A pre-feasibility study was then conducted in the second half of 2011 to evaluate the economic viability of the aforementioned infrastructure. It also assessed whether Izok Lake or High Lake would be best placed as the plant site and the other as a satellite site, with a view to taking these options into feasibility study.

The pre-feasibility study conclusion was that the option with the least risk would be to install a two-million-tonne per annum concentrator at the Izok Lake deposit and develop capacity to ship 650,000 tonnes of concentrate from Gray's Bay, inclusive of the contribution from the High Lake deposit. Additionally, there is a high likelihood of growth in the mineable inventory from additional deposits at Hood, Gondor, Izok and High Lake. There are also a large number of underexplored greenstone belts in the region.

Initial work has now started on a definitive feasibility study that is expected to take 18 to 24 months, assessing the integrated development of Izok Lake and High Lake.

Meanwhile, environmental baseline work continues in order to be prepared to submit a draft EIS in 2013. A data field collection program is planned for the 2012 field season to support the feasibility study and EIS as well as further exploratory and confirmation drilling.



High Lake exploration camp.

GOLDEN GROVE COPPER OPEN PIT

Development of the Golden Grove copper open pit commenced in 2011 after a feasibility study confirmed the economic viability of a near-surface copper resource at Gossan Hill.

The first drill hole was made in November 2011 and blasting commenced in January 2012, extending Golden Grove's mine life by approximately two years from 2017 to 2019. Expected production is 235,000 tonnes of copper concentrate containing 59,600 tonnes of copper metal in concentrate at 25% copper.

SEPON PRIMARY GOLD STUDY

A scoping study, completed in late 2011, confirmed the potential to mine and process primary, refractory gold ores at Sepon. The Mineral Resource is 45 million tonnes at 2.2 grams per tonne gold and will be mostly mined by open pit methods. A pre-feasibility study has commenced to determine the optimal processing option and production rate, to carry out detailed metallurgical testing and to commence baseline field work to support the permitting process.

CENTURY PHOSPHATE

A scoping study commenced in 2011 to investigate the potential to utilise Century mine infrastructure to process and transport phosphate from one or more of the identified deposits within 50 kilometres of the Century mine site. The scoping study seeks to confirm the business case and identify future work plans to assess this opportunity.

COMMISSIONED PROJECTS

SEPON COPPER EXPANSION

The Sepon copper expansion was successfully commissioned in the first quarter 2011. The expansion lifts nameplate capacity from 65,000 to 80,000 tonnes of copper cathode per annum.



The Sepon copper expansion has increased copper cathode production capacity to 80,000 tonnes per annum.

EXPLORATION

OVERVIEW

Exploration is an important part of the Company's growth strategy. It comprises a three-tiered strategy involving mine district exploration, new discovery programs and project generation. Mine district exploration takes place around the Company's suite of operations and development sites to find opportunities to extend mine life. New discovery programs actively explore a pipeline of opportunities globally within the Company's existing leases, and project generation involves identification of completely new projects for potential inclusion in the exploration portfolio.



Exploration in the Talkeetna Mountains, Alaska.

In 2011, a total of US$64 million was spent on exploration, with approximately three-quarters spent on mine district exploration at Sepon (copper and gold), Century (zinc and lead), Golden Grove (polymetallic), Rosebery (polymetallic), Avebury (nickel), the Izok Corridor project (polymetallic) and the Mincenco bauxite project. New discovery exploration programs for copper, zinc and nickel were conducted on tenements held by the Company and joint ventures in Australia, Canada, USA, Indonesia and Zambia. Project generation activities were successful with 11 new projects secured during 2011.

DRILLING RESULTS EXPLAINED

Drilling results are expressed in terms of the length of the drill sample and the percentage/quantity of metal per tonne.

EXAMPLE

3m @ 26.5 g/t gold
= 3 metres at 26.5 grams per tonne gold

The above refers to a 3-metre long drill sample containing 26.5 grams of gold for every tonne of material.

Highlights from each exploration program are summarised below.

MINE DISTRICT EXPLORATION

Sepon

Oxide gold exploration programs at Sepon continued to discover small, near-surface, low-grade deposits. These included Vang Ngang East, Vang Ngang South, Thongpiang West and Red Hill, which are now at the resource definition stage. A number of other prospects have been defined and are in earlier stages of evaluation. On current projection, the life of the Sepon oxide plant is forecast to continue until 2013.

Primary gold exploration programs have considerably expanded the extent of the mineralised system at Discovery Main/Dao Leuk, increasing the total Resource for primary gold at Sepon to 45 million tonnes at 2.2g/t gold for 3.2 million ounces (Indicated and Inferred). This represents a 47% increase in total ounces from 2010. A number of other prospects returned very encouraging results in the first phase of drilling, including Phavat North (3m @ 26.5g/t gold), Phavat Main (13m @ 5.8g/t gold) and Vang Ngang South (21m @ 4.7g/t gold).

During 2011, oxide copper exploration programs were limited as the focus was on gold exploration, but extensions to mineralisation around Thengkham East were defined.

A number of primary copper targets were tested. Encouraging results included Thengkham East (123m @ 0.64% copper), Thengkham South (21.5m @ 1.2% copper), Phavat West (9.5m @ 2.0% copper, 1.2g/t gold) and Khanong South (13m @ 2.1% copper). These results indicate good potential to increase the primary copper skarn-related resource at grades around 1% copper equivalent.

Century

Reviews at Century concluded that the potential to discover additional Century-style mineralisation at greater than 10% zinc is effectively tested. The Mine Operations team will resume a number of near-mine initiatives for identification of additional feed for the processing plant from vein breccia-style occurrences at Silver King, Watson's Lode and the Termite Range corridor. In addition, the viability of utilising Century infrastructure to exploit the phosphate deposits that occur on the Company's tenements continues to be studied.

Golden Grove

Following significant exploration success in 2010 at Gossan Valley and Felix, exploration during 2011 focused on resource definition drilling totalling more than 70,000 metres. As at December 2011, the Gossan Valley and Felix Resource stood at 1.5 million tonnes of zinc ore at 7.9% zinc, 10g/t silver and 0.9g/t gold; plus 1.3 million tonnes copper ore at 2.3% copper, 14g/t silver and 0.3g/t gold. Drilling was also conducted at the Flying Hi and Cullens prospects. At Flying Hi, broad zones of low-grade copper with some narrow higher grade intervals, including oxide copper and chalcocite, were encountered.

Rosebery

Deep drilling on the Rosebery mine lease under the Aegis project confirmed the shallow northerly plunge of the Rosebery mineral system into the newly acquired Lake Rosebery tenement. Significant progress was made during 2011 building and validating the Rosebery exploration database to generate a 3D regional geological interpretation of the 25-kilometre strike length Rosebery host horizon. This model will be instrumental in ongoing targeting for resource extensions.

Avebury

The exploration strategy at Avebury has been driven by the need to define all discovery options that have potential to transform the project economics of the Avebury nickel deposit. The single target defined by the 2010 versatile time-domain electro-magnetic (VTEM) airborne geophysical survey was drilled in 2011. The hole intersected small (1–6m) slivers/dykes of altered ultramafic with low levels of nickel.

Izok Corridor project

At Izok Lake, a 15,000-metre drilling program successfully traced the Izok host horizon 750 metres down dip and along strike to the south of the deposit, intersecting sporadic thin low-grade mineralisation. Further drilling in this area is scheduled in the first quarter 2012 to definitively test for near-resource massive sulphide extensions.

At High Lake East, a 20-hole drilling program over 7,000 metres confirmed this prospect as a new discovery representing a third significant volcanic massive sulphide (VMS) mineralised system with high-grade zinc and copper massive sulphide lenses that appear to be increasing in width at depth. Best intersections include: 21m @ 11% zinc, 0.6% copper from 143m downhole, and in another hole 33m at 7.5% zinc, 2.1% copper from 633m, although true thicknesses are likely to be 60% of these actual intersections. Drilling and downhole electro-magnetic (EM) geophysical survey data suggests that the best mineralisation occurs as two steeply plunging shoots within a broader mineralised horizon.

Mincenco bauxite project

A resource drilling program was initiated in the fourth quarter 2011 on the Mincenco bauxite project in Jamaica. The objective of the drilling is to validate the historical resource database and ascertain what work is required to define a Measured Resource target circa 20 million tonnes (dry metric), 20 million tonnes Indicated and 100 million tonnes Inferred Resource in accordance with JORC standards.

NEW DISCOVERY PROGRAMS

Australia

Project generation efforts in Australia defined and secured three new projects via joint ventures (JV) in a strongly competitive environment. These include the Curnamona copper project in South Australia (Havilah JV), Kitehawk copper project in Western Australia (Warriedar JV) and Huckitta nickel project in the Northern Territory (Mithril JV).

At the Kidman copper project in NSW (Cobar Basin), a nine-hole drilling program tested several airborne VTEM targets. Although no economic mineralisation was encountered, downhole geophysical and ground induced polarisation (IP) surveys identified further targets for follow-up work.

Americas

Project generation was successful in adding eight new projects to the exploration portfolio. These include three zinc projects in the Belt-Purcell Basin (USA-Canada), a district-scale land package for nickel sulphide deposits in Alaska, and four copper opportunities in Mexico and Chile. Of the four existing nickel exploration projects, Amaruk (Nunavut) and Sumach Lake (Ontario) were terminated following definitive exploration programs, while Savant Lake (Ontario) and MCR (Minnesota) projects were advanced during 2011.

Indonesia

Discovery of a large porphyry copper-gold deposit continued to be the core objective of exploration activities in Indonesia. Exploration programs in 2011 stalled due to a freeze in issuing forest use permits under a Forestry Moratorium, blocking exploration on the Bacan Island, East Java and North Sulawesi projects. Continued resource delineation drilling by Augur Resources at the Wonogiri JV project in central Java continued to build the potential for a low-grade (~1g/t gold) bulk-mineable gold deposit. Augur gained majority interest (51%) while the Company retained 39% interest and claw-back rights on any copper resource.

South-Central Africa

During 2011, a local operating company was incorporated in Zambia and an exploration office established in Lusaka. The Company's first exploration tenement in Zambia was granted in 2011 and efforts will continue to expand our land position via joint ventures or tenement application.

PROJECT GENERATION

The three commodity project generation teams (copper, zinc and nickel) focused generative activities in Africa, the Americas and Australia. Apart from having successfully identified and delivered 11 new exploration projects in Australia and the Americas in 2011, the commodity teams continued building innovative intellectual property on deposit models and exploration strategies that give the Company a long-term competitive advantage. The exploration portfolio is biased towards early-stage projects. Project generation in 2012 will have a strong focus on securing more advanced-stage exploration projects that have the potential for discovering an ore body transformational to the Company within a three-year timeframe.

RESOURCES AND RESERVES

OVERVIEW

Overall, the Company's June 2011 Mineral Resources and Ore Reserves Statement revealed increases in both Resources and Reserves.

Mineral Resources are defined as the concentration of material of economic interest in or on the Earth's crust, whereas Ore Reserves are the parts of a Mineral Resource that can at present be economically mined. Minerals Resources are inclusive of Ore Reserves.

In general, all of the Company's **Mineral Resources**, except zinc, have increased since the June 2010 estimate predominantly due to exploration success.

The Company's Mineral Resources (contained metal) as at 30 June 2011 were estimated to contain 16.4 million tonnes of zinc, 3.3 million tonnes of copper, 2.8 million tonnes of lead, 334.3 million ounces of silver, 7.4 million ounces of gold and 0.26 million tonnes of nickel.

The Company's **Ore Reserves** saw a significant increase in zinc (103.9%), lead (126.1%) and silver (108.2%), a minor increase in gold (1.1%) and a decrease in copper (-6.1%) compared with the June 2010 estimate.

The Ore Reserves (contained metal) as at 30 June 2011 were estimated to contain 8.1 million tonnes of zinc, 0.9 million tonnes of copper, 1.3 million tonnes of lead, 102.4 million ounces of silver and 0.6 million ounces of gold.

Gains in Ore Reserves were mostly due to the inclusion of the Dugald River Ore Reserve for the first time.

Additional contributions are due to the conversion of exploration results to Mineral Resources partly offsetting mining depletion.

MINERAL RESOURCES

Mineral Resources are tabulated by classification category for each mineral deposit or operation at the end of this statement.

Mineral Resource additions exceeded mining depletion at Rosebery and Sepon gold and partly offset mining depletion at Golden Grove.

Century and Sepon copper Mineral Resources have decreased in line with mining depletion.

Additions at Rosebery have come from the discovery of mineralisation in several lenses including J South, U, X and Z.

Sepon gold Mineral Resources increased with the discovery of the Tongpiang, Houay Bang and Houay Poung deposits, and the re-estimation of primary gold mineralisation at other deposits.

Golden Grove Mineral Resource increases have come from discovery of mineralisation within the Gossan Valley/ Felix and Tryall deposits.

The Avebury Mineral Resource has increased with the extension of East Avebury and Viking Deep deposits.

Changes in Mineral Resources are shown in absolute terms for all deposits or operations and in total within the following tables.

TOTAL MMG RESOURCES (CONTAINED METAL)*

	ZINC (Mt)	COPPER (Mt)	LEAD (Mt)	SILVER (Moz)	GOLD (Moz)	NICKEL (Mt)
SEPON		1.5		22.1	4.6	
CENTURY	3.7		0.6	42.4		
DUGALD RIVER	6.6	0.1	1.0	61.9	0.0	
GOLDEN GROVE	1.2	0.9	0.1	42.1	0.9	
ROSEBERY	2.4	0.1	0.8	93.6	1.3	
AVEBURY						0.26
HIGH LAKE	0.6	0.4	0.1	38.7	0.5	
IZOK LAKE	1.9	0.4	0.2	33.5		
TOTAL RESOURCES	**16.4**	**3.3**	**2.8**	**334.3**	**7.4**	**0.26**

* Details of Mineral Resources are tabulated and documented in the MMG Resources and Reserves Statement at 30 June 2011. Significant figures do not imply precision. Figures are rounded according to JORC Code guidelines. Contained metal does not imply recovery.

ABSOLUTE CHANGE IN MINERAL RESOURCE (CONTAINED METAL)

	ZINC (Mt)	COPPER (Mt)	LEAD (Mt)	SILVER (Moz)	GOLD (Moz)	NICKEL (Mt)
SEPON		-0.09		7.76	1.44	
CENTURY	-0.75		-0.06	-2.62		
DUGALD RIVER						
GOLDEN GROVE	-0.03	0.11	-0.01	-2.89	0.02	
ROSEBERY	0.38	0.03	0.14	15.49	0.26	
AVEBURY						0.05
HIGH LAKE						
IZOK LAKE						
TOTAL RESOURCES	**-0.40**	**0.05**	**0.08**	**17.58**	**1.72**	**0.05**

ORE RESERVES

Ore Reserves are tabulated by classification category for each operation or project at the end of this statement.

Ore Reserve tonnage reconciliation between 2010 and 2011 indicates an overall ore tonnage reduction of 11.2 million tonnes due to mill processing at all sites being offset by added Ore Reserves tonnage at Sepon gold (2.0 million tonnes), Century (0.9 million tonnes), Golden Grove (4.2 million tonnes) and Rosebery (1.4 million tonnes), with a reduction of 1.6 million tonnes for Sepon copper.

TOTAL MMG RESERVES (CONTAINED METAL)

	ZINC (Mt)	COPPER (Mt)	LEAD (Mt)	SILVER (Moz)	GOLD (Moz)
SEPON		0.7		0.9	0.2
CENTURY	2.5		0.3	15.5	
GOLDEN GROVE	0.1	0.2	0.0	5.2	0.1
ROSEBERY	0.7	0.0	0.2	27.5	0.4
DUGALD RIVER	4.8		0.8	53.2	
TOTAL RESERVES	**8.1**	**0.9**	**1.3**	**102.4**	**0.6**

* Details of Ore Reserves are tabulated and documented in the MMG Resources and Reserves Statement at 30 June 2011. Significant figures do not imply precision. Figures are rounded according to JORC Code guidelines. Contained metal does not imply recovery.

ABSOLUTE CHANGE IN ORE RESERVE (CONTAINED METAL)

	ZINC (Mt)	COPPER (Mt)	LEAD (Mt)	SILVER (Moz)	GOLD (Moz)
SEPON		-0.12		0.15	-0.04
CENTURY	-0.61		-0.05	-2.03	
GOLDEN GROVE	-0.05	0.06	0.00	0.40	0.01
ROSEBERY	0.00	0.00	0.01	1.46	0.04
DUGALD RIVER	4.78		0.76	53.23	
TOTAL RESERVES	**4.12**	**-0.06**	**0.71**	**53.21**	**0.01**

MINERAL RESOURCES AS AT 30 JUNE 2011

Sepon Mineral Resources

COPPER (0.5% Cu CUT-OFF GRADE) GOLD OXIDE AND PARTIAL OXIDE (0.5 g/t Au CUT-OFF GRADE) PRIMARY (1.0 g/t Au CUT-OFF GRADE)	TONNES (Mt)	COPPER GRADE (% Cu)	GOLD GRADE (g/t Au)	SILVER GRADE (g/t Ag)	CONTAINED METAL COPPER ('000 t)	 GOLD (Moz)	 SILVER (Moz)
SUPERGENE COPPER[1]							
MEASURED	15.1	3.1	–	–	462.0	–	–
INDICATED	21.9	2.4	–	–	528.8	–	–
INFERRED	18.8	1.4	–	–	269.4	–	–
TOTAL	**55.7**	**2.3**	–	–	**1,260.2**	–	–
PRIMARY COPPER[1]							
MEASURED	1.7	1.6	0.2	7	26.4	0.0	0.4
INDICATED	1.1	1.5	0.2	7	16.2	0.0	0.2
INFERRED	21.7	0.8	0.2	5	162.5	0.1	3.5
TOTAL	**24.4**	**0.8**	**0.2**	**5**	**205.1**	**0.2**	**4.1**
OXIDE GOLD[2]							
MEASURED	4.2	–	1.7	7	–	0.2	1.0
INDICATED	8.6	–	1.1	6	–	0.3	1.7
INFERRED	4.1	–	1.0	4	–	0.1	0.5
TOTAL	**16.9**	–	**1.2**	**6**	–	**0.7**	**3.2**
PARTIAL OXIDE GOLD[2]							
MEASURED	2.7	–	2.8	13	–	0.2	1.1
INDICATED	4.4	–	1.3	9	–	0.2	1.3
INFERRED	1.9	–	1.3	5	–	0.1	0.3
TOTAL	**9.0**	–	**1.7**	**9**	–	**0.5**	**2.7**
PRIMARY GOLD[2]							
MEASURED	2.7	–	2.9	9	–	0.3	0.8
INDICATED	29.1	–	2.5	9	–	2.3	8.7
INFERRED	13.6	–	1.5	6	–	0.7	2.6
TOTAL	**45.4**	–	**2.2**	**8**	–	**3.2**	**12.1**
TOTAL RESOURCES					**1,465.3**	**4.6**	**22.1**

Significant figures do not imply precision. Figures are rounded according to JORC Code guidelines.

Competent Persons

1. Kerrin Allwood (Member of AusIMM, employee of Geomodelling Ltd)
2. Jared Broome (Fellow of AusIMM, employee of MMG)

Century Mineral Resources

CENTURY AND EAST BLOCK 3.5% Zn CUT-OFF GRADE	TONNES (Mt)	ZINC GRADE (% Zn)	LEAD GRADE (% Pb)	SILVER GRADE (g/t Ag)	CONTAINED METAL ZINC ('000 t)	CONTAINED METAL LEAD ('000 t)	CONTAINED METAL SILVER (Moz)
CENTURY[1]							
MEASURED	22.5	11.6	1.6	39	2,610.0	360.0	28.5
INDICATED	8.5	11.2	1.6	36	952.0	136.0	9.9
INFERRED	0.1	7.7	1.0	39	7.7	1.0	0.1
TOTAL	**31.1**	**11.5**	**1.6**	**39**	**3,569.7**	**497.0**	**38.6**
CENTURY EAST BLOCK[1]							
MEASURED	–	–	–	–	–	–	–
INDICATED	0.2	12.8	1.1	49	25.6	2.2	0.3
INFERRED	0.2	12.7	1.1	55	25.4	2.2	0.4
TOTAL	**0.4**	**12.8**	**1.1**	**52**	**51.0**	**4.4**	**0.7**
SILVER KING[2] 3.5% Pb CUT-OFF GRADE							
MEASURED	–	–	–	–	–	–	–
INDICATED	–	–	–	–	–	–	–
INFERRED	0.7	5.2	15.1	143	35.6	103.3	3.1
TOTAL	**0.7**	**5.2**	**15.1**	**143**	**35.6**	**103.3**	**3.1**
TOTAL RESOURCES					**3,656.3**	**604.7**	**42.4**

Significant figures do not imply precision. Figures are rounded according to JORC Code guidelines.
Competent Persons:
1. Mike Smith (Member of AusIMM, employee of MMG)
2. Peter Carolan (Member of AusIMM, employee of MMG) & Glenn Patterson-Kane (Member of AIG, former employee of MMG)

Dugald River Mineral Resources

ZINC 6% Zn CUT-OFF GRADE	TONNES (Mt)	ZINC GRADE % Zn	COPPER GRADE (% Cu)	LEAD GRADE (% Pb)	SILVER GRADE (g/t Ag)	GOLD GRADE (g/t Au)	CONTAINED METAL ZINC ('000 t)	CONTAINED METAL COPPER ('000 t)	CONTAINED METAL LEAD ('000 t)	CONTAINED METAL SILVER (Moz)	CONTAINED METAL GOLD (Moz)
MEASURED	20.6	13.1	–	1.9	56	–	2,698.6	–	391.4	37.1	–
INDICATED	23.0	12.6	–	2.0	28	–	2,898.0	–	460.0	20.7	–
INFERRED	9.4	10.7	–	1.4	14	–	1,005.8	–	131.6	4.1	–
TOTAL	**53.0**	**12.5**	**–**	**1.9**	**36**	**–**	**6,602.4**	**–**	**983.0**	**61.9**	**–**
COPPER 1% Cu CUT-OFF GRADE											
MEASURED	–	–	–	–	–	–	–	–	–	–	–
INDICATED	–	–	–	–	–	–	–	–	–	–	–
INFERRED	4.4	–	1.8	–	–	0.2	–	79.2	–	–	0.0
TOTAL	**4.4**	**–**	**1.8**	**–**	**–**	**0.2**	**–**	**79.2**	**–**	**–**	**0.0**
TOTAL RESOURCES							**6,602.4**	**79.2**	**983.0**	**61.9**	**0.0**

Significant figures do not imply precision. Figures are rounded according to JORC Code guidelines.
Competent Person:
Peter Carolan (Member of AusIMM, employee of MMG)

Golden Grove Mineral Resources

CUT-OFF GRADE FOR THE PRIMARY ZINC & COPPER RESOURCES IS BASED ON THE NETT SMELTER RETURN VALUE OF A$70 PER TONNE	TONNES (Mt)	ZINC GRADE (% Zn)	COPPER GRADE (% Cu)	LEAD GRADE (% Pb)	SILVER GRADE (g/t Ag)	GOLD GRADE (g/t Au)	CONTAINED METAL ZINC ('000 t)	COPPER ('000 t)	LEAD ('000 t)	SILVER (Moz)	GOLD (Moz)
PRIMARY COPPER[1]											
MEASURED	14.1	0.6	2.6	0.0	19	0.5	80.5	372.2	7.0	8.5	0.2
INDICATED	4.3	0.3	2.4	0.0	15	0.3	13.3	104.9	1.4	2.1	0.0
INFERRED	10.7	0.5	2.8	0.0	21	0.5	55.8	297.8	2.3	7.4	0.2
TOTAL	**29.2**	**0.5**	**2.7**	**0.0**	**19**	**0.5**	**149.6**	**775.0**	**10.7**	**17.9**	**0.5**
OXIDE COPPER[2] 0.5% Cu CUT-OFF GRADE											
MEASURED	–	–	–	–	–	–	–	–	–	–	–
INDICATED	4.8	–	2.0	–	–	–	–	96.0	–	–	–
INFERRED	–	–	–	–	–	–	–	–	–	–	–
TOTAL	**4.8**	**–**	**2.0**	**–**	**–**	**–**	**–**	**96.0**	**–**	**–**	**–**
ZINC[1]											
MEASURED	4.3	13.0	0.4	1.3	96	1.4	560.9	16.6	56.4	13.4	0.2
INDICATED	0.5	10.4	0.3	1.3	81	1.2	56.1	1.5	6.9	1.4	0.0
INFERRED	4.7	10.3	0.5	0.5	38	0.9	480.6	25.1	22.9	5.8	0.1
TOTAL	**9.5**	**11.5**	**0.5**	**0.9**	**67**	**1.2**	**1,097.6**	**43.2**	**86.2**	**20.6**	**0.4**
OXIDE GOLD[1] 1 g/t Au CUT-OFF GRADE											
MEASURED	–	–	–	–	–	–	–	–	–	–	–
INDICATED	–	–	–	–	–	–	–	–	–	–	–
INFERRED	1.1	–	–	–	100	3.2	–	–	–	3.6	0.1
TOTAL	**1.1**	**–**	**–**	**–**	**100**	**3.2**	**–**	**–**	**–**	**3.6**	**0.1**
TOTAL RESOURCES							**1,247.2**	**914.2**	**96.9**	**42.1**	**0.9**

Significant figures do not imply precision. Figures are rounded according to JORC Code guidelines.
Competent Persons:
1. Chevaun Gellie (Member of AIG, employee of MMG)
2. Jared Broome (Fellow of AusIMM, employee of MMG)

Rosebery Mineral Resources Contained Metal

CUT-OFF GRADE IS BASED ON METALLURGICALLY RECOVERABLE TOTAL METAL UNITS (TMU), EXPRESSED AS A DOLLAR VALUE (A$125 PER TONNE)	TONNES (Mt)	ZINC GRADE (% Zn)	COPPER GRADE (% Cu)	LEAD GRADE (% Pb)	SILVER GRADE (g/t Ag)	GOLD GRADE (g/t Au)	CONTAINED METAL ZINC ('000 t)	COPPER ('000 t)	LEAD ('000 t)	SILVER (Moz)	GOLD (Moz)
ROSEBERY											
MEASURED	9.7	12.3	0.5	3.7	128	1.9	1,194.7	49.6	362.5	40.2	0.6
INDICATED	5.9	10.0	0.3	3.2	107	1.5	584.8	18.4	187.6	20.2	0.3
INFERRED	7.9	7.6	0.2	3.3	114	1.4	598.2	19.1	264.2	29.0	0.4
TOTAL	**23.5**	**10.1**	**0.4**	**3.5**	**118**	**1.6**	**2,377.7**	**87.1**	**814.3**	**89.4**	**1.2**
SOUTH HERCULES											
MEASURED	1.0	3.1	0.1	1.5	133.0	2.4	30.3	1.0	14.7	4.2	0.1
INDICATED	–	–	–	–	–	–	–	–	–	–	–
INFERRED	–	–	–	–	–	–	–	–	–	–	–
TOTAL	**1.0**	**3.1**	**0.1**	**1.5**	**133.0**	**2.4**	**30.3**	**1.0**	**14.7**	**4.2**	**0.1**
TOTAL RESOURCES							**2,408.0**	**88.0**	**829.0**	**93.6**	**1.3**

Significant figures do not imply precision. Figures are rounded according to JORC Code guidelines.
Competent Persons:
Clifton McGilvray (Member of AusIMM, employee of MMG) and Stuart Dawes (Member of AusIMM, employee of MMG)

Avebury Mineral Resources

		CONTAINED METAL	
0.4% Ni CUT-OFF GRADE	TONNES (Mt)	NICKEL GRADE (% Ni)	NICKEL ('000 t)
MEASURED	3.8	1.1	42.5
INDICATED	4.9	0.9	45.7
INFERRED	20.7	0.8	171.3
TOTAL RESOURCES	**29.3**	**0.9**	**259.4**

Significant figures do not imply precision. Figures are rounded according to JORC Code guidelines.
Mineral Resource stated as total Ni, which includes sulphide and silicate phases.
Competent Person:
Peter Carolan (Member of AusIMM, employee of MMG)

High Lake Mineral Resources

							CONTAINED METAL				
2% Cu EQUIVALENT CUT-OFF GRADE	TONNES (Mt)	ZINC GRADE (% Zn)	COPPER GRADE (% Cu)	LEAD GRADE (% Pb)	SILVER GRADE (g/t Ag)	GOLD GRADE (g/t Au)	ZINC ('000 t)	COPPER ('000 t)	LEAD ('000 t)	SILVER (Moz)	GOLD (Moz)
MEASURED	–	–	–	–	–	–	–	–	–	–	–
INDICATED	17.2	3.4	2.3	0.3	70	1.0	576.2	387.0	53.3	38.7	0.5
INFERRED	–	–	–	–	–	–	–	–	–	–	–
TOTAL RESOURCES	**17.2**	**3.4**	**2.3**	**0.3**	**70**	**1.0**	**576.2**	**387.0**	**53.3**	**38.7**	**0.5**

Significant figures do not imply precision. Figures are rounded according to JORC Code guidelines.
Competent Person:
George H. Wahl (Member Association of Professional Geoscientists of Ontario, employee of G. H. Wahl & Associates)

Izok Lake Mineral Resources

						CONTAINED METAL			
2% Zn EQUIVALENT CUT-OFF GRADE	TONNES (Mt)	ZINC GRADE (% Zn)	COPPER GRADE (% Cu)	LEAD GRADE (% Pb)	SILVER GRADE (g/t Ag)	ZINC ('000 t)	COPPER ('000 t)	LEAD ('000 t)	SILVER (Moz)
MEASURED	–	–	–	–	–	–	–	–	–
INDICATED	14.4	12.9	2.5	1.3	71	1,863.5	361.5	184.3	32.9
INFERRED	0.4	6.4	3.8	0.3	54	23.6	14.0	1.0	0.6
TOTAL RESOURCES	**14.8**	**12.8**	**2.5**	**1.3**	**71**	**1,887.1**	**375.5**	**185.3**	**33.5**

Significant figures do not imply precision. Figures are rounded according to JORC Code guidelines.
Competent Person:
Tim Maunula (Member Association of Professional Geoscientists of Ontario, employee of Wardrop Engineering)

ORE RESERVES AS AT 30 JUNE 2011

Sepon Ore Reserves

	TONNES (Mt)	COPPER GRADE (% Cu)	GOLD GRADE (g/t Au)	SILVER GRADE (g/t Ag)	CONTAINED METAL COPPER ('000 t)	CONTAINED METAL GOLD (Moz)	CONTAINED METAL SILVER (Moz)
SEPON GOLD DEPOSITS							
PROVED	2.0	–	0.9	5	–	0.1	0.3
PROBABLE	2.7	–	1.1	7	–	0.1	0.6
TOTAL	**4.7**	**–**	**1.0**	**6**	**–**	**0.2**	**0.9**
SEPON COPPER DEPOSITS							
PROVED	10.9	3.8	–	–	409.0	–	–
PROBABLE	7.9	4.0	–	–	312.8	–	–
TOTAL	**18.7**	**3.9**	**–**	**–**	**721.9**	**–**	**–**
TOTAL ORE RESERVES					**721.9**	**0.2**	**0.9**

Cut-off grades for gold deposits range from 0.39 to 0.47 g/t Au based on metallurgical recovery and haulage distance using a gold price of US$1,300/oz.
Cut-off grades for copper deposits range from 1.07 to 3.78% Cu based on metallurgical recovery and haulage distance using a US$3/lb Cu price.
Competent Person:
Olivier Varaud (Member of AusIMM, employee of MMG)

Century Ore Reserves

	TONNES (Mt)	ZINC GRADE (% Zn)	LEAD GRADE (% Pb)	SILVER GRADE (g/t Ag)	CONTAINED METAL ZINC ('000 t)	CONTAINED METAL LEAD ('000 t)	CONTAINED METAL SILVER (Moz)
PROVED	17.4	10.2	1.1	20	1,780.5	190.9	11.1
PROBABLE	7.4	9.9	1.1	19	735.6	82.0	4.4
TOTAL ORE RESERVES	24.8	10.1	1.1	19	2,516.0	272.9	15.5

Cut-off grade based on zinc equivalent grade of 3.9%, using a zinc price of US$2,340/t, lead price of US$2,330/t, silver price of US$19/oz and 0.86 exchange rate.
Competent Person:
Mel Palancian (Member of AusIMM, employee of MMG)

Golden Grove Ore Reserves

	TONNES (Mt)	ZINC GRADE (% Zn)	COPPER GRADE (% Cu)	LEAD GRADE (% Pb)	SILVER GRADE (g/t Ag)	GOLD GRADE (g/t Au)	CONTAINED METAL ZINC ('000 t)	CONTAINED METAL COPPER ('000 t)	CONTAINED METAL LEAD ('000 t)	CONTAINED METAL SILVER (Moz)	CONTAINED METAL GOLD (Moz)
PRIMARY ZINC[1]											
PROVED	0.9	11.0	0.4	1.5	83	1.5	97.9	3.6	12.9	2.4	0.0
PROBABLE	0.2	7.9	0.4	1.3	77	1.2	13.4	0.7	2.1	0.4	0.0
TOTAL	1.1	10.5	0.4	1.4	82	1.4	111.3	4.2	15.0	2.8	0.0
PRIMARY COPPER[1]											
PROVED	3.9	0.3	2.4	–	15	0.4	11.8	94.7	–	1.9	0.1
PROBABLE	1.3	0.2	2.3	–	12	0.3	2.5	29.1	–	0.5	0.0
TOTAL	5.2	0.3	2.4	–	14	0.4	14.4	123.8	–	2.4	0.1
PIT[2]											
PROVED	–	–	–	–	–	–	–	–	–	–	–
PROBABLE	3.0	–	2.4	–	–	–	–	71.2	–	–	–
TOTAL	3.0	–	2.4	–	–	–	–	71.2	–	–	–
TOTAL ORE RESERVES							125.7	199.2	15.0	5.2	0.1

Cut-off grade based on nett smelter return value of US$100/t, using a copper price of US$3/lb, zinc price of US$1/lb, lead price of US$0.95/lb, silver price of US$17/oz, gold price of US$1,000/oz and 0.84 exchange rate.
Competent Persons:
1. Wayne Ghavalas (Member of AusIMM, employee of MMG)
2. Angus Henderson (Member of AusIMM, employee of MMG)

Rosebery Ore Reserves

	TONNES (Mt)	ZINC GRADE (% Zn)	COPPER GRADE (% Cu)	LEAD GRADE (% Pb)	SILVER GRADE (g/t Ag)	GOLD GRADE (g/t Au)	CONTAINED METAL ZINC ('000 t)	COPPER ('000 t)	LEAD ('000 t)	SILVER (Moz)	GOLD (Moz)
PROVED	4.0	11.1	0.3	3.5	1.7	125	444.0	12.0	138.0	16.1	0.2
PROBABLE	2.6	8.7	0.2	3.4	1.6	137	226.2	5.2	87.1	11.5	0.1
TOTAL ORE RESERVES	6.6	10.2	0.3	3.4	1.7	130	670.2	17.2	225.1	27.5	0.4

Cut-off grade based on nett smelter return value of A$175/t, using a copper price of US$3/lb, zinc price of US$1/lb, lead price of US$0.94/lb, silver price of US$17/oz, gold price of US$1,000/oz and 0.84 exchange rate.

Competent Person:
Alex Bell (Member of AusIMM, employee of MMG)

Dugald River Ore Reserves

	TONNES (Mt)	ZINC GRADE (% Zn)	LEAD GRADE (% Pb)	SILVER GRADE (g/t Ag)	CONTAINED METAL ZINC ('000 t)	LEAD ('000 t)	SILVER (Moz)
PROVED	19.8	12.3	1.8	52	2435.4	356.4	33.2
PROBABLE	19.2	12.2	2.1	33	2342.4	403.2	20.1
TOTAL ORE RESERVES	39.0	12.3	1.9	42	4777.8	759.6	53.2

Cut-off grade based on nett smelter return value of A$125/t, using a zinc price of US$1/lb, lead price of US$0.50/lb, silver price of US$11/oz and 0.75 exchange rate.

Competent Person:
Mel Palancian (Member of AusIMM, employee of MMG)

The information in this report that relates to Ore Reserves is based on information compiled by the listed Competent Persons, who are Members or Fellows of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists or a 'ROPO' and have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2004 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code). Each of the Competent Persons has given consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

SUSTAINABILITY

The care for people, environment and stakeholders is of the utmost importance and is integrated in the management of our business. The Company's sustainability policy and principles are supported by its core values of safety, integrity, action and results that underpin the behaviour of all employees and contractors.

As a member of the International Council on Mining and Metals, the Company is committed to aligning its practices to the Council's Sustainable Development Framework. This includes integrating a set of ten principles and seven supporting position statements on sustainability into corporate policies.



Golden Grove employees learn about Indigenous heritage.

"The care for our people, environment and stakeholders is of the utmost importance and is integrated into the management of our business."

In 2011 the Company identified a three-year program through which it will meet these alignment objectives. In addition, ICMM members are required to develop transparent and accountable reporting practices. This year the Company will publish its second annual Sustainability Report according to the Global Reporting Initiative indicators and the ICMM assurance procedure.

Among the Company's primary sustainability objectives is protecting the health, safety and wellbeing of its employees and contractors. It aims to minimise its impact on the environment by responsibly managing emissions and waste. It wants to ensure that the communities in which it operates receive real benefit from its activities. When it comes to the way the Company operates, it wants to be known for its integrity to ensure that the workforce behaves with respect to other people and cultures.

The Company uses a robust governance process to identify its material sustainability issues, including the review of Board SHEC Committee reports and the Company and operational site risk registers, feedback from stakeholders and review of industry issues.

The Company's material sustainability issues can be broadly grouped into the following five areas.

OUR PEOPLE

People are an important part of and a strategic driver for the business. At the end of 2011 the Company had a workforce of approximately 8,500 people including contractors. Of this, approximately 60% were employed directly by the Company predominantly based at its operational mines. Indigenous employees make up a total of 10% of the workforce, with 25% of Century employees being Indigenous and 87% of Sepon employees being drawn from local communities. Women comprise approximately 17% of the total workforce. The potential development of the Dugald River project will create around 500 jobs.

The Company has experienced ongoing success from its pre-employment and training programs at all sites. These programs aim to attract new local people to roles in its operations, prepare them to enter the workforce and support them with safety and technically appropriate training throughout their employment.



Community members from around Sepon mine, Laos.

Recent highlights have included the graduation of 37 Lao employees from a Royal Melbourne Institute of Technology Certificate III course, the graduation of 14 youths from Golden Grove's Indigenous pre-employment program, the addition of 80 local and Indigenous youths to Century through its pre-employment and direct entry programs, and the employment of the first apprentices at Rosebery under a new program during 2011.

HEALTH AND SAFETY

The Company's overall health and safety vision is a 'Zero Harm and Fatality Free' workplace. As part of the priority to improve safety and health performance, a major program was launched across the business in 2010 called 'Stop & Think'. This program continued throughout 2011 and encourages the workforce to literally stop and think about the consequences of their actions before they commence a task.

At the end of 2011, the total recordable injury frequency rate (TRIFR) per million hours worked was 4.1, an improvement compared with the 2010 result of 4.8. The lost time injury frequency rate (LTIFR) was 0.6, a disappointing increase compared with the 2010 LTIFR of 0.4.

These statistics encompass the Company's whole workforce – employees and contractors. We continuously seek improvement and our priority remains on safety in 2012.

The Company also records occupational disease rates at a site level to monitor employee health. This includes the regular screening of employees to check blood lead levels at sites where lead is found in the mine's ore body.

Random drug and alcohol testing is also performed at all sites and at head office. Positive drug results are subject to a review process that may include validation testing, counselling and a review against the Code of Conduct.

WORKING WITH OUR STAKEHOLDERS

The Company has a wide range of stakeholders that are affected by its operations in positive and sometimes challenging ways. These include local communities, Indigenous people, employees, contractors, suppliers, shareholders, government and regulators. The importance of consulting with, listening and responding openly to stakeholders is recognised. This helps the Company to build positive relationships and be a welcomed and valued member of the communities in which it operates.

Ultimately, this benefits stakeholders and helps maintain the Company's 'social licence to operate'.

In 2011 the Company strengthened corporate oversight of stakeholder engagement and community relations management. This included commencement of a group-wide government relations strategy, development of a community relations management system, and a strategic investor relations plan.

RESPECTING OUR ENVIRONMENT

The Company recognises that excellence in managing environmental responsibilities is essential to long-term success. Minimising the impact of activities on the environment is a key objective for the business. The aim is to mitigate the operations' environmental footprint and equip the workforce to ensure the effective management of environmental issues.

Total energy consumption in 2011 was 6,452,901 gigajoules, while total greenhouse gas emissions were 869,595 tonnes of carbon dioxide equivalent. These are used and generated by the Company's mining operations and development projects in Australia and Laos. The Company reports its energy use to the Australian Government through the *National Greenhouse and Energy Reporting Act 2007* and the *Energy Efficiency Opportunities Act*.

Total water input for 2011 was 48,803 megalitres. Water is critical to the mining process as it is primarily used to process ore into concentrate. Where practicable the operations recycle and reuse water as much as possible.

Mine closure management is a key focus for the Company, with effective closure being critical to its activities. Closure plans are in place and periodically reviewed at operating sites to consider current and future environmental and community needs.

SUSTAINING OUR ECONOMIC PERFORMANCE

Building a business that is economically sustainable will ensure that the Company is able to share the benefits derived from operations with its stakeholders, now and into the future. In addition, the Company aims to invest in capacity building and to support the local economies in which it operates.

During the year, local investment included Sepon's annual provision to the Village Development Funds and Trust Funds (which facilitate local self-sufficiency projects), local entrepreneurial skills training, and preferential sourcing of local goods and services. In Australia, among other investments, Golden Grove launched an Education Engagement Program to broadly reinforce students' futures in their communities, while Rosebery supported the development of future tourism capacity in the township.

MANAGEMENT DISCUSSION AND ANALYSIS

OVERVIEW

The Group's continuing operations recorded solid operating performance in 2011 with all mines within revised annual guidance for production and cost.

The Group benefited from higher sustained base and precious metal prices and sales volumes of copper cathode, zinc and lead, but input cost pressures, most notably the stronger Australian dollar, continued to affect the operating sites' margins.

The Group's continuing operations' underlying EBITDA (excluding the following one-off items) was 2.1% below 2010, reflecting a higher level of expenditure on process and system standardisation necessary to support the Company's growth strategy.

US$ MILLION	2011	2010
EBITDA – CONTINUING OPERATIONS	1,063.8	820.9
ADJUST FOR ONE-OFF ITEMS:		
GAIN FROM THE SALE OF EQUINOX SHARES	152.1	–
BUSINESS ACQUISITION CREDIT/(EXPENSES)	63.8	(86.4)
ASSET/INVESTMENT WRITE-DOWNS	(39.9)	–
UNDERLYING EBITDA – CONTINUING OPS.	**887.8**	**907.3**

The Group's underlying net cash flow (excluding the following one-off items) was 31.1% below 2010 mainly due to higher capital expenditure and the timing of tax payments.

US$ MILLION	2011	2010
NET CASH FLOW	**694.1**	**(79.3)**
ADJUST FOR ONE-OFF ITEMS:		
ACQUISITION OF SUBSIDIARIES (MMG)	–	(100.0)
PLACEMENT OF ADDITIONAL MMR SHARES	494.3	–
NET SALE/(PURCHASE) OF EQUINOX SHARES	252.3	(100.2)
NET CASH FLOW FROM TRADING, FABRICATION AND OTHER OPERATIONS	(46.5)	54.1
NET PROCEEDS FROM SALE OF THE TRADING, FABRICATION AND OTHER OPERATIONS	503.0	–
LOAN PAYMENTS MADE TO ALBUM ENTERPRISES	(789.2)	–
DIVIDEND PAID TO ALBUM ENTERPRISES	–	(340.0)
UNDERLYING NET CASH FLOW	**280.2**	**406.8**

For the purpose of the management discussion and analysis, the Group's results for 2011 were compared to 2010 with the emphasis of commentary aligned with the disclosures within the financial statements, that is, focusing on the continuing operations.

The Group's management determined the operating segments based on reports reviewed by its Executive Committee. The Group's continuing operations are managed on a site-by-site basis. The Group's mining operations comprise the Century zinc/lead mine in Queensland, the Rosebery lead/zinc mine in Tasmania, the Golden Grove copper/zinc mine in Western Australia and the Sepon copper/gold project in Laos.

'Other' includes the Group's exploration and development projects, including Dugald River and the Izok Corridor project.

The Group's discontinued operations during 2011 included the trading, fabrication and other operations mainly operating in China. As at 31 December 2011, there remained some minor holding entities that are expected to be wound up/disposed of during 2012.

Anvil Mining Limited

The following management discussion and analysis excludes Anvil as the Group's acquisition of Anvil occurred in 2012. The Group's results for 2011 include approximately US$14.4 million of pre-tax costs incurred in relation to the acquisition of Anvil.

CHANGE IN ACCOUNTING POLICY

There have been no material changes in accounting policies or critical accounting estimates in relation to the Group as adopted for the 31 December 2010 accounts.

Year ended 31 December 2011 compared to the year ended 31 December 2010

Profit analysis for the Group's continuing operations

The following table shows the revenue and EBITDA results for its continuing operations by operating site.

US$ MILLION	CENTURY	SEPON	GOLDEN GROVE	ROSEBERY
REVENUE				
2011	750.4	816.9	388.5	272.5
2010	711.4	596.7	391.3	220.5
EBITDA				
2011	293.0	529.4	101.6	108.6
2010	356.2	358.6	192.4	104.5

The following discussion and analysis of the financial information and results should be read in conjunction with the financial statements.

Revenue

The Group's continuing operations generated revenue of US$2,228.3 million in 2011, which was an increase of 16.1% on 2010. The increase was driven by higher base and precious metal prices and higher sales volumes of zinc and lead, as well as copper following Sepon's expansion works. This was partly offset by lower sales volumes of copper in copper concentrate and gold as compared to 2010.

Profit on sale of investment

The sale of the Group's investment in Equinox to Barrick Gold Corporation was completed in June 2011 (approximately 37.3 million shares at C$8.15 per share), realising a profit before tax of US$152.1 million, associated income tax payable of US$36.4 million and resultant profit after tax of US$115.7 million.

Volume

The following table summarises the Group's production results.

	2011	2010	VAR %
PRODUCTION DATA ('000 t)			
ORE MINED*	11,075	11,783	(6.0)
ORE MILLED*	11,274	11,108	1.5
ZINC IN ZINC CONC**	648.6	665.9	(2.6)
COPPER IN COPPER CONC	21.7	33.5	(35.2)
COPPER CATHODE	78.9	64.2	22.9
LEAD IN LEAD CONC**	59.4	56.2	5.7
PRODUCTION DATA ('000 oz)			
GOLD***	86.6	114.1	(24.1)

* ALL SITES
** CENTURY, ROSEBERY AND GOLDEN GROVE
*** SEPON AND ROSEBERY

Ore mined was lower than 2010 due to the impact of Tropical Storm Nock-Ten on Sepon, which was partly offset by higher volume from Golden Grove.

Ore milled exceeded 2010 levels at Century, Rosebery and Sepon.

Zinc in zinc concentrate production was below 2010 production due to lower zinc feed grades, which was partly offset by higher throughput.

Copper cathode production reflected the first half year of full production from Sepon's expanded copper plant in 2011. Copper in copper concentrate at Golden Grove was 35.2% below 2010 production when the mine plan favoured copper-rich ore over the zinc ore.

Lead in lead concentrate production reflected higher throughput and recovery.

Gold production was below 2010 levels mainly due to ore availability from Sepon's Houay Yeng gold pit and lower grades.

Prices

The Group benefited considerably from sustained higher base and precious metal prices during 2011 as compared to 2010.

AVERAGE PRICES		2011	2010	VAR %
LME ZINC	US$/t	2,190	2,160	1.4
LME COPPER	US$/t	8,806	7,543	16.7
LME LEAD	US$/t	2,396	2,149	11.5
SILVER	US$/oz	35.15	20.20	74.0
GOLD	US$/oz	1,568	1,221	28.4

Costs

The Group's cost of sales were US$1,301.9 million for 2011, which represented an increase of 25.0% compared to 2010. Operating costs were adversely affected by:

- the stronger Australian dollar (A$) against the US dollar (US$). The A$:US$ rate averaged 1.033 for 2011 and 0.9192 for 2010. This increase of 12.4% contributed to a material increase in the A$ denominated portion of operating sites' costs of US$73.6 million.
- price increases of key inputs into the Group's mining, processing and support activities as seen across the mining industry due to the current resources boom. These input cost pressures particularly affected the costs associated with employees, contractors, energy and reagents.
- volume-related cost increases in 2011:
  - Golden Grove's Scuddles mine restart
  - Sepon's copper expansion
  - Century's higher zinc and lead sales volumes; and
  - increased throughput at Rosebery.

» Government royalty expenses of US$94.4 million were 23.0% higher than 2010 mainly due to stronger financial performance by Sepon and Century.

Depreciation and amortisation expenses of US$308.5 million were 3.0% above 2010 numbers, driven by increased charges at Sepon flowing from the copper plant expansion.

Selling expenses of US$80.3 million were $6.4 million above 2010 figures due to higher sales volumes from Century and Sepon.

Administrative expenses of US$135.9 million were US$77.3 million above 2010. Business expenditure increased largely to support the Company's future growth strategy.

There has been a significant step up in investment in information technology of approximately US$17 million. This relates to the transformation of key management systems to provide a foundation for the Company's simplification and growth, including essential infrastructure. Work has commenced on a standardised and simplified business management system, underpinned by common global processes and a standard SAP mining platform.

Business development activity has resulted in an increase of US$18 million, which has focused on the advancement and development of projects such as Dugald River, the Izok Corridor project, Century phosphate and other growth projects in the pipeline. This also included additional merger and acquisition outlay, reflecting a larger internal team and external advisors in support of potential acquisitions.

Business support costs included a further spend of US$17 million for operational excellence, in particular improved asset utilisation, establishment of a shared business services team and strategic sourcing which delivered sustainable business benefits in 2011 and will continue to do so in later years.

The 2010 result included a one-off benefit of US$6 million derived from the sub-lease of one floor of the Company's Melbourne office.

The Company has also established a stronger presence at the registered office in Hong Kong by investing in the roll-out of standardised processes and systems to align with the rest of the Company.

A **business acquisition expense** credit of US$63.8 million related to the reversal of assumed business acquisition costs provided for in 2010 (which totalled US$86.4 million) in relation to the acquisition of MMG. It was confirmed during the first half 2011 that these costs will not be payable by the Group.

Exploration expenses of US$64.0 million were 15.3% above 2010 mainly due to higher spend in Canada and at Rosebery. The weak US$ had an adverse impact on the Group's exploration costs of approximately US$4.4 million.

Other expenses included the impairment write-downs of the following items:

» Avebury mine's net fixed assets of US$24.3 million.

» Century trucks of US$9.2 million.

» Exploration listed investments – mark to market of US$6.4 million.

Net financing costs of US$46.2 million exceeded 2010 by US$7.7 million mainly due to higher interest expense on loans for the MMG acquisition.

The **tax expense** of the Group was US$225.5 million in 2011. This represents an increase of US$98.9 million compared to the tax expense in 2010 due to increased profit before tax and net tax benefits of US$51.1 million credited in 2010 from recognition of deferred tax assets previously unrecognised. The Group's effective tax rate in 2011 was 31.8% and is consistent with the applicable taxation rates for Australia (30%) and Laos (33.3%), which are the major operating jurisdictions.

Profit after tax: The Group's net profit after tax from continuing operations of US$483.6 million was 35.8% above 2010.

SEGMENTAL ANALYSIS

Century

Century's ore mined represented a strong result in view of the significant rainfall events in Queensland early in 2011. Higher throughput assisted production, although zinc production fell below 2010 due to lower feed grades while lead benefited from higher recovery. Century's EBITDA margin decreased from 2010 due to unfavourable effects from the stronger A$ (US$14.7 million) and higher costs for employees, contractors and reagents.

CENTURY	2011	2010	VAR %
PRODUCTION ('000 t)			
ORE MINED	5,217.5	5,287.7	(1.3)
ORE MILLED	5,297.7	5,210.6	1.7
ZINC IN ZINC CONCENTRATE	497.3	510.6	(2.6)
LEAD IN LEAD CONCENTRATE	26.5	25.2	5.2
FINANCIAL			
EBITDA (US$ MILLION)	293.0	356.2	(17.7)
EBITDA MARGIN %	39.0	50.1	(22.0)

Sepon

Sepon's ore mined was lower than 2010 due to the impact of Tropical Storm Nock-Ten. Ore milled and copper production exceeded 2010, which reflected the first half year of full production from the expanded copper plant. The second half 2011 exceeded pro rata nameplate capacity. Gold production was lower due to ore availability from the Houay Yeng gold pit and lower grades.

Sepon's EBITDA margin improved on 2010 due to the higher gold and copper prices, but was partly offset by higher reagent costs.

SEPON	2011	2010	VAR %
PRODUCTION			
ORE MINED ('000 t)	3,372.1	4,453.9	(24.3)
ORE MILLED ('000 t)	3,621.7	3,575.3	1.3
COPPER CATHODE ('000 t)	78.9	64.2	22.9
GOLD ('000 oz)	74.5	104.6	(28.8)
FINANCIAL			
EBITDA (US$ MILLION)	529.4	358.6	47.6
EBITDA MARGIN %	64.8	60.1	7.8

Golden Grove

Golden Grove's ore mined exceeded 2010 due to new development in copper ore zones and volume from the Scuddles mine, which was restarted in the second quarter 2011. Copper ore milled and copper production were well below 2010, when the mine plan favoured copper-rich ore over the zinc ore.

Zinc ore mined and milled exceeded 2010, but zinc production was lower than the previous year. This was driven by lower grades and partly offset by higher throughput.

Golden Grove's EBITDA margin was significantly lower than in 2010 due to the impact of the stronger A$ on costs (US$31.7 million), the Scuddles mine restart (US$21.2 million) as well as higher costs for employees and contractors.

GOLDEN GROVE	2011	2010	VAR %
PRODUCTION ('000 t)			
ORE MINED	1,705.6	1,354.0	26.0
ORE MILLED	1,566.5	1,597.0	(1.9)
ZINC IN ZINC CONCENTRATE	70.7	73.3	(3.5)
COPPER IN COPPER CONCENTRATE	21.7	33.5	(35.2)
FINANCIAL			
EBITDA (US$ MILLION)	101.6	192.4	(47.2)
EBITDA MARGIN %	26.2	49.2	(46.8)

Rosebery

Rosebery recorded a strong performance in 2011 with higher ore mined driven by improved planning and coordination as well as mobile fleet and ventilation upgrades. Higher ore milled was driven by higher throughput, but was partly offset by lower feed grades. Zinc production was lower as the increased throughput did not fully offset the declining zinc head feed grades. Higher throughput and recovery resulted in more lead.

Rosebery's EBITDA margin was below 2010 due to higher costs flowing from the unfavourable foreign exchange effects (US$17.6 million) and increased costs for employees and contractors.

ROSEBERY	2011	2010	VAR %
PRODUCTION ('000 t)			
ORE MINED	779.4	687.2	13.4
ORE MILLED	788.4	724.8	8.8
ZINC IN ZINC CONCENTRATE	80.7	82.0	(1.6)
LEAD IN LEAD CONCENTRATE	25.4	23.2	9.5
FINANCIAL			
EBITDA (US$ MILLION)	108.6	104.5	3.9
EBITDA MARGIN %	39.9	47.4	(15.9)

Trading, fabrication and other

Trading, fabrication and other operations were classified as discontinued operations held for sale in 2011. Amortisation and depreciation and equity accounting for jointly-controlled entities and associates ceased from 1 January 2011.

DISCONTINUED OPERATIONS PROFIT (US$ MILLION)	2011	2010	VAR %
PROFIT AFTER INCOME TAX	37.5	74.2	(49.5)
GAIN ON DISPOSAL OF SUBSIDIARIES AND INVESTMENT ACCOUNTED FOR USING THE EQUITY METHOD	53.4	–	N/A
TOTAL NET PROFIT AFTER TAX	**90.9**	**74.2**	**22.5**

The 2011 post-tax profit of US$37.5 million was 49.5% below the 2010 figure mainly due to the exclusion of the Group's share of profits of jointly-controlled companies and associates of US$23.2 million.

The trading, fabrication and other operations generated lower profit in 2011 compared to 2010 mainly attributable to lower margins. The trading, fabrication and other operations recorded a loss as a result of cost increases.

The gain on the disposal of the trading, fabrication and other operations of US$53.4 million mainly related to Minmetals Aluminium after allowing for tax expense of US$32.6 million and transaction costs of US$1.5 million.

DEVELOPMENT PROJECTS

Dugald River, Australia

The Group is continuing to progress the development of the Dugald River project in north-west Queensland.

In the fourth quarter 2011, the Board approved further expenditure of A$157 million for the next stage of the project, for spend up until the third quarter 2012.

In November 2011, the Queensland Department of Environment and Resource Management provided an assessment report on Dugald River's Environmental Impact Statement, advising that the project was suitable to proceed to the next stage of the approval process.

The Company is undertaking extensive pre-commitment activities, including advancing engineering design, refining capital and operating cost estimates, and advancing power, access and infrastructure negotiations.

Early works commenced on site in October 2011 and include the development of two exploration declines that will intersect the main part of the ore body in late 2012.

The final decision to develop the Dugald River project is expected to be made by the Board in 2012 and subject to other required approvals, the Company aims to have the mine in operation during 2014.

Dugald River project capitalised expenditure increased to US$58.1 million in 2011 (2010: US$5.7 million).

Izok Corridor project, Canada

A pre-feasibility study identified the preferred development option for the Izok and High Lake ore bodies.

This includes the installation of a two-million-tonne per annum concentrator at the Izok Lake deposit and developing the capacity to ship 650,000 tonnes of concentrate from Gray's Bay.

Initial work has now started on a definitive feasibility study for the integrated development of Izok Lake and High Lake, which is expected to take 18 to 24 months.

Exploration costs in Canada/Americas totalled US$19.9 million in 2011 compared to US$11.4 million in 2010.

Golden Grove copper open pit, Western Australia

During the first quarter 2011, the Board approved US$22 million for the development of a copper open pit at Gossan Hill as part of the Golden Grove operation. The copper open pit is expected to produce approximately 235,000 tonnes of copper concentrate containing 59,600 tonnes of copper metal in concentrate at 25% copper.

The project includes the development of an open pit mine, waste rock dump and supporting infrastructure including haul and access roads.

The first drill hole was made in November 2011 and full-scale production commenced in January 2012.

Sepon primary gold study

A scoping study, completed in late 2011, confirmed the potential to mine and process primary, refractory gold ores at Sepon. The Mineral Resource is 45 million tonnes at 2.2 grams per tonne gold and will be mostly mined by open pit methods. A pre-feasibility study has commenced to evaluate the most suitable processing option and production rate, to carry out detailed metallurgical testing and to commence baseline field work to support the permitting process.

Commissioned projects

Sepon copper output increased from 65,000 to 80,000 tonnes copper cathode per annum following the successful commissioning of the copper expansion project and ramp-up during the first half 2011. Total handover occurred for the transmission lines of the high voltage powerline and substations.

The Golden Grove Tailings Storage Facility 3 was handed over to site operations to commission during the first quarter 2011.

CASH FLOW ANALYSIS

Operating activities

The Group's continuing operations generated net cash from operations in 2011 of US$909.3 million, which represented an increase of 7.5% on 2010. The increased cash flows were predominantly due to higher receipts from customers.

The Group paid income taxes totalling US$209.6 million in 2011 comprising:

- US$122.3 million payment from LXML:
  - US$92.3 million which settled Sepon's 2010 tax liability (2010: US$57.5 million)
  - US$30 million towards Sepon's 2011 tax liability, which was a prepayment at the request of the Government of Laos to aid in the country's flood relief efforts.
- US$87.3 million from the MMG Australia group, which included US$50.4 million in instalments toward the 2011 income tax liability.

The Group's discontinued operations generated net cash from operations of US$100.8 million, which included a significant increase in bills payable.

Investing activities

The Group's continuing operations generated net cash from investing activities of US$285.3 million in 2011, which mainly reflected:

- Consideration received from the disposal of the trading, fabrication and other operations (net of cash held by these businesses, transaction costs, taxes paid and outstanding receivables) totalling US$503.0 million. The remaining funds were invested partly in cash deposits and a loan of US$95.0 million to Album Enterprises.
- Payments for property, plant and equipment of US$380.3 million, which were 23.6% above 2010. This was driven by:
  - Higher mine development at Century
  - Dugald River project pre-commitment spend of US$58.1 million (2010: US$5.7 million).
- The Group's purchase of an additional US$58.9 million of Equinox shares during 2011 (2010: US$100.2 million) and subsequent proceeds of US$311.2 million from the disposal of its entire Equinox shareholding in the first half 2011.

The Group's discontinued operations drew down net cash of US$99.1 million mainly by placing more funds in time deposits.

Financing activities

The Group's continuing operations had a net cash outflow from financing activities of US$244.4 million in 2011.

- Proceeds of US$494.3 million were received from the issuance of 762,612,000 shares by the Company which were used towards full repayment of the loan from Album Enterprises (US$694.2 million) during the first half 2011.
- Principal repayments of US$17.2 million were made in 2011 in accordance with external debt agreements.
- Interest paid of US$26.3 million was US$1.2 million above 2010 due to the higher debt levels during 2011.

The Group's discontinued operations used net cash of US$48.2 million in financing activities, mainly the repayment of bank loans used to provide working capital for trading during 2011.

Financial resources and liquidity for the Group

The Group strengthened its liquidity and financial position during 2011. During the period:

- total liabilities decreased by 33.2% to US$1,959.1 million while total assets only decreased by 0.4% to US$3,453.5 million; and
- shareholders' equity increased by 200.9% to US$1,435.4 million primarily driven by the share placement and results for the period.

The gearing ratio calculation in relation to the Group's continuing operations is shown in the following table. As at 31 December 2011, the Group held more cash than it had borrowings given the recent receipt of consideration from the sale of the interests in Minmetals Aluminium and NCA. A substantial part of the cash has been used in funding the acquisition of Anvil in 2012.

US$ MILLION	2011	2010
CASH AND CASH EQUIVALENTS	1,096.5	398.2
TIME DEPOSITS	–	12.8
PLEDGED BANK DEPOSITS	–	6.4
LESS: TOTAL BORROWINGS	1,081.7	1,965.3
NET (CASH)/DEBT	**(14.8)**	**1,547.9**
TOTAL EQUITY	1,494.4	533.4
GEARING RATIO	**N/A**	**2.9**

The current ratio in relation to the Group decreased from 1.7 at 31 December 2010 to 1.4 at 31 December 2011. The net increase in current assets, driven by the sale of the trading, fabrication and other operations, was less than the corresponding increase on current liabilities. This was due to the classification of external debt that is due to be repaid during 2012. This includes US$751.0 million of facilities that expire in June 2012.

The Group's cash and bank deposits of US$1,096.5 million at 31 December 2011 were mainly denominated in US$.

As at 31 December 2011, the profile of the Group's borrowings was as follows:

- 0.4% were in A$ and 99.6% were in US$;
- 0.4% were in fixed rates and 99.6% were in floating rates; and
- 72.8% were repayable within one year, 3.3% were repayable between one and two years, 23.9% were repayable between two and five years.

MATERIAL ACQUISITIONS AND DISPOSALS

Equinox shareholding

The Group disposed of its entire shareholding (equal to approximately 4.2% of the issued capital) in Equinox to Barrick Gold Corporation during June 2011.

Trading, fabrication and other

On 28 March 2011, the Board of the Company approved the program of strategic divestments of assets that were assessed as not being core to the Company's future. These assets included the trading, fabrication and other operations (the Disposal Group).

On 15 September 2011, the Company announced that it had agreed to sell its entire 100% equity interest in Minmetals Aluminium, Riseup Dragon Limited's (Riseup Dragon) entire 72.80% equity interest in NCA, Orienmet Industry Co. Ltd.'s (Orienmet Industry) entire 51% equity interest in Yingkou Orienmet, and Lontic (H.K.) Limited's entire 36.2913% equity interest in Changzhou Jinyuan (together, the Disposal Group) for an aggregate consideration of US$726.8 million (the Disposal). The Disposal was approved by the independent shareholders of the Company on 28 October 2011 and materially completed in December 2011.

Save as disclosed above and the acquisition of Anvil, the Group did not make any other material acquisitions or disposals during 2011. The Group adopts a 5% threshold on assets, profit, revenue and market capitalisation ratios as guidance in determining materiality of the acquisitions and disposals.

CONTINGENT LIABILITIES

The Company and its subsidiaries are defendants from time to time in legal proceedings arising from the conduct of their businesses. The Group does not consider that the outcome of any of these proceedings ongoing at balance date, either individually or in aggregate, is likely to have a material effect on its financial position. Where appropriate, provisions have been made.

Certain bank guarantees have been provided in connection with the operations of certain of the subsidiaries of the Company. These are primarily associated with the terms of mining leases or exploration licences. At the end of 2011, no claims have been made under these guarantees. The amount of these guarantees may vary from time to time depending upon the requirements of the relevant regulatory authority. These guarantees amount to US$91.5 million (2010: US$112.8 million). Provision is made in the financial statements for the anticipated costs of the mine rehabilitation obligations under the mining leases and exploration licences.

Charges on assets

As at 31 December 2011, the following assets of the Group were pledged to certain banks for the banking facilities granted to the Group:

- an external borrowing of US$190.0 million was secured by a share charge to the lender of 100% of the shares held in Album Resources' wholly-owned subsidiary, Album Investment, a mortgage over 70% of the shares in certain subsidiaries of Album Investment and a mortgage over 70% of shares of MMG Laos Holdings Limited.

RISK MANAGEMENT

The Group's activities expose it to a variety of financial risks, including commodity price risk, equities price risk, interest rate risk, foreign exchange risk, credit risk, liquidity risk, operational risk and sovereign risk. The Group's overall risk management focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. The use of financial derivative instruments strictly follows the yearly plans approved by the Board of directors of the Company and its subsidiaries. The Group does not and is prohibited from entering into derivative contracts for speculative purposes.

Commodity price risk

The principal activities of the Group are the mining and sale of zinc, copper, lead, gold and silver. As commodity markets are influenced by global as well as regional supply and demand conditions, any unexpected price changes in the market exchanges might affect the Group's earnings and performance. To mitigate this risk, the Group closely monitors any significant exposures. The Group generally believes commodity price hedging in relation to the mining operations would not provide long-term benefits to its shareholders.

Equities price risk

The Group is no longer materially exposed to equity securities price risk. This previously arose from investments held by the Group in Equinox.

Interest rate risk

The Group is exposed to interest rate volatility on deposits and borrowings. Deposits and borrowings at variable rates expose the Group to cash flow interest rate risk. Deposits and borrowings at fixed rates expose the Group to fair value interest rate risk. Details of the Group's cash and cash equivalents have been disclosed in Note 24 while the details of the Group's borrowings are set out in Note 30.

The Group regularly monitors its interest rate risk to ensure there are no undue exposures to significant interest rate movements.

Foreign exchange risk

The Group operates internationally and is exposed to foreign currency exchange risk. The Group's reporting currency and functional currency of the majority of subsidiaries with the Group is US$. The majority of revenue received by the Group is US$. The Group's foreign currency exchange risk arises predominantly from the currency in which the Group's operations are located.

The Group is exposed to foreign exchange risk primarily with respect to the A$, the Hong Kong dollar (HK$) and the Canadian dollar (C$) in relation to the Group's continuing operations.

Given the exchange rate peg between the HK$ and US$, it is not foreseen that the Group will be exposed to significant exchange rate risk for transactions conducted in HK$ or US$. However, exchange rate fluctuations of the A$ or C$ against the US$ could affect the Group's performance and asset values.

Under normal market conditions, the Group does not believe that the active currency hedging of transactions would provide long-term benefit to shareholders. The Group tries to minimise these exposures through natural hedges wherever possible. For instance, the majority of external debt and surplus cash is denominated in US$. A portion of cash may be held in A$ to meet operating costs.

The long-term relationship between commodity prices and the currencies of the countries where the Group operates provides a degree of natural protection. However, the Group may choose to hedge large foreign currency exposures such as capital expenditure, dividends or tax payments.

Credit risk

Credit risk in relation to the Group's continuing operations arises primarily from trade receivables and bank deposits. The Group's maximum exposure to this risk, without taking account of any collateral held, is represented by the carrying amounts of these financial assets in the consolidated balance sheet after deducting any provision for impairment.

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting obligations associated with financial liabilities.

Management utilises both short and long-term cash flow forecasts and other consolidated information to ensure appropriate liquidity buffers are maintained to support the Group's activities.

Operational risk

The Group's operational risks include secure supply of key inputs such as electricity and fuel.

Sovereign risk

The Group has operations in developing countries that may carry higher levels of sovereign risk. In general, however, mining companies are increasingly willing to develop or acquire projects in locations that would traditionally have been viewed as having higher sovereign risk.

CAPITAL RISK MANAGEMENT

The Group's objectives on managing capital are to safeguard the Group's ability to continue as a going concern, support the Group's sustainable growth, enhance shareholder value and provide capital for potential acquisitions and investment.

The Group manages the capital structure and makes adjustments to it in light of changes in economic conditions and business strategies. In order to maintain or adjust the capital structure, the Group may adjust the amount of dividend payments to shareholders, issue new shares or raise/repay debts.

The Group monitors capital by using the gearing ratio, defined as total borrowings less cash and bank deposits divided by shareholders' equity.

CAPITAL EXPENDITURE AND COMMITMENTS

The Group's capital expenditure of US$380.3 million for 2011 (2010: US$307.7 million) included US$235.6 million of growth-related capital expenditure (2010: US$191.6 million). The growth-related capital expenditure mainly included the following:

GROWTH CAPITAL (US$ MILLION)	2011	2010
MINE DEVELOPMENT – CENTURY	127.1	106.0
MINE DEVELOPMENT – SEPON	42.5	15.0
DUGALD RIVER TOTAL SPEND	58.1	5.7
COPPER EXPANSION – SEPON	5.9	43.1
VENTILATION UPGRADE – ROSEBERY	1.0	4.4
OPEN PIT – GOLDEN GROVE	0.6	–
TAILINGS STORAGE FACILITY #3 – GOLDEN GROVE	0.4	17.4

Century's mine development related to Stage 8 (bulk waste) and Stage 9 and the expansion cut-back.

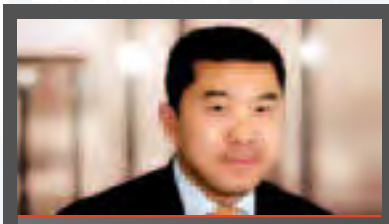
The Group's capital and non-capital commitments as at 31 December 2011 amounted to US$224.1 million (2010: US$63.9 million).

Human resources

As at 31 December 2011, the Group employed a total of 3,677 full-time employees in its continuing operations (not including contractors of the Group), of which 16 were based in Hong Kong, 1,740 in Australia, 1,832 in Laos, 21 in Canada and 68 in Group Exploration. Total staff costs for the Group's continuing operations for 2011, including directors' emoluments, amounted to US$331.5 million (2010: US$262.6 million).

The Group has adopted remuneration policies in line with market practice and remunerated its employees based on the responsibilities of their role, their performance and the performance of the Company. Other employee benefits include performance-related incentives and, in specific cases, insurance and medical coverage and a limited share option scheme. An extensive training program is offered to employees across the Company, which is designed to improve individual and group performance.

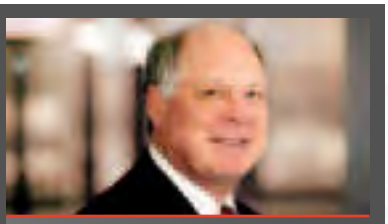
DIRECTORS AND SENIOR MANAGEMENT



Chairman
Mr Wang Lixin



Vice Chairman
Mr Hao Chuanfu



CEO and Executive Director
Mr Andrew Michelmore



CFO and Executive Director
Mr David Lamont



Non-executive Director
Mr Jiao Jian



Non-executive Director
Mr Xu Jiqing



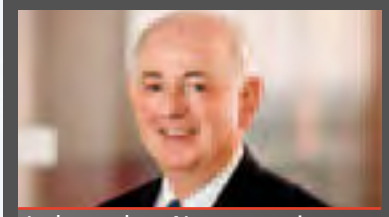
Executive Director
Mr Li Liangang



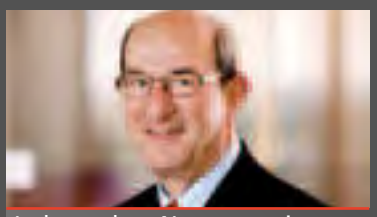
Non-executive Director
Mr Gao Xiaoyu



Independent Non-executive Director
Mr Loong Ping Kwan



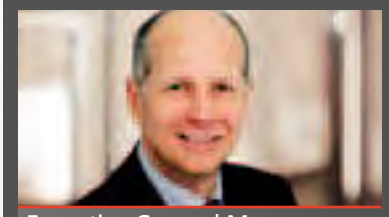
Independent Non-executive Director
Dr Peter Cassidy



Independent Non-executive Director
Mr Anthony Larkin



Chief Operating Officer
Mr Marcelo Bastos



Executive General Manager – Business Development
Mr Michael Nossal



Executive General Manager – Exploration
Mr Steve Ryan



Executive General Manager – Business Support
Mr Tim Scully

DIRECTORS' BIOGRAPHIES

CHAIRMAN

Mr Wang Lixin

Mr Wang, aged 44, was appointed the Chairman of the Company on 1 April 2011. He served as an Executive Director and a Vice President of the Company in October 2005, and was later redesignated as a Non-executive Director in January 2008; the Vice Chairman and a Non-executive Director in July 2009; and subsequently a Non-executive Director in December 2009 respectively. He is also a member of the Company's Remuneration and Nomination Committee.

Mr Wang has served as a Director of a number of subsidiaries of the Company. He has acted as the consultant of China Minmetals Non-ferrous Metals Company Limited (CMN) since November 2009.

Mr Wang holds a Bachelor of Arts in International Trade from the University of International Business and Economics in the People's Republic of China (PRC) and has more than 14 years' experience in foreign trade and corporate management, as well as five years' experience with government services.

Mr Wang joined the Ministry of Foreign Trade and Economic Cooperation in 1990 and China Minmetals Corporation (CMC) Group in 1995. From 2007 to 2009, he was the President of CMN and a Director of Shanxi Guanlv Co. Ltd, a company listed on the Shenzhen Stock Exchange (Shanxi Guanlv) from April 2009 to December 2009.

VICE CHAIRMAN

Mr Hao Chuanfu*

Mr Hao, aged 45, was redesignated as the Vice Chairman and an Executive Director of the Company in December 2010, after being appointed an Executive Director and President in May 2008. He has also served as a Director of a number of subsidiaries of the Company.

Mr Hao graduated from the University of International Business and Economics in the PRC with a degree of junior college in accounting. He is a certified public accountant in the PRC and has extensive experience in international business, financial management and corporate management.

Mr Hao joined the CMC Group in 1986 and has since been assigned to a number of departments and subsidiaries of CMC, both in the PRC and overseas. In 1996, he was appointed the Section Chief of the Finance department of CMN. In 1998, Mr Hao was appointed the Assistant General Manager of CMN and was promoted to Deputy General Manager in 1999. From 2000 to 2001, he was the Assistant General Manager of China National Nonferrous Metals Industry Trading Group Corporation, and from 2001 to 2008 he held the position of General Manager of Minmetals North-Europe AB.

EXECUTIVE DIRECTORS

Mr Andrew Gordon Michelmore

Mr Michelmore, aged 59, was appointed as an Executive Director and the CEO of the Company in December 2010. He is a member of the Company's Safety, Health, Environment and Community Committee.

Mr Michelmore is a Director of a number of subsidiaries of the Company and has been the Managing Director and CEO of MMG from its formation in June 2009. Mr Michelmore joined MMG after his tenure as CEO of Zinifex Limited (Zinifex) and then OZ Minerals Limited (OZ Minerals). He is a Director of Century Aluminum Company (a company listed on the NASDAQ and the Iceland Stock Exchange). Prior to his role as the CEO of Zinifex, Mr Michelmore spent two years working in London and Russia as the CEO of En+ Group.

Mr Michelmore has more than 28 years' experience in the metals and mining industry including 12 years at WMC Resources Limited, where he was the CEO, and prior to that, he held senior roles in the company's nickel, gold, alumina, copper, uranium and fertiliser businesses.

Mr Michelmore holds a First Class Honours degree in Engineering (Chemical) from the University of Melbourne and a Master of Arts in Politics, Philosophy and Economics from Oxford University. He is a Fellow of the Institution of Chemical Engineers, the Institution of Engineers Australia and the Australian Academy of Technological Sciences and Engineering.

Mr Michelmore is also Chairman of the International Zinc Association (IZA), Chairman of the Jean Hailes Foundation for Women's Health, Chairman of the Council of Ormond College at the University of Melbourne and a member of the Minerals Council of Australia and the Business Council of Australia.

Mr David Mark Lamont

Mr Lamont, aged 46, was appointed as an Executive Director and the CFO of the Company in December 2010.

Mr Lamont is a Director of a number of subsidiaries of the Company. He joined MMG as the CFO on its formation in June 2009 and was the CFO of OZ Minerals from October 2008. Mr Lamont holds a Bachelor of Commerce degree and is a qualified Chartered Accountant.

* Mr Hao Chuanfu resigned as a Director of the Company on 29 March 2012.

He is a member of the Institute of Chartered Accountants and was an Audit Supervisor at Deloitte Haskins and Sells before commencing a corporate career.

After progressing through a number of senior roles in the chemical and agricultural industries, Mr Lamont was appointed the CFO of Incitec Limited in 1999. He joined BHP Billiton in 2001 where he held a number of senior roles including the CFO of BHP Billiton's Energy Coal and Carbon Steel Materials Groups. Mr Lamont joined OZ Minerals from PaperlinX Limited, where he had served as the CFO since 2006 and was appointed an Executive Director in February 2008, resigning in September 2008.

Mr Li Liangang*
Mr Li, aged 48, was appointed as a Non-executive Director of the Company in December 2009 and was redesignated as an Executive Director in December 2010. He has also served as a Director of two subsidiaries of the Company.

Mr Li holds a Bachelor's degree in English language from the Normal College for Foreign Language of Beijing Union University in the PRC and has extensive experience in international business and the non-ferrous metals industry.

Mr Li joined the CMC Group in 1987. Since 1993, he has been assigned to various senior management positions with the subsidiaries of CMC in the PRC, Australia, Mexico and the USA. In July 2008 and August 2009 respectively, Mr Li was a Non-executive Director and an Independent Non-executive Director of Sino Gold Mining Limited, a company listed on the Australian Securities Exchange (ASX) and the Hong Kong Stock Exchange (which was delisted on 16 December 2009) and subsequently resigned on 4 December 2009.

NON-EXECUTIVE DIRECTORS

Mr Jiao Jian
Mr Jiao, aged 43, was appointed as a Non-executive Director of the Company in December 2010, and is a member of the Company's Remuneration and Nomination Committee.

Mr Jiao is a Director of certain subsidiaries of the Company. He was appointed as a Director and the President of CMN in May 2010, and is a Director and the President of China Minmetals Non-ferrous Metals Holding Company Limited (CMNH). Mr Jiao is also the Chairman of the Board of Directors of Shanxi Guanlv.

Mr Jiao holds a Bachelor's degree in International Economics from the Nankai University in the PRC and a Master of Business Administration from Saint Mary's University in Canada. He has extensive experience in international trade, investment and corporate management.

Mr Jiao joined the CMC Group in 1992. He was the Vice President of CMN from 2007 to May 2010.

Mr Xu Jiqing
Mr Xu, aged 44, was appointed as a Non-executive Director of the Company in May 2009 and is a member of the Company's Audit Committee.

Mr Xu has served as a Director of certain subsidiaries of the Company. He was appointed as the Vice President and CFO of CMN in 2007 and 2005 respectively. Mr Xu is a Director, Vice President and CFO of CMNH.

Mr Xu holds a Bachelor's degree in Accounting from the University of International Business and Economics in the PRC, and a Master of Business Administration from Saint Mary's University in Canada. He is a qualified senior accountant in the PRC and is a member of the Certified General Accountants Association of Canada. He has extensive experience in accounting and corporate financial management.

Mr Xu joined the CMC Group in 1991. In 1997, he was the Manager of Finance at Minmetals Development Co. Ltd., and was later promoted to Vice General Manager in 1999 and General Manager in 2000. He was also the General Manager of Finance at China National Nonferrous Metals Industry Trading Group Corporation from July 2001 to April 2002, and the General Manager of Finance at CMN from 2002 to 2007.

Mr Gao Xiaoyu
Mr Gao, aged 42, was appointed as a Non-executive Director of the Company in April 2011. He is a member of the Company's Safety, Health, Environment and Community Committee.

Mr Gao is a Director of certain subsidiaries of the Company. He has also served as the Vice President of CMNH since 2011 and the Vice President of CMN since 2008.

Mr Gao holds a Master's degree in Business Management from The Renmin University of China. He joined the CMC Group in 1993. Mr Gao has worked in the Futures department of China Nonferrous Metals Import and Export Corporation from 1993 to 1997. He was the General Manager of the Risk Management department of CMN from 2000 to 2009. Mr Gao has extensive experience in enterprise risk management and control.

*Mr Li Liangang resigned as a Director of the Company on 29 March 2012.

INDEPENDENT NON-EXECUTIVE DIRECTORS

Mr Loong Ping Kwan

Mr Loong, aged 47, was appointed as an Independent Non-executive Director of the Company in August 2009. He is a member of the Company's Remuneration and Nomination Committee and a member of the Audit Committee.

Mr Loong is a practising solicitor admitted in Hong Kong. He graduated from the University of Hong Kong with a Bachelor of Arts. He is an associate (life member) of the Hong Kong Institute of Bankers and a founder of Messrs. Loong and Yeung in Hong Kong. He has more than 20 years' experience in corporate finance, mergers and acquisitions.

Mr Loong was an Independent Non-executive Director of Zijin Mining Group Company Limited (a company listed on the Hong Kong Stock Exchange) from August 2003 to November 2009 and was a Director of Guangdong Golden Glass Technologies Limited (a company listed on the Shenzhen Stock Exchange) from April 2008 to July 2011.

Dr Peter William Cassidy

Dr Cassidy, aged 66, was appointed as an Independent Non-executive Director of the Company in December 2010. He is the Chairman of the Company's Remuneration and Nomination Committee and the Safety, Health, Environment and Community Committee. Dr Cassidy is also a member of the Company's Audit Committee. Dr Cassidy is a Director of Album Investment Private Limited, a subsidiary of the Company.

Dr Cassidy is a metallurgical engineer with more than 40 years' experience in the resource and energy sectors, including more than 20 years as a Director of major public companies. He was an Independent Non-executive Director of Oxiana Limited (2002 to 2007); Zinifex Limited (2004 to 2008); Sino Gold Mining Limited (2002 to 2009); Lihir Gold Limited (2003 to 2010); OZ Minerals (2008 to 2009); and Energy Developments Limited (2003 to 2009). Dr Cassidy was also Non-executive Chairman of Allegiance Mining NL (April to July 2008) and a Director of Eldorado Gold Corporation (2010). He was CEO of Goldfields Limited from 1995 until its merger with Delta Gold Limited in 2002 to form Aurion Gold Limited (AurionGold). Prior to 1995, Dr Cassidy was Executive Director – Operations of RGC Limited. He remained a Director of AurionGold until January 2003.

Dr Cassidy has most recently been involved in the development and operation of major mining and processing projects in Australia, the PRC, Laos, Papua New Guinea and Cote d'Ivoire. He is also a member of the Board of Advice of the Sydney Conservatorium of Music.

Mr Anthony Charles Larkin

Mr Larkin, aged 70, was appointed as an Independent Non-executive Director of the Company in November 2011. He is the Chairman of the Company's Audit Committee and a member of the Company's Remuneration and Nomination Committee. Mr Larkin is a Director of Album Investment Private Limited, a subsidiary of the Company.

Mr Larkin is a Fellow of the Australian Society of Certified Practising Accountants and the Australian Institute of Company Directors since 1984 and 1992, respectively. He received his accounting education from Wollongong Technical College and Sydney Technical College. Mr Larkin has extensive experience in enterprise audit and risk management.

Mr Larkin is currently a Non-executive Director of Incitec Pivot Limited, a company listed on the Australian Stock Exchange, since 2003, chairing its Audit and Risk Committee. He is also a Director of Oakton Limited, a company listed on the Australian Stock Exchange, since 2009, chairing its Audit and Risk Committee and being a member of its Remuneration and Appointments Committee.

Mr Larkin was previously a Director of Corporate Express Australia Limited, a company listed on the Australian Stock Exchange, from 2004 to 2010, and Eyecare Partners Limited, a company listed on the Australian Stock Exchange, from 2007 to 2010, being the Chairman of their respective Audit and Risk Committees. Mr Larkin was also a Director and Chairman of the Audit and Risk Committee and Remuneration and Appointments Committee of OZ Minerals Limited, a company listed on the Australian Stock Exchange, from 2008 to 2009, a Director and Chairman of the Audit and Risk Committee and Remuneration and Appointments Committee of Zinifex Limited, a company formerly listed on the Australian Stock Exchange, from 2004 to 2008, Chairman of the company and member of the Remuneration and Appointments Committee of Ausmelt Limited, a company formerly listed on the Australian Stock Exchange, from 2003 to 2007, and the Executive Director of Finance of Orica Limited, a company listed on the Australian Stock Exchange, from 1998 to 2002.

BIOGRAPHIES OF SENIOR MANAGEMENT

Mr Marcelo Bastos, Chief Operating Officer

Mr Bastos, aged 49, was appointed to the Executive Committee of the Company on 28 June 2011 in his capacity as the Chief Operating Officer with responsibility for all mining operations. He is also a Director of a number of subsidiaries of the Company.

Prior to this role, Mr Bastos was Chief Executive Officer of BHP Billiton Mitsubishi Alliance (BMA) from 2008 to 2011 and, prior to that, President of BHP Billiton Nickel West from 2007 to 2008. He was also President of Cerro Matoso Nickel, a BHP Billiton company in Colombia, from 2004 to 2007.

Mr Bastos commenced his career at Vale and worked with iron ore, gold and copper from 1985 to 2004. His most senior roles at Vale were General Manager at Carajas mines complex in Brazil and Director Non-ferrous Operations.

Mr Bastos has 26 years' international mining experience in the iron ore, gold, copper, nickel and coal sectors. He is a qualified mechanical engineer graduating from Universidade Federal de Minas Gerais (UFMG), and also holds a Master of Business Administration in Management from Fundacao Dom Cabral (FDC-MG).

He has trained at the Columbia Business School and Kellogg School of Management in the United States, Cranfield Business School in the United Kingdom, and INSEAD in France. Mr Bastos has been a member of the Western Australia Chamber of Mines and Energy and was Vice President of the Queensland Resources Council.

Mr Michael Nossal, Executive General Manager – Business Development

Mr Nossal, aged 53, was appointed to the Executive Committee of the Company on 24 January 2011 following his appointment at MMG in January 2010 as the Executive General Manager – Business Development. He is a Director of a number of subsidiaries of the Company.

Prior to joining MMG, Mr Nossal was the Deputy CEO of En+ Group, where he was responsible for corporate finance, strategy and business development and execution of key merger and acquisition projects. Prior to En+, Mr Nossal was Executive General Manager Business Strategy and Development at WMC Resources Limited, where he was responsible for business development, corporate planning, exploration, technical research and project development.

Mr Nossal has also held senior roles at Normandy Mining Limited and Kenmare Resources Limited. Between these roles, Mr Nossal spent several years in investment banking as Associate Director at Macquarie Corporate Finance, where he worked in the resources team on public market mergers and acquisitions, project finance and mining asset sales and acquisitions.

Mr Nossal holds a Science degree from Monash University in Melbourne and a Masters of Business Administration from the Wharton School of the University of Pennsylvania. He is also a Non-executive Director of Nord Gold NV.

Mr Steve Ryan, Executive General Manager – Exploration

Mr Ryan, aged 48, was appointed to the Executive Committee of the Company on 24 January 2011 in his capacity as the Executive General Manager – Exploration, a role he previously held at MMG. He is a Director of a number of subsidiaries of the Company.

He has more than 20 years' international experience in the mineral exploration industry. Mr Ryan worked for the CRA/Rio Tinto Group, including: Country Exploration Manager positions in India, Papua New Guinea and Fiji; and geologist positions in Russia, Australia and other countries. Mr Ryan has held positions with Oxiana Limited as China Country Exploration Manager and OZ Minerals as Asia Exploration General Manager. He has also had three years' experience in the venture capital industry as an Investment and Business Development Manager for an international venture capital group.

Mr Ryan has a Bachelor degree in Geology and a Master of Business Administration in International Business.

Mr Tim Scully, Executive General Manager – Business Support

Mr Scully, aged 64, was appointed to the Executive Committee of the Company on 24 January 2011 in his capacity as the Executive General Manager – Business Support, a role he previously held at MMG. He is a Director of a number of subsidiaries of the Company.

Prior to that, he joined OZ Minerals in November 2008. Mr Scully has experience in shared services, leadership development, talent management and succession planning and human resource systems and processes. Prior to joining OZ Minerals, Mr Scully was General Manager Organisation Development at Intrepid Mines. He was responsible for the development and roll-out of the human resources merger implementation plan through the merger of Emperor and Intrepid.

Prior to this role, Mr Scully was General Manager Organisation Development and Human Resources at Atlas Group Holdings and before that, General Manager – Human Resources at WMC Resources Limited, where he worked from 1989 to 2005.

DIRECTORS' REPORT

The Board of Directors (the Board) of the Company is pleased to present the annual report together with the audited financial statements of the Company and its subsidiaries for the year ended 31 December 2011.

PRINCIPAL ACTIVITIES

The principal activities of the Group and its jointly-controlled entities and associates during the financial year were:

(a) mining, processing and production of zinc, copper, lead, gold and silver;

(b) exploration for mineralisation and development of mining projects;

(c) trading of non-ferrous metals;

(d) production of aluminium; and

(e) manufacturing and distribution of aluminium and copper products.

Following the Company's disposal of the trading, fabrication and other operations in December 2011, the Group will cease activities referred to in items (c) to (e) above.

The full details of the principal activities of the Company's subsidiaries, jointly-controlled entities and associates are set out in Notes 17 to 18 to the consolidated financial statements.

An analysis of the Group's revenue for the year ended 31 December 2011 by reportable segments, together with their respective contributions to profit from operations, is set out in Note 5 to the consolidated financial statements.

MAJOR CUSTOMERS AND SUPPLIERS

During the year, sales to the largest customer and the five largest customers in aggregate accounted for 18.7% and 40.3% of the total sales of the Group. Purchases from the five largest suppliers to the Group in aggregate accounted for less than 30% of the total purchases of the Group respectively during the year.

None of the directors or any of their associates or any shareholders of the Company (which to the knowledge of the directors, owned more than 5% of the Company's share capital) had any beneficial interest in any of the five largest customers or suppliers of the Group other than (a) CMC, the ultimate controlling shareholder of the Company, being one of the five largest customers of the Company; (b) CMC also having an interest of approximately 88.4% in one of the five largest customers of the Company and (c) Minmetals Aluminium Co., Ltd (Minmetals Aluminium), a former wholly-owned subsidiary of the Company, having an interest of approximately 33% in one of the five largest suppliers. Minmetals Aluminium was sold by the Company to Aluminco Holdings Limited, a wholly-owned subsidiary of CMN. CMN is an intermediate holding company of the Company.

RESULTS AND APPROPRIATIONS

The results of the Group for the year ended 31 December 2011 are set out in the consolidated income statement in section II of this annual report.

No interim dividend was declared during the year (2010: nil). The Board has given due consideration to the payment of dividends and determined that given the current focus on growth, the Board does not recommend the payment of a final dividend for the year ended 31 December 2011 (2010: nil).

RESERVES

Movements in reserves of the Group during the year are set out in Note 26 to the consolidated financial statements.

DISTRIBUTABLE RESERVES

Details of the distributable reserves of the Group as at 31 December 2011 are set out in Note 26 to the consolidated financial statements.

PROPERTY, PLANT AND EQUIPMENT

Movements in property, plant and equipment during the year are set out in Note 15 to the consolidated financial statements.

BORROWINGS

Particulars of borrowings of the Group as at 31 December 2011 are set out in Note 30 to the consolidated financial statements.

Other than as disclosed in the Company's announcement on the Stock Exchange on 10 January 2011, the Company and its subsidiaries have not entered into a loan agreement that includes a condition imposing specific performance obligations on any controlling shareholder. A breach of such an obligation would cause a default in respect of loans that are significant to the operations of the issuer.

FIVE-YEAR FINANCIAL SUMMARY

A summary of the results and of the assets and liabilities of the Group for the past five financial years is set out in section III of this annual report.

SHARE CAPITAL

Details of the movements in the share capital of the Company are set out in Note 25 to the consolidated financial statements.

DONATIONS

Donations made by the Group during the year for charitable and community purposes amounted to approximately US$1,158,000.

DIRECTORS

The directors of the Company who held office during the year and up to the date of this report are as follows:

CHAIRMAN
Mr Wang Lixin (Non-executive Director)
(Redesignated on 1 April 2011)

Mr Li Fuli (Non-executive Director)
(Resigned on 1 April 2011)

VICE CHAIRMAN
Mr Hao Chuanfu (Executive Director)
(Resigned on 29 March 2012)

EXECUTIVE DIRECTORS
Mr Andrew Michelmore (Chief Executive Officer)

Mr David Lamont (Chief Financial Officer)

Mr Li Liangang
(Resigned on 29 March 2012)

NON-EXECUTIVE DIRECTORS
Mr Jiao Jian

Mr Xu Jiqing

Mr Gao Xiaoyu
(Appointed on 1 April 2011)

INDEPENDENT NON-EXECUTIVE DIRECTORS
Dr Peter Cassidy

Mr Anthony Larkin
(Appointed on 30 November 2011)

Mr Loong Ping Kwan

Mr Ting Leung Huel, Stephen
(Resigned on 30 November 2011)

In accordance with article 85 of the articles of association of the Company, Mr Anthony Larkin will retire at the forthcoming Annual General Meeting (AGM) of the Company and, being eligible, offer himself for re-election.

In accordance with article 101 of the articles of association of the Company, save as Mr Loong Ping Kwan who does not offer himself for re-election, Mr Wang Lixin, Mr Gao Xiaoyu and Mr David Lamont will retire by rotation at the forthcoming AGM of the Company and, being eligible, offer themselves for re-election.

The Company has received from each of the independent non-executive directors of the Company an annual confirmation of independence pursuant to Rule 3.13 of Listing Rules and considers them to be independent.

DIRECTORS' SERVICE CONTRACTS

No director proposed for re-election at the forthcoming AGM of the Company has an unexpired service contract that is not determinable by the Company or any of its subsidiaries within one year without payment of compensation, other than normal statutory compensation.

DIRECTORS' INTERESTS IN CONTRACTS OF SIGNIFICANCE

No contracts of significance to which the Company, any of its holding companies, or any of their subsidiaries was a party, in which a director of the Company had a material interest, subsisted at the end of the year or at any time during the year.

DIRECTORS' INTERESTS AND SHORT POSITIONS IN SHARES, UNDERLYING SHARES AND DEBENTURES

As at 31 December 2011, the interests and short positions of the directors and the Chief Executive of the Company or any of their associates in the shares, underlying shares and debentures of the Company or any of its associated corporations (within the meaning of Part XV of the Securities and Futures Ordinance (the SFO)) which were required to be notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests and short positions which they are taken or deemed to have under such provisions of the SFO), or which were required to be recorded in the register required to be kept pursuant to Section 352 of the SFO or which were required to be notified to the Company and the Stock Exchange pursuant to the Model Code for Securities Transactions by Directors of Listed Issuers (the Model Code) as set out in Appendix 10 of the Listing Rules were as follows:

LONG POSITION IN THE SHARES AND THE UNDERLYING SHARES OF THE COMPANY

NAME OF DIRECTOR	NATURE OF INTEREST	NUMBER OF ISSUED SHARES HELD	NUMBER OF UNDERLYING SHARES HELD (NOTE 1)	APPROXIMATE PERCENTAGE OF TOTAL NUMBER OF ISSUED SHARES (NOTE 2)
HAO CHUANFU (RESIGNED ON 29 MARCH 2012)	Personal	–	1,600,000	0.030%
ANDREW MICHELMORE	Personal	162,000	–	0.003%
LI LIANGANG (RESIGNED ON 29 MARCH 2012)	Personal	–	1,100,000	0.021%
JIAO JIAN	Personal	–	1,200,000	0.023%
XU JIQING	Personal	–	1,000,000	0.019%

Notes:

1. The directors' interests in the underlying ordinary shares of HK$0.05 each in the share capital of the Company are through share options granted by the Company pursuant to the 2004 Share Option Scheme, details of which are set out under the section headed 'Share Option Scheme'.
2. The calculation is based on the number of shares/underlying shares as a percentage of the total number of issued shares of the Company (i.e. 5,289,607,889 shares) as at 31 December 2011.

Save as disclosed above, as at 31 December 2011, none of the directors or the Chief Executive of the Company or any of their associates had any interests or short positions in any shares, underlying shares or debentures of the Company or any of its associated corporations (within the meaning of Part XV of the SFO) which were required to be notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests and short positions which they are taken or deemed to have under such provisions of the SFO), or which were required to be entered in the register required to be kept pursuant to Section 352 of the SFO or which were required to be notified to the Company and the Stock Exchange pursuant to the Model Code. In addition, none of the directors or the Chief Executive of the Company or any of their associates had been granted or had exercised any rights to subscribe for any equity or debt securities of the Company or any of its associated corporations (within the meaning of Part XV of the SFO) during the year ended 31 December 2011.

DIRECTORS' INTERESTS IN COMPETING BUSINESSES

During the year ended 31 December 2011, the interests of directors of the Company in a business which competes or is likely to compete with the businesses of the Group, as defined in the Listing Rules, are as follows:

1. Mr Li Fuli, the former Non-executive Director and Chairman of the Company who resigned on 1 April 2011, is:

» the Chairman of Hunan Nonferrous Metals Corp., Ltd (HNC);

» the Chairman of Hunan Nonferrous Metals Holdings Group Co., Ltd (HNG); and

» the Chairman of the Supervisory Board of Guangdong Wu Xin Mining Co., Ltd (Guangdong Wu Xin).

2. Mr Jiao Jian, a Non-executive Director of the Company, is:

» the President and Director of CMNH;

» the President and Director of CMN;

» a Director of HNG;

» a Director of Copper Partners Investment Co., Ltd (Copper Partners Investment); and

» a Director of Album Enterprises.

3. Mr Gao Xiaoyu, a Non-executive Director of the Company, is:

» the Vice President of CMNH; and

» the Vice President of CMN.

4. Mr Xu Jiqing, a Non-executive Director of the Company, is:

» the Vice President, Director and CFO of CMNH;

» the Vice President and CFO of CMN;

» a Director of HNG;

» a Director of Copper Partners Investment; and

» a Director of Album Enterprises.

Although the Group together with its jointly-controlled entities and the above companies are involved in businesses in the same industry, they are separate companies operated by separate and independent management. The Company is therefore capable of carrying on its business independently of, and at arm's-length from, the CMC Group, HNC, HNG, Guangdong Wu Xin and Copper Partners Investment.

SHARE OPTION SCHEME

2004 SHARE OPTION SCHEME

Pursuant to the Share Option Scheme adopted by the Company on 28 May 2004 (2004 Share Option Scheme), there were 7,300,000 options outstanding as at 31 December 2011, which represented approximately 0.14% of the total number of issued shares of the Company as at that date.

The following is a summary of the principal terms of the 2004 Share Option Scheme:

1. **Purpose**
   To recognise and acknowledge the contributions that the eligible persons had made or may make to the Group.

2. **Participants**
   Any directors or any employees of any company of the Group and any advisers of, consultants of, contractors to any company of the Group or any person who has any relationship (whether business or otherwise) with any company of the Group or any person whom the Board considers, in its sole discretion, appropriate.

3. **Total number of shares available for issue under the 2004 Share Option Scheme**
   The total number of shares available for issue under the 2004 Share Option Scheme is 50,534,961 ordinary shares, representing approximately 0.96% of the issued share capital of the Company as at the date of this report.

4. **Maximum entitlement of each participant**
   No option may be granted to any eligible person which, if exercised in full, would result in the total number of shares issued and to be issued upon exercise of the options already granted and to be granted to such eligible person under the 2004 Share Option Scheme (including exercised, cancelled and outstanding options) in the 12-month period up to and including the date of such new grant exceeding 1% of the issued share capital of the Company as at the date of such new grant. Any grant of further options above this limit shall be subject to the requirements under the Listing Rules.

5. **Period within which the shares must be taken up under an option**
   The Board may in its absolute discretion determine the period during which an option may be exercised, save that such period shall not be more than ten years from the date on which such option is granted and accepted subject to the provisions for early termination.

6. **Minimum period for which an option must be held before it can be exercised**
   There is no general requirement of a minimum period for which an option must be held under the terms of the 2004 Share Option Scheme. However, the Board may in its absolute discretion set a minimum period.

7. **Time of acceptance and the amount payable on acceptance of the option**
   An offer of an option may be accepted within 28 business days (or such shorter period as the Board shall determine) from the date of such offer and the amount payable on acceptance of such offer is HK$10.00.

8. **Basis of determining the exercise price**
   The exercise price shall be determined by the Board at the time of grant of the relevant option and shall not be less than the highest of:

   (i) the closing price per share of the Company as stated in the Stock Exchange's daily quotations sheet on the date of grant of the relevant option;

   (ii) an amount equivalent to the average closing price per share of the Company as stated in the Stock Exchange's daily quotations sheets for the five business days immediately preceding the date of grant of the relevant option; and

   (iii) the nominal value of a share of the Company.

9. **The remaining life of the 2004 Share Option Scheme**
   The 2004 Share Option Scheme will remain in force until 27 May 2014.

   During the year ended 31 December 2011, the movements of the options which have been granted under the 2004 Share Option Scheme were as follows:

CATEGORY AND NAME OF PARTICIPANT	DATE OF GRANT	EXERCISE PRICE PER SHARE	EXERCISE PERIOD	NUMBER OF OPTIONS					
				BALANCE AS AT 1 JANUARY 2011	GRANTED DURING THE YEAR	EXERCISED DURING THE YEAR	CANCELLED DURING THE YEAR	LAPSED DURING THE YEAR	BALANCE AS AT 31 DECEMBER 2011
	(NOTE 1)	HK$	(NOTE 2)					(NOTE 3)	
DIRECTORS									
LI FULI	3 June 2010	2.75	3 June 2012 to 2 June 2015	1,300,000	–	–	–	(1,300,000)	–
HAO CHUANFU	3 June 2010	2.75	3 June 2012 to 2 June 2015	1,600,000	–	–	–	–	1,600,000
LI LIANGANG	3 June 2010	2.75	3 June 2012 to 2 June 2015	1,100,000	–	–	–	–	1,100,000
JIAO JIAN	3 June 2010	2.75	3 June 2012 to 2 June 2015	1,200,000	–	–	–	–	1,200,000
XU JIQING	3 June 2010	2.75	3 June 2012 to 2 June 2015	1,000,000	–	–	–	–	1,000,000
EMPLOYEES OF THE GROUP	3 June 2010	2.75	3 June 2012 to 2 June 2015	6,400,000	–	–	–	(4,000,000)	2,400,000
				12,600,000	–	–	–	(5,300,000)	7,300,000

Notes:

1. The closing price of the shares of the Company immediately before the date on which the options were granted was HK$2.69 per share.
2. The options granted may be exercised according to the following three tranches, which are subject to certain terms and conditions including, among others, the achievement of certain performance targets by the Group and the grantee:
   (i) up to 33% of the options granted to each grantee shall be exercisable at any time after the expiration of 24 months from the date of grant of options;
   (ii) up to 67% of the options granted to each grantee shall be exercisable at any time after the expiration of 36 months from the date of grant of options; and
   (iii) up to 100% of the options granted to each grantee shall be exercisable at any time after the expiration of 48 months from the date of grant of options, and in each case, not later than 2 June 2015.
3. Options lapsed due to cessation of employment.

SUBSTANTIAL SHAREHOLDERS' INTERESTS AND SHORT POSITIONS IN THE SHARES AND UNDERLYING SHARES OF THE COMPANY

So far as is known to the directors and Chief Executive of the Company, as at 31 December 2011, the following persons had interests or short positions in the shares or underlying shares of the Company which were required to be disclosed to the Company under the provisions of Divisions 2 and 3 of Part XV of the SFO, or, which were recorded in the register required to be kept by the Company under Section 336 of the SFO.

LONG POSITION IN THE SHARES OF THE COMPANY

NAME	CAPACITY	NUMBER OF SHARES HELD	APPROXIMATE PERCENTAGE OF TOTAL NUMBER OF ISSUED SHARES INTERESTED IN (NOTE 1)
CHINA MINMETALS CORPORATION (CMC)	Interest of controlled corporations (Notes 2 & 3)	3,793,558,916	71.72%
CHINA MINMETALS CORPORATION LIMITED (CMCL)	Interest of controlled corporations (Notes 2 & 3)	3,793,558,916	71.72%
CHINA MINMETALS NON-FERROUS METALS HOLDING COMPANY LIMITED (CMNH)	Interest of controlled corporations (Notes 2 & 3)	3,793,558,916	71.72%
CHINA MINMETALS NON-FERROUS METALS COMPANY LIMITED (CMN)	Interest of controlled corporations (Notes 2 & 3)	3,793,558,916	71.72%
ALBUM ENTERPRISES LIMITED (ALBUM ENTERPRISES)	Beneficial owner (Note 3)	2,509,091,090	47.44%
TOP CREATE RESOURCES LIMITED (TOP CREATE)	Beneficial owner (Note 2)	1,284,467,826	24.28%

Notes:

1. The calculation is based on the number of shares which each person is interested in (whether directly/indirectly interested or deemed to be interested) as a percentage of the total number of issued shares of HK$0.05 each (i.e. 5,289,607,889 shares) of the Company as at 31 December 2011.
2. Top Create is a wholly-owned subsidiary of CMN, which in turn is owned as to approximately 93.6% by CMNH. CMNH is a wholly-owned subsidiary of CMCL. CMCL is owned as to 87.5% by CMC and 1% by China National Metal Products Co. Ltd., which in turn is a wholly-owned subsidiary of CMC. Accordingly, CMN, CMNH, CMCL and CMC were by virtue of the SFO deemed to be interested in the 1,284,467,826 shares of HK$0.05 each of the Company held by Top Create as at 31 December 2011.
3. Album Enterprises is a wholly-owned subsidiary of CMN. Accordingly, CMN, CMNH, CMCL and CMC were by virtue of the SFO deemed to be interested in the 2,509,091,090 shares of HK$0.05 each of the Company held by Album Enterprises as at 31 December 2011.

Save as disclosed above, as at 31 December 2011, there was no other person who was recorded in the register of the Company as having an interest or short positions in the shares or underlying shares of the Company which were required to be disclosed to the Company under the provisions of Divisions 2 and 3 of Part XV of the SFO, or, which was recorded in the register required to be kept by the Company under Section 336 of the SFO.

CONNECTED TRANSACTIONS

During the year ended 31 December 2011, the Group had the following material connected transactions, details of which are set out below:

1. On 15 September 2011, MMR entered into a Master Sale and Implementation Agreement pursuant to which CMN conditionally agreed to acquire:
   - » the Company's entire 100% equity interest in Minmetals Aluminium;
   - » Riseup Dragon's entire 72.80% equity interest in NCA;
   - » Orienmet Industry's entire 51% equity interest in Yingkou Orienmet; and
   - » Lontic's entire 36.2913% equity interest in Changzhou Jinyuan, for a total consideration of US$726.8 million.

The shares of Minmetals Aluminium and NCA were acquired by a nominee of CMN, Aluminco Holdings Limited, a wholly-owned subsidiary of CMN, and the shares of Yingkou Orienmet and Changzhou Jinyuan were acquired by CMN.

CMN is a controlling shareholder of the Company, and is therefore a connected person of the Company under the Listing Rules. As Aluminco Holdings Limited is a wholly-owned subsidiary of CMN, it is a connected person of the Company under the Listing Rules. Accordingly, the acquisition by CMN and Aluminco Holdings Limited constitutes a connected transaction for the Company under Chapter 14A of the Listing Rules.

The acquisitions were completed in December 2011 after the Company received approval from the shareholders of the Company in an Extraordinary General Meeting (EGM) held on 28 October 2011, and other necessary regulatory approvals were received by the parties.

2. Pursuant to the Share Sale Deed dated 19 October 2010 entered into by All Glorious, a wholly-owned subsidiary of the Company, and Album Enterprises, a wholly-owned subsidiary of CMN, in relation to the acquisition of MMG by the Company, the Company allotted and issued an aggregate principal sum of US$690.0 million Perpetual Subordinated Convertible Securities (PSCS) on 31 December 2010 to Album Enterprises. The PSCS were convertible into 1,560 million new shares of the Company at an initial conversion price of HK$3.45 per share. Album Enterprises exercised its option to convert the PSCS on 28 April 2011, on which date the fair value of these PSCS was approximately US$690.0 million.

   Album Enterprises is a connected person of the Company as it is a wholly-owned subsidiary of CMN. CMN is a controlling shareholder of the Company. Accordingly, this constituted a connected transaction for the Company under Chapter 14A of the Listing Rules.

   Further details of the PSCS are set out in Note 27 to the consolidated financial statements.

3. The Company conducted various transactions with CMN with respect to the sale of metal products to CMN during 2011. In particular, the following agreements were entered into with CMN by:

   - MMG Golden Grove, a wholly-owned subsidiary of the Company, to sell 10,000 dry metric tonnes of Golden Grove copper concentrate pursuant to an agreement dated 14 April 2011;
   - MMG Golden Grove and MMG Century, each a wholly-owned subsidiary of the Company, to sell 10,000 dry metric tonnes of Golden Grove zinc concentrate or 10,000 wet metric tonnes of Century zinc concentrate pursuant to an agreement dated 12 May 2011 (under which it was elected to sell Golden Grove zinc concentrate);
   - MMG Golden Grove and MMG Century, each a wholly-owned subsidiary of the Company, to sell 10,000 dry metric tonnes of Golden Grove zinc concentrate or 10,000 wet metric tonnes of Century zinc concentrate pursuant to an agreement dated 12 May 2011 and amended on 24 October 2011 (under which it was elected to sell Century zinc concentrate); and
   - MMG Golden Grove, a wholly-owned subsidiary of the Company, to sell 5,000 dry metric tonnes of Golden Grove lead concentrate pursuant to an agreement dated 1 September 2010 (and amended on 19 October 2011).

   Together, these form the 2011 MMG Concentrate Sales Agreement.

   The total value of sales made to CMN under the 2011 MMG Concentrate Sales Agreement up to 31 December 2011 was approximately US$53.7 million.

   CMN is a controlling shareholder of the Company, and is therefore a connected person of the Company under the Listing Rules. Accordingly, the transactions described above constitute connected transactions for the Company under Chapter 14A of the Listing Rules.

CONTINUING CONNECTED TRANSACTIONS

During the year ended 31 December 2011, the Group had the following material continuing connected transactions, details of which are set out below:

1. On 1 December 2009, Minmetals Aluminium, formerly a wholly-owned subsidiary of the Company, entered into a sale and purchase agreement (the Minmetals Aluminium Sale and Purchase Agreement) with Guangxi Huayin in relation to the purchase of alumina from Guangxi Huayin for the period from 1 December 2009 to 31 December 2012. The proposed annual cap for the transactions for the year ended 31 December 2011 was RMB1,611.0 million. The actual amount paid under the Minmetals Aluminium Sale and Purchase Agreement was approximately RMB1,474.0 million for the year ended 31 December 2011.

   Guangxi Huayin is owned as to 33% by Aluminum Corporation of China Limited (Chalco), which in turn is owned as to over 30% by Aluminum Corporation of China (Chinalco). Chinalco is a substantial shareholder of a non-wholly-owned subsidiary of the Company and is a connected person of the Company under the Listing Rules. As such, Guangxi Huayin is an associate of Chalco and Chinalco under the Listing Rules and hence a connected person of the Company. Accordingly, the Minmetals Aluminium Sale and Purchase Agreement constitutes a continuing connected transaction for the Company under Chapter 14A of the Listing Rules.

2. On 26 August 2010, Minmetals Aluminium, formerly a wholly-owned subsidiary of the Company, entered into a sale and purchase framework agreement with Shanxi Guanlv, which was supplemented by a supplemental agreement dated 30 August 2010 (Shanxi Guanlv Purchase Framework Agreement) pursuant to which Minmetals Aluminium agreed to purchase aluminium ingots from Shanxi Guanlv for a term of one year and four months commencing 1 September 2010 until 31 December 2011. During the period from 1 January 2011 to 31 December 2011, the actual amount paid under the Shanxi Guanlv Purchase Framework Agreement was approximately RMB523.7 million.

Shanxi Guanlv is a subsidiary of CMCL and is therefore a connected person of the Company under the Listing Rules. CMCL is owned as to 97.5% by CMC. Shanxi Guanlv became a subsidiary of CMCL on 21 March 2011 when CMC transferred its 29.9% equity interest in Shanxi Guanlv to CMCL. In turn, Shanxi Guanlv became a subsidiary of CMC on 12 November 2010 after the shareholders of Shanxi Guanlv, at an EGM held on 12 November 2010, approved the appointment of an additional director nominated by CMC to fill a vacancy in the board of directors of Shanxi Guanlv (Shanxi Guanlv Board). This resulted in CMC, which held approximately 29.9% in the equity interests in Shanxi Guanlv, holding a majority of the voting rights at the Shanxi Guanlv Board and rendering Shanxi Guanlv a subsidiary of CMC.

Accordingly, the Shanxi Guanlv Purchase Framework Agreement constitutes a continuing connected transaction for the Company under Chapter 14A of the Listing Rules.

3. On 26 August 2010, Minmetals Aluminium, formerly a wholly-owned subsidiary of the Company, entered into a sale and purchase framework agreement with Shanxi Guanlv (Shanxi Guanlv Sale Framework Agreement) pursuant to which Minmetals Aluminium agreed to sell alumina to Shanxi Guanlv for a term of one year and four months commencing 1 September 2010 until 31 December 2011. During the period from 1 January 2011 to 31 December 2011, the actual amount paid under the Shanxi Guanlv Sale Framework Agreement was approximately RMB334.8 million.

   As noted above, Shanxi Guanlv is a subsidiary of CMCL and is therefore a connected person of the Company under the Listing Rules. Accordingly, the Shanxi Guanlv Sale Framework Agreement constitutes a continuing connected transaction for the Company under Chapter 14A of the Listing Rules.

4. On 20 January 2011, LXML entered into a sale agreement with CMN for the sale of copper cathode to CMN, with the copper cathode to be delivered from February 2011 to April 2011 (2011 Testing Sales Agreement). The proposed annual cap for the transactions for the year ended 31 December 2011 was US$7.0 million. During the period from 1 January 2011 to April 2011, deliveries of copper cathode were made to CMN under the agreement with a total value of approximately US$5.6 million.

   CMN is the controlling shareholder of the Company and is therefore a connected person of the Company under the Listing Rules. Accordingly, the 2011 Testing Sales Agreement constitutes a continuing connected transaction for the Company under Chapter 14A of the Listing Rules.

5. On 18 May 2011, Minmetals Aluminium, formerly a wholly-owned subsidiary of the Company, entered into a sale and purchase framework agreement (Changshu Everbright Sale Framework Agreement) with Changshu Everbright Material Technology Co., Ltd (Changshu Everbright) in relation to the sale of aluminium-silicon alloy to Changshu Everbright for the period from 19 May 2011 to 31 December 2011. The proposed annual cap for the transactions for the year ended 31 December 2011 was RMB52 million. The actual amount paid under the Changshu Everbright Sale Framework Agreement was approximately RMB13.9 million for the year ended 31 December 2011.

   Changshu Everbright is an indirect non-wholly-owned subsidiary of CMC and is therefore an associate of CMC. Accordingly, the Changshu Everbright Sale Framework Agreement constitutes a continuing connected transaction for the Company under Chapter 14A of the Listing Rules.

6. On 30 September 2011, the Company entered into an unsecured acquisition finance facility agreement with Album Enterprises pursuant to which Album Enterprises agreed to make available to the Company up to US$1,000 million for the purpose of acquiring all of the issued shares of Anvil (Anvil Loan Facility). During the year ended 31 December 2011, no amounts were advanced or outstanding under the Anvil Loan Facility. On 16 February 2012, a loan in the amount of US$300 million was advanced to the Company under the Anvil Loan Facility. This loan has a term of one year from the date the advance was made.

   Album Enterprises is a substantial shareholder of the Company and is therefore a connected person of the Company under the Listing Rules. Accordingly, the Anvil Loan Facility constitutes a continuing connected transaction for the Company under Chapter 14A of the Listing Rules.

7. On 23 December 2011, MMG Limited, a wholly-owned subsidiary of the Company, entered into a loan facility agreement with Album Enterprises (MMR Loan Facility) pursuant to which MMG Limited agreed to make loan facilities available to Album Enterprises on an uncommitted basis for a term of one year commencing 23 December 2011.

The proposed annual cap for the transactions for the year ended 31 December 2011 was US$100 million. During the year ended 31 December 2011, the amount of US$95 million was advanced to Album Enterprises under the MMR Loan Facility. This loan was repaid by Album Enterprises on 15 February 2012.

Album Enterprises is a substantial shareholder of the Company and is therefore a connected person of the Company under the Listing Rules. Accordingly, the MMR Loan Facility constitutes a continuing connected transaction for the Company under Chapter 14A of the Listing Rules.

8. On 17 January 2012, LXML, a 90% owned subsidiary of the Company, entered into a sale agreement with China Minmetals Non-ferrous Metals Trading Company Limited (CMN Trading) for the sale of copper cathode to CMN Trading, with the copper cathode to be delivered from January 2012 to December 2012 (2012 Cathode Sales Agreement). For the year ended 31 December 2011, there were no transactions under the sales agreement. During the period from 1 January 2012 to 28 March 2012, deliveries of copper cathode were made to CMN Trading under the agreement with a total value of approximately US$20.8 million.

   CMC is the ultimate controlling shareholder of the Company and is therefore a connected person of the Company under the Listing Rules. As CMN Trading is a wholly-owned subsidiary of CMC, it is a connected person of the Company under the Listing Rules. Accordingly, the 2012 Cathode Sales Agreement described above (together, the 2011 MMG Connected Transactions) constitute continuing connected transactions for the Company under Chapter 14A of the Listing Rules.

Upon the completion of the acquisition of MMG on 31 December 2010 (Completion Date), the following material continuing transactions became continuing connected transactions with effect from the Completion Date (Grandfathered Continuing Connected Transactions) and details of these transactions for the year ended 31 December 2011 are set out below:

9. On 20 December 2010, MMG Management, a wholly-owned subsidiary of the Company, entered into an agreement for the supply of goods with Minmetals Australia Pty Ltd (Minmetals Australia) pursuant to which MMG Management agreed to purchase hot roll forged and hand forged grinding media from Minmetals Australia (Minmetals Supply Agreement) for a term of two years commencing 20 December 2010 (with two options for further periods of 12 months each which may be exercised by MMG Management in its discretion).

   For the year ended 31 December 2011, there were transactions under the Minmetals Supply Agreement to the value of US$5.6 million.

   Minmetals Australia is a subsidiary of CMC and is therefore an associate of CMC and a connected person of the Company under the Listing Rules. Accordingly, the Minmetals Supply Agreement constitutes a Grandfathered Continuing Connected Transaction for the Company under Chapter 14A of the Listing Rules, and the Company will comply with Listing Rule 14A.41 in respect of these transactions.

10. On 21 December 2010, LXML, a 90% owned subsidiary of the Company, entered into a sale agreement with CMN for the sale of copper cathode to CMN, with the copper cathode to be delivered from January 2011 to December 2011 (2011 Cathode Sales Agreement). For the year ended 31 December 2011, deliveries of copper cathode were made to CMN under the agreement with a total value of approximately US$69.7 million.

    CMN is the controlling shareholder of the Company and is therefore a connected person of the Company under the Listing Rules. Accordingly, the 2011 Cathode Sales Agreement constitutes a Grandfathered Continuing Connected Transaction for the Company under Chapter 14A of the Listing Rules, and the Company will comply with Listing Rule 14A.41 in respect of these transactions.

11. On 10 June 2010, MMG Management, a wholly-owned subsidiary of the Company, entered into a loan facility agreement with Album Enterprises (MMG Loan Facility) pursuant to which MMG Management agreed to make loan facilities available to Album Enterprises on an uncommitted basis. During the year ended 31 December 2011, no amounts were advanced or outstanding under the MMG Loan Facility.

    Album Enterprises is a substantial shareholder of the Company, and is therefore a connected person of the Company under the Listing Rules. Accordingly, the MMG Loan Facility constitutes a Grandfathered Continuing Connected Transaction for the Company under Chapter 14A of the Listing Rules, and the Company will comply with Listing Rule 14A.41 in respect of this transaction.

12. MMG Laos Holdings Limited (MMG Laos Holdings) is a party to a Mineral Exploration and Production Agreement (MEPA) with the Government of Laos dated 15 June 1993 (as amended).

The MEPA, among other things, grants a licence to operate the project contemplated by the MEPA, being the Sepon project in Laos, which licence terms are in addition to rights granted by relevant Lao law in respect of mining operations. In accordance with the terms of the MEPA, LXML was established and incorporated in Laos to conduct the activities contemplated under the MEPA. Under the MEPA, LXML is appointed the sole contractor for the Government of Laos with respect to the area on which the Sepon project is located. The MEPA sets out the terms and conditions for LXML's mining and processing operations, and exploration activity, with respect to gold and copper in Laos, and confirms the taxes payable by LXML and concessions granted by the Government of Laos to LXML in respect of such taxes. For the year ended 31 December 2011, the actual amount payable under the MEPA was US$189.1 million, being an aggregated amount of all taxes and royalties payable to the Government of Laos.

The Lao Government holds a 10% equity interest in LXML, and is therefore a connected person of the Company under the Listing Rules. Accordingly, the transactions under the MEPA constitute Grandfathered Continuing Connected Transactions for the Company under Chapter 14A of the Listing Rules. The transactions between LXML and the Government of Laos became connected transactions for the Company on 31 December 2010 following the acquisition of MMG by the Company, and the Company will comply with Listing Rule 14A.41 in respect of these transactions.

13. On 26 February 2004, LXML, a 90%-owned subsidiary of the Company, entered into a Power Purchase Agreement with Electricite Du Laos (EDL), pursuant to which LXML agreed to purchase energy from EDL for the purposes of operating the Sepon mine in Laos (Power Purchase Agreement). The total consideration payable under the Power Purchase Agreement is subject to levels of energy consumption which vary from year to year. For the year ended 31 December 2011, the actual amount payable under the Power Purchase Agreement was US$31.6 million.

    EDL is a state-owned corporation operated by the Ministry for Energy and Mines, which is a department of the Government of Laos. The Government of Laos is a connected person of the Company under the Listing Rules. Accordingly, the transactions under the Power Purchase Agreement constitute Grandfathered Continuing Connected Transactions for the Company under Chapter 14A of the Listing Rules, and the Company will comply with Listing Rule 14A.41 in respect of these transactions.

The above continuing connected transactions for the year ended 31 December 2011, including the Grandfathered Continuing Connected Transactions, have been reviewed by the independent non-executive directors of the Company. The independent non-executive directors of the Company have confirmed that the continuing connected transactions have been entered into:

(a) in the ordinary and usual course of business of the Group;

(b) either on normal commercial terms or on terms no less favourable to the Group than terms available to or from independent third parties; and

(c) in accordance with the respective terms of the Minmetals Aluminium Sale and Purchase Agreement, the Shanxi Guanlv Purchase Framework Agreement, the Shanxi Guanlv Sale Framework Agreement, the 2011 Testing Sales Agreement, the Changshu Everbright Sale Framework Agreement, the Anvil Loan Facility, the MMR Loan Facility, the 2011 Cathode Sales Agreement, the Minmetals Supply Agreement, the MMG Loan Facility, the Power Purchase Agreement, and the MEPA on terms that are fair and reasonable and in the interests of the shareholders of the Company as a whole.

The Company's auditor was engaged to report on the Group's continuing connected transactions in accordance with the Hong Kong Standard on Assurance Engagements 3000 *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* and with reference to Practice Note 740 *Auditor's Letter on Continuing Connected Transactions under the Hong Kong Listing Rules* issued by the Hong Kong Institute of Certified Public Accountants. The auditor has issued his unqualified letter containing his findings and conclusions in respect of the continuing connected transactions for the year ended 31 December 2011 disclosed above in accordance with Rule 14A.38 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited. A copy of the auditor's letter has been provided by the Company to The Stock Exchange of Hong Kong Limited.

In addition, the auditor of the Company has confirmed to the Board that the above continuing connected transactions for the year ended 31 December 2011:

(a) have been approved by the Board;

(b) have been entered into in accordance with the terms of the relevant agreements governing the transactions;

(c) are in accordance with the pricing policies of the Group where the transactions involved provision of goods by the Group; and

(d) that the following agreements – the Minmetals Aluminium Sale and Purchase Agreement, the 2011 Testing Sales Agreement, the Changshu Everbright Sale Framework Agreement and the MMR Loan Facility – have not exceeded the respective annual caps as disclosed in the announcements of the Company dated 4 December 2009, 28 March 2011, 18 May 2011 and 23 December 2011, respectively.

RELATED PARTY TRANSACTIONS

Details of the related party transactions undertaken in the normal course of business are set out in Note 37 to the consolidated financial statements.

In relation to those related party transactions that also constitute connected transactions and continuing connected transactions of the Company under the Listing Rules, the Company has complied with the disclosure requirements in accordance with Chapter 14A of the Listing Rules.

MANAGEMENT CONTRACTS

No contracts concerning the management and administration of the whole or any substantial part of the business of the Company were entered into or existed during the year.

PURCHASE, SALE OR REDEMPTION OF THE COMPANY'S LISTED SECURITIES

During the year ended 31 December 2011, neither the Company nor any of its subsidiaries purchased, sold or redeemed any of the Company's listed securities.

EMOLUMENT POLICY

The Group's Emolument Policy is formulated by the Remuneration and Nomination Committee on the basis of employees' merit, market practice, qualifications and competence.

The determination of remuneration packages of the directors of the Company takes into consideration factors such as remuneration paid by comparable companies, accountabilities of the directors, applicable regional employment conditions and appropriate 'at risk' performance-based remuneration.

The Company has adopted the Share Option Scheme as an incentive to the directors and eligible employees. Details of the scheme are set out under the section headed 'Share Option Scheme'. In relation to MMG, it has adopted both long-term and short-term 'at risk' incentive plans to reward its directors and eligible employees and to align their incentive remuneration with the performance of MMG.

RETIREMENT SCHEMES

Details of the Group's retirement schemes are set out in Note 32 to the consolidated financial statements.

DIRECTORS AND SENIOR MANAGEMENT

Particulars of the directors and senior management of the Company are set out on pages 46 to 50 of this annual report.

AUDITOR

The consolidated financial statements have been audited by PricewaterhouseCoopers, which will retire at the forthcoming AGM and, being eligible, offers itself for reappointment.

CORPORATE GOVERNANCE REPORT

Details of the Corporate Governance Report are set out on pages 62 to 67 of this annual report.

SUFFICIENCY OF PUBLIC FLOAT

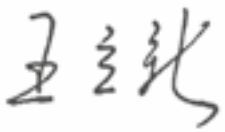
Based on information that is publicly available to the Company and within the knowledge of its Board, as at the latest practicable date prior to the printing of this report the Company has maintained sufficient public float of not less than 25% of the Company's issued shares as required under the Listing Rules.

EVENT AFTER THE BALANCE SHEET DATE

Other than the matters noted below, there have been no matters subsequent that have occurred to the reporting data which have significantly affected or may significantly affect the Group's operations, results or state of affairs in future years.

Anvil

The Company has successfully acquired Anvil for C$1,330 million. Details are set out in Note 39.



By order of the Board
Wang Lixin Chairman
28 March 2012

CORPORATE GOVERNANCE

The Company is committed to maintaining a high standard of corporate governance practices by emphasising a quality Board of Directors, sound internal controls, and transparency and accountability to all shareholders of the Company.

The Company has complied with all the code provisions set out in the Code on Corporate Governance Practice (CG Code) in Appendix 14 of the Listing Rules throughout the year ended 31 December 2011, except for the deviation from code provision A4.1 with explanation provided under the section headed 'Re-election of Directors'.

The Company has adopted a Board Charter to outline the manner in which its constitutional powers and responsibilities will be exercised, delegated and/or discharged. The Board Charter is adopted on the basis that strong corporate governance can add to the performance of the Company, create shareholder value and engender the confidence of the investment market.

DIRECTORS' SECURITIES TRANSACTIONS

The Company has adopted a policy for securities transactions by directors of the Company (Securities Trading Policy) on terms no less exacting than the required standard of the Model Code as set out in Appendix 10 of the Listing Rules.

Having made specific enquiry with all the directors of the Company, all of them confirmed that they have complied with the required standard set out in the Model Code and the Securities Trading Policy during the year ended 31 December 2011.

BOARD OF DIRECTORS

COMPOSITION

As at the time of publication, the Board comprised 11 directors of which four were executive directors, four were non-executive directors and three were independent non-executive directors. The members of the Board were as follows:

EXECUTIVE DIRECTORS

Mr Andrew Michelmore (Chief Executive Officer)
Mr Hao Chuanfu (Vice Chairman)*
Mr David Lamont (Chief Financial Officer)
Mr Li Liangang*

NON-EXECUTIVE DIRECTORS

Mr Wang Lixin (Chairman)
Mr Jiao Jian
Mr Xu Jiqing
Mr Gao Xiaoyu

INDEPENDENT NON-EXECUTIVE DIRECTORS

Dr Peter Cassidy
Mr Anthony Larkin
Mr Loong Ping Kwan

The Board formulates overall strategies and policies of the Group. It also ensures the availability of adequate capital and managerial resources to implement the strategies adopted, the adequacy of systems of financial and internal control and the conduct of business in conformity with applicable laws and regulations. The Board members are fully committed to their roles and have always acted in the best interests of the Group and its shareholders at all times. There is no financial, business, family or other material/relevant relationship among directors. The directors' biographical information is set out on pages 46 to 50 under the section headed 'Directors and Senior Management' of this annual report.

Board meetings are held regularly at approximately quarterly intervals and are also held on an ad hoc basis as required by business needs. Regular Board meetings and ad hoc Board meetings are attended by a majority of the directors in person or through other electronic means of communication. In addition, special Board meetings are convened from time to time for the Board to discuss issues that require the Board's timely attention.

Since the special Board meetings are concerned with the day-to-day management of the Company which often requires prompt decisions, usually only the Executive Directors and senior management attend the meetings. During the year ended 31 December 2011, other than resolutions passed in writing by all the directors, the Board held a total of four regular Board meetings, a total of five ad hoc Board meetings and a total of five special Board meetings.

* Resigned on 29 March 2012.

The attendance of each member at the Board meetings is set out below. Figures in brackets indicate maximum number of meetings held in the period in which the individual was a Board member.

DIRECTORS	NOTES	NUMBER OF REGULAR AND AD HOC BOARD MEETINGS ATTENDED	NUMBER OF SPECIAL BOARD MEETINGS ATTENDED
EXECUTIVE DIRECTORS			
MR ANDREW MICHELMORE		9/(9)	6/(6)
MR HAO CHUANFU	(vii)	9/(9)	
MR DAVID LAMONT		9/(9)	6/(6)
MR LI LIANGANG	(iii)	8/(9)	
NON-EXECUTIVE DIRECTORS			
MR LI FULI (FORMER CHAIRMAN)	(i)	1/(2)	
MR WANG LIXIN (CHAIRMAN)	(ii)	9/(9)	
MR XU JIQING		9/(9)	
MR JIAO JIAN		8/(9)	
MR GAO XIAOYU	(iv)	7/(7)	
INDEPENDENT NON-EXECUTIVE DIRECTORS			
MR TING LEUNG HUEL, STEPHEN	(v)	6/(8)	
MR LOONG PING KWAN		8/(9)	
DR PETER CASSIDY		9/(9)	
MR ANTHONY LARKIN	(vi)	1/(1)	

Notes:

(i) Resigned as the Chairman and a Non-executive Director on 1 April 2011.
(ii) Redesignated as the Chairman on 1 April 2011.
(iii) Resigned as an Executive Director on 29 March 2012.
(iv) Appointed as a Non-executive Director on 1 April 2011.
(v) Resigned as an Independent Non-executive Director on 30 November 2011.
(vi) Appointed as an Independent Non-executive Director on 30 November 2011.
(vii) Resigned as the Vice Chairman and Executive Director on 29 March 2012.

CHAIRMAN OF THE BOARD AND CHIEF EXECUTIVE OFFICER

The Chairman of the Board is Mr Wang Lixin and the CEO of the Company is Mr Andrew Michelmore. The roles of the Chairman of the Board and the CEO of the Company are segregated to ensure their respective independence, accountability and responsibility.

The Chairman takes the lead in formulating overall strategies and policies of the Group, ensures the effective performance by the Board of its functions, including compliance with good corporate governance practices and encourages and facilitates active contribution of directors in Board activities.

The Chairman also ensures that all directors are properly briefed on issues arising at Board meetings and have received adequate, complete and reliable information in a timely manner.

The CEO, supported by a management committee comprising executive directors and senior management (Executive Committee), is responsible for managing day-to-day operations of the Group and executing the strategies adopted by the Board. The CEO is also accountable to the Board for the implementation of the Group's overall strategies, and coordination of overall business operations.

EXECUTIVE DIRECTORS AND EXECUTIVE COMMITTEE

The Board has delegated the management of day-to-day operations of the Group to the CEO and his Executive Committee. The Executive Committee is also required to report regularly to the Board on the progress being made by the businesses of the Group.

The members of the Executive Committee are:

- Mr Andrew Michelmore (Chief Executive Officer and Executive Director);
- Mr David Lamont (Chief Financial Officer and Executive Director);
- Mr Marcelo Bastos (Chief Operating Officer);
- Mr Michael Nossal (Executive General Manager – Business Development);
- Mr Steve Ryan (Executive General Manager – Exploration); and
- Mr Tim Scully (Executive General Manager – Business Support).

NON-EXECUTIVE DIRECTORS

The non-executive directors (including the independent non-executive directors) provide a wide range of expertise and experience and bring independent judgement on issues relating to the Group's strategies, development, performance and risk management through their contribution at Board and committee meetings.

INDEPENDENT NON-EXECUTIVE DIRECTORS

The independent non-executive directors serve the important function of ensuring and monitoring the basis for an effective corporate governance framework. Their participation provides adequate checks and balances to safeguard the interests of shareholders. The Board has three independent non-executive directors and one of them has appropriate professional qualifications or accounting or related financial management expertise. The Board confirms that the Company has received from each of the independent non-executive directors a confirmation of independence for the year ended 31 December 2011 pursuant to Rule 3.13 of the Listing Rules and considers such directors to be independent.

RE-ELECTION OF DIRECTORS

Each of the non-executive directors has entered into a service agreement with the Company for a specific term of three years, except Dr Peter Cassidy. Dr Peter Cassidy's appointment agreement commences on 31 December 2010 and can be terminated by the Company with one month prior written notice.

However, as is the case with all other directors of the Company, his respective terms of office are subject to re-election by shareholders at the next general meeting (in the case of filling a casual vacancy) or at the next AGM (in the case of an addition to the Board) following his appointment in accordance with the articles of association of the Company. Every director (including Dr Peter Cassidy) is also subject to retirement by rotation at least once every three years at the AGM.

THE BOARD COMMITTEES

The Board has established various Board committees to provide a forum for a more detailed analysis of key issues for the Group. Each committee is entitled to the resources and information it requires to carry out its duties, including direct access to advisors and employees.

The current standing committees of the Board are the Audit Committee, the Remuneration and Nomination Committee, and the Safety Health, Environment and Community (SHEC) Committee.

AUDIT COMMITTEE

As at 31 December 2011, the Audit Committee comprised three independent non-executive directors, namely Mr Anthony Larkin, Dr Peter Cassidy and Mr Loong Ping Kwan, and one non-executive director, Mr Xu Jiqing. Mr Anthony Larkin is the Chairman of the Audit Committee.

The Audit Committee is accountable to the Board. Its principal duties include the review and supervision of the financial reporting process and internal control system of the Group. The terms of reference of the Audit Committee, incorporating all the duties set out in code provision C.3.3 of the CG Code, are posted on the Company's website.

During the year ended 31 December 2011, the Audit Committee held five meetings. The Audit Committee reviewed with the senior management and auditor of the Company the accounting policies and practices adopted by the Group and discussed auditing, the internal control system and financial reporting matters. It also reviewed the financial statements of the Company and the Company's annual and interim reports, the management letter from the auditor of the Company, the connected transactions and the continuing connected transactions entered into by the Group and the audit scope and fees for the year ended 31 December 2011.

The attendance of each member at the Audit Committee meetings is set out below. Figures in brackets indicate the maximum number of meetings held in the period in which the individual was a member of the Audit Committee.

MEMBERS	NOTES	NUMBER OF MEETINGS ATTENDED
NON-EXECUTIVE DIRECTORS		
MR XU JIQING		3/(3)
INDEPENDENT NON-EXECUTIVE DIRECTORS		
DR PETER CASSIDY		3/(3)
MR ANTHONY LARKIN (CHAIRMAN)	(i)	1/(1)
MR LOONG PING KWAN		3/(3)
MR TING LEUNG HUEL, STEPHEN	(ii)	2/(2)

Notes:

(i) Appointed as the Chairman and a member of the Audit Committee on 30 November 2011.
(ii) Resigned as the Chairman and a member of the Audit Committee on 30 November 2011.

MINERAL RESOURCES AND ORE RESERVES COMMITTEE

The Mineral Resources and Ore Reserves Committee is a sub-committee of the Audit Committee of the Company. The Committee oversees the Mineral Resources and Ore Reserves reporting processes of the Group. In doing so, the Committee facilitates and maintains free and open means of communication between the directors, the independent evaluators/auditors and management of the Group and ensures compliance with the JORC Code and the applicable Listing Rules.

The Committee comprises at least one Executive Committee member and two qualified staff:

- Executive Committee member (Chairman);
- General Manager Technical Services and Mining Engineering; and
- Principal Resource Geologist.

REMUNERATION AND NOMINATION COMMITTEE

As at 31 December 2011, the Remuneration and Nomination Committee comprised five members, a majority of whom are independent non-executive directors, and is chaired by Dr Peter Cassidy. The other members are Mr Jiao Jian, Mr Wang Lixin, Mr Anthony Larkin and Mr Loong Ping Kwan.

The Remuneration and Nomination Committee is responsible for, among other accountabilities:

- formulating and making recommendations to the Board on the Group's Remuneration Policy;
- the determination of specific remuneration packages of all executive directors in consultation with the Chairman and/or CEO and the determination of the appropriate mix of directors to constitute the Board;
- making recommendations to the Board on the remuneration of non-executive directors;
- developing policies and procedures for the selection and appointment of directors and identifying individuals suitably qualified to become directors, having regard to factors such as judgement, skills, diversity, experience in comparable businesses, the interplay of the candidate's experience with the experience of other Board members and the candidate's capacity to commit to the Board activities, and the extent to which the candidate would be a desirable addition to the Board or any Board committee;
- regularly reviewing the structure, size and composition (including the skills, knowledge and experience) of the boards of the Group companies; and
- reviewing succession plans for senior management annually to maintain an appropriate balance of skills, experience and expertise on the executive management team.

The terms of reference of the Remuneration and Nomination Committee are posted on the Company's website.

REMUNERATION

When determining or recommending to the Board the remuneration packages for directors and senior management, the Remuneration and Nomination Committee takes into consideration factors such as remuneration paid by comparable companies, accountabilities of the role, applicable regional employment conditions and, for executive directors and senior management, appropriate 'at risk' performance-based remuneration.

During the year ended 31 December 2011, other than resolutions passed in writing by all the Committee members, the Remuneration and Nomination Committee held five meetings. The Remuneration Committee reviewed the Remuneration Policy of the Company and the remuneration of directors and senior management and made recommendations to the Board.

The attendance of each member at the Remuneration and Nomination Committee meetings during the year ended 31 December 2011 is set out below. Figures in brackets indicate the maximum number of meetings held in the period in which the individual was a member of the Remuneration and Nomination Committee.

MEMBERS	NOTES	NUMBER OF MEETINGS ATTENDED
NON-EXECUTIVE DIRECTORS		
MR WANG LIXIN		5/(5)
MR JIAO JIAN	(i)	2/(5)
INDEPENDENT NON-EXECUTIVE DIRECTORS		
DR PETER CASSIDY (CHAIRMAN)	(ii)	5/(5)
MR ANTHONY LARKIN	(iii)	1/(1)
MR LOONG PING KWAN		5/(5)
MR TING LEUNG HUEL, STEPHEN	(iv)	4/(4)

Notes:

(i) Appointed as a member of the Remuneration and Nomination Committee on 15 February 2011.
(ii) Appointed as the Chairman of the Remuneration and Nomination Committee on 15 February 2011.
(iii) Appointed as a member of the Remuneration and Nomination Committee on 30 November 2011.
(iv) Resigned as a member of the Remuneration and Nomination Committee on 30 November 2011.

NOMINATION

The Board is empowered under the Company's articles of association to appoint any person as a director either to fill a casual vacancy or as an addition to the Board. Following the resignation of Mr Ting Leung Huel, Stephen on 30 November 2011, the Board selected and appointed Mr Anthony Larkin to the Board. In doing so, the Board considered his qualifications, experience and expertise as well as the requirements under the Listing Rules, having regard to the balance of skills and experience appropriate to the Group's business.

SAFETY, HEALTH, ENVIRONMENT AND COMMUNITY (SHEC) COMMITTEE

As at 31 December 2011, the SHEC Committee comprised three directors, namely Dr Peter Cassidy, Mr Andrew Michelmore and Mr Gao Xiaoyu. Dr Peter Cassidy is the Chairman of the SHEC Committee.

The purpose of the SHEC Committee is to assist the Board in the effective discharge of its responsibilities in relation to safety, health, environmental and community matters arising out of the activities of the Group as they affect employees, contractors and the communities in which the Group operates.

DISCLOSURE COMMITTEE

The Company has adopted a Disclosure Policy to ensure its compliance with the disclosure obligations under the Listing Rules and the timely disclosure of price-sensitive information to the market. In addition, the Company has also established a Disclosure Committee, which comprises the CEO, CFO, General Counsel, General Manager Stakeholder Relations, Group Manager Communications and Company Secretary. The Disclosure Policy requires employees to refer all information that potentially requires disclosure to a member of the Disclosure Committee.

ACCOUNTABILITY AND AUDIT

FINANCIAL REPORTING

The directors acknowledge their responsibility for preparing all information and representations contained in the financial statements for the year ended 31 December 2011 as disclosed in this annual report. The directors consider that the financial statements have been prepared in conformity with Hong Kong Financial Reporting Standards issued by the Hong Kong Institute of Certified Public Accountants and the Hong Kong Companies Ordinance, and reflect amounts that are based on the best estimates and reasonable, informed and prudent judgement of the Board and management with an appropriate consideration to materiality. As at 31 December 2011, the directors, having made appropriate enquiries, are not aware of any material uncertainties relating to events or conditions which may cast significant doubt upon the Group's and the Company's ability to continue as a going concern.

Accordingly, the directors have prepared the financial statements on a going concern basis.

The statement of the auditor of the Company regarding its responsibilities for the financial statements is set out in the Independent Auditor's Report on page 68 of this annual report.

INTERNAL CONTROLS

The Board is entrusted with overall responsibility for establishing and maintaining the Group's internal control system and reviewing its effectiveness to safeguard the Group's assets and to protect shareholders' interest. The management throughout the Group maintains and monitors the internal control system on an ongoing basis. During the year, the Group engaged an international independent external professional consultant to perform the internal control reviews over the Group's operations.

The reviews were based on the internal control framework recommended by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), a globally recognised framework. The internal control reviews covered certain key operational and financial processes of the selected entities of the Group and a follow-up review of the action plans to address the findings from last year's review. The consultant reported its findings and recommendations directly to the Audit Committee. The Audit Committee reported the findings to the Board.

AUDITOR'S REMUNERATION

An analysis of the remuneration of the external auditor, PricewaterhouseCoopers (which for these purposes include any entity under common control, ownership or management with the external auditors or any entity that a reasonable and informed third party having knowledge of all relevant information would reasonably conclude as part of the audit firm nationally or internationally), for the year ended 31 December 2011 is set out as follows:

	FEE PAID/PAYABLE 2011
SERVICES RENDERED	**US$'000**
STATUTORY AUDIT SERVICES	1,647
OTHER AUDIT-RELATED SERVICES – MAINLY INCLUDING REPORTING ACCOUNTANTS IN CONNECTION WITH THE MAJOR TRANSACTIONS DURING THE YEAR	606
NON-AUDIT SERVICES	
TAX SERVICES IN CONNECTION WITH THE MAJOR TRANSACTIONS DURING THE YEAR	414
OTHER TAX SERVICES – INCLUDING TAX COMPLIANCE, ADVISORY, DUE DILIGENCE AND PLANNING SERVICES	531
OTHER SERVICES (INCLUDING TAXATION SERVICES)	112
	3,310

COMMUNICATION WITH SHAREHOLDERS

The Company endeavours to develop and maintain continuing relationships and effective communication with its shareholders and investors. In an effort to facilitate and enhance the relationships and communication the Company has adopted a Shareholder Communication Policy, which is available on the Company website. In addition:

(i) The AGM provides a forum for shareholders of the Company to raise comments and exchange views with the Board. The directors are available at the AGMs of the Company to address shareholders' queries.

(ii) Separate resolutions are proposed at the general meetings on each substantially separate issue.

(iii) Interim and annual results are announced as soon as practicably possible to keep shareholders of the Company informed of the Group's performance and operations.

(iv) Updated key information of the Group is available on the Company's website to enable the shareholders of the Company and the investors to have timely access to information about the Group.

A notice of meeting is sent to shareholders at least 20 clear business days before AGMs and at least 10 clear business days before EGMs.

pwc

羅兵咸永道

INDEPENDENT AUDITOR'S REPORT

TO THE SHAREHOLDERS OF
MINMETALS RESOURCES LIMITED
(incorporated in Hong Kong with limited liability)

We have audited the consolidated financial statements of Minmetals Resources Limited (the "Company") and its subsidiaries (together, the "Group") set out on pages II-2 to II-76, which comprise the consolidated and company balance sheets as at 31 December 2011, and the consolidated income statement, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated cash flow statement for the year then ended, and a summary of significant accounting policies and other explanatory information.

Directors' responsibility for the consolidated financial statements
The directors of the Company are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with Hong Kong Financial Reporting Standards issued by the Hong Kong Institute of Certified Public Accountants, and the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

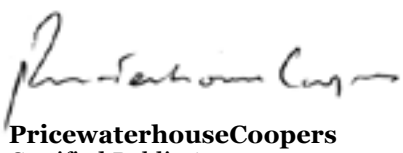
Auditor's responsibility
Our responsibility is to express an opinion on these consolidated financial statements based on our audit and to report our opinion solely to you, as a body, in accordance with section 141 of the Hong Kong Companies Ordinance and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

We conducted our audit in accordance with Hong Kong Standards on Auditing issued by the Hong Kong Institute of Certified Public Accountants. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of consolidated financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the directors, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion
In our opinion, the consolidated financial statements give a true and fair view of the state of affairs of the Company and of the Group as at 31 December 2011, and of the Group's profit and cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards and have been properly prepared in accordance with the Hong Kong Companies Ordinance.



PricewaterhouseCoopers
Certified Public Accountants

Hong Kong, 28 March 2012

PricewaterhouseCoopers, 22/F, Prince's Building, Central, Hong Kong
T: +852 2289 8888, F:+852 2810 9888, www.pwchk.com

GLOSSARY

lb	pound(s)
oz	ounce(s)
t	tonne(s)
A$	Australian dollar, the lawful currency of Australia
AGM	Annual General Meeting
ALBUM ENTERPRISES	Album Enterprises Limited, a company incorporated on 19 January 2005 in Hong Kong with limited liability
ALBUM INVESTMENT	Album Investment Private Limited, a company incorporated on 8 April 2009 in Singapore with limited liability, a wholly-owned subsidiary of the Company
ALBUM RESOURCES	Album Resources Private Limited, a company incorporated on 8 April 2009 in Singapore with limited liability, a wholly-owned subsidiary of the Company
ALL GLORIOUS	All Glorious Limited, a company incorporated on 8 September 2010 in the British Virgin Islands with limited liability, a wholly-owned subsidiary of the Company
ANVIL	Anvil Mining Limited, a corporation existing under the laws of the Northwest Territories, Canada
ASSOCIATE	has the meaning ascribed to it under the Listing Rules
AUSTRALIA	the Commonwealth of Australia
AUSTRALIAN GOVERNMENT	the Government of Australia
BOARD	the Board of Directors of the Company
BOARD CHARTER	the Board Charter of the Company
C$	Canadian dollar, the lawful currency of Canada
C1 COST	as defined in Brook Hunt Zinc and Lead Costs – Mines and Projects to 2018, 2005 edition
CHANGZHOU JINYUAN	Changzhou Jinyuan Copper Company Limited
CHINA	the People's Republic of China excluding Hong Kong, the Macau Special Administrative Region of the PRC and Taiwan
COMPANY	Minmetals Resources Limited, a company incorporated on 29 July 1998 in Hong Kong with limited liability, the shares of which have listed and traded on the Stock Exchange
CMC	China Minmetals Corporation, formerly known as China National Metals and Minerals Import and Export Corporation, a state-owned enterprise incorporated on 7 April 1950 under the laws of the PRC
CMC GROUP	CMC and its subsidiaries
CMCL	China Minmetals Corporation Limited, a joint stock limited company incorporated on 16 December 2010 under the laws of the PRC
CMN	China Minmetals Non-ferrous Metals Company Limited, a joint stock limited company incorporated on 27 December 2001 under the laws of the PRC
CMN TRADING	China Minmetals Non-ferrous Metals Trading Company Limited
COMPANIES ORDINANCE	the Companies Ordinance (Chapter 32 of the Laws of Hong Kong)
DISPOSAL GROUP	the Company's entire 100% equity interest in Minmetals Aluminium, Riseup Dragon Limited's entire 72.80% equity interest in NCA, Orienmet Industry's entire 51% equity interest in Yingkou Orienmet and Lontic (H.K.) Limited's entire 36.2913% equity interest in Changzhou Jinyuan
EBIT	earnings before net financing expenses and income tax
EBIT MARGIN	EBIT divided by revenue
EBITDA	earnings before depreciation and amortisation expenses, net financing expenses and income tax
EBITDA MARGIN	EBITDA divided by revenue
EGM	Extraordinary General Meeting

EIS	Environmental Impact Statement
EQUINOX	Equinox Minerals Limited
EXECUTIVE COMMITTEE	the Executive Committee of the Group, which consists of all executive directors of the Company, Chief Operating Officer, Executive General Manager – Business Development, Executive General Manager – Exploration and Executive General Manager – Business Support.
GROUP	the Company and its subsidiaries, excluding jointly-controlled entities
g/t	grams per tonne
GUANGXI HUAYIN	Guangxi Huayin Aluminium Company Limited
HK$	Hong Kong dollar, the lawful currency of Hong Kong
HONG KONG	the Hong Kong Special Administrative Region of the PRC
HNC	Hunan Nonferrous Metals Corporation Limited
HNG	Hunan Nonferrous Metals Holdings Group Company Limited
ICMM	International Council on Mining and Metals
INDICATED RESOURCES	as defined under the JORC Code, that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence
INFERRED RESOURCES	as defined under the JORC Code, that part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence
JORC CODE	the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2004 edition), as published by the Joint Ore Reserves Committee, as amended from time to time
LAOS	the Lao People's Democratic Republic (Lao PDR)
LISTING RULES	the Rules Governing the Listing of Securities on the Stock Exchange
LME	London Metals Exchange
LTIFR	Lost time injury frequency rate
LXML	Lane Xang Minerals Limited, a company incorporated on 30 September 1993 in Laos as the holding company for the Sepon operation
M&A	merger and acquisition
MEASURED RESOURCES	as defined under the JORC Code, that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence
MINERAL RESOURCES	as defined under the JORC Code, a concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction
MINMETALS ALUMINIUM	Minmetals Aluminium Company Limited
MMG	Minerals and Metals Group, being the collective brand name of the portfolio of international mining assets held by Album Resources
MMG CENTURY	MMG Century Limited, a company incorporated on 25 November 1986 in Australia with limited liability and a member of MMG
MMG GOLDEN GROVE	MMG Golden Grove Pty Ltd, a company incorporated on 21 June 2005 in Australia with limited liability and a member of MMG
MMG MANAGEMENT	MMG Management Pty Ltd, a company incorporated on 15 July 2005 in Australia with limited liability and a member of MMG
Mt	million tonnes
NCA	North China Aluminium Company Limited

NPAT	net profit after tax
ORE RESERVES	as defined under the JORC Code, the economically mineable part of a Measured Resource and/or Indicated Resource
ORIENMET INDUSTRY	Orienmet Industry Company Limited
PRC	the People's Republic of China
PRODUCTION DATA	the production data included in this report is the metal contained in concentrate, cathode or doré for the key products the Company produces
PSCS	the Perpetual Sub-ordinated Convertible Securities issued by the Company
PSCS HOLDER(S)	the person(s) in whose names the PSCS are registered
QINGDAO M.C.	Qingdao M.C. Packaging Limited
RISEUP DRAGON	Riseup Dragon Limited
RMB	Renminbi, the lawful currency of the PRC
SAP	'Systems Applications and Products in Data Processing', enterprise application software
SFO	the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong)
SHANXI GUANLV	Shanxi Guanlv Company Limited
STOCK EXCHANGE	The Stock Exchange of Hong Kong Limited
TOP CREATE	Top Create Resources Limited, a company incorporated on 22 January 2004 in the British Virgin Islands with limited liability
TRADING, FABRICATION AND OTHER OPERATIONS	has the same meaning as Disposal Group
TRIFR	Total recordable injury frequency rate
US$	United States dollar, the lawful currency of the United States of America
YINGKOU ORIENMET	Yingkou Orienmet Plica Tube Company Limited



FINANCIAL STATEMENTS

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CONSOLIDATED INCOME STATEMENT

	NOTE	YEAR ENDED 31 DECEMBER 2011 US$ MILLION	2010 US$ MILLION (RESTATED)
CONTINUING OPERATIONS			
Revenue	5	**2,228.3**	**1,919.9**
Cost of sales	7	(1,301.9)	(1,041.6)
Gross profit		**926.4**	**878.3**
Selling expenses	7	(80.3)	(73.9)
Administrative expenses	7	(135.9)	(58.6)
Exploration expenses	7	(64.0)	(55.5)
Other gains/(losses) – net	6(a)	3.1	(16.2)
Other operating expenses	7	(129.0)	(75.4)
Other income	6(b)	19.1	9.0
Gain on disposal of available-for-sale financial assets	19	152.1	-
Business acquisition expenses	7	-	(86.4)
Write-back of business acquisition expenses	7	63.8	-
Operating profit		**755.3**	**521.3**
Finance income	8	2.4	4.3
Finance costs	8	(48.6)	(42.8)
Profit before income tax		**709.1**	**482.8**
Income tax expense	9	(225.5)	(126.6)
Profit for the year from continuing operations		**483.6**	**356.2**
DISCONTINUED OPERATIONS			
Profit from discontinued operations	38	90.9	74.2
Profit for the year		**574.5**	**430.4**
Profit for the year attributable to:			
Equity holders of the Company		540.9	409.4
Non-controlling interests		33.6	21.0
		574.5	**430.4**
Profit for the year attributable to equity holders of the Company arises from:			
Continuing operations		454.1	335.8
Discontinued operations		86.8	73.6
		540.9	**409.4**

	NOTE	YEAR ENDED 31 DECEMBER 2011	2010 (RESTATED)
Earnings per share for profit attributable to the equity holders of the Company	11		
Basic earnings per share			
From continuing operations		US 9.99 cents	US 11.32 cents
From discontinued operations		US 1.91 cents	US 2.48 cents
		US 11.90 cents	US 13.80 cents
Diluted earnings per share			
From continuing operations		US 8.99 cents	US 7.41 cents
From discontinued operations		US 1.72 cents	US 1.63 cents
		US 10.71 cents	US 9.04 cents

The notes on pages II-12 to II-76 are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	NOTE	YEAR ENDED 31 DECEMBER 2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Profit for the year		**574.5**	**430.4**
Other comprehensive income/(loss)			
Net change in fair value of available-for-sale financial assets, net of tax		70.1	43.9
Transfer to income statement on disposal of available-for-sale financial assets, net of tax		(112.7)	-
Currency translation differences		12.3	13.1
Currency translation differences transfer to income statement on disposal of subsidiaries and investments accounted for using the equity method		(45.9)	-
Cash flow hedge		-	1.0
Other comprehensive (loss)/income for the year		**(76.2)**	**58.0**
Total comprehensive income for the year		**498.3**	**488.4**
Total comprehensive income attributable to:			
Equity holders of the Company		464.0	466.7
Non-controlling interests		34.3	21.7
		498.3	**488.4**
Total comprehensive income attributable to equity holders of the Company arises from:			
Continuing operations		411.5	379.6
Discontinued operations		52.5	87.1
		464.0	**466.7**

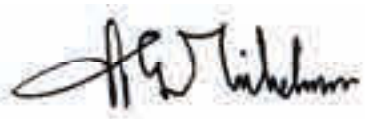
The notes on pages II-12 to II-76 are an integral part of these consolidated financial statements.

CONSOLIDATED BALANCE SHEET

	NOTE	AS AT 31 DECEMBER 2011 US$ MILLION	2010 US$ MILLION
ASSETS			
Non-current assets			
Property, plant and equipment	15	1,754.9	1,671.5
Investment properties		1.8	2.0
Intangible assets	16	-	132.0
Investments accounted for using the equity method	18	0.1	227.3
Inventories	21	33.1	24.4
Deferred income tax assets	20	63.6	98.8
Other assets		2.7	1.5
		1,856.2	2,157.5
Current assets			
Inventories	21	278.4	363.8
Trade and other receivables	22	118.3	360.4
Loan to a related party	37	95.0	-
Current income tax assets		7.4	3.5
Available-for-sale financial assets	19	-	164.1
Other financial assets	23	1.7	19.4
Cash and cash equivalents	24	1,096.5	398.2
		1,597.3	1,309.4
Total assets		**3,453.5**	**3,466.9**
EQUITY			
Capital and reserves attributable to equity holders of the Company			
Share capital	25	33.9	19.0
Perpetual sub-ordinated convertible securities	27	-	690.0
Reserves and retained profits	26	1,401.5	(232.0)
		1,435.4	477.0
Non-controlling interests		59.0	56.4
Total equity		**1,494.4**	**533.4**

CONSOLIDATED BALANCE SHEET CONTINUED

	NOTE	AS AT 31 DECEMBER 2011 US$ MILLION	2010 US$ MILLION
LIABILITIES			
Non-current liabilities			
Deferred income	29	-	5.1
Deferred income tax liabilities	20	5.5	20.1
Borrowings	30	294.5	1,144.3
Loan from a related party	37	-	694.2
Provisions	33	491.1	317.6
		791.1	2,181.3
Current liabilities			
Trade and other payables	31	205.1	368.5
Receipts in advance		-	71.0
Advances from banks for discounted bills		-	43.6
Amounts due to related parties	37	-	2.5
Derivative financial instruments	23	-	1.2
Current income tax liabilities		117.9	129.1
Borrowings	30	787.2	83.2
Provisions	33	56.5	53.1
		1,166.7	752.2
Liabilities of disposal group classified as held for sale	38	1.3	-
		1,168.0	752.2
Total liabilities		**1,959.1**	**2,933.5**
Total equity and liabilities		**3,453.5**	**3,466.9**
Net current assets		**429.3**	**557.2**
Total assets less current liabilities		**2,285.5**	**2,714.7**





ANDREW MICHELMORE
CEO AND EXECUTIVE DIRECTOR

DAVID LAMONT
CFO AND EXECUTIVE DIRECTOR

The notes on pages II-12 to II-76 are an integral part of these consolidated financial statements.

COMPANY BALANCE SHEET

	NOTE	AS AT 31 DECEMBER 2011 US$ MILLION	2010 US$ MILLION
ASSETS			
Non-current assets			
Property, plant and equipment	15(b)	-	0.3
Investment properties		1.8	1.8
Interests in subsidiaries	17	2,207.9	1,780.9
		2,209.7	1,783.0
Current assets			
Other receivables		0.4	0.1
Amounts due from subsidiaries	17	644.2	-
Cash and cash equivalents	24	222.3	17.1
		866.9	17.2
Total assets		**3,076.6**	**1,800.2**
EQUITY			
Capital and reserves			
Share capital	25	33.9	19.0
Perpetual sub-ordinated convertible securities	27	-	690.0
Reserves and retained profits	26	2,531.1	1,085.7
Total equity		**2,565.0**	**1,794.7**
LIABILITIES			
Non-current liabilities			
Provision	33	3.2	-
Current liabilities			
Other payables		1.2	0.5
Provision	33	1.3	-
Amounts due to subsidiaries	17	505.9	5.0
		508.4	5.5
Total liabilities		**511.6**	**5.5**
Total equity and liabilities		**3,076.6**	**1,800.2**
Net current assets		**358.5**	**11.7**
Total assets less current liabilities		**2,568.2**	**1,794.7**





ANDREW MICHELMORE
CEO AND EXECUTIVE DIRECTOR

DAVID LAMONT
CFO AND EXECUTIVE DIRECTOR

The notes on pages II-12 to II-76 are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

	ATTRIBUTABLE TO EQUITY HOLDERS OF THE COMPANY					
US$ MILLION	Share capital	Perpetual sub-ordinated convertible securities	Total other reserves	Retained profits	Non-controlling interests	Total
At 1 January 2011	19.0	690.0	(677.2)	445.2	56.4	533.4
Profit for the year	-	-	-	540.9	33.6	574.5
Other comprehensive income/(loss)						
Change in fair value of available-for-sale financial assets, net of tax	-	-	70.1	-	-	70.1
Transfer to income statement on disposal of available-for-sale financial assets, net of tax	-	-	(112.7)	-	-	(112.7)
Currency translation differences	-	-	11.6	-	0.7	12.3
Currency translation differences transfer to income statement on disposal of subsidiaries and investments accounted for using the equity method	-	-	(45.9)	-	-	(45.9)
Total comprehensive income for the year	-	-	(76.9)	540.9	34.3	498.3
Transactions with owners						
Transfer (from)/to reserves	-	-	6.1	(6.1)	-	-
Dividends paid to non-controlling interests	-	-	-	-	(0.4)	(0.4)
Issue of shares	4.9	-	489.4	-	-	494.3
Conversion of perpetual sub-ordinated convertible securities into ordinary shares	10.0	(690.0)	680.0	-	-	-
Employees share option	-	-	0.1	-	-	0.1
Disposal of subsidiaries	-	-	(31.1)	31.1	(31.3)	(31.3)
Total transactions with owners	14.9	(690.0)	1,144.5	25.0	(31.7)	462.7
At 31 December 2011	**33.9**	**-**	**390.4**	**1,011.1**	**59.0**	**1,494.4**

US$ MILLION	ATTRIBUTABLE TO EQUITY HOLDERS OF THE COMPANY					
	Share capital	Perpetual sub-ordinated convertible securities	Total other reserves	Retained profits	Non-controlling interests	Total
At 1 January 2010	13.0	-	755.1	376.3	67.7	1,212.1
Profit for the year	-	-	-	409.4	21.0	430.4
Other comprehensive income						
Cash flow hedge	-	-	1.0	-	-	1.0
Net change in fair value of available-for-sale financial assets	-	-	43.9	-	-	43.9
Currency translation differences	-	-	12.4	-	0.7	13.1
Total comprehensive income for the year	-	-	57.3	409.4	21.7	488.4
Transactions with owners						
Transfer (from)/to reserves	-	-	0.5	(0.5)	-	-
Dividends paid	-	-	-	(340.0)	-	(340.0)
Dividends paid to non-controlling interests	-	-	-	-	(33.0)	(33.0)
Issue of shares	6.0	-	646.6	-	-	652.6
Issue of perpetual sub-ordinated convertible securities	-	690.0	-	-	-	690.0
Employees share option	-	-	0.1	-	-	0.1
Business combination under common control	-	-	(2,136.8)	-	-	(2,136.8)
Total transactions with owners	6.0	690.0	(1,489.6)	(340.5)	(33.0)	(1,167.1)
At 31 December 2010	19.0	690.0	(677.2)	445.2	56.4	533.4

The notes on pages II-12 to II-76 are an integral part of these consolidated financial statements.

CONSOLIDATED CASH FLOW STATEMENT

	NOTE	YEAR ENDED 31 DECEMBER 2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Cash flows from operating activities			
Continuing operations			
Net cash generated from operations	34	909.3	846.2
Income tax paid		(209.6)	(81.6)
		699.7	764.6
Discontinued operations		100.8	51.6
Net cash generated from operating activities		**800.5**	**816.2**
Cash flows from investing activities			
Continuing operations			
Acquisition of subsidiaries		-	(100.0)
Capital injection into a jointly-controlled entity		(0.1)	-
Purchase of property, plant and equipment		(380.3)	(307.7)
Proceeds from disposal of property, plant and equipment		4.2	2.5
Proceeds from disposal of investment properties		0.3	-
Proceeds from disposal of available-for-sale financial assets		311.2	-
Proceeds from disposal of investments		509.1	0.3
Purchase of financial assets		(66.4)	(100.2)
Dividends received from investments accounted for using the equity method		1.3	2.5
Interest received		1.0	4.3
Loan to a related party		(95.0)	-
		285.3	(498.3)
Discontinued operations		(99.1)	(7.3)
Net cash generated from/(used in) investing activities		**186.2**	**(505.6)**

	NOTE	YEAR ENDED 31 DECEMBER 2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Cash flows from financing activities			
Continuing operations			
Repayments of borrowings		(17.2)	-
Repayments of loan from a related party		(694.2)	-
Proceeds from issue of shares		494.3	-
Interest paid		(26.3)	(25.1)
Dividends paid to non-controlling interests		-	(32.9)
Dividends paid to former owner of Album Resources Private Limited		-	(340.0)
Repayments of finance lease liabilities		(1.0)	(1.7)
		(244.4)	(399.7)
Discontinued operations		(48.2)	9.8
Net cash used in financing activities		**(292.6)**	**(389.9)**
Net increase/(decrease) in cash and cash equivalents		694.1	(79.3)
Cash and cash equivalents at 1 January		398.2	471.1
Exchange gains on cash and bank balances		4.2	6.4
Cash and cash equivalents at 31 December	24	**1,096.5**	**398.2**
Analysis of balances of cash and cash equivalents			
Cash and bank balances from:			
Continuing operations		1,096.5	240.8
Discontinued operations		-	157.4
		1,096.5	**398.2**

The notes on pages II-12 to II-76 are an integral part of these consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. GENERAL INFORMATION

Minmetals Resources Limited (Company) is a limited liability company and was incorporated in Hong Kong on 29 July 1988. The address of its registered office is Units 8501-8503, Level 85, International Commerce Centre, 1 Austin Road West, Kowloon, Hong Kong.

The Company was an investment holding company and is listed on the Stock Exchange of Hong Kong. The principal activities of the Company and its subsidiaries (Group) are the exploration for, and the mining, processing and sale of zinc, copper, lead, gold, silver and other minerals into both metal and metal in concentrates.

The consolidated financial statements for the year ended 31 December 2011 comprise the Group and the Group's interest in jointly-controlled entities and associates. These consolidated financial statements are presented in United States dollars (US$) unless otherwise stated and have been approved for issue by the Board of Directors on 28 March 2012.

Divestment of the trading, fabrication and other operations of the Company
Following the decision by the Board of the Company on 28 March 2011, the trading, fabrication and other operations were made available for sale at their present state as a disposal group (Disposal Group). On 15 September 2011, the directors of the Company announced that the Company had entered into the Master Sale and Implementation Agreement with a controlling shareholder of the Company, China Minmetals Non-ferrous Metals Co., Ltd. (CMN), to sell its entire interest in four entities (Disposal Entities) out of the Disposal Group for an aggregate consideration of US$726.8 million (Disposal). The Disposal Entities represent majority components of the Disposal Group. The Disposal was approved by the independent shareholders of the Company on 28 October 2011 and completed in December 2011.

Analysis on the results, assets and liabilities of the Disposal Group, and details of the Disposal are presented in Note 38.

Common control combination in 2010
The Group completed the acquisition of the entire equity interest in Album Resources from Album Enterprises, a wholly-owned subsidiary of CMN, on 31 December 2010 for a total consideration of US$2,136.8 million. Album Resources is the holding company for Minerals and Metals Group (MMG), a significant producer of zinc, copper, lead, gold and silver. This business combination was regarded and accounted for as a business combination under common control in 2010.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

2.1 Basis of preparation

The consolidated financial statements of the Company have been prepared in accordance with Hong Kong Financial Reporting Standards (HKFRS) issued by the Hong Kong Institute of Certified Public Accountants (HKICPA). These consolidated financial statements have been prepared under the historical cost convention, as modified by the revaluation of investment properties, available-for-sale financial assets, and financial assets and financial liabilities (including derivative instruments) at fair value through profit or loss.

The preparation of financial statements in conformity with HKFRS requires the use of certain critical accounting estimates. It also requires management to exercise their judgement in the process of applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 4.

The financial statements have been prepared on the basis that the Company and Group are able to continue as a going concern, including to meet its obligations in the ordinary course of business. The Board of Directors is confident about its ability to successfully refinance its current borrowings during 2012.

(a) New and amended standards adopted by the Group

The HKICPA has issued the following new and revised standards, amendments to standards and interpretations that are effective in 2011 but not relevant to the Group.

HKFRSs (Amendment)	Improvements to HKFRSs 2010
HKAS 32 (Amendment)	Classification of right issues
HK (IFRIC) – Int 14 (Amendment)	Prepayments of a minimum funding requirement
HK (IFRIC) – Int 19	Extinguishing financial liabilities with equity instruments

(b) New standards and amendments to standards issued but not effective for the financial year beginning 1 January 2011 and not early adopted

The Group has not early adopted the following new/revised standards and amendments to standards that have been issued but are not effective for 2011. The Group is in the process of assessing their impact to the Group's results and financial position.

HKAS 1 (Amendment)	Presentation of Financial Statements[(2)]
HKAS 12 (Amendment)	Deferred tax- recovery of underlying assets[(1)]
HKAS 19 (2011)	Employee Benefits[(2)]
HKAS 27 (2011)	Separate Financial Statements[(2)]
HKAS 28 (2011)	Investments in Associates and Joint Ventures[(2)]
HKAS 32 (Amendment)	Presentation – Offsetting Financial Assets and Financial Liabilities[(3)]
HKFRS 1 (Amendment)	Severe Hyperinflation and Removal of Fixed Dates for First-time Adopters[(1)]
HKFRS 7 (Amendment)	Disclosures- transfers of financial assets[(1)]
HKFRS 9	Financial instruments[(4)]
Additions to HKFRS 9	Financial instruments – financial liabilities[(4)]
HKFRS 10	Consolidated Financial Statements[(2)]
HKFRS 11	Joint Arrangements[(2)]
HKFRS 12	Disclosures of Interests in Other Entities[(2)]
HKFRS 13	Fair Value Measurement[(2)]
HK(IFRIC) - Int 20	Stripping Costs in the Production Phase of a Surface Mine[(2)]

Effective for the Group for annual period beginning:

(1) 1 January 2012

(2) 1 January 2013

(3) 1 January 2014

(4) 1 January 2015

2.2 Consolidation

(a) Purchase method of accounting for non-common control combination

The Group uses the purchase method of accounting to account for business combinations other than common control combination. The consideration transferred for the acquisition of a subsidiary is the fair value of the assets transferred, the liabilities incurred to the former owners of the acquiree and the equity interests issued by the Group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement and the fair value of any pre-existing equity interest in the subsidiaries. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. On an acquisition-by-acquisition basis, the Group recognises any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the recognised amounts of the acquiree's identifiable net assets.

Goodwill is initially measured as the excess of the aggregate of the consideration transferred and the fair value of non-controlling interest over the net identifiable assets acquired and liabilities assumed. If this consideration is lower than the fair value of the net assets of the subsidiary acquired, the difference is recognised directly in the income statement.

(b) Merger accounting for common control combination

The consolidated financial statements incorporate the financial statements of the combining entities or businesses in which the common control combination occurs as if they had been combined from the date when the combining entities or businesses first came under the control of the controlling party.

The net assets of the combining entities or businesses are consolidated using the existing book values from the controlling parties' perspective. No amount is recognised in respect of goodwill or excess of acquirers' interest in the net fair value of acquirees' identifiable assets, liabilities and contingent liabilities over cost at the time of common control combination, to the extent of the continuation of the controlling party's interest.

The consolidated income statement includes the results of each of the combining entities or businesses from the earliest date presented or since the date when the combining entities or business first came under the common control, where this is a shorter period, regardless of the date of the common control combination.

The comparative amounts in the consolidated financial statements are presented as if the entities or businesses had been combined at the previous balance sheet date unless they first came under common control at a later date.

Transaction costs, including professional fees, registration fees, costs of furnishing information to shareholders, costs or losses incurred in combining operations of the previously separate businesses, incurred in relation to the common control combination that is to be accounted for by using merger accounting are recognised as expenses in the year in which they are incurred.

(c) Subsidiaries

Subsidiaries are all entities (including special purpose entities) over which the Group has the power to govern the financial and operating policies generally accompanying a shareholding of more than one half of the voting rights. The existence and effect of potential voting rights that are currently exercisable or convertible are considered when assessing whether the Group controls another entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are de-consolidated from the date that control ceases.

Inter-company transactions, balances, income and expenses on transactions between group companies are eliminated. Profits and losses resulting from inter-company transactions that are recognised in assets are also eliminated. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

(d) Transactions with non-controlling interests

Transactions with non-controlling interests that do not result in loss of control are accounted for as equity transactions – that is, as transactions with the owners in their capacity as owners. The difference between fair value of any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

When the Group ceases to have control, any retained interest in the entity is re-measured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, jointly-controlled entity or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognised in other comprehensive income are reclassified to profit or loss.

(e) Separate financial statements

Investments in subsidiaries are accounted for at cost less impairment. Cost is adjusted to reflect changes in consideration arising from contingent consideration amendments. Cost also includes direct attributable costs of investment. The results of subsidiaries are accounted for by the company on the basis of dividend and receivable.

Impairment testing of the investments in subsidiaries is required upon receiving dividends from these investments if the dividend exceeds the total comprehensive income of the subsidiary in the period the dividend is declared or if the carrying amount of the investment in the separate financial statements exceeds the carrying amount in the consolidated financial statements of the investee's net assets including goodwill.

2.3 Investments accounted for using equity method

The Group applies equity method of accounting to account for its investments in jointly-controlled entities and associates.

(a) Jointly-controlled entities

Joint venture arrangements that involve the establishment of a separate entity in which venturers have joint control over the economic activity of the entity are referred to as jointly-controlled entities. The Group's interests in jointly-controlled entities are accounted for using the equity method of accounting and are initially recognised at cost. The Group's investment in jointly-controlled entities includes goodwill identified on acquisition, net of any accumulated impairment loss.

(b) Associates

Associates are all entities over which the group has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. Investments in associates are accounted for using the equity method of accounting. Under the equity method, the investment is initially recognised at cost, and the carrying amount is increased or decreased to recognise the investor's share of the profit or loss of the investee after the date of acquisition. The group's investment in associates includes goodwill identified on acquisition.

If the ownership interest in an associate or jointly-controlled entity is reduced but significant influence/jointly control is retained, only a proportionate share of the amounts previously recognised in other comprehensive income is reclassified to profit or loss where appropriate.

The Group's share of post-acquisition profit or loss is recognised in the income statement, and its share of post-acquisition movements in other comprehensive income is recognised in other comprehensive income with a corresponding adjustment to the carrying amount of the investment. When the group's share of losses in an associate/a jointly-controlled entity equals or exceeds its interest in the associate/jointly-controlled entity, including any other unsecured receivables, the Group does not recognise further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the associate/jointly-controlled entity.

The Group determines at each reporting date whether there is any objective evidence that the investment is impaired. If this is the case, the group calculates the amount of impairment as the difference between the recoverable amount of the associate/jointly-controlled entity and its carrying value and recognises the amount adjacent to 'share of profit/(loss) of an associate/a jointly-controlled entity' in the income statement.

Profits and losses resulting from upstream and downstream transactions between the Group and its associate/jointly-controlled entity are recognised in the group's financial statements only to the extent of unrelated investor's interests in the associates/jointly-controlled entities. Unrealised losses are eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of associates/jointly-controlled entities have been changed where necessary to ensure consistency with the policies adopted by the Group.

Dilution gains and losses arising in investments in associates/jointly-controlled entities are recognised in the income statement.

2.4 Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Company's Executive Committee.

2.5 Foreign currency translation

(a) Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (functional currency). The Company's functional currency is US dollars which is the Group's presentation currency.

(b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement.

Translation differences on non-monetary financial assets and liabilities such as equities held at fair value through profit or loss are recognised in profit or loss as part of the fair value gain or loss. Translation differences on non-monetary financial assets such as equities classified as available-for-sale are included in the available-for-sale financial assets reserve in equity.

(c) Group companies

The results and financial position of all the Group's entities (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

(i) assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;
(ii) income and expenses for each income statement are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing at the dates of the transactions, in which case income and expenses are translated at the dates of the transactions); and
(iii) all resulting exchange differences are recognised in other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate.

On the disposal of a foreign operation (that is, a disposal of the Group's entire interest in a foreign operation, or a disposal involving loss of control over a subsidiary that includes a foreign operation, a disposal involving loss of joint control over a jointly controlled entity that includes a foreign operation, or a disposal involving loss of significant influence over an associate that includes a foreign operation), all of the exchange differences accumulated in equity in respect of that operation attributable to the equity holders of the Company are reclassified to profit or loss.

2.6 Property, plant and equipment

Property, plant and equipment is stated at historical cost less accumulated depreciation and impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items and costs incurred in bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Cost also includes transfers from equity of any gains/losses on qualifying cash flow hedges of foreign currency purchases of property, plant and equipment.

Major spare parts and stand-by equipment are carried as property, plant and equipment when an entity expects to use them during more than one period or when they can be used only in connection with an item of property, plant and equipment.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate. Only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably, the carrying amount of the replaced part is derecognised. All other repairs and maintenance are expensed in the consolidated income statement during the accounting period in which they are incurred.

Mine property and development assets include costs transferred from exploration and evaluation assets once technical feasibility and commercial viability of an area of interest are demonstrable, and also includes subsequent costs to develop the mine to the production phase.

(a) Depreciation and amortisation

Amortisation of mine property and development assets and depreciation of assets within the mining and processing streams of property, plant and equipment are calculated on the basis of units of production unless their useful life is less than that of the mine. Amortisation of mine, property and development assets is based on assessments of developed proven and probable reserves and a proportion of resources available to be mined by the current production equipment to the extent that such resources are considered to be economically recoverable. Reserves and resource estimates are revised annually. The depreciation expense calculation reflects the Board approved estimates in place at the balance sheet date, prospectively. The amortisation of mine, property and development assets commences when the mine starts commercial production. Depreciation of all other items of property, plant and equipment commences when an asset is available for use. All other non-operating items of property, plant and equipment are depreciated over the shorter of the asset's useful life and the life of mine on a reducing balance basis, as follows:

- Freehold land – Not depreciated
- buildings –depreciated at 2.5% over the life of the mine to a maximum of 40 years
- Plant and equipment – lower of life of mine and 3-5 years;

(b) Overburden and waste removal

Overburden and other waste removal costs incurred in the development of a mine before production commences are capitalised as part of the construction of the mine as mine property and development assets. These costs include direct costs and an allocation of relevant overhead expenditure. These costs are subsequently amortised over the life of mine on a units of production basis upon commencement of commercial production.

Overburden and other waste costs incurred once an operation commences production activity (production stripping costs) are capitalised as mine property and development assets. A proportion of the costs is charged to the income statement as an operating cost on the basis of the quantity of ore mined or the quantity of the minerals contained in the ore, as a proportion of the known mineral reserves of the operation.

Changes in the technical and/or other economic parameters that impact on reserves will also have an impact on the depreciation and amortisation of capitalised mine property and development assets. These changes are accounted for prospectively from the date of change.

(c) Disposal of property, plant and equipment
On disposal of an item of property, plant and equipment, the difference between the disposal proceeds and its carrying amount is recognised in the income statement within other income or other (losses)/gains – net as applicable.

(d) Exploration and evaluation expenditure
Exploration and evaluation costs, including costs of acquiring licences, are capitalised as exploration and evaluation assets on an area of interest basis. Costs incurred before the Group has obtained the legal right to explore an area are recognised in the income statement.

Exploration and evaluation assets are classified as part of property, plant and equipment. As the assets are not yet ready for use they are not depreciated.

Exploration and evaluation assets are only recognised if the rights to the area of interest are current and either:

- the expenditures are expected to be recouped through successful development and exploitation of the area of interest, or alternatively by its sale; or
- activities in the area of interest have not at the reporting date, reached a stage that permits a reasonable assessment of the existence or otherwise of economically recoverable reserves and active and significant operations in, or in relation to, the area of interest are continuing.

Exploration and evaluation assets are assessed for impairment if:

- sufficient data exists to determine technical feasibility and commercial viability; and
- facts and circumstances suggest that the carrying amount exceeds the recoverable amount (see recoverable amount and fair value estimation accounting policy Note 2.9).

For the purposes of the impairment testing, exploration and evaluation assets are allocated to cash-generating units to which the exploration activity relates. The cash generating units shall not be larger than the area of interest. Refer to Note 2.9 for further details.
Once the technical feasibility and commercial viability of the extraction of mineral reserves in an area of interest are demonstrable, exploration and evaluation assets attributable to that area of interest are first tested for impairment and then reclassified to mine property and development assets within property, plant and equipment.

Acquired mineral rights comprise identifiable exploration and evaluation assets including mineral reserves and mineral resources, which are acquired as part of a business combination and are recognised at fair value at the date of acquisition. The acquired mineral rights are reclassified as mine property and development from commencement of development and amortised when commercial production commences on a unit of production basis over the estimated economic reserve of the mine.

2.7 Investment properties
Property that is held for long-term rental yields or for capital appreciation or both, and that is not occupied by any Group company, is classified as investment property.

Investment property is measured initially at its cost, including related transaction costs. After initial recognition, investment property is carried at fair value, representing open market value determined at each reporting date by external valuers. Fair value is based on active market prices, adjusted, if necessary, for any difference in the nature, location or condition of the specific asset. If the information is not available, alternative valuation methods such as recent prices on less active markets or discounted cash flow projections are used. Changes in fair values are recognised in the consolidated income statement.

2.8 Intangible assets

(a) Goodwill

Goodwill arises on the acquisition of subsidiaries, associates and joint ventures and represents the excess of the consideration transferred over the Group's interest in net fair value of the net identifiable assets, liabilities and contingent liabilities of the acquiree and the fair value of the non-controlling interest in the acquiree.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the cash-generating units ("CGUs"), or groups of CGUs, that is expected to benefit from the synergies of the combination. Each unit or group of units to which the goodwill is allocated represents the lowest level within the entity at which the goodwill is monitored for internal management purposes. Goodwill is monitored at the operating segment level.

Goodwill impairment reviews are undertaken annually or more frequently if events or changes in circumstances indicate a potential impairment. The carrying value of goodwill is compared to the recoverable amount, which is the higher of value in use and the fair value less costs to sell. Any impairment is recognised immediately as an expense and is not subsequently reversed.

(b) Alumina purchasing rights

Alumina purchasing rights represent the rights to purchase pre-determined quantities of alumina from an alumina supplier over certain periods of time pursuant to the legal binding agreements entered into between the alumina supplier and the Group. Alumina purchasing rights are stated at cost less accumulated amortisation and impairment losses. Alumina purchasing rights are amortised over the unexpired periods of the agreements or in accordance with the quantities of alumina delivered.

2.9 Impairment of non-financial assets

Assets that have an indefinite useful life, for example goodwill, are not subject to amortisation and are tested annually for impairment. Assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at each reporting date.

2.10 Non-current assets held for sale

Non-current assets (or disposal groups) are classified as assets held for sale when their carrying amount is to be recovered principally through a sale transaction and a sale is considered highly probable. They are stated at the lower of carrying amount and fair value less costs to sell.

2.11 Financial assets

Classification

The Group classifies its financial assets in the following categories: at fair value through profit or loss, loans and receivables and available-for-sale. The classification depends on the purpose for which the financial assets were acquired. Management determine the classification of its financial assets at initial recognition.

(a) Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss are financial assets held for trading. A financial asset is classified in this category if acquired principally for the purpose of selling in the short term. Derivatives are also categorised as held for trading unless they are designated as hedges. Assets in this category are classified as current assets if expected to be settled within 12 months; otherwise, they are classified as non-current.

(b) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for the amounts that are settled or expected to be settled more than 12 months after the end of the reporting period, in which case they are classified as non-current assets.

(c) Available-for-sale financial assets

Available-for-sale financial assets are non-derivatives that are either designated in this category or not classified in any of the other categories. They are included in non-current assets unless management intends to dispose of the investment within 12 months of the end of the reporting period.

Recognition and measurements

Regular purchases and sales of financial assets are recognised on the trade-date being the date on which the Group commits to purchase or sell the asset. Investments are initially recognised at fair value plus transaction costs for all financial assets not carried at fair value through profit or loss. Financial assets carried at fair value through profit or loss are initially recognised at fair value and transaction costs are expensed in the consolidated income statement. Financial assets are derecognised when the rights to receive cash flows from the investments have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership. Available-for-sale financial assets and financial assets at fair value through profit or loss are subsequently carried at fair value. Loans and receivables are subsequently carried at amortised cost using the effective interest method.

Gains or losses arising from changes in the fair value of the financial assets at fair value through profit or loss category are presented in the consolidated income statement within other gains/(losses) in the period in which they arise. Dividend income from financial assets at fair value through profit or loss is recognised in the consolidated income statement when the Group's right to receive payments is established.

Changes in the fair value of monetary and non-monetary securities classified as available-for-sale are recognised in other comprehensive income.

When securities classified as available-for-sale are sold or impaired, the accumulated fair value adjustments recognised in equity are included in the consolidated income statement as gains and losses from investment securities.

Interest on available-for-sale securities calculated using the effective interest method is recognised in the consolidated income statement. Dividends on available-for-sale equity instruments are recognised in the consolidated income statement when the Group's right to receive payments is established.

Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously.

Impairment of financial assets

(a) Assets carried at amortised cost

The Group assesses at the end of each reporting period whether there is objective evidence that a financial asset or group of financial assets is impaired. A financial asset or a group of financial assets is impaired and impairment losses are incurred only if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (loss event) and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganisation, and where observable data indicate that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

For loans and receivables category, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The carrying amount of the asset is reduced and the amount of the loss is recognised in the consolidated income statement. If a loan or held- to-maturity investment has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate determined under the contract. As a practical expedient, the Group may measure impairment on the basis of an instrument's fair value using an observable market price.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised (such as an improvement in the debtor's credit rating), the reversal of the previously recognised impairment loss is recognised in the income statement.

(b) Assets classified as available-for-sale

The Group assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired. For debt securities, the Group uses the criteria referred to in (a) above. In the case of equity investments classified as available-for-sale, a significant or prolonged decline in the fair value of the security below its cost is also evidence that the assets are impaired. If any such evidence exists for available-for-sale financial assets, the cumulative loss – measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that financial asset previously recognised in profit or loss – is removed from equity and recognised in the separate consolidated income statement. Impairment losses recognised in the separate consolidated income statement on equity instruments are not reversed through the separate consolidated income statement. If, in a subsequent period, the fair value of a debt instrument classified as available-for-sale increases and the increase can be objectively related to an event occurring after the impairment loss was recognised in profit or loss, the impairment loss is reversed through the separate consolidated income statement.

2.12 Derivative financial instruments and hedging activities

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently re-measured at their fair value. The method of recognising the resulting gain or loss depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. The Group designates certain derivatives as either:

- hedges of the fair value of recognised assets or liabilities or a firm commitment (fair value hedge);
- hedges of a particular risk associated with a recognised asset or liability or a highly probable forecast transaction (cash flow hedge); or
- hedges of a net investment in a foreign operation (net investment hedge).

The Group documents at the inception of the transaction the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedge transactions. The Group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair value or cash flows of hedged items.

Certain derivatives instruments do not qualify for hedge accounting and are accounted for at fair value through profit or loss. Changes in the fair value of these derivative instruments are recognised immediately in the consolidated income statement within other gains/(losses).

During the year, the Group did not enter into any derivative instruments used for hedging purposes.

2.13 Financial guarantee contract

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument. A financial guarantee contract issued by the Group is recognised initially at its fair value less transaction costs that are directly attributable to the issue of the financial guarantee contract. Subsequent to initial recognition, the Group measures the financial guarantee contract at the higher of: (i) the amount determined in accordance with HKAS 37 *Provisions, Contingent Liabilities and Contingent Assets*; and (ii) the amount initially recognised less, when appropriate, cumulative amortisation recognised in accordance with HKAS 18 "Revenue".

2.14 Inventories

Inventories comprise raw materials, stores and consumables, work in progress, finished goods, and commodities purchased for re-sale. Inventories are stated at the lower of cost and net realisable value.

Cost of commodities purchased for re-sale, mainly comprising purchase costs and custom duty, is determined using the first-in, first-out method. The cost of work in progress and finished goods, comprising raw materials, direct labour, other direct costs and an appropriate proportion of related production overheads, is determined using the weighted average method. It excludes borrowing costs.

Net realisable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

Costs are assigned to individual items of inventory on the basis of weighted average costs. Costs include the costs of direct materials, overburden removal, mining, processing, labour, related transportation cost to the

point of sale, mine rehabilitation costs incurred in the extraction process and other fixed and variable costs directly related to mining activities.

2.15 Trade and other receivables
Trade and other receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less provision for impairment. If collection of trade and other receivables is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets. If not, they are presented as non-current assets.

2.16 Cash and cash equivalents
Cash and cash equivalents include cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less, and bank overdrafts.

2.17 Financial liabilities and equity
Financial liabilities and equity instruments issued by the Group are classified according to the substance of the contractual arrangements entered into and the definitions of a financial liability and an equity instrument. Financial liabilities are initially measured at fair value, and are subsequently measured at amortised cost, using the effective interest method. Equity instruments (including ordinary shares and perpetual sub-ordinated convertible securities) are any contract that does not meet the definition of financial liability and evidences a residual interest in the assets of the Group after deducting all of its liabilities. Subsequent to initial recognition, the equity instrument is not re-measured.

2.18 Share capital
Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds.

Where any Group company purchases the Company's equity share capital (treasury shares), the consideration paid, including any directly attributable incremental costs (net of income taxes) is deducted from equity attributable to the Company's equity holders until the shares are cancelled or reissued. Where such shares are subsequently reissued, any consideration received, net of any directly attributable incremental transaction costs and the related income tax effects, is included in equity attributable to the Company's equity holders.

2.19 Government grants
Grants from the government are recognised at their fair value where there is a reasonable assurance that the grant will be received and the Group will comply with all attached conditions. Government grants relating to the purchase of property, plant and equipment are included in non-current liabilities as deferred income and are recognised in the consolidated income statement on a straight-line basis over the expected useful lives of the related assets.

2.20 Mine rehabilitation, restoration and dismantling obligations
Provisions are made for the estimated cost of rehabilitation, restoration and dismantling relating to areas disturbed during the mine's operations up to the reporting date but not yet rehabilitated. Provision has been made in full for all the disturbed areas at the reporting date based on current estimates of costs to rehabilitate such areas, discounted to their present value based on expected future cash flows. The estimated cost of rehabilitation includes the current cost of re-contouring, topsoiling and re-vegetation to meet legislative requirements. Changes in estimates are dealt with on a prospective basis as they arise.

Uncertainty exists as to the amount of rehabilitation obligations which will be incurred due to the impact of changes in environmental legislation, and many other factors, including future developments, changes in technology, price increases and changes in interest rates. The amount of the provision relating to mine rehabilitation, restoration and dismantling obligations is recognised at the commencement of the mining project and/or construction of the assets where a legal or constructive obligation exists at that time.

The provision is recognised as a liability, separated into current (estimated costs arising within 12 months) and non-current components based on the expected timing of these cash flows. A corresponding asset is included in mine property and development assets, only to the extent that it is probable that future economic benefits associated with the restoration expenditure will flow to the entity. The capitalised cost of this asset is recognised in property, plant and equipment and is amortised over the life of the mine.

At each reporting date the rehabilitation liability is re-measured in line with changes in discount rates, and timing or amounts of the costs to be incurred. Rehabilitation, restoration and dismantling provisions are adjusted for changes in estimates. Adjustments to the estimated amount and timing of future

rehabilitation and restoration cash flows are a normal occurrence in light of the significant judgements and estimates involved. Changes in the liability relating to mine rehabilitation, restoration and dismantling obligations are added to or deducted from the related asset (where it is probable that future economic benefits will flow to the entity), other than the unwinding of the discount which is recognised as a finance cost in the income statement. Changes to capitalised cost result in an adjustment to future depreciation charges.

The provisions referred to above do not include any amounts related to remediation costs associated with unforeseen circumstances.

2.21 Provisions and contingent liabilities

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and the amount has been reliably estimated.

Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognised even if the likelihood of an outflow with respect to any one item included in the same class of obligations may be small.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to passage of time is recognised as interest expense.

A provision for onerous contracts is recognised when the expected benefits to be derived by the Group from a contract is lower than the unavoidable cost of meeting its obligations under the contract. The provision is measured at the present value of the lower of the expected cost of terminating the contract and the expected net cost of continuing with the contract.

A provision is recognised for the amount expected to be paid under short-term or long-term bonus entitlements if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the Director or employee and the obligation can be estimated reliably.

Contingent liabilities are possible obligations that arise from past events and whose existence will only be confirmed by the occurrence of one or more future events not wholly within the control of the Group. Where it is not probable that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote.

Workers' compensation

Provision is made for outstanding claims, including any incurred but not reported claims, where any subsidiary self-insures for risks associated with workers' compensation. Outstanding claims are recognised when an incident occurs that may give rise to a claim and are measured at the cost that the entity expects to incur in settling the claims, discounted using a rate that reflects current market assessments of the time value of money and risks specific to the liability. An independent actuary provides the calculation of the value of outstanding claims. Each period the impact of the unwind of discounting is recognised in the income statement as a financing cost.

2.22 Borrowings

Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently stated at amortised cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognised in the consolidated income statement over the period of the borrowings using the effective interest method.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale. All other borrowing costs are recognised in profit or loss in the period in which they are incurred.

2.23 Current and deferred income tax

The tax expense recognised for the year comprises current and deferred tax. Tax is recognised in the income statement, except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In this case, the tax is also recognised in other comprehensive income or directly in equity, respectively.

The current income tax charge is calculated on the basis of the tax laws enacted or substantially enacted at the balance sheet date in the places where the Company's subsidiaries, jointly-controlled entities and associates operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax is recognised, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, the deferred income tax is not accounted for if it arises from initial recognition of an asset or a liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantively enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred income tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred income tax is provided on temporary differences arising on investments in subsidiaries, jointly-controlled entities and associates, except where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities, and when the deferred income tax assets and liabilities relate to income taxes levied by the same taxation authority on either the taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

Tax consolidation – Australia

The Australian subsidiaries of the Company are an income tax consolidation group and are taxed as a single entity. MMG Australia Limited is the head company of the Australian tax consolidated group. The subsidiaries in the Australian tax consolidated group account for their own current and deferred tax amounts. These tax amounts are measured as if each entity in the tax consolidated group continues to be a stand-alone tax payer in its own right. In addition to its own current and deferred tax amounts, the head entity also recognises the current tax liabilities (or assets) and the deferred tax assets arising from unused tax losses and unused tax credits assumed from the other entities in the tax consolidated group.

Assets or liabilities arising under tax funding agreements between entities within the tax consolidated group entities are utilised as amounts receivable from or payable to other entities within the tax consolidated group.

2.24 Trade and other payables

Trade and other payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method.

Trade and other payables are classified as current liabilities if payment is due with one year or less (or in the normal operating cycle of the business if longer). If not, they are presented as non-current liabilities.

2.25 Revenue recognition

Revenue comprises the fair value of the consideration received or receivable for the sale of goods and services in the ordinary course of the Group's activities. Revenue is shown, net of value-added tax, returns, rebates and discounts and after eliminating sales within the Group.

The Group recognises revenue when the amount of revenue can be reliably measured, it is probable that future economic benefits will flow to the entity and when specific criteria have been met for each of the Group's activities as described below. The Group bases its estimates on historical results, taking into consideration the type of customer, the type of transaction and the specifics of each arrangement.

(a) Sales of goods
Revenue from the sale of goods and disposal of other assets is recognised when persuasive evidence of an arrangement exists, usually in the form of an executed sales agreement, indicating there has been a transfer of the significant risks and rewards to the customer, recovery of the consideration is probable, the associated costs and possible return of goods can be estimated reliably, there is no continuing management involvement with the goods, and the amount of revenue can be measured reliably. This is generally when title passes, which for the majority of commodity sales is the bill of lading date when the commodity is delivered for shipment. For non-commodity sales, it is usually the date when a Group entity has delivered products to the customer, the customer has accepted the products, and there are no unfulfilled obligations that could affect the customer's acceptance of the products.

Revenue on provisionally priced sales is recognised at the estimated fair value of the total consideration received or receivable. Contract terms for many of the Group's zinc, copper, lead, gold, silver and metal in concentrate sales allow for a price adjustment based on a final assay of the goods by the customer to determine content. Recognition of the sales revenue for these commodities is based on the most recently determined estimate of product specifications with a subsequent adjustment made to revenue upon final determination.

The terms of concentrate sales contracts with third parties contain provisional pricing arrangements whereby the selling price for metal in concentrate is based on prevailing spot prices on a specified future date after shipment to the customer. Adjustment to the sales price occurs based on movements in quoted market prices up to the date of final settlement. The period between provisional invoicing and final settlement is typically between 60 and 120 days.

The fair value of the final sales price adjustment is re-estimated continuously and changes in fair value are recognised as an adjustment to revenue. In all cases, fair value is estimated by reference to forward market prices.

Revenue is reported net of discounts and pricing adjustments. Royalties paid and payable are separately reported as expenses.

(b) Servicing income
Revenue from sales of services is recognised when the related services are rendered.

(c) Interest income
Interest income is recognised on a time proportion basis, using the effective interest method.

(d) Rental income
Operating lease rental income is recognised on a straight-line basis over the lease periods.

2.26 Employee benefits

(a) Employee leave entitlements
Employee entitlements to annual leave are recognised when they are accrued by employees. A provision is made for the estimated liability for annual leave as a result of services rendered by employees up to the balance sheet date. Employee entitlements to sick leave and maternity leave are not recognised until the time of leave.

(b) Pension obligations – defined contribution plans
Arrangements for staff retirement benefits are made in accordance with local regulations and customs.

For defined contribution plans, the Group pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. The Group has no further payment obligations once the contributions have been paid. The contributions are recognised as an employee benefit expense when they are due. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in future payment is available.

(c) Long-term employee benefits
Long service leave is a period of paid leave granted to an employee in recognition of a long period of service to an employer. The liability for long service leave is recognised in the provision for employee benefits and measured as the present value of expected future payments to be made in respect of services provided by employees up to the reporting date using the projected unit credit method. Consideration is given to expected future wage and salary levels, experience of employee departures and periods of service. Expected future payments are discounted using market yields at the reporting date on national government bonds with terms to maturity and currency that match, as closely as possible, the estimated future cash outflows.

(d) Share-based compensation

The Group operates an equity-settled, share-based compensation plan, under which the entity receives services from employees as consideration for equity instruments (options) of the Group. The fair value of the employee services received in exchange for the grant of the options is recognised as an expense. The total amount to be expensed over the vesting period is determined by reference to the fair value of the options granted, excluding the impact of any non-market service and performance vesting conditions (for example, profitability and sales growth targets and remaining employees of the entity over a specified time period). Non-market vesting conditions are included in assumptions about the number of options that are expected to vest. The total amount expensed is recognised over the vesting period, which is the period over which all of the specified vesting conditions are to be satisfied. At each balance sheet date, the Group revises its estimates of the number of options that are expected to vest based on the non-market vesting conditions. It recognises the impact of the revision of original estimates, if any, in the consolidated income statement with a corresponding adjustment to equity.

The proceeds received net of any directly attributable transaction costs are credited to share capital (nominal value) and share premium when the options are exercised.

2.27 Leases

Leases of property, plant and equipment where the Group has substantially transferred all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalised at the lease inception at the lower of the fair value of the leased property and the present value of the minimum lease payments. The corresponding rental obligations, net of finance charges, are included as interest-bearing liabilities. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to the income statement over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The property, plant and equipment acquired under finance leases is depreciated over the asset's useful life or over the shorter of the asset's useful life and the lease term if there is no reasonable certainty that the Group will obtain ownership at the end of the lease term.

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor), including upfront payment made for leasehold land and land use rights, are charged to the consolidated income statement on a straight-line basis over the period of the lease.

2.28 Dividend distribution

Dividend distribution to the Company's shareholders is recognised as a liability in the Group's and the Company's financial statements in the period in which the dividends are approved by the Company's shareholders or the Board of Directors, as appropriate.

2.29 Comparatives

Certain comparative figures have also been reclassified to conform with the current year presentation to align the financial statements presentation for the discontinued operations.

3. FINANCIAL RISK MANAGEMENT

3.1 Financial risk factors

The Group's activities expose it to a variety of financial risks, including commodity price risk, equities price risk, interest rate risk, foreign exchange risk, credit risk and liquidity risk. The Group's overall risk management focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. The use of financial derivative instruments should strictly follow the yearly plans approved by the Board of Directors of the Company and its subsidiaries. The Group does not and is prohibited to enter into derivative contracts for speculative purposes.

Financial risk management is carried out by the Group Treasury function under policies approved by the Board of Directors. Group Treasury identifies, evaluates and manages financial risks in close co-operation with the Group's operating units. The Board approves written principles for overall risk management, as well as policies covering specific areas, such as those identified above.

(a) Commodity price risk

The Group is exposed to commodity price volatility on commodity sales made by the mines. This arises from sale of metal and metal in concentrate products such as zinc, copper, lead, gold and silver, which are priced on, or benchmarked to, open market exchanges. The Group generally believes commodity price hedging would not provide long-term benefit to its shareholders. There are no commodity hedges in place as at 31 December 2011. Prior to the divestment of the Disposal Group, the Group was also exposed to aluminium price risk and commodity derivative contracts had been entered in its aluminum operations from time to time in accordance with the policies and yearly plans approved by the Board of Directors.

The following table details the Group's sensitivity to movement in commodity prices. At reporting date, if the commodity prices increased/(decreased) by 10% and all other variables were held constant, the Group's after tax profit would have increased/(decreased) as set out below.

	2011			2010		
Commodity	**Commodity price movement**	**Increase profit US$ million**	**Decrease profit US$ million**	**Commodity price movement**	**Increase profit US$ million**	**Decrease profit US$ million**
Aluminium	N/A	-	-	10%	3.2	(3.2)
Zinc	10%	0.8	(0.8)	10%	1.8	(1.8)
Copper	10%	1.8	(1.8)	10%	4.3	(4.3)
Gold	10%	0.5	(0.5)	10%	0.9	(0.9)
Lead	10%	1.5	(1.5)	10%	0.4	(0.4)
Total		**4.6**	**(4.6)**		**10.6**	**(10.6)**

(b) Equities price risk

Equity securities price risk arises from investments held by the Group and classified in the balance sheet as available-for-sale and other short term investments. The majority of the Group's equity investments are publicly traded.

The Group does not have significant equity securities exposed to price risk as at 31 December 2011. The table below summarises the impact of an increase/(decrease) of an index of securities traded on relevant exchanges on the Group's equity as at 31 December 2010.

	2010				
US$ MILLION	Equity securities	12-month movement in price (increase 21%)	Impact on equity (net of tax)	12-month movement in price (decrease 21%)	Impact on equity (net of tax)
Available-for-sale financial assets					
Value of investment at year-end	164.1	198.6	24.2	129.6	(24.2)

Equity would increase/(decrease) as a result of gains/losses on equity securities classified as available-for-sale.

(c) Interest rate risk

The Group is exposed to interest rate volatility on deposits and borrowings. Deposits and borrowings at variable rates expose the Group to cash flow interest rate risk. Deposits and borrowings at fixed rates expose the Group to fair value interest rate risk. Details of the Group's cash and cash equivalents have been disclosed in Note 24 while the details of the Group's borrowings are set out in Note 30.

The Group regularly monitors its interest rate risk to ensure there are no undue exposures to significant interest rate movements. Any decision to hedge interest rate risk is assessed at the inception of each floating rate debt facility in light of the overall Group's exposure, the prevailing interest rate market and any funding counterparty requirements. Monthly reporting is provided to the Executive Committee, which summarises the Group's debt and interest rates. As at 31 December 2011, if the interest rate had increased/decreased by 100 basis points with all other variables held constant, post-tax profit for the year would have increased/(decreased) as follows:

	2011				2010			
	+100 basis points		-100 basis points		+100 basis points		-100 basis points	
US$ MILLION	Profit	Equity	Profit	Equity	Profit	Equity	Profit	Equity
Financial assets								
- Cash and cash equivalents	7.7	-	(7.7)	-	2.5	-	(2.5)	-
Financial liabilities								
- Borrowings	(7.5)	-	7.5	-	(8.7)	-	8.7	-
Total	0.2	-	(0.2)	-	(6.2)	-	6.2	-

(d) Foreign exchange risk

The Group operates internationally and is exposed to foreign currency exchange risk. The Group's reporting currency and functional currency of the majority of subsidiaries within the Group is US$. The majority of revenue received by the Group is US$. The Group's foreign currency exchange risk arises predominantly from the currency in which the Group's operations are located.

The Group is exposed to foreign exchange risk primarily with respect to Renminbi (RMB), Australian dollars (A$), Hong Kong dollars (HK$) and the Canadian dollar (C$). Given the exchange rate peg between HK$ and US$, it is not foreseen that the Group will be exposed to significant exchange rate risk for the transactions conducted in HK$ or US$. However, exchange rate fluctuations of C$ or A$ against US$ could affect the Group's performance and asset value. Upon the completion of divestment of the trading, fabrication and other operations, the Group does not

have significant foreign exchange risk with respect to RMB. The A$ is the most important currency influencing costs.

Under normal market conditions, the Group does not believe that active currency hedging of transactions would provide long-term benefit to shareholders. The Group tries to minimise these exposures through natural hedges wherever possible. For instance, the majority of external debt and surplus cash is denominated in US$. A portion of cash may be held in Australian dollars and Renminbi to meet operating costs.

The Group purchased a US$ put / C$ call option with a notional value of US$434.8 million to hedge the currency risk associated with its all-cash offer to acquire all of the Common Shares in Anvil Mining Limited ("Anvil").

The sensitivity analysis includes only outstanding foreign currency denominated monetary items at the reporting date and adjusts their translation for a 4.9 % (2010: 2.5%) change in the A$/US$ and a 2.9 % (2010: 5.5%) change in the C$/US$ foreign exchange rate. This percentage change reflects the market consensus 12-month forecast foreign exchange rate movement.

As at 31 December 2011, if the foreign currency exchange rates strengthened/(weakened) against the functional currency by the above foreign exchange rate changes, and all other variables were held constant, the Group's after-tax profit and equity would have increased/(decreased) by US$4.2 million.

(e) Credit risk

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Group. The Group is exposed to counterparty credit risk through sales of metal products on normal terms of trade, through deposits of cash and settlement risk on foreign exchange transactions.

At the reporting date, the carrying amount of the Group's financial assets including cash and cash equivalents, trade and other receivables and other bank deposits represents the maximum credit exposure.

The credit risk on investments in cash, short-term deposits and similar assets are with approved counterparty banks and the intermediate holding company. Counterparties are assessed prior to, during and after the conclusion of transactions to ensure exposure to credit risk is limited to acceptable levels. The limits are set to minimise the concentration of risks and therefore mitigate the potential for financial loss through counterparty failure.

The Group's most significant customer is Nyrstar. The revenue earned from Nyrstar by the Group was approximately 18.7 per cent (2010: 21.7 per cent) of revenue for the year. The largest debtor at 31 December 2011 was CMN with a balance of $29.9 million and the five largest debtors accounted for 47.8% (2010: 27.4%) of the Group's trade and other receivables as at 31 December 2011, respectively.

Credit risk arising from sales to Nyrstar and other large concentrate customers are managed by contracts that stipulate a provisional payment of at least 90 per cent of the estimated value of each sale. This is payable either promptly after vessel loading or upon vessel arriving at the discharge port. Title to the concentrate does not pass to the buyer until this provisional payment is made. For most sales a second provisional payment is received within 60 days of the vessel arriving at the port of discharge. Final payment is recorded after completion of the quotation period and assaying.

The maximum exposure to credit risk for trade receivables, from its continuing operations, at the reporting date by geographic region was:

	AS AT 31 DECEMBER	
US$ MILLION	2011	2010
Australia	14.1	30.0
Europe	8.3	57.1
Asia	43.6	63.4
USA	0.1	1.8
	66.1	**152.3**

The Group does not have any significant receivables which are past due at the reporting date.

The Group is also exposed to credit risk due from related parties which amount to US$123.5 million (2010: US$1.2 million). Management does not expect any loss arising from default by these counterparties.

(f) Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting obligations associated with financial liabilities.

Management utilises short and long-term cash flow forecasts and other consolidated information to ensure appropriate liquidity buffers are maintained to support the Group's activities.

The table below analyses the Group's non-derivative financial liabilities and net-settled derivative financial liabilities into relevant maturity groupings based on the remaining period at the balance sheet date to the contractual maturity date. Derivative financial liabilities are included in the analysis if their contractual maturities are essential for an understanding of the timing of the cash flows. The amounts disclosed in the table are the contractual undiscounted cash flows.

US$ MILLION	Within 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years	Total
At 31 December 2011					
Financial liabilities					
Trade and other payables	205.1	-	-	-	205.1
Borrowings (including interest)	803.6	43.1	272.9	-	1,119.6
	1,008.7	43.1	272.9	-	1,324.7
At 31 December 2010					
Financial liabilities					
Trade and other payables	368.2	0.1	0.2	-	368.5
Advances from banks for discounted bills	43.6	-	-	-	43.6
Amounts due to related parties	2.5	-	-	-	2.5
Loan from a related party (including interest)	14.1	14.1	778.5	-	806.7
Borrowings (including interest)	107.2	821.6	168.4	220.7	1,317.9
	535.6	835.8	947.1	220.7	2,539.2
Derivative financial liabilities					
Net settled derivative financial instruments	1.2	-	-	-	1.2
Financial guarantee issued					
Maximum amount guaranteed	5.4	-	-	-	5.4

3.2 Fair value estimation

HKFRS 7 requires disclosure of financial instruments that are measured in the balance sheet at fair value by level of the following fair value measurement hierarchy:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (level 1).
- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (level 2).
- Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs) (level 3).

The US$ put / C$ call option with a notional value of US$434.8 million in relation to the offer for Anvil was valued by reference to quoted prices. The fair value of the option was insignificant as at 31 December 2011.

The Group does not have any other significant financial instruments that are measured in the balance sheet at fair value as at 31 December 2011. The following table presents the Group's financial assets and liabilities that are measured at fair value as at 31 December 2010.

US$ MILLION	Level 1	Level 2	Level 3	Total
At 31 December 2010				
Assets				
Derivative financial instruments				
- Aluminium futures contracts	-	0.2	-	0.2
Available-for-sale financial assets	164.1	-	-	164.1
	164.1	0.2	-	164.3
Liabilities				
Derivative financial instruments				
- Aluminium futures contracts	-	1.2	-	1.2

The fair value of financial instruments traded in active markets is based on quoted market prices at the end of the relevant reporting period. The quoted market price used for financial assets held by the Group is the current bid price. These instruments are included in Level 1.

The fair value of aluminium futures contracts is determined by using valuation techniques, that reference the listed market prices as quoted on the London Metal Exchange and Shanghai Futures Exchange.

Where discounted cash flow techniques are used, estimated future cash flows are based on management's best estimates and the discount rate is a market related rate for a similar instrument at the balance sheet date.

The nominal values less any credit adjustments for financial assets and liabilities with a maturity of less than one year are assumed to approximate their fair values. The fair values of non-current bank borrowings equal their carrying amounts, as the impact of discounting is not significant. As the fair value of the issued financial guarantee contract of the Company is not material, no disclosure of its fair value has been made.

3.3 Capital risk management

The Group's objectives on managing capital are to safeguard the Group's ability to continue as a going concern, support the Group's sustainable growth, enhance shareholders' value and provide capital for potential acquisitions and investment.

The Group manages the capital structure and makes adjustments to it in light of changes in economic conditions and business strategies. In order to maintain or adjust the capital structure, the Group may adjust the amount of dividend payments to shareholders, issue new shares or raise/repay debts.

The Group monitors capital by using a gearing ratio defined as total borrowings less cash and bank deposits divided by shareholders' equity. The change in gearing ratio from 2.9 to net cash position is mainly attributable to the net proceed received from disposal of discontinued operations as well as the cash generated from operating activities during the year.

	2011 US$ MILLION	2010 US$ MILLION
Cash and cash equivalents	1,096.5	398.2
Time deposits	-	12.8
Pledged bank deposits	-	6.4
Less: Total borrowings including a loan from a related party and advances from banks for discounted bills	1,081.7	1,965.3
Net (cash)/debt	(14.8)	1,547.9
Total equity	1,494.4	533.4
Gearing ratio	N/A	2.9

4. CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

(a) Mine rehabilitation, restoration and dismantling obligations

Provision is made for the anticipated costs of future restoration, rehabilitation and dismantling of mining areas from which natural resources have been extracted in accordance with the accounting policy in Note 2.20. These provisions include future cost estimates associated with reclamation, plant closures, waste site closures, monitoring, demolition, decontamination, water purification and permanent storage of historical residues. These future cost estimates are discounted to their present value. The calculation of these provision estimates requires assumptions such as application of environmental legislation, plant closure dates, available technologies, engineering cost estimates and discount rates. A change in any of the assumptions used may have a material impact on the carrying value of mine rehabilitation, restoration and dismantling provisions.

(b) Ore reserves and resources estimates

The estimated quantities of economically recoverable reserves and resources are based upon interpretations of geological and geophysical models and require assumptions to be made regarding factors such as estimates of short and long-term exchange rates, estimates of short and long-term commodity prices, future capital requirements and future operating performance. Changes in reported reserves and resources estimates can impact the carrying value of property, plant and equipment, provisions for mine rehabilitation, restoration and dismantling obligations, the recognition of deferred tax assets, as well as the amount of depreciation and amortisation charged to the income statement. The changes are effective from the month following Board approval of the revised ore reserves and resources estimates.

(c) Income taxes

The Group is subject to income taxes in a number of jurisdictions. Significant judgement is required in determining the provision for income taxes. There are some transactions and calculations for which the ultimate tax determination is uncertain during the ordinary course of business. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the income tax and deferred income tax provisions in the accounting period in which such determination is made.

Deferred tax assets are recognised for deductible temporary differences and unused tax losses only if it is probable that future taxable profits will be available to utilise those temporary differences and losses, and the tax losses continue to be available having regard to the nature and timing of their origination and compliance with the relevant tax legislation associated with their recoupment.

(d) Recoverability of non-financial assets

The recoverable amount of each cash-generating unit is determined as the higher of the asset's fair value less costs to sell and its value in use in accordance with the accounting policy in Note 2.9. These value in use calculations require the use of estimates and assumptions including discount rates, exchange rates, commodity prices, future capital requirements and future operating performance.

(e) Functional currency

An entity's functional currency is the currency of the primary economic environment in which the entity operates in accordance with accounting policy in Note 2.5. Determination of an entity's functional currency requires management judgement when considering a number of factors including the currency that mainly influences sales prices, costs of production, and competitive forces and regulations that impact sales prices. In addition, consideration must be given to the currency in which financing and operating activities are undertaken. Applying the principles described above, management has come to the conclusion that the functional currency of the majority of subsidiaries within the Group is US$ based on the following factors:

- Sales are predominantly denominated in US$;
- A significant portion of costs are denominated in US$;
- A significant portion of debt and finance costs are denominated in US$; and
- Senior management and Board reporting is conducted in US$.

5. SEGMENT INFORMATION

HKFRS 8 Operating Segments requires operating segments to be identified on the basis of internal reports about operations of the Group that are regularly reviewed by the chief operating decision-maker in order to allocate resources to the segment and assess its performance.

The chief operating decision-maker has been identified as the Company`s Executive Committee, which consist of all Executive Directors of the Company, Chief Operating Officer, Executive General Manager – Business Development, Executive General Manager – Exploration and Executive General Manager – Business Support. They review the Group's internal reporting of these operations in order to assess performance and allocate resources.

The Group's reportable segments are as follows:

Continuing operations

Century	Century is Australia's largest open pit zinc mine located in Queensland's North West. Century comprises two sites – the mine and processing operation at Lawn Hill, and associated concentrate dewatering and ship-loading facilities at Karumba, on the Gulf of Carpentaria.
Sepon	Sepon is an open pit, copper and gold mining operation located in Laos' south west. Sepon comprises a number of open pit mines, a copper processing plant and gold processing plant.
Golden Grove	Golden Grove is an underground base and precious metals mining operation located in Western Australia's Mid West. Golden Grove comprises two underground mines and surface processing operations.
Rosebery	Rosebery is an underground polymetallic base metal mine located on Tasmania's West Coast. Rosebery comprises an underground mine and surface processing operation.
Other	The Group has built a portfolio of exploration and development projects in Australia, Asia and the Americas. These exploration and development projects, include the Dugald River Project and the Canadian projects; the Avebury mine, which remains on care and maintenance; and corporate office entities, that are not required to be disclosed as a separate segment at this stage, and accordingly are included within Other.

Discontinued operations

Trading, fabrication and other	This segment engages in the trading of alumina and aluminium ingot, the production and sale of aluminium foil, plate, strip and extrusions, the production and sale of aluminium processing equipment, the production and sale of plica tubes and the provision of port logistics services, as well as certain jointly-controlled entities and associates of the Group.

A segment result represents the profit earned by each segment. This is the measure reported to the chief operating decision-maker for the purposes of resource allocation and assessment of segment performance. Other information provided, except as disclosed in the following paragraph, to the chief operating decision-maker is measured in a manner consistent with that in the financial statements.

Segment assets exclude current income tax assets, deferred income tax assets, available-for-sale financial assets and interests in jointly-controlled entities and associates. Segment liabilities exclude current income tax liabilities and deferred income tax liabilities. The excluded assets and liabilities are presented as part of the reconciliation to total balance sheet assets or liabilities.

Finance costs for inter-segment loans are charged at prevailing market interest rate.

The segment revenue and result for the year ended 31 December 2011 are as follows:

	FOR THE YEAR ENDED 31 DECEMBER 2011								
US$ MILLION	Century	Sepon	Golden Grove	Rosebery	Other	Total continuing operations	Trading, fabrication & other	Total discontinued operations	Group
External revenue	741.5	741.6	342.9	272.5	-	2,098.5	2,324.9	2,324.9	4,423.4
Revenue from related parties	8.9	75.3	45.6	-	-	129.8	52.4	52.4	182.2
Revenue	750.4	816.9	388.5	272.5	-	2,228.3	2,377.3	2,377.3	4,605.6
EBITDA	293.0	529.4	101.6	108.6	31.2	1,063.8	53.6	53.6	1,117.4
Depreciation and Amortisation	(176.8)	(58.1)	(48.3)	(21.8)	(3.5)	(308.5)	-	-	(308.5)
Operating profit /(loss) (EBIT)	116.2	471.3	53.3	86.8	27.7	755.3	53.6	53.6	808.9
Finance income	-	1.0	-	-	7.3	8.3	3.3	3.3	11.6
Finance costs	(16.0)	(15.4)	(7.2)	(1.3)	(14.6)	(54.5)	(9.2)	(9.2)	(63.7)
Segment result	100.2	456.9	46.1	85.5	20.4	709.1	47.7	47.7	756.8
Profits on disposal of subsidiaries and investments accounted for using equity method						-		53.4	53.4
Income tax expense						(225.5)		(10.2)	(235.7)
Profit for the year						483.6		90.9	574.5
Non-controlling interests						(29.5)		(4.1)	(33.6)
Profit attributable to equity holders of the Company						454.1		86.8	540.9
Other segment information:									
Assets impairment	9.2	-	-	-	24.3	33.5	-	-	33.5
Additions to non-current assets	242.9	86.6	48.6	57.1	81.0	516.2	23.0	23.0	539.2

	FOR THE YEAR ENDED 31 DECEMBER 2010 (RESTATED)								
US$ MILLION	Century	Sepon	Golden Grove	Rosebery	Other	Total continuing operations	Trading, fabrication & other	Total discontinued operations	Group
External revenue	659.8	542.7	384.4	220.5	-	1,807.4	1,591.3	1,591.3	3,398.7
Revenue from related parties	51.6	54.0	6.9	-	-	112.5	70.9	70.9	183.4
Revenue	711.4	596.7	391.3	220.5	-	1,919.9	1,662.2	1,662.2	3,582.1
EBITDA	356.2	358.6	192.4	104.5	(190.8)	820.9	57.6	57.6	878.5
Depreciation and Amortisation	(219.5)	(14.9)	(36.8)	(25.7)	(2.7)	(299.6)	(18.9)	(18.9)	(318.5)
Operating profit /(loss) (EBIT)	136.7	343.7	155.6	78.8	(193.5)	521.3	38.7	38.7	560.0
Finance income	-	0.5	-	-	3.8	4.3	4.3	4.3	8.6
Finance costs	(14.3)	(10.0)	(7.9)	(2.0)	(8.6)	(42.8)	(6.7)	(6.7)	(49.5)
Segment result	122.4	334.2	147.7	76.8	(198.3)	482.8	36.3	36.3	519.1
Share of net profits of investments accounted for using the equity method						-		41.0	41.0
Income tax expense						(126.6)		(3.1)	(129.7)
Profit for the year						356.2		74.2	430.4
Non-controlling interests						(20.4)		(0.6)	(21.0)
Profit attributable to equity holders of the Company						335.8		73.6	409.4
Other segment information:									
Additions to non-current assets	187.2	102.1	61.1	36.9	13.4	400.7	15.5	15.5	416.2

	AS AT 31 DECEMBER 2011								
US$ MILLION	Century	Sepon	Golden Grove	Rosebery	Other	Total continuing operations	Trading, fabrication & other	Total discontinued operations	Group
Segment assets	719.9	1,045.4	318.4	281.8	1,016.9	3,382.4	-	-	3,382.4
Investments accounted for using the equity method						0.1		-	0.1
Deferred income tax assets						63.6		-	63.6
Current income tax assets						7.4		-	7.4
						3,453.5		-	3,453.5
Segment liabilities	675.2	390.9	122.5	105.4	540.4	1,834.4	1.3	1.3	1,835.7
Deferred income tax liabilities						5.5		-	5.5
Current income tax liabilities						117.9		-	117.9
						1,957.8	1.3	1.3	1,959.1

	AS AT 31 DECEMBER 2010 (RESTATED)								
US$ MILLION	Century	Sepon	Golden Grove	Rosebery	Other	Total continuing operations	Trading, fabrication & other	Total discontinued operations	Group
Segment assets	654.1	753.3	328.7	281.2	192.6	2,209.9	763.3	763.3	2,973.2
Investments accounted for using the equity method						-		227.3	227.3
Available-for-sale financial assets						164.1		-	164.1
Deferred income tax assets						90.7		8.1	98.8
Current income tax assets						-		3.5	3.5
						2,464.7		1,002.2	3,466.9
Segment liabilities	150.8	262.8	114.7	80.4	1,797.3	2,406.0	378.3	378.3	2,784.3
Deferred income tax liabilities						20.1		-	20.1
Current income tax liabilities						128.9		0.2	129.1
						2,555.0		378.5	2,933.5

Century's, Golden Grove's and Rosebery's operations are located in Australia. Sepon's operations are located in Laos. Trading, fabrication and other business operations are located in China, while all other segments are immaterial by location.

6. OTHER INCOME AND EXPENSES

a) Other gains/(losses) – net

	2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Exchange gains/(losses) – net	3.1	(16.5)
Fair value gains on investment properties	-	0.3
	3.1	(16.2)

b) Other income

	2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Sale of other assets	-	4.3
Agency commission	-	2.2
Gain on disposal of investments	17.3	-
Gain on disposal of property, plant and equipment and investment properties	0.6	0.1
Other income	1.2	2.4
	19.1	9.0

7. EXPENSES

Profit before income tax includes the following specific expenses:

	2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Changes in inventories of finished goods and work in progress	23.2	77.2
Raw materials and other direct costs	(0.3)	(9.6)
Employee benefit expenses (Note 13)	(246.2)	(196.4)
Contracting and consulting expenses	(237.9)	(166.7)
Royalties expense	(94.5)	(76.6)
Energy costs	(144.9)	(125.1)
Stores and consumables costs	(292.8)	(244.8)
Depreciation and amortisation expense	(308.5)	(299.6)
Total cost of goods sold	**(1,301.9)**	**(1,041.6)**
Exploration and evaluation expenditure	(64.0)	(55.5)
Employee benefit expenses (including Directors' emoluments) (Note 13)	(85.3)	(66.2)
Operating lease rental on properties	(22.6)	(13.4)
Auditor's remuneration	(1.6)	(1.1)
Business acquisition expenses (note)	-	(86.4)
Write-back of business acquisition expenses (note)	63.8	-
Impairment of property, plant and equipment	(33.5)	-
Selling expenses	(80.3)	(73.9)
Other administrative expenses	(121.9)	(53.3)
Total other expenses	**(345.4)**	**(349.8)**
Total expenses	**(1,647.3)**	**(1,391.4)**

Note:
Business acquisition expenses of US$86.4 million were incurred and accrued in 2010 for the acquisition of MMG under common control and mainly comprised of provision for government duties as well as legal and professional expenses and provision for tax and duties. During the current year US$63.8 million of the accrual was reversed.

8. FINANCE COSTS- NET

	2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Finance costs		
Interest on borrowings wholly repayable within five years	(26.5)	(16.4)
Interest on borrowings not wholly repayable within five years	-	(7.8)
Unwind of discount provisions	(20.8)	(17.7)
Other finance cost	(1.3)	(0.9)
	(48.6)	(42.8)
Finance income		
Interest income	2.4	4.3
Finance costs – net	(46.2)	(38.5)

9. INCOME TAX EXPENSE

No provision for Hong Kong profits tax has been made as the Group has tax losses brought forward to offset the assessable profit generated in Hong Kong for the year (2010: US$Nil). Taxation on profits arising from other jurisdictions has been calculated on the estimated assessable profits for the year at the rates prevailing in the relevant jurisdictions.

	2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Current income tax expense		
Overseas income tax	(192.8)	(151.0)
Deferred income tax (Note 20)	(32.7)	24.4
Income tax expense	(225.5)	(126.6)

The tax on the Group's profit before income tax differs from the theoretical amount that would arise using the applicable tax rate to profits of the consolidated companies as follows:

	2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Profit before income tax	709.1	482.8
Calculated at domestic tax rates applicable to profits in the respective countries	(221.0)	(166.2)
Net non-taxable/(non–deductible) amounts	0.8	(9.1)
Net (unrecognised deferred tax assets)/recognition of previously unrecognised deferred tax assets	(7.6)	51.6
Over/(under) provision in prior years	2.3	(2.9)
Income tax expense	(225.5)	(126.6)

Note:
The Group's entities are mainly operated in Australia and Laos and the taxation rates applicable in Australia and Laos are 30% and 33% respectively. The change in effective tax rate is caused by a change in the profitability of the Group's subsidiaries in the respective countries as well as the applicable tax rate for certain income generated and expenses incurred in the current year and prior year.

Deferred tax impact relating to other items of other comprehensive income:

	2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Available-for-sale financial assets	18.8	(18.8)

10. PROFIT/(LOSS) ATTRIBUTABLE TO EQUITY HOLDERS OF THE COMPANY

The profit/(loss) attributable to equity holders of the Company is dealt with in the financial statements of the Company to the extent of US$278.6 million (2010: US$(1.7) million).

11. EARNINGS PER SHARE

(a) Basic earnings per share

The calculation of basic earnings per share is based on the profit attributable to equity holders of the Company and the weighted average number of ordinary shares in issue during the year. In 2010, the weighted average number of ordinary shares also adjusted for the effect of the 2010 Business Combination.

	2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Profit from continuing operations attributable to equity holders of the Company	454.1	335.8
Profit from discontinued operations attributable to equity holders of the Company	86.8	73.6

	NUMBER OF SHARES	
	2011 '000	2010 '000
Weighted average number of ordinary shares in issue	4,545,099	2,026,217
Adjustment for the weight average number of ordinary shares to reflect the business combination of MMG	-	940,779
Weighted average number of ordinary shares used in the calculation of the basic earnings per share	4,545,099	2,966,996
Basic earnings per share- continuing operations	US 9.99 cents	US 11.32 cents
Basic earnings per share- discontinued operations	US 1.91 cents	US 2.48 cents

(b) Diluted earnings per share

Diluted earnings per share is calculated by adjusting the weighted average number of ordinary shares outstanding to assume conversion of all dilutive potential ordinary shares. The Company has two categories of dilutive potential ordinary shares: share options and Perpetual Sub-ordinated Convertible Securities. For the share options, a calculation is done to determine the number of shares that could have been acquired at fair value (determined as the average market share price of the Company's shares) based on the monetary value of the subscription rights attached to outstanding share options. The number of shares calculated as above is compared with the number of shares that would have been issued assuming the exercise of the share options. The PSCS are assumed to have been converted into ordinary shares.

	2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Profit from continuing operations attributable to equity holders of the Company	454.1	335.8
Profit from discontinued operations attributable to equity holders of the Company	86.8	73.6

	NUMBER OF SHARES	
	2011 '000	2010 '000
Weighted average number of ordinary shares used in the calculation of the basic earnings per share	4,545,099	2,966,996
Adjustments for:		
– Share options	4,929	2,380
– Perpetual sub-ordinated convertible securities	500,055	1,560,000
Weighted average number of ordinary shares used in the calculation of the diluted earnings per share	5,050,083	4,529,376
Diluted earnings per share- continuing operations	US 8.99 cents	US 7.41 cents
Diluted earnings per share- discontinued operations	US 1.72 cents	US 1.63 cents

12. DIVIDENDS

No interim dividend was paid (2010: US$Nil) and the Directors do not recommend the payment of a final dividend for the year ended 31 December 2011 (2010: US$Nil).

13. EMPLOYEE BENEFIT EXPENSES, INCLUDING DIRECTORS' EMOLUMENTS

	2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Salaries and other benefits	314.8	248.9
Retirement scheme contributions (Note 32)	16.7	13.7
	331.5	262.6

14. DIRECTORS' AND SENIOR MANAGEMENT'S EMOLUMENTS

(a) Directors' emoluments

The remuneration of every Director for the year ended 31 December 2011 is set out below:

Name of Director	Fees US$'000	Salaries US$'000	Other Benefits (h) US$'000	Incentive plans (i) US$'000	Total US$'000
Mr Wang Lixin [(a)]	419	-	-	-	419
Mr Hao Chuanfu [(f)]	-	267	61	41	369
Mr Andrew Gordon Michelmore	-	2,294	28	4,595	6,917
Mr David Mark Lamont	-	1,110	23	1,185	2,318
Mr Li Liangang [(g)]	13	171	38	-	222
Mr Jiao Jian	137	-	-	-	137
Mr Xu Jiqing	141	-	-	-	141
Mr Gao Xiaoyu [(b)]	65	-	-	-	65
Mr Loong Ping Kwan	38	-	-	-	38
Dr Peter William Cassidy	219	-	-	-	219
Mr Anthony Charles Larkin [(c)]	17	-	-	-	17
Mr Li Fuli [(d)]	34	-	-	-	34
Mr Ting Leung Huel, Stephen [(e)]	35	-	-	-	35
	1,118	3,842	150	5,821	10,931

Note:

(a) Appointed as the Chairman whilst remaining as a Non-executive Director on 1 April 2011.

(b) Appointed as a Non-executive Director on 1 April 2011.

(c) Appointed as an Independent Non-executive Director on 30 November 2011.

(d) Resigned as the Chairman and Non-executive Director on 1 April 2011.

(e) Resigned as a Non-executive Director on 30 November 2011.

(f) Resigned as the Vice Chairman and Executive Director on 29 March 2012.

(g) Resigned as an Executive Director on 29 March 2012.

(h) Other benefits include statutory superannuation and pension contributions, non-monetary benefits and housing allowance. Not all benefits apply to each executive; benefits are applied variably based on contractual and statutory obligations.

(i) Incentive plans include at risk performance linked remuneration of both short and long-term incentives and discretionary bonuses.

The Short Term Incentive (STI) Plan is an annual cash reward determined by performance against Group financial and safety targets and individual performance. For operational roles, additional components include performance targets related to production rates, unit costs, and operational safety.

The Long Term Incentive (LTI) Plan is a cash settled reward at the conclusion of three performance years. Performance measures for the current LTI plans are differentiated from the STI plan and include three equally weighted metrics of:

- Earnings Per Share (diluted) Growth (EPS)
- Resources Growth
- Relative performance to Total Shareholder Return (TSR) HSBC Global Mining Index

Participation in the at risk incentives plans is offered to participants as a percentage of their fixed remuneration according to seniority and their ability to influence the performance of the Group.

All employees on long term employment contracts are eligible to participate in the STI plan whilst the LTI plan is limited to senior managers.

The remuneration of every Director for the year ended 31 December 2010 is set out below:

Name of Director	Fees US$'000	Salaries US$'000	Other Benefits [h] US$'000	Discretionary bonuses US$'000	Total US$'000
Mr Li Fuli	13	-	-	-	13
Mr Hao Chuanfu (a)	-	246	63	82	391
Mr Andrew Gordon Michelmore (b)	-	-	-	-	-
Mr David Mark Lamont (c)	-	-	-	-	-
Mr Li Liangang (d)	13	208	3	191	415
Mr Wang Lixin	13	-	-	-	13
Mr Xu Jiqing	13	-	-	-	13
Mr Jiao Jian (e)	-	-	-	-	-
Mr Ting Leung Huel, Stephen	29	-	-	-	29
Mr Loong Ping Kwan	29	-	-	-	29
Dr Peter William Cassidy (f)	-	-	-	-	-
Mr Zhan Wei (g)	-	143	37	81	261
Ms Shen Ling (g)	13	-	-	-	13
Mr Zong Qingsheng (g)	13	-	-	-	13
Mr Li Dongsheng (g)	29	-	-	-	29
	165	597	103	354	1,219

Note:
(a) Re-designated as the Vice Chairman while remaining as an Executive Director on 31 December 2010.
(b) Appointed as an Executive Director and Chief Executive Officer on 31 December 2010.
(c) Appointed as an Executive Director and Chief Financial Officer on 31 December 2010.
(d) Re-designated as an Executive Director on 31 December 2010.
(e) Appointed as a Non-executive Director on 31 December 2010.
(f) Appointed as an independent Non-executive Director on 31 December 2010.
(g) Resigned on 31 December 2010.
(h) Other benefits include housing allowances.

(b) Five highest-paid individuals

The five individuals whose emoluments were the highest in the Group for the year include two Directors (2010: 2) whose emoluments is reflected in the analysis presented above. The two Directors were appointed as Directors of the Company on 31 December 2010 and accordingly received the emoluments as employees rather than Directors during 2010. Details of the emoluments payable to all five individuals during the year are as follows:

	2011 US$ '000	2010 US$ '000
Salaries and other short-term employee benefits	5,784	5,684
Long term incentives scheme	3,926	1,136
Discretionary bonuses	3,920	2,729
	13,630	9,549

The emoluments fell within the following bands:

	NUMBER OF INDIVIDUALS	
	2011	2010
HK$8,000,001 – HK$8,500,000 (US$1,025,641 – US$1,089,744)	-	1
HK$8,500,001 – HK$9,000,000 (US$1,089,745 – US$1,153,846)	1	-
HK$9,500,001 – HK$10,000,000 (US$1,217,949 – US$1,282,051)	1	-
HK$10,000,001 – HK$10,500,000 (US$1,282,052 – US$1,346,154)	-	1
HK$11,000,001 – HK$11,500,000 (US$1,410,257 – US$1,474,359)	-	1
HK$13,000,001 – HK$13,500,000 (US$1,666,667 – US$1,730,769)	-	1
HK$15,500,001 – HK$16,000,000 (US$1,987,180 – US$2,051,282)	1	-
HK$18,000,001 – HK$18,500,000 (US$2,307,692 – US$2,371,795)	1	-
HK$31,500,001 – HK$32,000,000 (US$4,038,462 – US$4,102,564)	-	1
HK$53,500,001 – HK$54,000,000 (US$6,858,974 – US$6,923,077)	1	-
	5	5

During the year, no Director waived any emoluments and no emoluments were paid or payable by the Group to the Directors or any of the five highest-paid individuals as an inducement to join or upon joining the Group or as compensation for loss of office.

15. PROPERTY, PLANT AND EQUIPMENT

(a) The Group

US$ MILLION	Land and buildings	Plant and machinery	Mine property and development	Exploration and evaluation	Construction in progress	Total property, plant and equipment
As at 1 January 2011						
Cost	169.8	1,123.4	853.1	1.9	124.3	2,272.5
Accumulated depreciation	(37.9)	(284.3)	(278.2)	(0.6)	-	(601.0)
Net book amount at 1 January 2011	131.9	839.1	574.9	1.3	124.3	1,671.5
Year ended 31 December 2011						
At the beginning of the year	131.9	839.1	574.9	1.3	124.3	1,671.5
Additions	2.3	21.7	366.6	-	177.0	567.6
Depreciation	(9.2)	(99.4)	(202.8)	(0.1)	-	(311.5)
Disposals	(0.2)	(4.9)	(17.3)	-	(0.4)	(22.8)
Asset impairment	(0.5)	(28.4)	(4.0)	-	(0.6)	(33.5)
Transfers	21.1	65.7	12.5	(0.4)	(102.0)	(3.1)
Transferred to disposal group classified as held for sale (Note 38)	(27.2)	(79.5)	-	-	(6.6)	(113.3)
At the end of the year	118.2	714.3	729.9	0.8	191.7	1,754.9
As at 31 December 2011						
Cost	184.4	1,144.1	1,230.9	1.5	192.3	2,753.2
Accumulated depreciation and impairment	(66.2)	(429.8)	(501.0)	(0.7)	(0.6)	(998.3)
Net book amount at 31 December 2011	118.2	714.3	729.9	0.8	191.7	1,754.9

US$ MILLION	Land and buildings	Plant and machinery	Mine property and development	Exploration and evaluation	Construction in progress	Total property, plant and equipment
As at 1 January 2010						
Cost	174.1	1,002.8	587.8	3.9	85.3	1,853.9
Accumulated depreciation	(22.7)	(174.1)	(56.3)	-	-	(253.1)
Net book amount at 1 January 2010	151.4	828.7	531.5	3.9	85.3	1,600.8
Year ended 31 December 2010						
At the beginning of the year	151.4	828.7	531.5	3.9	85.3	1,600.8
Additions	2.7	57.4	239.9	-	116.2	416.2
Depreciation	(15.1)	(109.8)	(222.4)	(0.1)	-	(347.4)
Disposals	(0.2)	(0.5)	-	-	-	(0.7)
Transfers	(7.4)	62.3	25.9	(2.5)	(78.3)	-
Exchange differences	0.5	1.0	-	-	1.1	2.6
At the end of the year	131.9	839.1	574.9	1.3	124.3	1,671.5
As at 31 December 2010						
Cost	169.8	1,123.4	853.1	1.9	124.3	2,272.5
Accumulated depreciation	(37.9)	(284.3)	(278.2)	(0.6)	-	(601.0)
Net book amount at 31 December 2010	131.9	839.1	574.9	1.3	124.3	1,671.5

(b) The Company

US$ MILLION	Land and buildings	Plant and machinery	Total property, plant and equipment
As at 1 January 2011			
Cost	0.5	0.3	0.8
Accumulated depreciation	(0.3)	(0.2)	(0.5)
Net book amount at 1 January 2011	0.2	0.1	0.3
Year ended 31 December 2011			
At the beginning of the year	0.2	0.1	0.3
Disposals	(0.1)	(0.1)	(0.2)
Depreciation	(0.1)	-	(0.1)
At the end of the year	-	-	-
As at 31 December 2011			
Cost	-	-	-
Accumulated depreciation	-	-	-
Net book amount at 31 December 2011	-	-	-

US$ MILLION	Land and buildings	Plant and machinery	Total property, plant and equipment
As at 1 January 2010			
Cost	0.5	0.4	0.9
Accumulated depreciation	(0.2)	(0.3)	(0.5)
Net book amount at 31 December 2010	0.3	0.1	0.4
Year ended 31 December 2010			
At the beginning of the year	0.3	0.1	0.4
Depreciation	(0.1)	-	(0.1)
At the end of the year	0.2	0.1	0.3
As at 31 December 2010			
Cost	0.5	0.3	0.8
Accumulated depreciation	(0.3)	(0.2)	(0.5)
Net book amount at 31 December 2010	0.2	0.1	0.3

16. INTANGIBLE ASSETS

	ALUMINA PURCHASING RIGHTS	
	2011 US$ MILLION	2010 US$ MILLION
Cost		
At 1 January	174.0	174.0
Transferred to disposal group classified as held for sale	(174.0)	-
At 31 December	-	174.0
Accumulated amortisation		
At 1 January	(42.0)	(34.0)
Amortisation	-	(8.0)
Transferred to disposal group classified as held for sale	42.0	-
At 31 December	-	(42.0)
Net book amount		
At 31 December	-	132.0

As at 31 December 2010, the alumina purchasing rights represent the Group's rights to source alumina from a third party supplier, amounting to approximately 400,000 tonnes per annum up to mid-2027, at prices which correlate to the production costs of the supplier. As at 31 December 2010, the Group's alumina purchasing rights have been pledged to a bank to secure certain banking facilities of the Group.

17. INTERESTS IN SUBSIDIARIES

	THE COMPANY	
	2011 US$ MILLION	2010 US$ MILLION
Investments in subsidiaries		
Unlisted shares/investments at cost	6.2	316.8
Less: Provision for impairment	(0.4)	(0.4)
	5.8	316.4
Amounts due from subsidiaries (note i)	2,351.8	1,587.1
Less: Provision for impairment	(149.7)	(122.6)
	2,202.1	1,464.5
Interests in subsidiaries	2,207.9	1,780.9
Amounts due from subsidiaries (note ii)	644.2	-
Amounts due to subsidiaries (note iii)	(505.9)	(5.0)

Note:

(i) The amounts due from subsidiaries are unsecured, interest-free and have no fixed repayment terms.

(ii) The amounts due from subsidiaries are unsecured, interest-free and repayable on demand.

(iii) The amounts due to subsidiaries of which US$501.6 million are unsecured, interest bearing loans with no fixed repayment term and the remaining US$4.3 million are unsecured, interest-free and repayable on demand.

The following is a list of the principal subsidiaries as at 31 December 2011:

Name of company	Place of incorporation/ operation	Principal activities	Particulars of issued or paid up capital	Proportion of issued capital held by the Company	
				Directly	Indirectly
Allegiance Mining Pty Ltd	Australia	Mineral exploration and production	782,455,310 Ordinary Shares at A$1 a share	-	100%
MMG Australia Limited	Australia	Mineral exploration and production, management and employment services	490,000,000 Ordinary Shares at A$1 a share	-	100%
MMG Century Limited	Australia	Mineral exploration and production	30 Ordinary Shares at A$1 a share	-	100%
MMG Exploration Pty Ltd	Australia	Investment holding	1 Ordinary Share at A$1 a share	-	100%
MMG Golden Grove Pty Ltd	Australia	Mineral exploration and production	1 Ordinary Share at A$1 a share	-	100%
MMG Management Pty Ltd	Australia	Treasury and management services	1 Ordinary Share at A$1 a share	-	100%
All Glorious Limited	The British Virgin Islands (BVI)	Investment holding	1 share of US$1	100%	-
MMG Resources Inc.	Canada	Mineral exploration	90,750,378 Common Shares at C$1 a share	-	100%

Name of company	Place of incorporation/ operation	Principal activities	Particulars of issued or paid up capital	Proportion of issued capital held by the Company	
Minmetals Resources Copper Company Limited	Hong Kong	Non-ferrous metals trading	28,800 ordinary shares of HK$100 each	100%	-
Minmetals Resources Aluminium Company Limited	Hong Kong	Non-ferrous metals trading	28,800 ordinary shares of HK$100 each	100%	-
Orienmet Industry Company Limited	Hong Kong	Investment holding	5,000,000 ordinary shares of HK$1 each	100%	-
Lane Xang Minerals Limited	Laos	Mineral exploration and production	342,979 Ordinary Shares at US$1 a share	-	90%
Album Investment Pte Ltd	Singapore	Investment holding	488,211,900 Ordinary Share at S$1 a share	-	100%
Album Resources Pte Ltd	Singapore	Investment holding	488,211,901 Ordinary Share at S$1 a share	-	100%

18. INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

	2011 US$ MILLION	2010 US$ MILLION
Interests in jointly-controlled entities (a)	0.1	208.5
Interests in associates (b)	-	18.8
Total investments accounted for using the equity method	0.1	227.3

(a) Interests in jointly-controlled entities

	2011 US$ MILLION	2010 US$ MILLION
Share of net assets at 1 January	179.0	127.5
Share of jointly-controlled entities' results		
- Profit before income tax	-	44.9
- Income tax expense	-	(6.0)
	-	38.9
Capital injection into jointly-controlled entities	0.1	10.4
Dividends received	-	(2.3)
Exchange differences	-	4.5
Less: amounts classified as held for sale	(179.0)	-
	(178.9)	51.5
Share of net assets at 31 December	0.1	179.0
Goodwill	29.5	29.5
Less: amounts classified as held for sale	(29.5)	-
Interests in jointly-controlled entities at 31 December	0.1	208.5

As at and for the year ended 31 December 2011, the Group's share of the results of its jointly-controlled entities, all of which are unlisted, and its aggregated assets and liabilities and capital commitments are as follows:

US$ MILLION	Country of incorporation	Assets	Liabilities	Revenues	Profit	Capital commitments	Interest Held
At 31 December 2011							
Mincenco Limited [3]	Jamaica	0.1	-	-	-	-	51%
		0.1	-	-	-	-	
At 31 December 2010							
Changzhou Jinyuan Copper Company Limited [1]	The PRC	130.1	(105.6)	568.3	2.5	-	36%
Guangxi Huayin Aluminium Company Limited [2]	The PRC	424.4	(269.9)	197.4	36.4	4.0	33%
Mincenco Limited [3]	Jamaica	-	-	-	-	-	51%
		554.5	(375.5)	765.7	38.9	4.0	

Note:
[1] Sino-foreign equity joint venture registered under The PRC law.
[2] Limited liability company incorporated under The PRC law.
[3] Limited liability company incorporated in Jamaica.

As at 31 December 2010, the Company provided a corporate guarantee of RMB36,000,000 (equivalent to approximately US$5.4 million) to a bank in respect of a banking facility granted to a jointly-controlled entity. This guarantee was released on 30 June 2011.

(b) Interests in associates

	2011 US$ MILLION	2010 US$ MILLION
Share of net assets at 1 January	18.8	15.0
Share of associates' results		
- Profit before income tax	-	2.9
- Income tax expense	-	(0.8)
	-	2.1
Dividends received	-	(0.2)
Exchange differences	-	1.9
Less: amounts classified as held for sale	(18.8)	-
	(18.8)	3.8
Interests in associates at 31 December	-	18.8

As at and for the year ended 31 December 2010, the Group's share of the results of its principal associates, all of which are unlisted, and its aggregated assets and liabilities, are as follows:

US$ MILLION	Country of incorporation	Assets	Liabilities	Revenues	Profit	Interest Held
Qingdao M. C. Packaging Limited [1]	The PRC	6.7	(2.7)	7.8	0.5	20%
Sino Nickel Pty Ltd [2]	Australia	21.2	(6.4)	51.0	1.6	40%
		27.9	(9.1)	58.8	2.1	

Note:
[1] Sino-foreign equity joint venture registered under The PRC law.
[2] Limited liability company incorporated in Australia.

19. AVAILABLE-FOR-SALE FINANCIAL ASSETS

	2011 US$ MILLION	2010 US$ MILLION
At 1 January	164.1	-
Additions	58.9	100.2
Fair value transferred from equity	(152.1)	-
Fair value transferred to equity	88.2	63.9
Disposals	(159.1)	-
At 31 December	-	164.1
Available-for-sale financial assets represent:		
Listed equity securities – outside of Hong Kong	-	164.1
Market value of listed securities	-	164.1

The Group realised a gain before income tax of US$152.1 million on disposal of available-for-sale financial assets during the year which related to the disposal of shares held in Equinox Minerals Limited.

20. DEFERRED INCOME TAX

a) The movement in deferred income tax assets/(liabilities) account during the year is as follows:

US$ MILLION	Property, plant and equipment	Provisions	Tax losses	Others	Total
At 1 January 2010	51.7	-	13.8	4.3	69.8
(Charged)/credited to the income statement	(23.8)	62.8	(13.8)	(0.8)	24.4
Charged to equity	-	-	-	(18.8)	(18.8)
Exchange differences	-	-	-	3.3	3.3
At 31 December 2010	27.9	62.8	-	(12.0)	78.7
(Charged)/credited to the income statement	(79.1)	54.1	-	(7.7)	(32.7)
Credited to equity	-	-	-	18.8	18.8
Amounts classified as held for sale	-	-	-	(6.7)	(6.7)
At 31 December 2011	(51.2)	116.9	-	(7.6)	58.1

b) Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current income tax assets against current income tax liabilities and when the deferred income taxes relate to income tax levied by the same taxation authority on either the taxation entity or different taxation entities, there is an intention to settle the balances on a net basis. The following amounts, determined after appropriate offsetting, are shown in the balance sheet:

	2011 US$ MILLION	2010 US$ MILLION
Deferred income tax assets	63.6	98.8
Deferred income tax liabilities	(5.5)	(20.1)
	58.1	78.7

c) The Group only recognises deferred tax assets for deductible temporary differences and unused tax losses if it is probable that future taxable amounts will be available to utilise those temporary differences and tax losses. Management will continue to assess the recognition of deferred tax assets in future reporting periods. At 31 December 2011, the Group has unrecognised deferred tax assets in respect of the following items:

	2011 US$ MILLION	2010 US$ MILLION
Tax losses	16.1	8.5
Deductible temporary differences	106.0	98.7
At 31 December	122.1	107.2

21. INVENTORIES

	2011 US$ MILLION	2010 US$ MILLION
Current		
Stores and consumables	106.9	90.3
Less: impairment	(24.7)	(20.1)
	82.2	70.2
Raw materials	-	9.3
Work in progress	99.2	110.3
Finished goods	97.0	114.0
Commodities held for sale	-	37.0
Goods-in-transit	-	23.0
	278.4	363.8
Non-Current		
Work in progress	33.1	24.4
Total	311.5	388.2

The cost of inventories recognised as expense and included in cost of sales amounted to US$270.0 million (2010 restated: US$177.3 million).

As at 31 December 2011, certain banking facilities of the Group were secured by the Group's inventories with a carrying amount of US$Nil (2010: US$33.8 million).

22. TRADE AND OTHER RECEIVABLES

As at 31 December 2011, trade and other receivables of the Group is attributable to the continuing operations which mainly comprises of the mining operations, and the trade and other receivables of the Group as at 31 December 2010 also comprised the discontinued operations – trading, fabrication and other. The majority of sales for mining operations are made under contractual arrangements whereby provisional payment is received after delivery and the balance within 30 to 90 days from delivery. The majority of sales derived from the trading segment are under the arrangement of delivery upon payment from customers, with the remaining amounts on letters of credit while for the aluminium fabrication, sales are normally made with credit periods ranging from 30 to 90 days. The ageing analysis of the trade receivables is as follows:

	2011		2010	
	US$ MILLION	%	US$ MILLION	%
Trade receivables				
Less than 6 months	66.1	100.0	145.2	95.3
6 months-1 year	-	-	0.5	0.3
1–2 years	-	-	0.6	0.4
Over 2 years	-	-	6.0	4.0
	66.1	100.0	152.3	100.0
Less: Provision for impairment	-		(6.9)	
Trade receivables – net	66.1		145.4	
Bills receivable (note)	-		150.0	
Prepayments, deposits and other receivables	52.2		65.0	
	118.3		360.4	

Note:
Bills receivable are with maturity of less than 6 months. As at 31 December 2010, bills receivable of approximately US$117.1 million were discounted to banks or endorsed to suppliers.

As at 31 December 2011, the Group's trade receivables included an amount of US$29.9 million (2010: US$1.2 million), which was due from a related company of the Group.

The carrying amounts of the Group's trade and bills receivables are denominated in the following currencies:

	2011 US$ MILLION	2010 US$ MILLION
Renminbi	-	175.8
US dollars	66.1	119.6
	66.1	295.4

Movements on the provision for impairment of trade receivables are as follows:

	2011 US$ MILLION	2010 US$ MILLION
At 1 January	6.9	6.4
Provision for impairment of receivables	-	0.6
Receivables written off as uncollectable	-	(0.1)
Amounts classified as held for sale	(6.9)	-
At 31 December	-	6.9

As at 31 December 2011, no trade receivables were impaired (2010: US$6.9 million). The ageing analysis of these receivables is as follows:

	2011 US$ MILLION	2010 US$ MILLION
Less than 6 months	-	0.7
6 months-1 year	-	-
1-2 years	-	0.4
Over 2 years	-	5.8
	-	6.9

As at 31 December 2011, no trade receivables were past due but not impaired (2010: US$3.1 million).

Prepayments, deposits and other receivables consist of the following:

	2011 US$ MILLION	2010 US$ MILLION
Prepayments	14.9	33.0
Cash accounts kept at futures brokerage firms	-	9.3
Value added tax refundable	-	8.2
Consideration receivables from CMN (Note 38)	28.5	-
Other	5.0	14.5
	48.4	65.0

As at 31 December 2011, the prepayments, deposits and other receivables of the Group included an amount of US$Nil (2010: US$7.9 million), which was due from intermediate and ultimate holding companies and fellow subsidiaries of the Group.

23. OTHER FINANCIAL ASSETS

	2011 US$ MILLION	2010 US$ MILLION
Short-term investment	1.7	-
Derivative financial instruments (a)	-	0.2
Time deposits	-	12.8
Pledged bank deposits	-	6.4
	1.7	19.4

(a) Derivative financial instruments

	2011		2010	
	ASSETS US$ MILLION	LIABILITIES US$ MILLION	ASSETS US$ MILLION	LIABILITIES US$ MILLION
Carried at fair value				
- Aluminium future contracts	-	-	0.2	(1.2)

24. CASH AND CASH EQUIVALENTS

	THE GROUP		THE COMPANY	
	2011 US$ MILLION	2010 US$ MILLION	2011 US$ MILLION	2010 US$ MILLION
Cash and cash equivalents				
- Cash at bank and in hand	64.0	198.6	3.4	7.1
- Short-term bank deposits	1,032.5	199.6	218.9	10.0
	1,096.5	398.2	222.3	17.1

The weighted average effective interest rate on short-term bank deposits as at 31 December 2011 was 0.9% (2010: 1.4%). These deposits have an average maturity of 21 days (2010: 24 days).

The carrying amounts of the cash and cash equivalents and are denominated in the following currencies:

	THE GROUP		THE COMPANY	
	2011 US$ MILLION	2010 US$ MILLION	2011 US$ MILLION	2010 US$ MILLION
US dollars	1,086.4	256.9	218.9	15.5
Renminbi	-	88.3	-	-
Australian dollars	3.4	47.8	-	-
Hong Kong dollars	4.9	3.0	3.4	1.6
Others	1.8	2.2	-	-
	1,096.5	398.2	222.3	17.1

25. SHARE CAPITAL

	NUMBER OF ORDINARY SHARES		NOMINAL VALUE	
	2011 '000	2010 '000	2011 US$ MILLION	2010 US$ MILLION
Authorised:				
Ordinary shares of HK$0.05 each				
At 1 January	18,000,000	6,000,000	115.4	38.5
Increase in authorised share capital (note (a))	-	12,000,000	-	76.9
At 31 December	18,000,000	18,000,000	115.4	115.4
Issued and fully paid:				
At 1 January	2,966,996	2,026,217	19.0	13.0
Issue of shares (notes (b) & (c))	762,612	940,779	4.9	6.0
Conversion of perpetual sub-ordinated convertible securities into ordinary shares (note (d))	1,560,000	-	10.0	-
At 31 December	5,289,608	2,966,996	33.9	19.0

Notes:

(a) Pursuant to a resolution passed on 9 December 2010, the authorised share capital of the Company was increased from HK$300,000,000 (equivalent to US$38.5 million) divided into 6,000,000,000 shares to HK$900,000,000 (equivalent to US$115.4 million) divided into 18,000,000,000 shares by the creation of an additional 12,000,000,000 new shares of HK$0.05 each. These shares rank pari passu in all respects with the then existing shares.

(b) The Company issued 940,779,090 new shares on 31 December 2010 to Album Enterprises as part of the purchase consideration for the acquisition of the entire issued share capital of Album Resources. These shares rank pari passu in all respects with the then existing shares. The fair value of the new shares issued at the completion date of the acquisition amounted to approximately US$652.6 million (HK$5.39 per share).

(c) On 28 April 2011, the Company issued and placed aggregate 762,612,000 ordinary shares to certain independent third parties at HK$5.10 per share. These shares rank pari passu in all respect with the then existing shares.

(d) On 28 April 2011, 1,560,000,000 ordinary shares have been issued and allotted to Album Enterprises upon the conversion of the PSCS. These shares rank pari passu in all respect with the then existing shares.

26. RESERVES AND RETAINED PROFITS

(a) The Group

US$ MILLION	Share premium	Capital reserve	Special capital reserve	PRC statutory reserves	Exchange translation reserve	Available-for-sale financial assets reserve	Merger reserve	Other reserves	Total other reserves	Retained profits	Total
At 1 January 2011	1,151.9	11.2	9.4	19.9	33.4	43.5	(1,946.9)	0.4	**(677.2)**	445.2	**(232.0)**
Profit for the year	-	-	-	-	-	-	-	-	**-**	540.9	**540.9**
Other comprehensive (loss)/income											
Change in fair value of available-for-sale financial assets	-	-	-	-	-	88.2	-	-	**88.2**	-	**88.2**
Deferred income tax	-	-	-	-	-	(18.1)	-	-	**(18.1)**	-	**(18.1)**
Transfer to income statement on disposal of available-for-sale financial assets	-	-	-	-	-	(149.1)	-	-	**(149.1)**	-	**(149.1)**
Income tax expense	-	-	-	-	-	36.4	-	-	**36.4**	-	**36.4**
Currency translation differences	-	-	-	-	11.6	-	-	-	**11.6**	-	**11.6**
Currency translation differences transfer to income statement on disposal of subsidiaries and investments accounted for using the equity method	-	-	-	-	(45.9)	-	-	-	**(45.9)**	-	**(45.9)**
Total comprehensive income for the year	-	-	-	-	(34.3)	(42.6)	-	-	**(76.9)**	540.9	**464.0**
Transactions with owners											
Transfer (from)/to reserves	-	5.8	-	0.3	-	-	-	-	**6.1**	(6.1)	**-**
Issue of shares	489.4	-	-	-	-	-	-	-	**489.4**	-	**489.4**
Conversion of perpetual sub-ordinated convertible securities into ordinary shares	677.3	-	-	-	2.7	-	-	-	**680.0**	-	**680.0**
Employee share option	-	-	-	-	-	-	-	0.1	**0.1**	-	**0.1**
Disposal of subsidiaries	-	(10.8)	-	(20.2)	0.9	(0.9)	-	(0.1)	**(31.1)**	31.1	**-**
Total transactions with owners	1,166.7	(5.0)	-	(19.9)	3.6	(0.9)	-	-	**1,144.5**	25.0	**1,169.5**
At 31 December 2011	2,318.6	6.2	9.4	-	2.7	-	(1,946.9)	0.4	**390.4**	1,011.1	**1,401.5**

US$ MILLION	Share premium	Capital reserve	Special capital reserve	PRC statutory reserves	Exchange translation reserve	Available-for-sale financial assets reserve	Merger reserve	Other reserves	Total other reserves	Retained profits	Total
At 1 January 2010	505.3	11.2	9.4	19.4	20.4	0.2	189.9	(0.7)	**755.1**	376.3	**1,131.4**
Profit for the year	-	-	-	-	-	-	-	-	**-**	409.4	**409.4**
Other comprehensive (loss)/income											
Change in fair value of available-for-sale financial assets	-	-	-	-	-	62.7	-	-	**62.7**	-	**62.7**
Deferred income tax	-	-	-	-	-	(18.8)	-	-	**(18.8)**	-	**(18.8)**
Cash flow hedge	-	-	-	-	-	-	-	1.0	**1.0**	-	**1.0**
Currency translation differences	-	-	-	-	13.0	(0.6)	-	-	**12.4**	-	**12.4**
Total comprehensive income for the year	-	-	-	-	13.0	43.3	-	1.0	**57.3**	409.4	**466.7**
Transactions with owners											
Transfer (from)/to reserves	-	-	-	0.5	-	-	-	-	**0.5**	(0.5)	**-**
Dividends paid to former owner of Album Resources	-	-	-	-	-	-	-	-	**-**	(340.0)	**(340.0)**
Issue of shares	646.6	-	-	-	-	-	-	-	**646.6**	-	**646.6**
Employee share option	**-**	**-**	**-**	**-**	**-**	**-**	-	0.1	**0.1**	-	**0.1**
Business combination under common control	**-**	**-**	**-**	**-**	**-**	**-**	(2,136.8)	**-**	**(2,136.8)**	**-**	**(2,136.8)**
Total transactions with owners	646.6	-	-	0.5	-	-	(2,136.8)	0.1	**(1,489.6)**	(340.5)	**(1,830.1)**
At 31 December 2010	1,151.9	11.2	9.4	19.9	33.4	43.5	(1,946.9)	0.4	**(677.2)**	445.2	**(232.0)**

(b) The Company

US$ MILLION	Share premium	Capital reserve	Special capital reserve	Capital redemption reserve	Share option reserve	(Accumulated losses)/ retained profits	Total
At 1 January 2010	505.3	6.2	9.4	0.2	-	(80.3)	440.8
Loss for the year	-	-	-	-	-	(1.7)	(1.7)
Issue of shares upon 2010 business combination under common control	646.6	-	-	-	-	-	646.6
At 31 December 2010	1,151.9	6.2	9.4	0.2	-	(82.0)	1,085.7
Profit for the year	-	-	-	-	-	278.6	278.6
Issue of shares	489.4	-	-	-	-	-	489.4
Conversion of perpetual sub-ordinated convertible securities into ordinary shares	677.3	-	-	-	-	-	677.3
Employee share options	-	-	-	-	0.1	-	0.1
At 31 December 2011	2,318.6	6.2	9.4	0.2	0.1	196.6	2,531.1

(c) Nature and purpose of reserves

(i) Share premium and capital redemption reserve

The application of the share premium account and the capital redemption reserve is governed by sections 48B and 49H respectively of the Hong Kong Companies Ordinance.

(ii) Capital reserve

The capital reserve comprises of the excess of consideration of US$6.2 million paid by Coppermine Resources Limited, the previous immediate holding company of the Company, over the nominal value of 475,376,917 shares of the Company issued on 12 January 2004.

(iii) Special capital reserve

In relation to the capital reorganisation as confirmed by the High Court of the Hong Kong Special Administrative Region on 13 February 2007, the Company has provided an undertaking (Undertaking) for its petition to the court that as long as any debt or liability of claim against the Company as at the effective date of this capital reorganisation remains outstanding, the Company should credit the following amounts to a special reserve (Special Reserve):

- all retained profits, if any, accruing to the Company between 1 November 2006 and 13 February 2007 (the effective date of the capital reorganisation);
- any recovery in excess of the written down value of or the reversal of impairment loss in respect of certain investments in subsidiaries, listed securities, properties and loans or receivables of the Company as at 31 October 2006; and
- an amount equal to the change in fair value in respect of certain share options not yet vested as at 31 October 2006.

The standing to the credit of the Special Reserve shall not be treated as realised profit. It shall be treated as an undistributable reserve of the Company for the purposes of Section 79C of the Hong Kong Companies Ordinance. As at 31 December 2011, the standing to the credit of the Company's special capital reserve, which had been made in accordance with the Undertaking, amounted to approximately US$9.4 million (2010: US$9.4 million).

(iv) PRC statutory reserves

PRC statutory reserves comprise statutory reserve fund and enterprise expansion reserve, which are reserves required by the relevant PRC laws applicable to the Group's subsidiaries and cannot be used for distribution in the form of cash dividends.

For the Group's subsidiaries registered under the PRC law on jointly-controlled entities with Chinese and foreign investment, the appropriations to statutory reserve fund and enterprise expansion reserve are determined at the discretion of the Board of Directors of the respective subsidiaries.

For the Group's subsidiaries registered under the PRC law on Enterprises Operated Exclusively with Foreign Capital, the appropriations to statutory reserve fund and enterprise expansion reserve are determined at the discretion of the Board of Directors of the respective subsidiaries. However, the appropriation to the statutory reserve fund should not be less than 10% of their profit after income tax as stated in the PRC statutory financial statements unless the statutory reserve fund reaches 50% of their registered capital.

The statutory reserve fund can be used to set off accumulated losses while the enterprise expansion reserve can be used for expansion of production facilities or to increase the capital of the subsidiaries upon approval by the regulatory authority.

(v) Exchange translation reserve

The exchange reserve comprises all foreign exchange differences arising from the translation of the financial statements of foreign operations as well as the effective portion of any foreign exchange differences arising from hedges of the net investment in these foreign operations. The reserve is dealt with in accordance with the accounting policies set out in note 2.5(c).

(vi) Hedging reserve

The hedging reserve comprises the effective portion of the cumulative net change in the fair value of hedging instruments used in cash flow hedges pending subsequent recognition of the hedged cash flow in accordance with the accounting policy adopted for cash flow hedges in note 2.12.

(vii) Available-for-sale financial assets reserve

In 2009, the Group acquired a subsidiary through piecemeal acquisition. Available-for-sale financial assets reserve represents the increase in fair value of the identifiable net assets attributable to the initial interest held by the Group immediately before the completion of the piecemeal acquisition in the acquired business. This reserve also reflects revaluation of the listed equity securities acquired in 2010.

(viii) Merger reserve

Merger reserve represents the excess of investment cost in entities that have been accounted for under merger accounting for common control combinations in accordance with AG5 against their share capital.

(d) Distributability of reserves

At 31 December 2011 the Company had US$202.8 million reserves available for distribution to shareholders (2010: Nil).

27. PERPETUAL SUB-ORDINATED CONVERTIBLE SECURITIES (PSCS)

The Company issued an aggregate principal sum of US$690.0 million PSCS on 31 December 2010 to Album Enterprises as part of the purchase consideration for the acquisition of the entire issued share capital of Album Resources . These PSCS being convertible into 1,560,000,000 new shares of the Company at an initial conversion price of HK$3.45 per share. The fair value of these PSCS issued at the completion date of the acquisition amounted to approximately US$690.0 million.

The PSCS constitutes direct, unsecured and sub-ordinated obligations of the Company and rank pari passu without any preference or priority among themselves. In the event of the winding-up of the Company, the rights and claims of the PSCS Holder(s) would; (i) rank ahead of those persons whose claims are in respect of any class of share capital (including preference shares) of the Company, (ii) be sub-ordinated in right of payment to the claims of all other present and future senior creditors of the Company, and (iii) pari passu with each other and with claims of holders of any security issued or guaranteed by the Company which ranks or is expressed to rank pari passu with the PSCS (Parity Securities). The PSCS Holder(s) were not entitled to receive notice of, attend or vote at general meetings of the Company by reason only of its being a PSCS holder.

The PSCS conferred a right to receive distribution(s) from and including the date of issue of the PSCS at 1% per annum on any outstanding principal amount of distribution payable annually in arrears on 31 July each year, subject to the terms of the PSCS. The Company was entitled to elect to defer a distribution pursuant to the terms of the PSCS, provided that no dividend or distribution or other payment was made on any class of its share capital (including preference shares) or Parity Securities. Any arrears of distribution(s) due in respect of the PSCS would be extinguished by the Company in full through the delivery by the Company of its shares issuable by it upon the exercise of the PSCS Holder's conversion right.

The conversion of the PSCS held by Album Enterprises into new shares took place on 28 April 2011 converting the principal amount of US$690,000,000 at the conversion price of HK$3.45 per new share, based on the exchange rate of US$1.00 = HK$7.8. Accordingly 1,560,000,000 new shares have been issued and allotted to Album Enterprises.

28. SHARE OPTION SCHEME

2004 Share Option Scheme

Pursuant to the share option scheme adopted by the Company on 28 May 2004 (2004 Share Option Scheme), there were 7,300,000 options outstanding as at 31 December 2011, which represented approximately 0.14% of the total number of issued shares of the Company as at that date.

During the year ended 31 December 2011, the movements of the options which have been granted under the 2004 Share Option Scheme are as follows:

				NUMBER OF OPTIONS					
Category and name of participant	Date of grant	Exercise price per share	Exercise period	Balance as at 1 January 2011	Granted during the year	Exercised during the year	Cancelled during the year	Lapsed during the year	Balance as at 31 December 2011
	(note 1)	HK$	(note 2)					(note 3)	
Directors									
Li Fuli	3 June 2010	2.75	3 June 2012 to 2 June 2015	1,300,000	-	-	-	(1,300,000)	-
Hao Chuanfu	3 June 2010	2.75	3 June 2012 to 2 June 2015	1,600,000	-	-	-	-	1,600,000
Li Lianggang	3 June 2010	2.75	3 June 2012 to 2 June 2015	1,100,000	-	-	-	-	1,100,000
Jiao Jian	3 June 2010	2.75	3 June 2012 to 2 June 2015	1,200,000	-	-	-	-	1,200,000
Xu Jiqing	3 June 2010	2.75	3 June 2012 to 2 June 2015	1,000,000	-	-	-	-	1,000,000
Employees of the Group	3 June 2010	2.75	3 June 2012 to 2 June 2015	6,400,000	-	-	-	(4,000,000)	2,400,000
				12,600,000	-	-	-	(5,300,000)	7,300,000

Notes:

1. The closing price of the shares of the Company immediately before the date on which the options were granted was HK$2.69 per share.
2. The options granted may be exercised according to the following three tranches, which are subject to certain terms and conditions, including amongst others, the achievement of certain performance targets by the Group and the grantee:
   (i) Up to 33% of the options granted to each grantee shall be exercisable at any time after the expiration of 24 months from the date of grant of options;
   (ii) Up to 67% of the options granted to each grantee shall be exercisable at any time after the expiration of 36 months from the date of grant of options; and
   (iii) Up to 100% of the options granted to each grantee shall be exercisable at any time after the expiration of 48 months from the date of grant of options,

   and in each case, not later than 2 June 2015.
3. Options lapsed due to cessation of employment.

The estimated fair value of the options granted on 3 June 2010 was approximately US$0.1183 each, estimated as at the date of grant by using the binomial option pricing model and taking into account the terms and conditions (except vesting conditions other than market conditions) upon which the options were granted, of which the Group recognised a share option expense of approximately US$48,000 for the year ended 31 December 2011 (2010: US$116,000).

29. DEFERRED INCOME

	2011 US$ MILLION	2010 US$ MILLION
At 1 January	5.1	5.1
Government grants obtained	-	0.2
Exchange differences	-	0.2
Amortisation	-	(0.4)
Less: amounts classified as held for sale	(5.1)	-
At 31 December	-	5.1

Deferred income represents grants obtained from the PRC government in relation to: i) the construction of new production line; and ii) the purchase of certain plant and machinery by the Group.

30. BORROWINGS

	2011 US$ MILLION	2010 US$ MILLION
Non-current		
Borrowings	292.4	1,141.1
Finance lease liabilities	2.1	3.2
	294.5	1,144.3
Current		
Borrowings	785.4	81.8
Finance lease liabilities	1.2	1.1
Other loans	0.6	0.3
	787.2	83.2
	1,081.7	1,227.5
Analysed as:		
- Secured	1,077.8	1,171.0
- Unsecured	3.9	56.5
	1,081.7	1,227.5
Borrowings are repayable as follows:		
- Within 1 year	787.2	83.2
- Between 1 and 2 years	35.8	799.6
- Between 2 and 5 years	258.7	136.5
- Repayable within 5 years	1,081.7	1,019.3
- Over 5 years	-	208.2
	1,081.7	1,227.5
Borrowings are:		
- wholly repayable within 5 years	1,081.7	834.5
- not wholly repayable within 5 years	-	393.0
	1,081.7	1,227.5

An analysis of the carrying amounts of the borrowings excluding finance leases by type and currency is as follows:

	2011 US$ MILLION	2010 US$ MILLION
Renminbi		
- at fixed rates	-	9.0
- at floating rates	-	69.9
	-	78.9
United States dollars		
- at floating rates	1,077.8	1,144.0
	1,077.8	1,222.9

The effective interest rates at the balance sheet date were as follows:

	2011		2010	
	US$	RMB	US$	RMB
Borrowings	1.8%	-	2.0%	5.59%

As at 31 December 2011, the borrowings of the Group were secured by:

(i) approximately US$190.0 million were secured by a charge on entire share capital of a wholly-owned subsidiary of the Company, Album Investment Private Limited ("Album Investment"), a mortgage on 70% of the issued shares in certain wholly-owned subsidiaries of Album Investment and a mortgage on 70% of issued shares in MMG Laos Holdings Limited, a 90%-owned subsidiary of Album Investment; and

(ii) approximately US$366.0 million with China Development Bank (CDB), approximately US$136.8 million with Bank of China (Singapore Branch) and approximately US$385.0 million with Bank of China (Sydney Branch) are guaranteed by CMN.

As at 31 December 2010, the borrowings of the Group were also secured by:

(i) equity interests in a wholly owned subsidiary, Sino Mining Alumina Limited (Sino Mining) and the assets of Sino Mining;

(ii) certain property, plant and equipment, land use rights and inventories of the Group with a total carrying amount of approximately US$65.4 million; and

(iii) pledged bank deposits of approximately US$6.4 million.

31. TRADE AND OTHER PAYABLES

The ageing analysis of the trade payables is as follows:

	2011		2010	
	US$ MILLION	%	US$ MILLION	%
Trade payables				
Less than 6 months	188.1	100.0%	186.5	99.7%
6 months - 1 year	-	-	0.3	0.2%
1 - 2 years	-	-	0.1	0.0%
Over 2 years	-	-	0.2	0.1%
	188.1	100.0%	187.1	100.0%
Other payables and accruals	17.0		107.9	
Trade payables under endorsed bills	-		73.5	
	205.1		368.5	

As at 31 December 2011, the Group's accruals included payables in respect of the transaction cost arising from the Business Combination of approximately US$Nil (2010: US$78.1 million), of which approximately US$Nil (2010: US$74.4 million) are denominated in A$.

32. RETIREMENT SCHEMES

The Group provides retirement benefits to all Hong Kong eligible employees under the Mandatory Provident Fund (MPF Scheme). Under the MPF Scheme, the Group and their employees make monthly contributions to the MPF Scheme at 5% of the employees' salaries as defined under the Mandatory Provident Fund legislation. Contributions of both the Hong Kong subsidiaries and their employees are subject to a maximum of HK$1,000 per month and thereafter contributions are voluntary and are not subject to any limitation. The MPF Scheme is administered by an independent trustee and its assets are held separately from those of the Group. The Group provides a superannuation contribution for all Australian based employees to their nominated superannuation fund. This contribution is to provide benefits for employees and their dependants in retirement, and for relevant employees, disabilities or death. In accordance with the applicable regulation in Australia, the Group is required to contribute at a minimum rate of 9% of ordinary time earnings (OTE) of the Australian based employee.

Total contributions made for the year ended 31 December 2011 amounted to approximately US$16.7 million (2010 restated: US$13.7 million).

33. PROVISIONS

(a) Provision – The Group

	2011 US$ MILLION	2010 US$ MILLION
Current		
Employee benefits	53.2	40.2
Workers' compensation	1.4	2.0
Mine rehabilitation, restoration and dismantling (note (b))	-	4.9
Other provisions (note (c))	1.9	6.0
Total current provisions	56.5	53.1
Non–current		
Employee benefits	7.8	6.8
Workers' compensation	5.0	5.3
Mine rehabilitation, restoration and dismantling (note (b))	471.8	305.5
Other provisions (note (c))	6.5	-
Total non–current provisions	491.1	317.6
Aggregate		
Employee benefits	61.0	47.0
Workers' compensation	6.4	7.3
Mine rehabilitation, restoration and dismantling (note (b))	471.8	310.4
Other provisions (note (c))	8.4	6.0
Total provisions	547.6	370.7

(b) Mine rehabilitation, restoration and dismantling

	2011 US$ MILLION	2010 US$ MILLION
Opening carrying amount	310.4	221.3
Additional provisions recognised	161.4	71.6
Reversal of provisions	(28.8)	(0.2)
Payments made	0.4	–
Unwind of discount	20.8	17.7
Exchange rate differences	7.6	–
Closing carrying amount	471.8	310.4

Of the above mine rehabilitation, a restoration and dismantling provision of US$13.9 million (2010: US$16.0 million) relates to exploration activities.

(c) Other provisions

	2011 US$ MILLION	2010 US$ MILLION
Opening carrying amount	6.0	10.7
Additional provisions recognised	2.4	0.7
Write back of onerous leases	-	(5.4)
Closing carrying amount	8.4	6.0

Other provisions relate predominantly to provisions for other taxes and onerous contracts where the expected benefit to be derived by the Group from a contract is lower than the unavoidable cost of meeting its obligation under the contract. The obligation for the discounted future payments has been provided for.

(d) Provisions – The Company

	2011 US$ MILLION	2010 US$ MILLION
Current		
Employee benefits	1.3	-
Total current provisions	1.3	-
Non–current		
Employee benefits	3.2	-
Total non–current provisions	3.2	-
Aggregate		
Employee benefits	4.5	-
Total provisions	4.5	-

34. NOTES TO CONSOLIDATED CASH FLOW STATEMENT

(a) Reconciliation of profit for the year to net cash generated from operations is as follows:

	2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Profit for the year from continuing operations	483.6	356.2
Adjustments for:		
- Income tax expense/(benefit)	225.5	126.6
- Finance income	(2.4)	(4.3)
- Finance expenses	27.8	25.1
- Depreciation and amortisation	308.5	299.6
- (Gain)/loss on disposal of property, plant and equipment	(0.5)	(2.4)
- (Gain)/loss on disposal of investment properties	(0.1)	-
- (Gain)/loss on disposal of available-for-sale assets	(152.1)	-
- (Gain)/loss on disposal of investment	(17.3)	-
- Provision for impairment of property, plant and equipment	33.5	-
- Provision for impairment of short-term investment	0.8	-
- Fair value gains on investment properties	-	(0.3)
- Share options granted to Directors and employees	-	0.1
- Non-cash borrowing costs	20.8	17.7
- Other non-cash items	7.6	8.7
- Foreign exchange (gains)/losses	(3.1)	17.1
- Reversal of business acquisition cost	(63.8)	-
Changes in working capital (excluding the effects of discontinued operations and exchange differences on consolidation):		
- Inventories	(35.2)	(75.3)
- Trade and other receivables	20.7	(18.8)
- Trade payables and accruals, receipts in advance and other payables	51.7	97.8
- Other assets	3.3	(1.6)
Net cash generated from operations	909.3	846.2

(b) In the cash flow statement, proceeds from sale of property, plant and equipment comprise:

	2011 US$ MILLION	2010 US$ MILLION (RESTATED)
Net book amount (Note 15)	22.8	0.1
Assets disposed as part of sale of investment	(19.1)	-
Gain/(loss) on disposal of property, plant and equipment	0.5	2.4
Proceeds from disposal of property, plant and equipment	4.2	2.5

(a) Included in net cash generated from operations is US$64.0 million (2010: US$55.5 million) paid in relation to exploration activities.

35. COMMITMENTS

(a) Operating leases

The Group leases various warehouses, offices and factory premises under non-cancellable operating leases. The future aggregate minimum lease payments under non-cancellable operating leases are as follows:

	2011 US$ MILLION	2010 US$ MILLION
Not later than one year	4.5	3.8
Later than one year but not later than five years	17.0	18.6
Later than five years	7.1	8.9
	28.6	31.3

(b) Capital and non-capital commitments

Commitments for acquisition of capital and non-capital commitments contracted for at the reporting date but not recognised as liabilities, are set out in the table below.

	2011 US$ MILLION	2010 US$ MILLION
Not later than one year	63.8	45.7
Later than one year but not later than five years	4.1	18.2
	67.9	63.9

The Group had the following capital commitments not provided for at the reporting date:

	2011 US$ MILLION	2010 US$ MILLION
Property, plant and equipment		
Contracted but not provided for	44.0	28.2
Authorised but not contracted for	156.2	-
	200.2	28.2

36. CONTINGENT LIABILITIES

Legal proceedings

The Company and its subsidiaries are defendants from time to time in legal proceedings arising from the conduct of their businesses. The Group does not consider that the outcome of any of these proceedings ongoing at balance date, either individually or in aggregate, is likely to have a material effect on its financial position. Where appropriate, provisions have been made.

Bank guarantees

Certain bank guarantees have been provided in connection with the operations of certain of the subsidiaries of the Company, primarily associated with the terms of mining leases or exploration licences. At the end of the year, no claims have been made under these guarantees. The amount of these guarantees may vary from time to time depending upon the requirements of the relevant regulatory authority. These guarantees amount to US$91.5 million (2010: US$112.8 million). Provision is made in the financial statements for the anticipated costs of the mine rehabilitation obligations under the mining leases and exploration licenses (refer Note 33).

37. SIGNIFICANT RELATED PARTY TRANSACTIONS

The Group is controlled by CMN through Top Create Resources Limited, a company incorporated in the British Virgin Islands, which owns 24.28% of the Company's shares, and Album Enterprises, which owns 47.28% of the Company's shares, both of them are wholly owned subsidiaries of CMN. The remaining 28.44% of the Company's shares are widely held. The Directors of the Company consider the ultimate holding company is CMC, a company incorporated in the PRC.

CMC itself is a state-owned enterprise and is controlled by the PRC government, which also owns a significant portion of productive assets in the PRC. In accordance with HKAS 24 *Related Party Disclosures* issued by the Hong Kong Institute of Certified Public Accountants, other state-owned enterprises and their subsidiaries (other than subsidiaries of CMC), directly or indirectly controlled by the PRC government, are also defined as related parties of the Group. On that basis, related parties include CMC and its related companies, other state-owned enterprises and their subsidiaries directly or indirectly controlled by the PRC government, the Company's jointly-controlled entities and associates, and key management personnel of the Company and CMC as well as their close family members.

For the purposes of the related party transaction disclosures, the Directors of the Company believe that meaningful information in respect of related party transactions has been adequately disclosed. In addition to the related party information and transactions disclosed elsewhere in the consolidated financial statements, the following is a summary of significant related party transactions entered in the ordinary course of business between the Group and its related parties during the year.

(a) Transactions with jointly-controlled entities and associates of the Group

	2011 US$ MILLION	2010 US$ MILLION
Expenses		
Purchases of non-ferrous metals from a jointly-controlled entity (Note (i))	223.9	196.7

Note:

(i) The purchases were made with Guangxi Huayin Aluminium Company Limited, a 33%-owned jointly controlled entity of the Group before disposal of discontinued operation in December 2011.

(b) Transactions with CMC and its group companies (other than those within the Group)

	2011 US$ MILLION	2010 US$ MILLION
Revenue		
Sales of non-ferrous metals to a related company	182.2	183.4
Expenses		
Construction contract fees to a fellow subsidiary (Note (i))	-	0.8
Transportation fees to fellow subsidiaries (Note (ii))	-	0.2
Rental to fellow subsidiaries (Note (iii))	0.2	0.2
Commission fees to fellow subsidiaries (Note (iii))	0.3	0.1
Interest paid to a related company	5.2	-
Purchases of non-ferrous metals from a related company	79.2	176.0
Financial guarantees provided by ultimate holding company for the bank loans granted to a subsidiary	-	83.3

Notes:

(i) The construction contract fees were paid to Ershisanye Construction Group Co., Ltd. (Ershisanye), a non-wholly owned subsidiary of the Company's ultimate holding company, by a subsidiary of the Company. Details of the transactions are set out in the Company's announcement dated 20 March 2008.

(ii) The transportation fees were paid by the Company's subsidiaries to Minmetals Logistics & Forwarding Tianjian Company Limited, a non-wholly owned subsidiary of the Company's ultimate holding company. Details of the transactions are set out in the Company's announcement dated 6 November 2008.

(iii) De minimis transactions entered into in the usual course of business and under normal commercial terms, exempted from all the reporting, announcement and independent shareholders' approval requirements by virtue of rule 14A.31 of the Listing Rules.

(c) Transactions and balances with other state-owned enterprises

During the year ended 31 December 2011, the Group's transactions with other state-owned enterprises (excluding CMC and its subsidiaries) are sales of goods and purchases of non-ferrous metals, raw materials, electricity, property, plant and equipment and services and the related receivables and payables balances. In addition, a portion of fixed deposits, cash and cash equivalents and borrowings as of 31 December 2011 and the relevant interest earned or paid during the year are transacted with banks and other financial institutions controlled by the PRC government.

The transactions of revenues and expenses in nature conducted with government-related entities were based on terms as set out in the underlying agreements, based on statutory rates or market prices or actual cost incurred, or as mutually agreed.

(d) Key management compensation

The key management personnel remuneration for the Group was as follows:

	2011 US$ MILLION	2010 US$ MILLION
Salaries and other short-term employee benefits	12.4	11.6
Other long-term benefits	4.0	3.1
Post-employment benefits	0.1	0.1
Termination benefits	0.5	1.0
Share based payments	-	0.1
	17.0	15.9

(e) Year-end balances

	2011 US$ MILLION	2010 US$ MILLION
Payables to		
- a jointly-controlled entity	-	2.2
- intermediate and ultimate holding company	-	0.1
- fellow subsidiaries	-	0.2
	-	2.5
Loan from Album Enterprises (i)	-	694.2
Loan to Album Enterprises (ii)	95.0	-
Consideration receivables from CMN	28.5	-
Trade receivable from CMN	29.9	-

Notes:

(i) The loan from Album Enterprises represented an unsecured 5 year term loan, with fixed interest rate of 2.0%, 3.0%, 4.0% and 5.0% per annum for the first two years, third year, fourth year and fifth year respectively. The loan was settled during the year.

(ii) The loan to Album Enterprises represented the amount drawn by Album Enterprises pursuant to a Facility Agreement, dated 23 December 2011, entered by MMG Limited, a wholly owned subsidiary of the Company, and Album Enterprises. According to the Facility Agreement, a loan facility of US$100.0 million is make available to Album Enterprises on an uncommitted basis, available for a period of 1 year commencing on the date of the Facility Agreement, interest accrues on outstanding balance drawn under the facility at LIBOR plus 1.50% per annum and repayable based on the agreed term but no later than the expiry date of the Facility Agreement or repayable on demand.

38. DISCONTINUED OPERATIONS AND ASSETS HELD FOR SALE

On 28 March 2011, the Board of the Company approved the program of strategic divestments, of assets that are assessed as not being core to the company's future and these assets include the trading, fabrication and other operations (the Disposal Group). Accordingly, these operations were regarded as discontinued.

On 15 September 2011, the directors of the Company announced that the Company had entered into the Master Sale and Implementation Agreement with a controlling shareholder of the Company, China Minmetals Non-ferrous Metals Co., Ltd. (CMN), to sell its entire interest in four entities (Disposal Entities) out of the Disposal Group for an aggregate consideration of US$726.8 million (Disposal). The Disposal Entities represent majority components of the Disposal Group. The Disposal was approved by the independent shareholders of the Company on 28 October 2011 and completed in December 2011. During the year, an additional US$11.2 million was received on disposal of remaining discontinued entities.

Analysis on the results, assets and liabilities of the Disposal Group are as follows:

Results from discontinued operations

The results of the Disposal Group are presented in these consolidated financial statements as discontinued operations.

	2011 US$ MILLION	2010 US$ MILLION
Revenue	2,377.3	1,662.2
Expenses	(2,323.7)	(1,623.5)
Profit before net financing costs and income tax	53.6	38.7
Finance income	3.3	4.3
Finance costs	(9.2)	(6.7)
Share of net profits of associates and jointly-controlled entities accounted for using the equity method	-	41.0
Profit before income tax	47.7	77.3
Income tax expense	(10.2)	(3.1)
Profit after income tax	37.5	74.2
Profits on disposal	53.4	-
Profit from discontinued operations	90.9	74.2
Profit from discontinued operations attributable to:		
Equity holders of the Company	86.8	73.6
Non-controlling interests	4.1	0.6
	90.9	74.2

(a) Profits on disposal

	2011 US$ MILLION
Net assets disposed	
Property, plant and equipment	139.4
Intangible assets	132.9
Investments accounted for using the equity method	216.3
Deferred income tax assets	4.7
Inventories	100.1
Trade and other receivables	242.1
Other financial assets	115.7
Current income tax assets	3.3
Cash and cash equivalents	171.2
Total assets	1,125.7
Deferred income	6.2
Deferred income tax liabilities	0.1
Borrowings	133.6
Trade and other payables	157.5
Receipts in advance	100.1
Current income tax liabilities	0.5
Total liabilities	398.0
Net assets disposed	727.7
Non-controlling interests	(31.3)
Net assets disposed, attributable to equity owners	**696.4**
Total consideration	738.0
Exchange translation differences realised on disposal	45.9
Income tax expense	(32.6)
Transaction cost	(1.5)
Profits on disposal	**53.4**

Analysis of net cash received

Total consideration	738.0
Transaction cost	(33.8)
Income tax paid	(1.5)
Receivables	(28.5)
Cash and cash equivalents disposed	(171.2)
	503.0

(b) Carrying amounts of assets and liabilities of the Disposal Group

The assets and liabilities related to the Disposal Group have been presented as held for sale following the divestment program. These assets and liabilities were measured at the lower of carrying amount and fair value less costs to sell at the date of held for sale classification. After the completion of disposal to CMN and as at 31 December 2011, the assets and liabilities related to the Disposal Group are as follows:

	2011 US$ MILLION
Liabilities directly associated with assets classified as held for sale	
Trade and other payables	1.3
Total liabilities of the Disposal Group	1.3

On 1 April 2010, the Group entered into the Share Transfer Agreement with an independent third party, to conditionally dispose of the Group's entire equity interest (42%) in an associate, Yantai Penghui Copper Industry Company Limited at a consideration of RMB85,590,000 (equivalent to approximately US$12.5 million). Accordingly, the carrying amount of the investment in this associate was re-classified to non-current asset held for sale. This reclassification does not have a material impact on the consolidated financial statements as full provision had already been made for this associate and the net carrying amount was nil at the balance sheet date.

The transaction would be completed upon the fulfillment of conditions as stipulated in the agreement and the transfer of significant risks and rewards of the ownership concerned. As at 31 December 2011, the transaction remains open.

39. EVENTS AFTER BALANCE SHEET DATE

On 19 October 2011, MMG Malachite Limited, a wholly owned subsidiary of the Company, made an all-cash recommended takeover offer to acquire all of the Common Shares in Anvil Mining Limited ("Anvil"), a company incorporated in Canada and its Common Shares are listed on the Toronto Stock Exchange at a price of C$8.00 on a fully-diluted basis (the "Offer"). Details of the Offer have been set out in the Company's circular to the Shareholders dated 24 February 2012. The Offer expired on 17 February 2012 and 98.07% of the shares in Anvil were acquired by the Group. The Group exercised its rights under the compulsory acquisition provision of the Business Corporations Act (Northwest Territories) to acquire all of the outstanding Common Shares, which completed on 19 March 2012.

Anvil is an African focused base metals mining and exploration group. The principal assets of Anvil are a 95% interest in the Kinsevere Project and a 70% equity interest in the Mutoshi Project, each located in the Katanga province of the Democratic Republic of the Congo ("DRC"). Anvil also holds 14.5% of the issued and outstanding capital in Mawson West Limited, and has a number of exploration properties in the DRC.

The total acquisition price is approximately C$1,330 million and was financed through cash reserves of C$1,030 million and a loan from Album Enterprises of C$300 million which has a term of 12 months. In addition, the Group has entered into a currency swap contract with an independent third party financial institution to limit any potential foreign exchange movement exposure.

Due to the timing of the transaction, the Group is in the preliminary stages of determining fair values of the assets and liabilities acquired and the associated accounting for the business combination. The Group has not yet been able to analyse all books and records, and therefore the initial accounting for the business combination is incomplete. Accordingly certain disclosures in relation to the business combination as at the date of acquisition such as the fair value of net assets acquired and acquisition related transaction costs have not been presented. Certain publicly available financial information regarding Anvil is presented below.

The unaudited financial information of Anvil as at 30 September 2011, as extracted from its published interim financial statements, is summarised below for information purpose:

	AS AT 30 SEPTEMBER 2011 US$ MILLION (UNAUDITED)
Property, plant and equipment *(note)*	561.2
Inventories	53.5
Trade and other receivables	47.0
Other financial assets	23.0
Cash and cash equivalents and restricted cash	41.2
Deferred income tax liabilities	(9.9)
Borrowings	(41.7)
Provisions	(23.8)
Trade and other payables	(21.7)
Derivative financial instruments	(24.9)
	603.9
Non-controlling interests	(4.2)
	599.7

Note:
As part of the lodgement of the Circular for the Offer, a valuation report in respect of the Kinsevere Mine is prepared by an external valuer in accordance with the requirements of Chapter 18 of the Listing Rules and amounted to approximately US$1,160.1 million. In accordance with Chapter 18 of the Listing Rules, the valuation did not include any consideration of Inferred Mineral Resources in determining the value for Kinsevere Mine.

FIVE-YEAR FINANCIAL SUMMARY

US$ MILLION	2011	2010 (RESTATED)	2009 *(Note)*	2008 *(Note)*	2007 *(Note)*
Results – the Group					
Continuing operations					
Revenue	2,228.3	1,919.9	1,649.7	1,083.4	940.7
Operating profit	755.3	521.3	242.4	27.2	96.1
Finance income	2.4	4.3	4.2	4.8	10.7
Finance costs	(48.6)	(42.8)	(30.5)	(7.9)	(14.3)
Share of net profits/(losses) of associates and jointly-controlled entities accounted for using the equity method	-	-	4.2	(5.0)	6.1
Profit before income tax	709.1	482.8	220.3	19.1	98.6
Income tax (expense)/benefit	(225.5)	(126.6)	4.5	(0.4)	(19.4)
Profit for the year from continuing operations	483.6	356.2	224.8	18.7	79.2
Discontinued operations					
Profit for the year from discontinued operations	90.9	74.2	-	-	-
Profit for the year	574.5	430.4	224.8	18.7	79.2
Attributable to:					
Equity holders of the Company	540.9	409.4	215.8	17.7	77.1
Non-controlling interests	33.6	21.0	9.0	1.0	2.1
	574.5	430.4	224.8	18.7	79.2

FIVE-YEAR FINANCIAL SUMMARY CONTINUED

US$ MILLION	2011	2010	2009	2008	2007
Assets and liabilities - the Group					
Property, plant and equipment, investment properties	1,756.7	1,673.5	1,602.5	83.0	66.4
Investments accounted for using the equity method	0.1	227.3	171.5	155.7	26.2
Alumina purchasing rights	-	132.0	140.0	148.0	156.0
Inventories	311.5	388.2	324.0	89.0	94.6
Trade and other receivables	118.3	360.4	283.7	168.5	157.0
Loan to a related party	95.0	-	-	-	-
Cash and cash equivalents	1,096.5	398.2	471.1	239.5	345.6
Available-for-sale financial assets	-	164.1	-	39.8	61.0
Other financial assets	1.7	19.4	33.0	5.4	7.0
Other assets	2.7	1.5	0.9	23.6	4.1
Current income tax assets	7.4	3.5	0.9	2.2	-
Deferred income tax assets	63.6	98.8	70.6	7.7	2.0
Total assets	3,453.5	3,466.9	3,098.2	962.4	919.9
Capital and reserves attributable to equity holders of the Company	1,435.4	477.0	1,144.4	617.1	628.8
Non-controlling interests	59.0	56.4	67.7	24.8	32.3
Total equity	1,494.4	533.4	1,212.1	641.9	661.1
Borrowings	1,081.7	1,227.5	1,231.4	108.8	89.4
Trade and other payables	205.1	368.5	223.2	119.6	114.7
Advances from banks for discounted bills	-	43.6	25.1	11.2	6.3
Receipts in advance	-	71.0	62.1	44.4	38.5
Loan from a related party	-	694.2	-	-	-
Other liabilities	-	8.8	15.9	35.9	6.5
Current income tax liabilities	117.9	129.1	60.7	0.2	3.4
Provisions	547.6	370.7	266.9	-	-
Deferred income tax liabilities	5.5	20.1	0.8	0.4	-
Liabilities of disposal group classified as held for sale	1.3	-	-	-	-
Total liabilities	1,959.1	2,933.5	1,886.1	320.5	258.8
Total equity and liabilities	3,453.5	3,466.9	3,098.2	962.4	919.9
Net current assets	429.3	557.2	623.5	258.1	411.2
Total assets less current liabilities	2,285.5	2,714.7	2,632.5	715.9	726.9

Note:
The results of discontinued operations prior to 2010 have not been restated or reclassified.

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MMG Resources

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Ministry of Government Services
Ontario

Ministère des Services gouvernementaux

Ontario Corporation Number
Numéro de la société en Ontario

1150888

CERTIFICATE
This is to certify that these articles are effective on

CERTIFICAT
Ceci certifie que les présents statuts entrent en vigueur le

JULY 13 JUILLET, 2009

Director / Directrice
Business Corporations Act / Loi sur les sociétés par actions

ARTICLES OF AMENDMENT
STATUTS DE MODIFICATION

Form 3
Business Corporations Act

Formule 3
Loi sur les sociétés par actions

1. The name of the corporation is: (Set out in BLOCK CAPITAL LETTERS)
Dénomination sociale actuelle de la société (écrire en LETTRES MAJUSCULES SEULEMENT) :

OZ MINERALS CANADA RESOURCES INC.

2. The name of the corporation is changed to (if applicable): (Set out in BLOCK CAPITAL LETTERS)
Nouvelle dénomination sociale de la société (s'il y a lieu) (écrire en LETTRES MAJUSCULES SEULEMENT) :

MMG RESOURCES INC.

3. Date of incorporation/amalgamation:
Date de la constitution ou de la fusion :

1995/10/05
(Year, Month, Day)
(année, mois, jour)

4. **Complete only if there is a change in the number of directors or the minimum / maximum number of directors.**
Il faut remplir cette partie seulement si le nombre d'administrateurs ou si le nombre minimal ou maximal d'administrateurs a changé.

Number of directors is/are:
Nombre d'administrateurs :

minimum and maximum number of directors is/are:
nombres minimum et maximum d'administrateurs :

Number
Nombre

minimum and maximum
minimum et maximum

	or / ou		

5. The articles of the corporation are amended as follows:
Les statuts de la société sont modifiés de la façon suivante :

NOW THEREFORE BE IT RESOLVED AS A SPECIAL RESOLUTION:

1. the articles of the Company be and the same are hereby amended by changing the name of the Company from "OZ Minerals Canada Resources Inc." to "MMG Resources Inc." or such other name as may be selected by the board of directors of the Company

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and as may be acceptable to the Director appointed under the Act;

2. notwithstanding that this special resolution has been duly passed by the sole shareholder of the Company, the directors of the Company be and they are hereby authorized and empowered to revoke this special resolution at any time prior to the endorsement by the director under the Act of a certificate of amendment of articles giving effect to the foregoing amendments to the articles of the Company, without further approval of the shareholders of the Company; and

3. any director and/or officer of the Company be and such director or officer of the Company is hereby authorized and empowered, acting for, in the name of and on behalf of the Company, to execute or cause to be executed, under the seal of the Company or otherwise, and to deliver or cause to be delivered any and all such documents and instruments and to do or to cause to be done all such other acts and things as, in the opinion of such director or officer, may be necessary or desirable in order to fulfil the intent of the foregoing paragraphs of this special resolution including, without limitation, the filing of articles of amendment, in duplicate, with the Director under the Act.

6. The amendment has been duly authorized as required by sections 168 and 170 (as applicable) of the *Business Corporations Act*.
La modification a été dûment autorisée conformément aux articles 168 et 170 (selon le cas) de la *Loi sur les sociétés par actions*.

7. The resolution authorizing the amendment was approved by the shareholders/directors (as applicable) of the corporation on
Les actionnaires ou les administrateurs (selon le cas) de la société ont approuvé la résolution autorisant la modification le

2009/07/06

(Year, Month, Day)
(année, mois, jour)

These articles are signed in duplicate.
Les présents statuts sont signés en double exemplaire.

OZ MINERALS CANADA RESOURCES INC.

(Print name of corporation from Article 1 on page 1)
(Veuillez écrir le nom de la société de l'article un à la page une).

By/
Par :

(Signature)
(SIgnature)

PRESIDENT

(Description of Office)
(Fonction)

D2 AANDC – Application for Crown Land for the Grays Bay Port

MMG RESOURCES INC
2600-1177 WEST HASTINGS STREET
VANCOUVER BC V6E 2K3
TELEPHONE +1 778 373 5600
FAX +1 778 373 5598
WWW.MMG.COM

20 August 2012

Tracey McCaie
Land Administration Specialist
Aboriginal Affairs and Northern Development Canada
P.O. Box 100, Building 918
Iqaluit, NU X0A 0H0

Dear Ms. McCaie,

RE: IZOK CORRIDOR PROJECT – APPLICATION FOR FEDERAL CROWN LANDS AT THE GRAYS BAY PORT

Mineral and Metals Group (MMG) is pleased to submit the attached Application for Federal Crown Land at Grays Bay; the first of our applications for Crown land tenure in support of the proposed Izok Corridor Project.

This letter and the attached application are accompanied by MMG's Project Proposal outlining the plans for the proposed Izok Corridor Project development. The key components of the proposed Izok Corridor Project outlined in the Project Proposal include the following:

- Izok Mine: an open pit and an underground mining operation, including crushers, an ore processing plant, camp and offices, and supporting infrastructure
- High Lake Mine: an open pit and underground mining operation, including minimal ore processing in the form of crushing, camp and offices, and supporting infrastructure
- Izok Road: an all-season road connecting Izok Mine, High Lake Mine and Grays Bay Port
- Grays Bay Port: a dock and land-based infrastructure including camp, diesel and concentrate storage, laydown areas to support transportation of concentrate and resupply
- Marine shipping: transport of concentrate from Grays Bay to ports in Europe and Asia and resupply cargo into Grays Bay during the open-water season
- Temporary winter roads: two temporary winter roads for use during the construction phase of the Project – one from Grays Bay to High Lake Mine, and another which will link Izok Mine to the Tibbitt-to-Contwoyto Winter Road

MMG will be seeking authorizations for those project components that will require the use of Federal Crown land. Those components will include surface access to quarries, segments of the all-weather road, winter roads and the port facilities at Grays Bay.

The requirement for land tenure to authorize construction related activities, including camps, aggregate quarries and access roads, will be of relatively short duration. As such, MMG expects to seek Class "A" Land Use Permits to encompass land use requirements for construction activities for the various components of the Project.

For those land use activities relating to components that will continue into the operations phase; including the all-weather road right of way and the port facilities, MMG will be seeking certainty and exclusive use tenure through lease agreements. The anticipated requirements for the use of Crown land, as they are currently understood, are summarized in the table below. Please note that these numbers are subject to change, as the proposed project moves through the planning and regulatory processes.

Table 1 Anticipated Requirements for Surface Land Tenure Pursuant to the *Territorial Lands Act,* for Project Activities on Crown Land

Activity	Estimated Parcel Requirement (Hectares)	Land Tenure
1. Construct and operate port facilities, storage and related infrastructure at Gray's Bay	22	Long Term Lease to 2037
2. Operate and maintain an all-season road right-of-way	770	Long term Lease to 2037
3. Undertake open pit and underground mining operations at the Izok Mine	290	Long term lease to 2037
4. Construction related activities, including camps, aggregate quarries and access roads relating to the all-weather road,	Will stay within the project footprint of all components	Class A Land Use Permit(s) Minimum 5-year terms
5. Establishment and maintenance of winter roads	150 (Grays Bay-High Lake) 345 (Lupin-Izok)	Class A Land Use Permit/Licence to Occupy (Minimum 5 year term)

The terms for the Crown Land leases, as described above, will encompass the construction, operation, reclamation and post-closure monitoring phases of the Project. The land use permits for construction related activities, quarries, and use of the Crown Land will be requested for a minimum 5-year term to encompass the construction phase of the Project and allow for a period of progressive reclamation.

The attached Application for Crown Land is specific to the Grays Bay Port. Applications for the remaining requirements for the use of Crown Land will follow as those requirements are further defined through the feasibility study and the regulatory review process.

Please don't hesitate to contact me should you have any questions, concerns or specific advice as it relates to these proposed activities.

Yours sincerely,



Sahba Safavi
Project Manager - Canada

T 778-373-5607
M 604-417-5589
E Sahba.Safavi@mmg.com

APPLICATION FOR FEDERAL CROWN LAND

☐ **Individual Applicants** ☑ **Government or Companies (Go direct to Page 2)**

***Privacy Act* Statement**

The information you provide in this document is collected under the authority of the *Territorial Lands Act* for the purpose of making the first step in your application for Federal Crown Lands. Information on individuals is used by Aboriginal Affairs and Northern Development Canada Land Administration employees who need to know the information in order to respond to your request. We share the information you give us with First Nations, Aboriginal groups and Inuit, Territorial and Federal Government Expert Agencies and Public Government Institutions. The personal information will be retained 10 years after the last administrative use and then transferred to Library and Archives Canada. Individuals have the right to the protection of and access to their personal information under the *Privacy Act:*
http://lois.justice.gc.ca/en/P-21/index.html

A. (1) Information on Individual Applicant. Please fill in this section only if the lease/licence is to be in the name of Individual(s). Must be age of majority (19 or over) to apply.

I hereby make application to:
- ● Lease
- ○ Purchase (Within Communities and Settled Land Claim Areas only)
- ○ Lease with Purchase Option (Within Communities and Settled Land Claim Areas only)
- ○ Easement (Linear Development only, ie: Roads, Pipelines etc.)
- ○ Licence of Occupation (Linear Development only, ie: roads, Pipelines etc.)

Full Legal Name	Family Name	Given Name	Middle Name

Address/Apt./P.O. Box/Street No./Street Name

City/Town		Prov./Terr./State	Country	Postal Code/Zip Code
Email Address	**Tel. No. (Home)**	**Tel. No. (Work)**	**Cellular No.**	**Facsimile No.**
Occupation		**Employer**		

Are you a Federal Employee: ○ Yes ○ No

Do you have a partner/spouse who is a Federal Employee: ○ Yes ○ No If Yes, which Federal Department and Division do they work for: ▶

Individual Partner/Spouse or Co-applicant (Names of Partner/Spouse or Co-applicant)

Full Legal Name	Family Name	Given Name	Middle Name

Address/Apt./P.O. Box/Street No./Street Name

City/Town		Prov./Terr./State	Country	Postal Code/Zip Code
Email Address	**Tel. No. (Home)**	**Tel. No. (Work)**	**Cellular No.**	**Facsimile No.**
Occupation		**Employer**		

Are you a Federal Employee: ○ Yes ○ No

Do you have a partner/spouse who is a Federal Employee: ○ Yes ○ No If Yes, which Federal Department and Division do they work ▶

Identify tenancy type if two or more persons applying for this land ○ Joint Tenancy ○ Tenancy in Common

Definitions

Joint Tenancy: The primary purpose of Joint Tenancy is the right of survivorship, upon death of one joint tenant, their interest passes to the other joint tenant automatically and at length to the last survivor.

Tenancy in Common: A form of ownership whereby each tenant (Owner or Lessee) holds an undivided interest in property. Upon the death of one of the individuals their property interest passes to their heirs.

Land Purpose: ○ Commercial ○ Industrial ○ Residential

○ Other (Specify) ▶

A. (2) Information of Government, Company, Corporation or Association.
Please fill in this section only if the lease/licence is to be in the name of a Government, Company, Corporation or Association.

I hereby make application to:
- (●) Lease
- ( ) Reserve (Government only)
- ( ) Transfer (Government only)
- ( ) Lease with Purchase Option (Within Communities and Settled Land Claim Areas only)
- ( ) Purchase (Within Communities and Settled Land Claim Areas only)
- ( ) Licence of Occupation (Linear Development only, ie: roads, Pipelines etc.)
- ( ) Easement (Linear Development only, ie: Roads, Pipelines etc.)

Full Legal Name of Government/Company/Corporation/Association

Minerals and Metals Group (MMG)

Address/Apt./P.O. Box/Street No./Street Name

Level 26, 1177 West Hastings Street

City/Town	Prov./Terr./State	Country	Postal Code/Zip Code
Vancouver	B.C.	Canada	V6E 2K3

Contact Person for Government, Company, Corporation or Association

Scott.Trusler, Environmental Permitting Lead

Email Address	Tel. No. (Home)	Tel. No. (Work)	Cellular No.	Facsimile No.
Scott.Trusler@mmg.com		778-373-5586		778-373-5598

Mailing Address (If different from above):

Address/Apt./P.O. Box/Street No./Street Name

City/Town	Prov./Terr./State	Country	Postal Code/Zip Code

B. Parcel Description

General Description of Parcel (ie: hilly or flat, tree cover, soil type). If the parcel is surveyed, please indicate lot, block, group, QUAD, CLSR and LTO numbers. If unsurveyed, state size of parcel, NTS MAP Sheet Number (QUAD Number) and general location.

Please see attached Project Proposal Section 2.7 Grays Bay Port and Figure 2.7-3 Grays Bay Port Site Plan for a general description of the area. The size of the parcel is approximately 22 ha.

C. Project Location

Provide a National Topographic System (NTS) map at a scale of 1:50,000 that indicates the following features:

- [x] Approximate location of land under application or indicate the kilometre post of road/highway, if applicable
- [x] Nearby water bodies
- [x] Distance to nearest community
- [x] Existing access if any
- [x] Proposed new access routes
- [x] Use of adjacent land
- [x] Co-ordinates

Indicate approximate area applied for in metres: (Metres X Metres)	Indicate approximate hectare size: Hectares (metres x metres divided by 10000 = hectares)
0.22	22

Mandatory requirements: (*)

1. Outside of Community Boundaries

*NTS Map Sheet No.	*Map or GPS Longitude and Latitude Co-ordinates: (Indicate Degrees, Minutes and Seconds)	
	North Latitude	West Longitude
76M14 and 76M15	67.805N	-110.869W

Map or GPS UTM Co-ordinates			
Parcel Corner 1 Eastings	Northings	Parcel Corner 2 Eastings	Northings
Parcel Corner 3 Eastings	Northings	Parcel Corner 4 Eastings	Northings
Parcel Centre Point Eastings	Northings	GPS Map Datum (ie: NAD 83, NAD 27)	

2. Inside Community Boundaries (Provide Community Mapping at a scale of 1:5,000 scale or less)

*Community Name

n/a - Kugluktuk is the nearest community and it is 179 km from Grays Bay

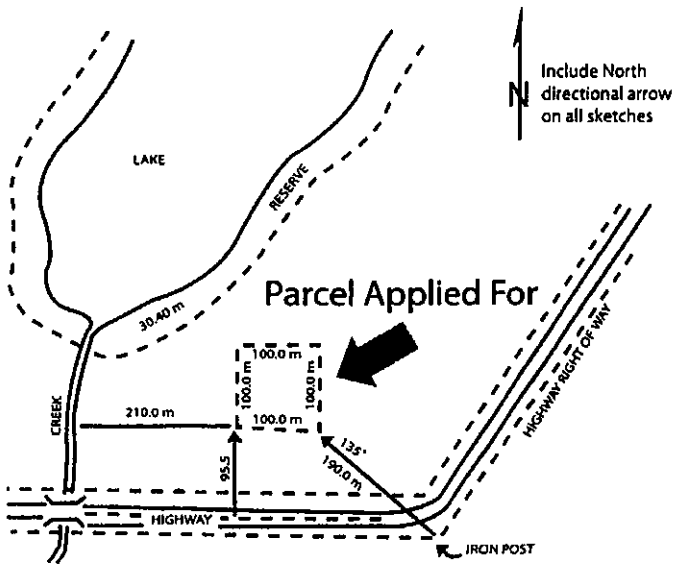
Draw a detailed site sketch ON THE LAST PAGE OF THIS APPLICATION FORM of your proposed development. Exact dimensions of buildings are not necessary. Provide the approximate dimensions of buildings etc. shown within the parcel applied for. Your sketch must include:

- Boundaries, approximate dimensions in metres or feet
- Location or proposed buildings and structures
- Waste disposal, fuel storage, docks and breakwaters area, etc.
- Access routes, trails, paths, roads
- Existing facilities
- Location of water bodies, lake front, stream bank etc.
- North Arrow Indicator
- Water bodies to be used for transportation and/or recreation
- Scale

Measure the distance of the boundaries of the parcel of land being applied for. When locating the parcel of land applied for, it is important that the location is defined by distance measurement and possibly compass bearings in relation to some known point or land feature.

IE: Distance to an existing survey posts of other property in that area, highway survey monuments, the shorelines of water bodies (lakes, rivers, creeks) and kilometre posts.

SAMPLE SKETCH



SCALE: 1:800

D. Commercial/Industrial Applications

Commercial/Industrial applications may require approval-in-principal or associated licencing from the Government of the Northwest Territories, Department of Industry, Tourism and Investment (GNWT-ITI), prior to this Department's issuing any approvals of this application. Please ensure the proper application(s) has been made and documentation (ie: Tourism Licence) is provided with your application.

Type of industrial or commercial use (Describe In detail)

Port facilities, storage and related infrastructure at Grays Bay to service the mining operations at Izok and High Lake with fuel, dry goods and equipment and to transport concentrate to markets via ocean-going vessels. The port facilities are a component of the Izok Corridor Project.

☐ Attach copy of approved licences, approval or authorizations from GNWT-ITI

E. Land Use Type

○ Commercial ● Industrial ○ Residential (In Communities only)

○ Other (Please specify)

Is your use ● Year round or ○ Seasonal

If seasonal, provide details of your seasonal activities

The land-based, year round activity at the port will consist of trucks delivering the concentrate to the shed for storage, and other trucks picking up fuel, sea-containers and supplies to bring to the mine sites. The fuel station, power generation and camp will operate year–round.

Shipping activities and ship loading activities will take place during ice-free months. The port will be open to receive ships and barges from mid-July to October as recommended in the Draft West Kitikmeot Land Use Plan, but most likely from August to October.

How many year round residents will be living at the site

25-40

F. Existing Improvements

Describe any existing buildings or structures currently on site and their condition. Use your sketch for illustration.

n/a

How far from the Ordinary High Water Mark are these existing improvements? (Metres)

Value of improvements already on the land	Name of Owner of Improvements

G. No existing improvements - New Construction and Costs

Describe any new planned facilities to be constructed and the methods and materials to be used.

Please see attached Project Proposal Sections 2.7

Outline the time schedule for your construction program. Indicate approximate start and completion dates.

Start Date	Completion Date
2015-07-01 (YYYY-MM-DD)	2017-09-30 (YYYY-MM-DD)

Describe existing and proposed methods of access, and transportation for your project

The Port facilities at Grays Bay will be accessed by ocean going vessels and by an all-weather road (Izok Road) from Izok Mine. A winter road will connect the Izok Road to the Tibbett to Contwoyto Lake winter road; that in turn connects to an all-weather road to southern Canada. Access by air will be via proposed airstrips located near the Izok Mine (Ham Lake) and the High Lake property (Sand Lake.) The airstrip at Sand Lake will service the Grays Bay Port facility. A helicopter pad will be constructed at the Grays Bay site.

Provide a brief description of the capital costs for your project.

Costs related to the Project will be provided in the Pre-feasibility Study

Site Preparation	Materials for Initial Construction	Construction Costs

Are there any wastes produced by this use?

○ Yes ● No ▶ If Yes describe the type of waste, the volume of waste and the disposal method(s) to be used.

How do you plan to dispose of:

Liquid Waste (grey water, sewage)	Solid Waste
Please see Project Proposal Sec. 2.7.6 and Section 12.2.1	Please see Project Proposal Sec. 2.7.6 and Section 12.2.1

If you have specific waste treatment equipment in mind, please describe it

Details will be provided in the draft EIS

Are there any hazardous materials to be stored other than consumer goods?

● Yes ○ No ▶ If Yes, please list the type, estimated volume, quantities and storage method(s).
*Hazardous materials as defined in the *Transportation of Dangerous Goods Act and Regulations.*

Please attached Project Proposal Sec.2.7.12 Hazardous Materials

H. Resource Capability

What other general resource activities are taking place on or near your proposed project area? E.g.: Does the area involve a trap line or any mining activity? Is it an access point for resident anglers, hunters, campers, etc.? Is there a registered mineral claim on the project area?

Archaeological evidence collected at the proposed Grays Bay site indicates that the area is part of the traditional land use/occupation pattern of Inuit. The extent of current and recent use of the area will be examined as part of the collection of socio-economic baseline data as per the NIRB environmental assessment process. MMG currently holds Propecting Permits (8315 and 8316) for the Grays Bay area (expire 31/01/2015).

Do you see any activity listed in your answer to the above affecting your operation, or is your operation a conflict to them? If so, how?

Community engagement and the application of Inuit Qaujumajatuqangit as part of the NIRB process will determine the extent of use of the area by Inuit and the measures through which impacts to that use by the proposed development will be mitigated.

Do you plan on using your facilities for other than the applied for purpose?

○ Yes ● No ▶ If Yes, briefly describe alternate use.

I. Fees

Land Application Fee ($150.00) (Except Government Agencies)	▶	$150.00
GST for all Applications (Except Residential Uses)	▶	$7.50
Total Fees Submitted with Application	▶	$157.50

▶ **Please make Cheque/Money Order payable to: "Receiver General for Canada"**

NOTE: This application will be subject to an environmental review and consultation process. As a result of this process, if it is determined that your application must be refused, the application fees submitted with your application will not be refunded.

Individuals Signatures

I certify that the information I have given in this application is correct, to the best of my knowledge.

I hereby acknowledge and confirm that the filing of this application does not grant me any rights to take, occupy or use the land for which I have applied.

Applicant Name (Print)	Applicant Signature	Date (YYYYMMDD)
Co-applicant Name (Print)	**Co-applicant Signature**	**Date (YYYYMMDD)**

Federal or Territorial Government Officials Signatures

I certify that the information I have given in this application is correct, to the best of my knowledge.

I hereby acknowledge and confirm that the filing of this application does not grant me any rights to take, occupy or use the land for which I have applied.

Applicant Name (Print)	Applicant Signature	Date (YYYYMMDD)

On behalf of (Federal/Territorial Government Department Name)

Companies, Corporations or Associations Signatures

If your Company, Corporation or Association is in good standing at the NWT Companies Registry, please attach the Certificate of Incorporation, company current standing and signing authorities.

☑ Certificate of Incorporation attached.

If your Company, Corporation or Association can sign legal documents without your Corporate Seal, please attach a Certified True copy or your BY-LAWS that state you can sign legal documents without your Corporate Seal.

If your Power of Attorney can sign legal documents on behalf of your Company, Corporation or Association, please attach a copy of your Power of Attorney documentation.

I certify that the information I have given in this application is correct, to the best of my knowledge.

I hereby acknowledge and confirm that the filing of this application does not grant me any rights to take, occupy or use the land for which I have applied.

Applicant Name (Print)	Applicant Signature	Date (YYYYMMDD)
Minerals and Metals Group (MMG Resources)		

On behalf of (Company, Corporation or Association Name)

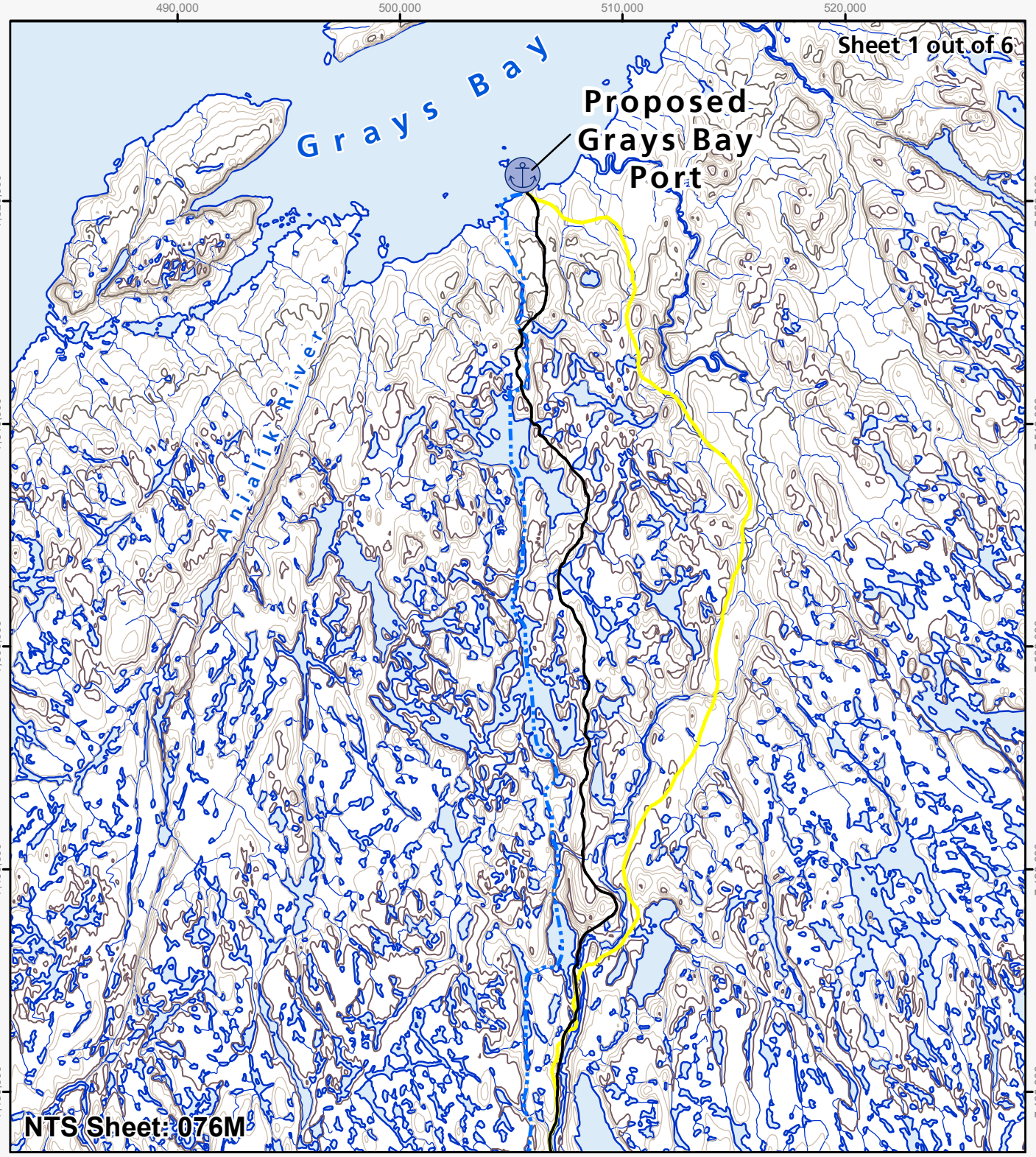
Minerals and Metals Group (MMG Resources)

Land Administration Use Only

Date Application Received (YYYYMMDD)	Received by
Application Checklist Completed (YYYYMMDD)	**Completed by**

DRAW SKETCH OF PARCEL APPLIED FOR HERE
AS INSTRUCTED IN PART C OF THIS APPLICATION FORM

Please see Project Proposal Section 2.7 and Figure 2.7-3 Grays Bay Port Site Plan

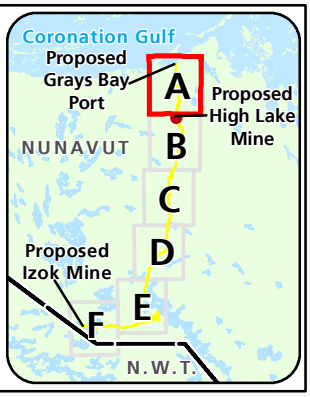


LEGEND

- MMG Properties
- Other Properties
- HamCamp
- Proposed Grays Bay Port
- Boundary Line
- Contour (20 meter)
- Watercourse
- Waterbody
- Base Case Road Alignment (June 2012)
- Alternate Road Alignment (August 2012)
- Winter Road Alignment Grays Bay to High Lake (June 2012)
- Winter Road Alignment (June 2012)

Data Sources:

1) National Topographic Database (NTDB) provided by the Government of Canada, Natural Resources Canada at 1:250,000 scale.
2) Proposed road alignments, potential borrow sources, Ham Camp, proposed port site and mine locations provided by MMG.



MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Project Components Overview

Lead: J.E.	Date: 16 Aug 2012
Drawn By: A.W.	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

Scale: 1:250,000

0 2.5 5 10

kilometers

Figure No. 02A

K:\Data\Project\MMG1764\GIS_MXD\Base\mmg_Base Map Project_Components_Overview_DDP_09aug12_v4_ac.mxd

For Ministry Use Only
À l'usage exclusif du ministère

Ministry of Government Services
Ontario

Ministère des Services gouvernementaux

Ontario Corporation Number
Numéro de la société en Ontario

1150888

CERTIFICATE
This is to certify that these articles are effective on

CERTIFICAT
Ceci certifie que les présents statuts entrent en vigueur le

JULY 13 JUILLET, 2009

Director / Directrice
Business Corporations Act / Loi sur les sociétés par actions

ARTICLES OF AMENDMENT
STATUTS DE MODIFICATION

Form 3
Business Corporations Act

Formule 3
Loi sur les sociétés par actions

1. The name of the corporation is: (Set out in BLOCK CAPITAL LETTERS)
Dénomination sociale actuelle de la société (écrire en LETTRES MAJUSCULES SEULEMENT) :

OZ MINERALS CANADA RESOURCES INC.

2. The name of the corporation is changed to (if applicable): (Set out in BLOCK CAPITAL LETTERS)
Nouvelle dénomination sociale de la société (s'il y a lieu) (écrire en LETTRES MAJUSCULES SEULEMENT) :

MMG RESOURCES INC.

3. Date of incorporation/amalgamation:
Date de la constitution ou de la fusion :

1995/10/05
(Year, Month, Day)
(année, mois, jour)

4. **Complete only if there is a change in the number of directors or the minimum / maximum number of directors.**
Il faut remplir cette partie seulement si le nombre d'administrateurs ou si le nombre minimal ou maximal d'administrateurs a changé.

Number of directors is/are:
Nombre d'administrateurs :

minimum and maximum number of directors is/are:
nombres minimum et maximum d'administrateurs :

Number
Nombre

minimum and maximum
minimum et maximum

	or / ou		

5. The articles of the corporation are amended as follows:
Les statuts de la société sont modifiés de la façon suivante :

NOW THEREFORE BE IT RESOLVED AS A SPECIAL RESOLUTION:

1. the articles of the Company be and the same are hereby amended by changing the name of the Company from "OZ Minerals Canada Resources Inc." to "MMG Resources Inc." or such other name as may be selected by the board of directors of the Company

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and as may be acceptable to the Director appointed under the Act;

2. notwithstanding that this special resolution has been duly passed by the sole shareholder of the Company, the directors of the Company be and they are hereby authorized and empowered to revoke this special resolution at any time prior to the endorsement by the director under the Act of a certificate of amendment of articles giving effect to the foregoing amendments to the articles of the Company, without further approval of the shareholders of the Company; and

3. any director and/or officer of the Company be and such director or officer of the Company is hereby authorized and empowered, acting for, in the name of and on behalf of the Company, to execute or cause to be executed, under the seal of the Company or otherwise, and to deliver or cause to be delivered any and all such documents and instruments and to do or to cause to be done all such other acts and things as, in the opinion of such director or officer, may be necessary or desirable in order to fulfil the intent of the foregoing paragraphs of this special resolution including, without limitation, the filing of articles of amendment, in duplicate, with the Director under the Act.

6. The amendment has been duly authorized as required by sections 168 and 170 (as applicable) of the *Business Corporations Act*.
La modification a été dûment autorisée conformément aux articles 168 et 170 (selon le cas) de la *Loi sur les sociétés par actions*.

7. The resolution authorizing the amendment was approved by the shareholders/directors (as applicable) of the corporation on
Les actionnaires ou les administrateurs (selon le cas) de la société ont approuvé la résolution autorisant la modification le

2009/07/06

(Year, Month, Day)
(année, mois, jour)

These articles are signed in duplicate.
Les présents statuts sont signés en double exemplaire.

OZ MINERALS CANADA RESOURCES INC.

(Print name of corporation from Article 1 on page 1)
(Veuillez écrir le nom de la société de l'article un à la page une).

By/
Par :

(Signature)
(SIgnature)

PRESIDENT

(Description of Office)
(Fonction)

No.: **ET7191**

Nunavut

CANADA

BUSINESS CORPORATIONS ACT

CERTIFICATE OF COMPLIANCE OF AN EXTRA-TERRITORIAL CORPORATION

LOI SUR LES SOCIÉTÉS ACTIONS

CERTIFICAT DE CONFORMITÉ D'UNE SOCIÉTÉ PAR ACTIONS EXTRATERRITORIALE

I HEREBY CERTIFY THAT **JE CERTIFIE PAR LA PRÉSENTE QUE**

MMG RESOURCES INC.

a body corporate incorporated under the laws of **une personne morale constituée En vertu des lois**

Ontario

registered under Part XXI of the *Business Corporations Act of Nunavut,* has filed with the Registrar of Corporations, the required annual returns and is, with respect to the filing of annual returns, in good standing on the records of the Registrar.

enregistrée en vertu de la partie XXI de la *Loi sur les sociétés par actions au Nunavut,* a déposé auprès du registraire des sociétés par actions le rapport annuel exigé et renconte les exigences du registraire relatives au dépôt des rapports annuels.

REGISTRAR OF CORPORATIONS
NUNAVUT
REGISTRAIRE DES SOCIÉTÉS PAR ACTIONS

Dated **20-Jun-2012**
Fait le

DEPUTY / REGISTRAR OF CORPORATIONS
REGISTRAIRE OU REGISTRAIRE ADJOINT DES SOCIÉTÉS PAR ACTIONS

No.: **ET7191**

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Nunavut

Canada

BUSINESS CORPORATIONS ACT

CERTIFICATE OF AMENDMENT OF REGISTRATION OF AN EXTRA-TERRITORIAL CORPORATION

LOI SUR LES SOCIÉTÉS ACTIONS

CERTIFICAT DE MODIFICATION DE L'ENREGISTREMENT D'UNE SOCIÉTÉ PAR ACTIONS EXTRATERRITORIALE

I HEREBY CERTIFY THAT
the name of

JE CERTIFIE PAR LA PRÉSENTE QUE
La dénomination sociale de

OZ MINERALS CANADA RESOURCES INC.

Registered under Part XXI of the *Business Corporations Act of Nunavut,* **has been changed to**

Enregistrée en vertu de la Partie XXI de la *Loi sur les sociétés par actions au Nunavut, a été changée pour*

MMG RESOURCES INC.

Effective as of

à compter du

7/13/2009

Dated
Fait le

05-Aug-2009

Tammy Heffernan

DEPUTY / REGISTRAR OF CORPORATIONS
REGISTRAIRE OU REGISTRAIRE ADJOINT DES SOCIÉTÉS PAR ACTIONS

4) The directors of this corporation are: Les administrateurs de la société sont :	
Name - Nom	**Postal and street address (including postal code)** **Adresse (y compris le code postal)**
Ian Neill	5015 Bear Lane, West Vancouver, BC V7W 1L2
Marcelo Bastos	209 Dendy St, Brighton East, Vic, 3187 AUSTRALIA
Sahba Safavi	2881 Alamein Ave., Vancouver, B.C, V6L 1S4
Karen Stoffels	4 Elgin Ave, Armadale, Vic, 3143

13/10/2011

D3 KIA – Land Use Permit Application for the Izok Mine Facilities

MMG RESOURCES INC
2600-1177 WEST HASTINGS STREET
VANCOUVER BC V6E 2K3
TELEPHONE +1 778 373 5600
FAX +1 778 373 5598
WWW.MMG.COM

20 August 2012

Geoff Clark
Director of Lands, Environment and Resources
Kitikmeot Inuit Association
PO Box 360
Kugluktuk, NU X0B 0E0

Dear Mr. Clark,

RE: IZOK CORRIDOR PROJECT – APPLICATION FOR ACCESS TO INUIT OWNED LAND

Mineral and Metals Group (MMG) is pleased to submit the attached Application for Access to Inuit Owned Land (IOL) at the proposed Izok mine site in support of the proposed Izok Corridor Project.

This application and the Project Proposal represent MMG's current understanding of the proposed Izok Corridor Project. Some of the information that will be required prior to confirming requirements for access to IOL is still being compiled, and we expect that the project description will undergo some revision as it is informed by the completion of the feasibility study, consultation, the environmental assessment and regulatory processes.

The key components of the proposed Izok Corridor Project outlined in the Project Proposal include the following:

- Izok Mine: an open pit and an underground mining operation, including crushers, an ore processing plant, camp and offices, and supporting infrastructure
- High Lake Mine: an open pit and underground mining operation, including minimal ore processing in the form of crushing, camp and offices, and supporting infrastructure
- Izok Road: an all-season road connecting Izok Mine, High Lake Mine and Grays Bay Port
- Grays Bay Port: a dock and land-based infrastructure including camp, diesel and concentrate storage, laydown areas to support transportation of concentrate and resupply
- Marine shipping: transport of concentrate from Grays Bay to ports in Europe and Asia and resupply cargo into Grays Bay during the open-water season
- Temporary winter roads: two temporary winter roads for use during the construction phase of the Project – one from Grays Bay to High Lake Mine, and another which will link Izok Mine to the Tibbitt-to-Contwoyto Winter Road

MMG will be seeking authorizations for those components that will require the use of Inuit Owned Land. Those components will include surface access to the Izok and High Lake mine sites, airstrips at Ham Lake and Sand Lake, part of the all-weather road, numerous quarries and borrow sources and corresponding access roads including temporary construction camps.

The full extent of the requirement for access to Inuit Owned Lands will be determined pursuant to a final route selection, and confirmation of quarry locations.

The attached Access to IOL application is specific to the Izok mine site. Applications for access to IOL for the other activities listed above will be submitted later pending the outcome of ongoing investigations. Further required information, in addition to that which has been supplied in the application form and the Project Proposal, will be provided as it becomes available.

The requirement for land tenure to authorize construction related activities, including camps, aggregate quarries and access roads, will be of relatively short duration. As such, MMG expects to seek short term access authorities for these types of land use requirements. For those land use activities relating to components that will remain in place during operations (i.e., mines and related infrastructure, Grays Bay Port, and the Izok Road right-of-way), MMG will be seeking certainty and exclusive use tenure through lease agreements.

We look forward to an opportunity to build upon our existing relationship with the Kitikmeot Inuit Association through an ongoing dialogue with the Lands, Environment and Resources Department throughout the Access to Inuit Owned Land process.

Please don't hesitate to contact me should you have any questions, concerns or specific advice as it relates to these proposed activities.

Yours sincerely,



Sahba Safavi
Project Manager - Canada

T 778-373-5607
M 604-417-5589
E Sahba.Safavi@mmg.com

Kitikmeot Inuit Association
Kitikmeot Inuit Katuyikatigit
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KITIKMEOT INUIT ASSOCIATION
LANDS DIVISION
APPLICATION FOR ACCESS TO INUIT OWNED LAND

Office use only			
Category	Application No:	Accepted By:	Date Accepted:

To be completed by all applicants

1. Applicant's name and mailing address (Full name, no initials or abbreviations) **Scott Trusler** **Minerals and Metals Group (MMG)** **26th Floor, 1177 West Hasting St.** **Vancouver, BC V6E 2K3**	Fax no. **778-373-5598** Telephone no. **778-373-5586**
2. Head Office address **As above**	Fax no. Telephone no.
3. Field supervisor and address if different from above **As above**	Telephone no.

4. Other personnel list (Subcontractors or contractors to be used)

To be determined

Total no. of personnel: No. of person days:

5. Location of activities by map coordinates. Attach **ORIGINAL** maps and sketches.

MAX Lat Min **64**	MIN Lat Deg **65**	MIN Lat Min **63**	MAX Lat Deg **65**
MAX Long Min **82**	MIN Long Deg **112**	MIN Long Min **76**	MAX Long Deg **112**

Map Sheet No: **86H/10** Inuit Land Parcel No: **CO-05**

Coordinate of camp (if applicable) Lat. **65 º 63 ‘ “** Long. **112 º 77 ‘ “**

6. Periods of operation including periods of seasonal shut down and periods for restoration.

The mine operation at Izok will be year-round

7. Period of access required (up to one or two years for licenses, depending on license level, up to five years for residential/recreational leases and level I and II commercial leases)	Start date **Upon receipt of Project Certificate** **Est. 01 July 2015**	Completion Date **31 December 2037**

8. Other rights, licenses, permits or leases related to this application. Provide proof of rights or indicate if in the process of applying for rights.

- ☐ NTI Subsurface Right
- X DIAND Subsurface Right
- X NWB Water License
- X NRI Research License
- ☐ RWED Tourism License
- X Explosives Permit
- ☐ CWS Permit
- ☐ Other – Please Specify _____

Applications for the DIAND (AANDC) Subsurface Right, NWB Water License are in progress. Explosives Permit will be applied for after receipt of the Project Certificate. NRI Research Licence was obtained for baseline work being conducted in support of the DEIS. Other applications will be prepared and delivered in 2013 to 2015

9. TYPE OF LAND USE ACTIVITY

Check off the appropriate land use activities.

Mining/Oil & Gas
- ☐ staking and prospecting
- ☐ exploration (geophys-grd/air)
- ☐ drilling (diamond/ice, etc.)
- ☐ bulk sampling
- ☐ mine (open pit, undergrd, etc.)
- X bulk fuel storage
- X other: **Milling**

Construction:
- X camp
- X building
- ☐ winter road
- ☐ all-season road
- ☐ quarrying
- ☐ other: _____

Tourism:
- ☐ tourism facility
- ☐ outfitting
- ☐ other: _____

Municipality:
- ☐ bulk storage of fuel
- ☐ residential building
- ☐ commercial building
- ☐ other: _____

Research:
- ☐ wildlife/fish/birds/marine
- ☐ survey (grd/aerial/collars)
- ☐ collection of species
- ☐ research station
- ☐ other: _____

Other:
- ☐ commercial harvest
- ☐ recreational camp
- ☐ _____
- ☐ _____

10. TYPE OF WATER USE

Check off the kind of project for which water will be used and the type of water use.

Undertaking

- ☐ Advanced Exploration
- ☐ Exploration Drilling
- ☐ Industrial
- x Mine Development
- ☐ Power
- ☐ Remote/Tourism
- ☐ Other: _____

Water Use:

- X To obtain water
- X To modify the bed or bank of water course
- ☐ To Alter the flow of, or store water
- X To cross the watercourse
- X To Divert the watercourse
- ☐ Flood control
- ☐ Other: _____

11. QUANTITY OF WATER INVOLVED

Please include an estimate of the quantity of water to be used during the land use activity.

Quantity of water to be used (estimate): **Details characterizing the water requirements in the mine, including sources, volumes and water quality, will be provided in a future draft EIS.**

---

12. On a separate page, provide a NON-TECHNICAL project summary. This should include a non-technical description of the project proposal, no more than 300 words, in English and Inuktituk (Inuinaktun, in the West Kitikmeot). The project description should outline the project activities and their necessity, method of transportation, any structures that will be erected, expected duration of activity and alternatives considered. If the proposed activity fits into any long-term developments, please describe the projected outcome of the development for the area and its timeline.

Refer to the English and translated Non-Technical Project Summary submitted as part of the Project Proposal to NIRB.

---

13. Attach a detailed project description as outlined in APPENDIX A. **Refer to the attached Project Proposal prepared for submission to NIRB**

---

14. LAND USE APPLICATION FEES:

- ☐ Land use license I - Inuit - $ 0; Non-Inuit - $100 per 1:250,000 NTS Map Sheet
- ☐ Land use license II - $250
- ☐ Land use license III- $500
- ☐ Residential/Recreational Lease — Inuit - $ 0; Non-Inuit - $250
- ☐ Exemption Certificate
- ☐ Commercial Lease I - $ 500
- ☐ Commercial Lease II - $1000
- X Commercial Lease III - $5000

Land use fees: # of hectares used @ $50.00/hectare = **To be determined in the course of further discussions with AANDC and KIA and in the context of Project details**

Note: The land use fee is for the amount of land used on an annual basis.

---

15. WATER USE APPLICATION FEES:

☐ Land use license I
Application fee - $50/year
Water use fee - $1/1000m^3

☐ Land use license II
Application fee - $250/2 years
Water use fee - $1/1000m^3

☐ Land use license III
Application fee - $500/2 years
Water use fee - $26.35/1000m^3

☐ Commercial Lease I
Application fee - $50/year
Water use fee - $26.35/1000m^3

☐ Commercial Lease II
Application fee - $500/year
Water use fee - $26.35/1000m^3

☐ Commercial Lease III
Application fee - $5000/year + Legal Fees
Water use fee - $26.35/1000m^3

Water use fees: volume of water used (m^3) * Water use fee = **To be determined in the course of further discussions with the NWB, AANDC and KIA and in the context of Project details**

Note: The water application type is related to the land use application type.

16. a) The Applicant requests a Certificate of Exemption ☐

OR

b) The Applicant agrees to be bound by terms and conditions to be attached to the Inuit Land Use License or Lease. ☐

Sign name in full: _____ August 20, 2012

Signature _____ Date

APPENDIX A

All applicants must provide a detailed project description that includes ALL of the following:

1. Outline project activities, their necessity, their expected duration and alternatives considered. If the proposed activity fits into any long-term developments, describe the projected outcome of the development for the area and its timeline.

   See Project Proposal Section 1.2 (General Description of the Project), Section 1.7 (Need for and Purpose of the Project), Section 1.9 (Alternatives)

2. Schedule of activities including both operations and shutdowns

   See Project Proposal Figure 2.1-1 (Project Schedule)

3. Provide a preliminary plan showing the location of the lands proposed to be used and an estimate of their area in hectares. The preliminary plan should show the approximate location of all:

   i) existing or new lines, trails, rights-of-way and cleared areas proposed to be used in the exercise of the Right;

   ii) buildings, campsites, air landing strips, air navigation aids, fuel and supply storage sites, waste disposal sites, excavations, ponds, reservoirs and other works and places proposed to be constructed or used during the exercise of the Right;

   iii) manmade structures and works, including bridges, dams, ditches, highways, roads, transmission lines, pipelines, survey lines and monuments, air landing strips; all topographical and natural features, including eskers, rivers, streams, lakes, inland seas and ponds; and all areas of biological interest, including wildlife and fish habitat, specifically, calving, denning, spawning or nesting areas, identified in consultation with the NWMB, RWO, or HTO, as appropriate, that may be affected by the exercise of the Right; and

   iv) the accurate location of all carving stone, archaeological sites, and archaeological specimens

   For questions 3 i., ii., and iii., see Project Proposal Section 2.4 (Izok Mine) and the Figures within this section. For question iv., refer to Project Proposal Section 4.2 (Traditional Knowledge – Approach and Methodology) and Section 6.6.1 (Cultural, Archaeological and Paleontological Resources). No carving stone deposits have been identified so far, but if carving stone deposits are encountered in the future, they will be recorded and identified.

4. Provide a list of structures that will be erected.

   See Project Proposal Section 2.4.10 (Izok Mine Facilities and Infrastructure)

See Project Proposal Table 2.4-4 (Izok Open Pit Equipment) and Table 2.4-5 (Izok Underground Mine Equipment)

6. Fuels to be used, capacity of containers and number of litres. Include diesel, gasoline, aviation fuel, propane and other fuel types. Describe method of fuel transfer.

   See Project Proposal Section 2.4.10.7 (Fuel Systems). Additional details will be provided as part of the draft EIS.

7. Provide a copy of fuel spill contingency plan

   See Project Proposal Section 12.2.3. Additional details will be provided as part of the draft EIS.

8. Proposed disposal methods for garbage, sewage, grey water, overburden (organic soil, waste material, tailings etc.), hazardous waste and other waste products. Describe the acid rock drainage potential of waste rock materiel and testing methods, if applicable. List the type, estimated quantities and storage methods of any hazardous materials that are going to be stored on the property.

   See Project Proposal Section 2.4.6 (Izok Mineral Waste Management) and Section 2.4.9 (Izok Mine Waste and Other Wastes)

9. Describe the methods of transportation.

   See Project Proposal Section 2.4.10.2 (Roads), and Section 2.4.10.8 (Airport)

10. Indicate the components of the environment that are near the project area, as applicable. Include the type of species, the important habitat area (calving, staging, denning, migratory pathways, spawning, nesting etc.) and the critical time periods (calving, post-calving, spawning, nesting, breeding etc.). Also include information on eskers, communities and historical/archaeological sites.

    See Project Proposal Section 5 (Existing Biophysical Environment), Section 6 (Existing Human Environment)

11. Summary of potential environmental, wildlife and resource impacts and mitigation measures to be used. Describe the effects of the proposed program on lands, water, flora and fauna.

    See Project Proposal Section 7

12. Reclamation cost analysis for advanced exploration activities.

    N/A

13. Proposed reclamation plan, that includes, but is not limited to the proposed methods and procedures for the progressive:

13. Proposed reclamation plan, that includes, but is not limited to the proposed methods and procedures for the progressive:

    i) removal of all structures, equipment, and other manmade debris;

    ii) rehabilitation of the area to its previous standard of human utilization and natural productivity;

    iii) replacement of overburden and soil;

    iv) grading of the area back to is natural contours; and

    v) re-establishment, to the extent possible, of flora.

    Include information about on going site remediation throughout the duration of the project.

    See Project Proposal Section 2.4.6 (Izok Mineral Waste Management), Section 2.4.7.4 (Surface Water Management Closure Plan), Section 2.4.7.8 (Groundwater Management Closure Plan), Section 2.4.8.7 (Water Requirements Closure Plan), Section 2.4.9.9 (Waste Water and Other Wastes Closure Plan), Section 2.4.10.15 (Infrastructure Closure Plan), and Section 12

14. Provide information on the socio-economic aspects of these activities. In particular, please provide details on:

    i) How much money will be spent on this work?

    ii) What percentage will go to Inuit firms or employees?

    iii) How many jobs are available through this activity?

    iv) How many Inuit employees will be hired?

    v) What type of training opportunities for Inuit will be offered?

    See Project Proposal Section 2.9 (Employment and Procurement), further details will be provided as part of the draft EIS

    An IIBA will be negotiated with KIA and will provide anwers to these questions.

In addition to the above requirements, COMMERCIAL LEASE APPLICANTS must provide the following information:

- If the land is surveyed, state the lot and block number. If unsurveyed, state the size of the parcel and general area. Provide a detailed description and detailed sketch of the area applied for.
- Describe the type of commercial use.

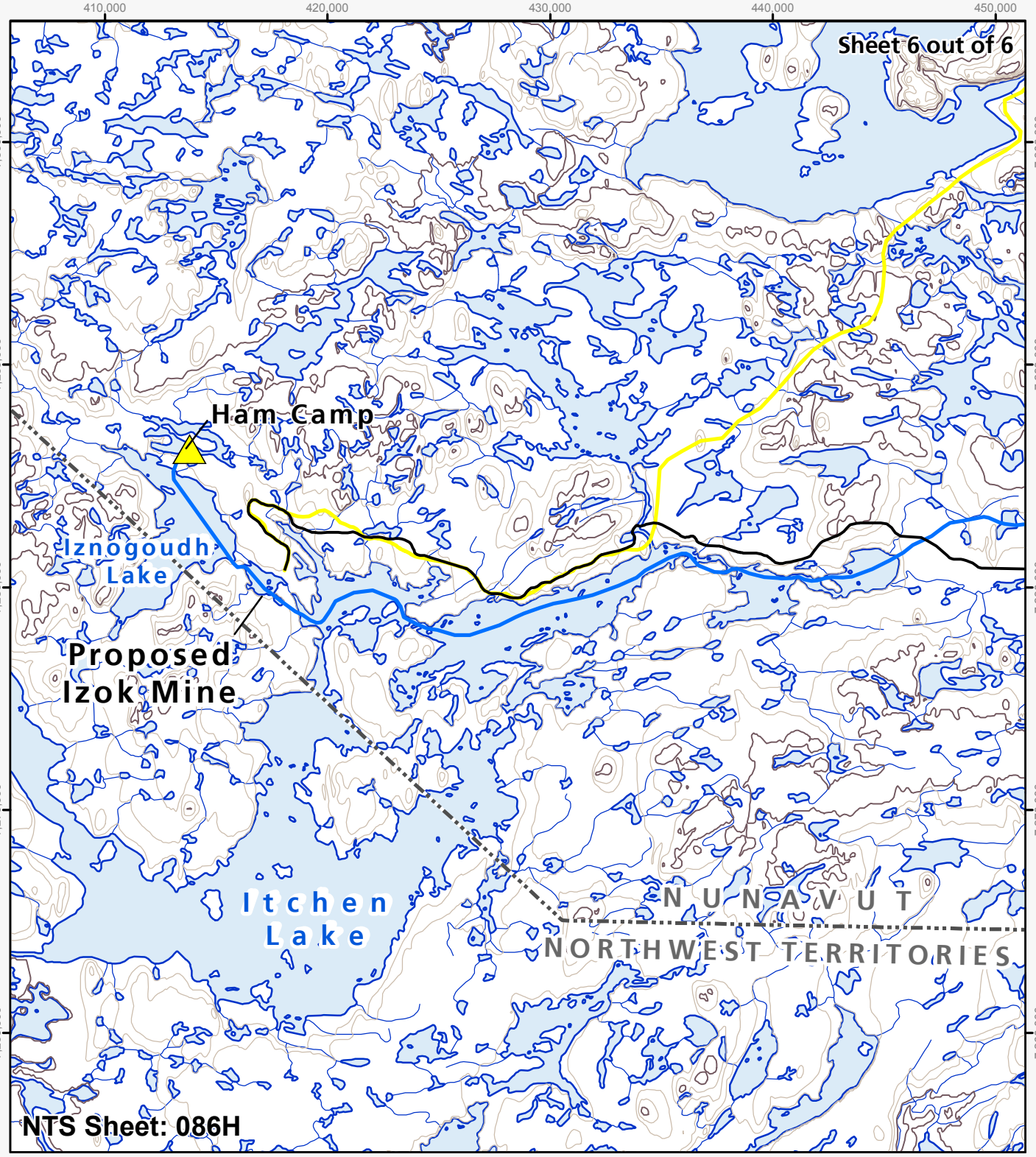
In addition to the above requirements, RESIDENTIAL/RECREATIONAL LEASE APPLICANTS must provide the following information:

- If the land is surveyed, state the lot and block number. If unsurveyed, state the size of the parcel and general area. Provide a detailed description and detailed sketch of the area applied for.
- For what purposes will the land be used? Describe any buildings or improvements on this land. What is the value of the improvements on the land and who is the owner of the improvements.
- Provide a list of improvements planned for construction, the value of these improvements and within how many months of the effective date of the lease these improvements be finished.

In addition to the above requirements, QUARRY LICENSE or QUARRY CONCESSION AGREEMENT applicants must provide the following information:

- A description by meters and bounds of the land applied for;
- The name of the specified substances that the applicant desires to remove from the area; and
- A sketch showing clearly the position of the parcel in relation to a survey monument, prominent topographical feature or other known point and shown in its margin, copies of the markings on the posts or cairns.
- If for commercial use, the description shall contain an affidavit sworn by the applicant setting forth:
  - i) that the land contains material of the kind applied for in merchantable quantities;
  - ii) that the volume of specified substances are required for a project that has been approved by the appropriate level of government; and
  - iii) that the applicant has obtained a contract for the delivery of those Specified Substances.

Please prepare this project description on a separate sheet of paper and attach it to your application form marked as APPENDIX A. Return the original, signed and dated application form, with attached APPENDICES A and B and all ORIGINAL maps of the area to the KIA Lands Office at Box 360, Kugluktuk, NU, X0B 0E0.

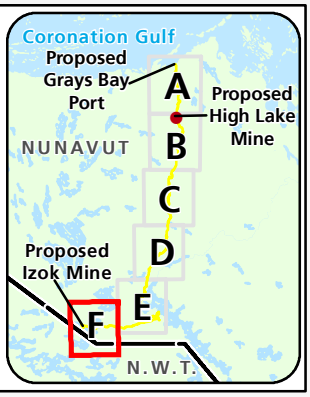


LEGEND

- MMG Properties
- Other Properties
- HamCamp
- Proposed Grays Bay Port
- Boundary Line
- Contour (20 meter)
- Watercourse
- Waterbody
- Base Case Road Alignment (June 2012)
- Alternate Road Alignment (August 2012)
- Winter Road Alignment Grays Bay to High Lake (June 2012)
- Winter Road Alignment (June 2012)

Data Sources:

1) National Topographic Database (NTDB) provided by the Government of Canada, Natural Resources Canada at 1:250,000 scale.
2) Proposed road alignments, potential borrow sources, Ham Camp, proposed port site and mine locations provided by MMG.



MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Project Components Overview

Lead: J.E.	Date: 16 Aug 2012
Drawn By: A.W.	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

Scale: 1:250,000

0 2.5 5 10

kilometers

Figure No. 02F

K:\Data\Project\MMG1764\GIS_MXD\Base\mmg_Base Map Project_Components_Overview_DDP_09aug12_v4_ac.mxd

D4 DFO – Application for a Section 35 Fisheries Act Authorization for Izok Lake

MMG RESOURCES INC
2600-1177 WEST HASTINGS STREET
VANCOUVER BC V6E 2K3
TELEPHONE +1 778 373 5600
FAX +1 778 373 5598
WWW.MMG.COM

20 August 2012

Derrick Moggy
Habitat Team Leader Eastern Arctic Area
Fisheries and Oceans Canada
Government of Canada
11-1500 Paris Street
Sudbury, ON P3E 3B8

Dear Mr. Moggy,

RE: IZOK CORRIDOR PROJECT PROPOSAL
APPLICATION FOR AN AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT AND DFO OPERATIONAL STATEMENT CONFORMITY

MMG Resources Inc. (MMG) is pleased to submit the attached application for an Authorization for Works or Undertakings Affecting Fish Habitat; this is the first of such applications that we will be submitting to Fisheries and Oceans Canada (DFO) as part of the regulatory approval process for the proposed Izok Corridor Project.

This letter and the attached application are accompanied by MMG's Project Proposal outlining the plans for the proposed Izok Corridor Project development. The key components of the proposed Izok Corridor Project outlined in the Project Proposal include the following:

- Izok Mine: an open pit and an underground mining operation, including crushers, an ore processing plant, camp and offices, and supporting infrastructure
- High Lake Mine: an open pit and underground mining operation, including minimal ore processing in the form of crushing, camp and offices, and supporting infrastructure
- Izok Road: an all-season road connecting Izok Mine, High Lake Mine and Grays Bay Port
- Grays Bay Port: a dock and land-based infrastructure including camp, diesel and concentrate storage, laydown areas to support transportation of concentrate and resupply
- Marine shipping: transport of concentrate from Grays Bay to ports in Europe and Asia and resupply cargo into Grays Bay during the open-water season
- Temporary winter roads: two temporary winter roads for use during the construction phase of the Project – one from Grays Bay to High Lake Mine, and another that will link Izok Mine to the Tibbitt-to-Contwoyto Winter Road

The attached application is specific to the proposed undertakings at the proposed Izok Mine. Further details concerning these undertakings and applications for authorization for other project related works that may affect fish habitat will follow as the Project is further defined through the environmental assessment and regulatory processes, and through on-going geotechnical engineering studies.

MMG understands that conformity to applicable DFO Operational Statements will be required for the development of this Project, including:

- Bridge Maintenance
- Clear-Span Bridges
- Culvert Maintenance
- Ice Bridges and Snow Fills
- Installation of Moorings
- Temporary Stream Crossings
- Timing Windows

MMG agrees to meet the conditions and incorporate the measures to protect fish and fish habitat as outlined in applicable DFO Operational Statements.

MMG looks forward to continued dialogue with the DFO with respect to the Project Proposal, further defining potential effects to fish habitat and developing a conceptual No Net Loss Plan consistent with DFO policy objectives.

Please do not hesitate to contact me should you have any questions, concerns or specific advice as it relates to these proposed activities.

Yours sincerely,



Sahba Safavi
Project Manager - Canada

T 778-373-5607
M 604-417-5589
E Sahba.Safavi@mmg.com

SCHEDULE VI/ANNEXE V1
(Subsection 58(1)/paragraphe 58(1)

Fisheries and Oceans Canada | Pêches et Océans Canada

Habitat File No./N° de fichier

APPLICATION FOR AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT
DEMANDE D'AUTORISATION POUR DES OUVRAGES OU ENTREPRISES MODIFIANT L'HABITAT DU POISSON

I, the undersigned, hereby request authorization to carry out the works or undertakings described on this application form. I understand that the approval of this application, if granted, is from the Minister of Fisheries and Oceans standpoint only and does not release me from my obligation to obtain permission from other concerned regulatory agencies.

Je soussigné, demande par les présentes l'autorisation d'exploiter les ouvrages ou entreprises décrits dans la formule. Je comprends que l'approbation de cette demande, le cas échéant, porte sur ce qui relève du ministre des Pêches et des Océans et ne me dispense pas d'obtenir la permission d'autres organismes réglementaires concernés.

If an authorization is granted as a result of this application, I hereby agree to carry out all activities relating to the project within the designated time frames and conditions specified in the authorization.

Si la demande est approuvée, je consens par les présentes à exécuter tous les travaux relatifs à ce projet selon les modalités et dans le laps de temps prescrits dans l'autorisation.

Applicant's Name (Please Print): Scott Trusler — Nom du requérant (lettres moulées)

Applicant's Business Address: 26th Floor, 1177 West Hastings Street — Adresse d'affaires du requérant

Vancouver, BC V6E 2K3

Applicant's Telephone No./N° de téléphone du requérant: 778-373-5586 Date: August 20, 2012

I solemnly declare that the information provided and facts set out in this application are true, complete and correct, and I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath. This declaration applies to all material submitted as part of this application.

Je déclare solennellement que les renseignements fournis et les faits énoncés dans cette demande sont véridiques, complets et exacts, et je fais cette déclaration solennelle, la croyant consciencieusement vraie et sachant qu'elle a la même force et le même effet que si elle était faite sous serment. Cette déclaration s'applique à tout document qui est présenté dans le cadre de cette demande.

Applicant's Signature (and corporate seal) — Signature du requérant (et sceau de la société)

Name of watercourse or waterbody (give coordinates)
Cours d'eau ou plan d'eau (donner les coordonnées): Izok Lake: 65 Degrees, 63' N latitude, 112 Degrees 79' W longitude

This watercoure is a tributary of (where applicable)
Cours d'eau tributaire de (le cas échéant): Coppermine River

Nearest Community / Localité la plus proche	County / Comté	Province / Province
Kugluktuk		Nunavut

Canada

Habitat File No./N° de fichier

APPLICATION FOR AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT
DEMANDE D'AUTORISATION POUR DES OUVRAGES OU ENTREPRISES MODIFIANT L'HABITAT DU POISSON

Type of Activity/Genre d'activité

[X] Bridge / Pont	[X] Stream Realignment / Alignement de cours d'eau	[ ] Gravel Removal / Enlèvement du gravier	[ ] Stream Traverse / Traversée de cours d'eau
[X] Culvert / Ponceau	[X] Channelization / Canalisation	[X] Obstruction Removal - Bypass / Enlèvement ou contournement d'obstacle	[ ] Seismic Survey / Levé sismique
[X] Dam / Barrage	[ ] Wharf - Break water / Quai - Brise-lames	[ ] Stream Utilization - Recreation / Utilisation récéative du cours d'eau	[ ] Agriculture
[X] Stream Diversion / Dérivation de cours d'eau	[X] Dewatering / Assèchement	[ ] Erosion Control / Lutte contre l'érosion	[ ] Other (Specify) / Autres (préciser)
[X] Mining / Activité minière	[ ] Aquaculture	[ ] Flood Protection / Protection contre les inondations	

List of Agencies (Federal, Provincial or Municipal) contacted or notified, or who have initiated contact with the applicant.
Liste des orgnaismes (fédéraux, provinciaux ou municipaux) contactés ou qui ont pris contact avec le requérant.

A complete list is attached

PROVIDE DETAILS OF PROPOSED ACTIVITY INCLUDING REASONS FOR THE PROJECT AND TYPES OF EQUIPMENT TO BE USED
DONNER DES PRÉCISIONS SUR LES TRAVAUX PROJETÉS, Y COMPRIS LA JUSTIFICATION DU PROJET ET LE TYPE D'ÉQUIPEMENT À UTILISER

Please see attached Project Proposal; Sec. 1 Introduction and Sec. 2 Preliminary Project Description

Lists of the types of equipment that will be used are found in Table 2.4-4 Izok Open Pit Equipment and 2.4-5 Izok Undergound Mine Equipment in the attached Project Proposal.

Details concerning the proposed diversion channel can be found in the attached Project Proposal Section 2.4.3, in particular Section 2.4.3.1 Diversion Dam and Diversion Channel Construction and Operation, Figures 2.4-9 and Figure 2.4-10

Fisheries and Oceans Canada | Pêches et Océans Canada

Habitat File No./N° de fichier

APPLICATION FOR AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT
DEMANDE D'AUTORISATION POUR DES OUVRAGES OU ENTREPRISES MODIFIANT L'HABITAT DU POISSON

SCHEDULE/CALENDRIER

	D/J	M/M	Y/A
Proposed Starting Date Date prévue du début des travaux	01	July	2015
Proposed Completion Date Date prévue de l'achèvement des travaux	31	Dec	2037

Approximate Timing of Work in shoreline, foreshore, tidal zone, or underwater areas.
Période approximative des travaux sur le rivage et les estrans ainsi que dans les zones à marées et les zones sous-marines.

	D/J	M/M	Y/A		D/J	M/M	Y/A
From/De	01	July	2015	To/À	31	Dec	2037

The following documents will assist in assessing your application and help expedite its approval. Please check which documents you have attached.		**Les documents suivants faciliteront l'évaluation de votre demande et permettront d'accélérer son approbation. Veuillez cochez les documents vous avez joints á votre demande.**
Map indicating location of project Attached	[X]	Carte indiquant l'emplacement du projet
Engineering Specifications	[ ]	Spécifications techniques
Scale Drawings	[ ]	Dessins à l'échelle
Dimensional Drawings	[ ]	Plans cotés
Assessment of Existing Fish Habitat Characteristics (see section 5.6.3 of Project Proposal)	[X]	Évaluation des caractéristiques existantes de l'habitat du poisson
Assessment of Potential Effects of Project on Fish Habitat (see section 7.4.3 of Project Proposal)	[X]	Évaluation des répercussions possibles sur l'habitat du poisson
Measures Proposed to Offset Potential Damage to Fish Habitat (see section 7.4.3.3 of Project Proposal)	[X]	Mesures proposées pour compenser les éventuels dommages à l'habitat du poission
Other List of Agencies Contacted or Notified Summary of Fish Species Composition and Potential Impacts to Fish Habitat: Izok Lake Diversion and Dewatering	[ ]	Autres

ENVIRONMENTAL ASSESSMENT AND REVIEW PROCESS CONSIDERATIONS

NOTE: All applications pursuant to section 35 of the Fisheries Act will be assessed in accordance with applicable federal environmental assessment requirements.

CONSIDÉRATIONS CONCERNANT LE PROCESSUS D'ÉVALUATION ET D'EXAMEN EN MATIÉRE D'ENVIRONNEMENT

REMARQUE: Toute demande en vertu l'article 35 de la Loi sur les pêches sera soumise aux exigences fédérales applicables à l'évaluation environnementale.

Fisheries and Oceans Canada / Pêches et Océans Canada

_____
Habitat File No./N° de fichier

APPLICATION FOR AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT
DEMANDE D'AUTORISATION POUR DES OUVRAGES OU ENTREPRISES MODIFIANT L'HABITAT DU POISSON

COMPLETE ONLY IF USE OF EXPLOSIVES IS INTENDED
À REMPLIR SEULEMENT EN CAS D'UTILISATION D'EXPLOSIFS

EXPLOSIVES CONTRACTOR (IF DIFFERENT FROM APPLICANT)/RESPONSABLE DES EXPLOSIFS (SI AUTRE QUE LE REQUÉRANT)

Name/Nom: _____

Address/Adresse: _____

_____

Telephone No./N° de téléphone: _____

	D/J	M/M	Y/A		D/J	M/M	Y/A
Anticipated Starting Date Date prévue du début des travaux	_____	_____	_____	Completion Date Date d'achèvement	_____	_____	_____

DETAILS OF EXPLOSIVES/PRÉCISIONS SUR LES EXPLOSIFS

Type (including trade name)
Genre (y compris la marque) _____

_____

Weight and configuration (where applicable)
Poids et forme (le cas échéant) _____

_____

_____

Weight of individual shots and shot pattern where multiple charges are used
Poids des coups individuels et déploiement des coups, en cas de charges multiples

_____

_____

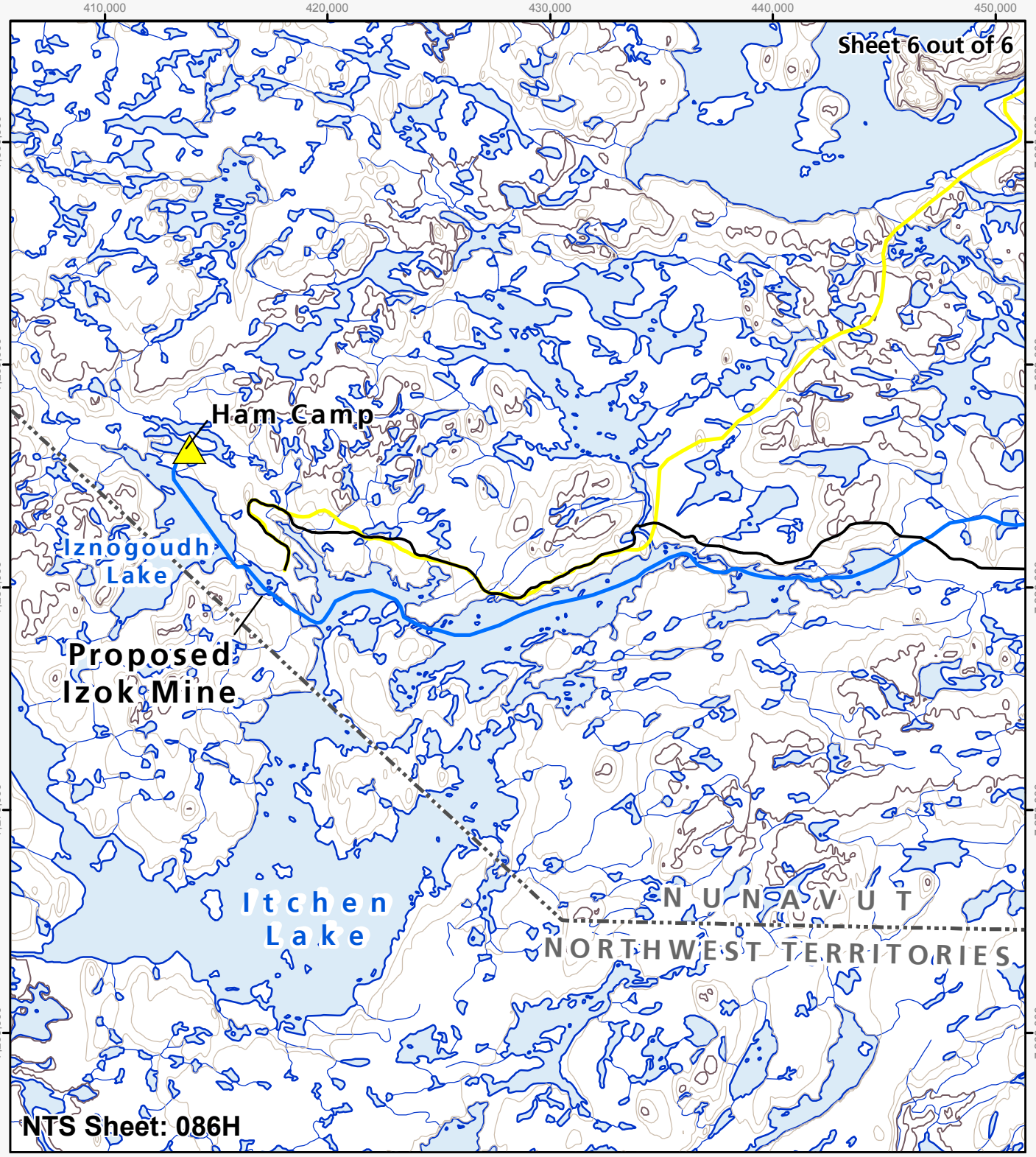
Detonation depth (In the rock; note also the depth of water, if applicable)
Profondeur de détonation (dans le roc; indiquer aussi la profondeur de l'eau, s'il ya lieu)

_____

_____

Method of detonation
Méthode de détonation _____

_____

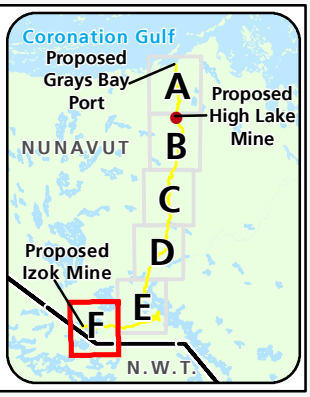


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MINERALS AND METALS GROUP

IZOK CORRIDOR PROJECT

Project Components Overview

Lead: J.E.	Date: 16 Aug 2012
Drawn By: A.W.	Office: Vancouver, BC
Projection: NAD 1983 UTM Zone 12N	

N

Scale: 1:250,000

0 2.5 5 10

kilometers

Figure No. 02F

K:\Data\Project\MMG1764\GIS_MXD\Base\mmg_Base Map Project_Components_Overview_DDP_09aug12_v4_ac.mxd

List of Agencies Contacted or Notified

The *Authorization for Works or Undertakings Affecting Fish Habitat* for the proposed works at Izok Lake has been part of the comprehensive communications effort by MMG to introduce the Izok Corridor Project. As part of that effort MMG has contacted the agencies listed as follows:

Aboriginal Affairs and Northern Development Canada

Environment Canada

Department of Fisheries and Oceans

Nunavut Impact Review Board

Government of Nunavut

Transport Canada

Kitikmeot Inuit Association

Natural Resources Canada

Nunavut Tunngavik Inc.

CanNor – Northern Project Management Office

Nunavut Water Board

Mackenzie Valley Land and Water Board

Wek'eezhii Land and Water Board

Tlicho Government

Government of NWT

Hamlet Mayor and Council - Gjoa Haven

Hamlet Mayor and Council - Kugaaruk

Hamlet Mayor and Council - Kugluktuk

Hamlet Mayor and Council - Taloyoak

Hamlet Mayor and Council - Cambridge Bay

Aurora Research Institute

Nunavut Research Institute

Hunters and Trappers Organization - Kugluktuk

Hunters and Trappers Organization -Cambridge Bay

Hunters and Trappers Organization - Taloyoak

Hunters and Trappers Organization - Gjoa Haven

Hunters and Trappers Organization - Kugaaruk

Summary of Fish Species Composition and Potential Impacts to Fish Habitat:

Izok Lake Diversion and Dewatering

The proposed Izok mine is located within the Coppermine River drainage, approximately 380 km north of Yellowknife, and about 90 km west of Lupin. The area studied during the previous investigations focused on four lakes (locally called Ham, Iznogoudh, Izok, and Itchen lakes) and streams that connect these water bodies.

The study area lies in the sub-Arctic of the Canadian Shield, an area of continuous permafrost characterized by typical tundra vegetation. Lichens, mosses, heather and dwarf shrub species dominate on the higher, well-drained areas, whereas sedges and grasses are more predominant in the poorly drained areas and along creeks and lakeshores. The surrounding terrain is rugged, with many rock outcrops and eskers, resulting in numerous small lakes and streams in the depressions throughout the surrounding area.

The lakes in the study area are cold and oligotrophic. The north basin of Itchen Lake (immediately downstream of Izok Lake) is 1100 ha in area, with a maximum depth of 37 m. Iznogoudh Lake (1900 ha, maximum depth of 42 m) is located immediately upstream of Izok Lake. Ham Lake (306 ha, maximum depth of 8 m) is on a tributary system to Iznogoudh Lake. Izok Lake (141 ha, maximum depth of 19 m), located between Iznogoudh and Itchen lakes, will be the main water body directly affected by the project footprint.

The mine plan includes draining Izok Lake to access the ore body beneath it via an open pit in the southeast part of the lake basin. To facilitate this plan, diversion dams will be constructed across the inlet and outlet to Izok Lake and the flow from Iznogoudh to Itchen lakes will be diverted around the north side of Izok Lake via a constructed channel (approximately 3.0 km in length). The primary design approach for the diversion channel is to allow fish passage during and after mine operations. The northern part of the drained lake basin will be used for mine rock and tailings deposition. A map indicating the diversion structures is attached.

Prior to the start of Izok Lake dewatering, an initial fish-out of the lake will occur following DFO guidelines (Tyson et al. 2011). Once the diversion channel is operational and initial fish removal has been performed, the diversion dam across the outlet to Izok Lake will be completed and draining initiated by pumping water into Itchen Lake. The dewatering process will take several months as approximately 6.4 Mm^3 of water has to be pumped into Itchen Lake. The upper half of the Izok Lake water column is expected to be clear enough to be pumped directly to Itchen Lake, while the lower half likely will be turbid and require routing through a water holding pond for clarification before release to Itchen Lake. After closure, the open pit area will be reclaimed as a deep pit lake, but the northern part of Izok Lake (approximately 2/3 of current lake area) will become terrestrial habitat.

Based on studies conducted in 1992-1993, 2002-2003, and 2007-2008, lakes and streams in the study area is inhabited by 7 fish species: lake trout, Arctic grayling, round whitefish, longnose sucker, burbot, cisco, and slimy sculpin. Among the 1705 fish captured in the study area lakes and their tributaries during the previous studies, lake trout were the most abundant species, contributing 54% to the total catch. Longnose sucker (17%), round whitefish (15%), and Arctic grayling (12%) were also frequently captured.

Of 390 fish recorded in Izok Lake, lake trout contributed 70% to the catch. The remainder included longnose sucker (13%), Arctic grayling (9%), and round whitefish (8%). Mark-recapture sampling in Izok Lake in 1993 estimated a population size of 544 lake trout greater than 350 mm in length (95% confidence interval between 270 and 1190). Captured lake trout in Izok Lake ranged from 63 to 1000 mm in fork length (mean of 458 mm), indicating presence of all life stages. Several lake trout in spawning condition collected in Izok Lake during fall suggested that this species uses rocky shoals in the lake for spawning.

Arctic grayling was the most abundant species in the inflow stream to Izok Lake, where this species contributed 73% to the total catch of 62 fish (all by angling). The Izok Lake inflow stream from Iznogoudh Lake provides important rearing and adult feeding habitat to Arctic grayling; however, it does not appear to be an important spawning area for Arctic grayling, likely because of its large size, primarily boulder substrate, and turbulent nature (mean discharge in June 1993 was 24 m^3/s).

Based on egg collections and year over year catches, the main spawning and rearing areas for Arctic grayling are in the medium sized tributaries to Ham, Iznogoudh, and Itchen lakes. Spawning has not been reported in the small tributaries draining into Izok Lake. Most of these sub-drainages do not appear to provide satisfactory passage for fish moving upstream from Izok Lake, due to poorly defined channels and steep gradients. Fish species captured in the lower reaches of these tributaries included slimy sculpin and juvenile burbot. Fish habitat and fish populations in the Izok Lake watershed will be investigated in more detail in 2012.

One small lake (L410) will be traversed by the diversion channel on the north side of Izok Lake. Fish were not captured in this lake; however, slimy sculpin were captured in the outlet stream.

Based on 30 lake trout and 7 Arctic grayling that were surgically implanted with radio transmitters in 2002, most fish remained in the lake (Izok and Iznogoudh) where they were released until spring 2003. Six fish (3 lake trout and 3 Arctic grayling) exhibited movements between lakes. Although most (5 of 6) movements occurred between Izok and Iznogoudh lakes, one radio-tagged Arctic grayling indicated that movements from Izok Lake to Itchen Lake also occur.

The diversion channel between Iznogoudh Lake and Itchen Lake will be designed to provide upstream fish passage. It also may include features (e.g., riffle/pool sequences, boulder gardens) to provide rearing and feeding habitat for Arctic grayling and lake trout. Other potential compensation measures for the loss of aquatic habitat in Izok Lake will be investigated in 2012.

A conceptual fish habitat compensation plan will be developed as part of the environmental assessment process to meet DFO requirements for lost fish habitat related to the project.

References

Tyson , J.D., W.M. Tonn, S. Boss, and B.W. Hanna. 2011. General fish-out protocol for lakes and impoundments in the Northwest Territories and Nunavut. Canadian Technical Report of Fisheries and Aquatic Sciences 2935. Prepared for Fisheries and Oceans Canada, Central and Arctic Region.