

Summary Report
Joint Solutions Workshop
for Mining in the M-KMA
March 29-30, 2006

Prepared for:
M-K Advisory Board Mining Committee

Prepared by
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Executive Summary:

Joint Solutions Workshop for Mining in the M-KMA

The Muskwa Kechika Advisory Board convened a workshop in Fort St John in March 2006, bringing together mining industry representatives, First Nations, community representatives, guide outfitters, conservation interests, agency staff and others to explore barriers and opportunities for mining in the Muskwa-Kechika Management Area (M-KMA). The M-KMA comprises 6.4 million hectares of land in northeastern BC, of which 25% is park and 75% is special resource management zones, where resource development is permitted in a manner that ensures natural values are maintained.

Workshop Objectives

The specific objectives of this workshop were to:

- share information about the vision for the M-KMA and the planning and management framework for the area;
- share information about the requirements of the mineral exploration and mining sectors and government permitting agencies;
- share information so that the mineral sector is more fully aware of the management responsibilities of various regulatory agencies, as well as the interests of First Nations, local communities and stakeholder groups;
- identify key issues of concern from a range of perspectives regarding exploration and mining activity in the M-KMA;
- generate solutions to these issues that can enable exploration and mining activity while ensuring other resource values are respected and protected, through a series of case studies;
- identify strategies to refine and implement these solutions, and disseminate learnings more broadly within Government agencies, First Nations, and stakeholder groups; and,
- provide opportunities for the building of working relationships among those with interests in mineral exploration and mining in the M-KMA.

Discussions at the workshop were structured around a hypothetical *case study* of mineral exploration in the M-KMA. Participants were invited to investigate barriers and opportunities for mineral exploration based on a series of scenarios, outlining mineral exploration programs of varying scope.

Participants

Workshop participants included representatives from:

- M-K Advisory Board;
- Provincial planning and regulatory agencies, including MEMPR, ILMB, MoE and MoFR;
- Association for Mineral Exploration BC (AMEBC);
- Mining and exploration companies;
- Local government;
- First Nations communities in and around the M-KMA;
- Local communities, including Toad River and others;
- Other tenure holders, such as Guide Outfitters;
- Conservation organizations; and,
- Tourism interests.

Presentations

- *Planning and Management of Activities in the M-KMA*: Jim McGregor (Regional Director, Northern Region, ILMB), Jason Lawson (Planning Team Leader, Peace Region, ILMB), and, Wayne Sawchuk representing the M-K Advisory Board explained that the M-KMA was created in 1997 following completion of the Fort St John and Fort Nelson LRMPs, and later expanded following completion of the Mackenzie LRMP. They profiled the remarkable wilderness and wildlife values of the area, and summarized the role and accomplishments of the M-K Advisory Board. Management of activities in the M-KMA is guided by the *M-KMA Act* that sets out specific planning requirements for many industrial activities.
- *State of Mineral Exploration and Mining In BC*: Dan Jepsen, President and CEO of the Association for Mineral Exploration British Columbia (AME BC; formerly BC Yukon Chamber of Mines) summarized the state of mining in BC, noting that exploration expenditures have risen considerable in the last three years. There are currently 650 mineral exploration projects in BC, with some 18 mines in the environmental assessment process. Dan explained that the footprint from mining is very minimal, compared to forestry but that large areas are needed for exploration. Despite increased activity, overall trends indicate that the industry faces challenges, including the lowest metal reserves in 25 years, limited 'greenfield' developments, and an aging workforce. Dan also highlighted the completion of a draft *Memorandum of Understanding (MOU)* with coastal First Nations, and a completed MOU with the tourism industry.
- *Mineral Exploration Practices, Tools, Techniques and the Regulatory Regime*: Graeme McLaren (Executive Director, Southwest Victoria Mining Operations Branch, Ministry of Energy, Mines and Petroleum Resources) introduced the four cornerstones of BC's *Mining Plan*: reaching out to communities; ensuring public and workers are safe; competitiveness; and, minimizing environmental footprint. Graeme provided an overview of the permitting process for mineral exploration, which includes a *Notice of Work* for all activities where there will be mechanical disturbance of the ground, referrals to agencies and First Nations, and the determination of permit conditions including security bonds. He also highlighted the establishment of the North East Mine Development Review Committee, that addresses mine projects which are an advanced exploration stage. Nancy Wilkin (Assistant Deputy Minister, Ministry of Environment) highlighted that the Ministry of Environment now depends on a shared stewardship approach; and can no longer ensure BC's environmental assets are managed without close collaboration from multiple interests. She also explained that in a results-based planning and management context, there is now greater reliance on Qualified Professionals. Nancy challenged the workshop to identify solutions for mining in the M-KMA—an area she noted was among the 'most special of the special in BC.'
- *Churchill Mine Reclamation*: Gary Davies (Teck Cominco Ltd) presented a summary of the reclamation of the Churchill mine in the M-KMA, a project undertaken with funding from Teck Cominco and the M-K Advisory Board. This project received an award from the BC Technical and Research Committee on Reclamation.
- *Mining-Tourism MOU*: Petrus Rykes (Council of Tourism Associations of BC) and Dan Jepsen (AME BC) profiled the 2004 *Memorandum of Understanding* between the mining and tourism industries. This MOU was established as a means of creating understanding and as a conflict resolution policy.

Workshop Results: Case Study Analysis and Conclusions

Workshop participants examined three scenarios for mining in the M-KMA, as follows:

- Scenario 1: involving mapping, line cutting, geophysical surveys, geochemical surveys;
- Scenario 2: involving drilling and trenching (2a) and more extensive grid drilling activity (2b); and
- Scenario 3: involving bulk sampling and underground diamond drilling.

These scenarios provided a vehicle for the investigation of barriers and opportunities for mining in the M-KMA, as summarized below.

Consultation/Communication

All of the parties at this workshop agreed that one of the features that makes the M-KMA 'special' is the need for improved consultation and communication "early and often" with all those affected by mining exploration activities. While this is a voluntary rather than a formal requirement, participants generally agree that demonstrable efforts in this regard can help to overcome many of the potential barriers to mining in the area, and can also serve as a source of valuable local information for prospective proponents. Participants also highlighted that the legacy of past mining has left some negative impressions among communities and others in the M-KMA, that have yet to be overcome.

Some mining industry representatives have noted that further clarification is needed over the range of parties who should be consulted, and to what degree. Other workshop participants have countered however, that such information is readily available through contacts such as LRMP Coordinators, local Chambers of Commerce, agencies including MEMPR, and the M-KMA Information Office. As one participant put it, "In a community like the M-KMA where everyone know one another... there really is no excuse for not knowing who to consult."

Concerns were also raised over potential delays in approvals that might result from higher expectations regarding consultation. In particular, concerns were raised over any changes to the 30-day approval timeline. Some mining representatives also noted that it is as yet unclear which party—if any—would approve a proposed consultation plan.

Finally, it was also noted that the costs of consultation activities are not considered Canadian Exploration Expenses (CEE) and so do not receive the same favourable tax treatment as CEE. Changes in the relevant tax provision could create greater incentives for industry to engage in more extensive consultation programs.

Referrals

Ministry of Environment representatives have made it clear that the mandate of the agency has been focused on setting standards for activities, and monitoring. As a result, there is more limited capacity to handle referrals for proposed developments—including those for mineral exploration. To address this issue, a set of guidelines have been prepared in NE BC setting out suggested approaches for assessment of baseline conditions and for avoiding impacts to environmental values. Some industry representatives have noted that these guidelines are complex, and that they demand significant technical knowledge in areas that often fall outside the skills sets of exploration proponents. Workshop participants agreed that one potential solution to address this concern was greater reliance on Qualified Professionals, such as Registered Professional Biologists (RPBios). Depending on the scope of the exploration activity, an RPBio could be retained; it was suggested, to assist in the review of information about local conditions, and potentially in contacting local communities, First Nations and other tenure holders. Another potential solution was to secure additional resources to support enhanced capacity within the Ministry of Environment (MoE) to handle mining related referrals, for the M-KMA or for BC as a whole.

Information

Workshop participants agreed that information plays a critical role in ensuring that mining activity could continue in the M-KMA while ensuring that the intent of the M-KMA Act is fulfilled. Some participants highlighted that valuable knowledge can be readily accessed through consultation with local First Nations, communities and other stakeholders. Some confidentiality issues may arise however, regarding the location of particular wildlife resources.

Additional sources of information on values in the M-KMA were also pointed out, including the Integrated Land Resource Registry and information on rare, threatened and endangered species available from the Conservation Data Centre (CDC). The availability of information on other environmental 'hotspots' was also noted as being crucial for planning of industrial activity, for example critical habitat designated under the *Species at Risk Act*. In this context, the Conservation Area Design (CAD) was highlighted as being of significant potential value, although a number of participants pointed out that the data sets are not available at the present time, and that the significance of 'core' or 'connectivity areas' remains

ambiguous. Ensuring that reliable and consistent information is available to proponents and regulators alike is a key concern. It was suggested that Front Counter BC could assist in addressing this concern.

Mining industry representatives questioned whether all exploration proponents should be expected to have the technical knowledge to access and interpret specialized data on values in the M-KMA. Moreover the costs involved in hiring RPBios or other qualified professionals to assist may be prohibitive for smaller exploration projects. Questions also remain over the scope, timing, costs and responsibilities for monitoring of local conditions in and around development project sites. Environmental Assessment and Baseline Monitoring activities are also not considered CEE and do not receive the favourable tax treatment of exploration expenditures.

Managing Impacts

The scenario exercise identified a number of potential impacts from the proposed exploration activities. Participants agreed that the majority of these impacts could be mitigated through strategies such as:

- Adjustments in the timing of activities, where possible;
- Adjustments in the location of activities—acknowledging that flexibility is limited for some aspects of an exploration program, such as drill sites;
- Adjusting access routes and usage, for example by minimizing air traffic and disturbance to wildlife, and through the location of work camps;
- Access control measures, such as gates, to prevent unauthorized use of new access routes,;
- Efforts to reduce visual and noise impacts in wilderness areas, and limiting the use of reflective or bright coloured marking materials;
- Avoidance of impacts to wildlife in the construction of trenches, through the creation of exit ramps; and,
- Adopting the highest standards for fuel storage and waste disposal for camps.

It was noted however, that not all impacts can be avoided and some participants suggested that a 'no net loss' approach could be adopted, through which some kind of offsets for habitat impacts would be contemplated.

Reclamation and Security Bonds

Participants agreed that reclamation was a key issue of concern in the M-KMA, together with adequate security bonds to ensure that all sites can be reclaimed appropriately. M-K Advisory Board members noted that this issue is addressed in detail in the Board's proposed *Wilderness Definition*.

Agency staff informed the workshop that there is a standard approach adopted for determination of security bonds. This approach takes into account the higher costs likely to be incurred by the Crown to reclaim a site using contracted services.

Several participants noted that there is as yet no consistent monitoring in the M-KMA.

Compensation

Participants generally agreed that compensation is likely to be required for more advanced exploration programs, when the impacts on First Nations, communities, guide outfitters, or other tenure holders in the area is significant. Despite this, many questions remain over:

- The scale of compensation required;
- At what stage compensation should be required; and,
- Which parties should be compensated and on what basis.

It was noted that the Ministry of Environment (MoE) has completed a guidebook on coordinating tenures in the NE, entitled *A Practical Guide to effective Coordination of Resource Tenures*.¹

¹ Copies are available online from: <http://srmwww.gov.bc.ca/rmd/crt/index.htm>

Clarity of Vision for M-KMA

Participants acknowledged that further effort is needed to establish clear expectations regarding the scope, distribution and intensity of acceptable industrial activity in the M-KMA. In particular, mining industry representatives asked for further clarification over what activities would need to be adjusted and in what manner in the M-KMA.

There is also a shared sense that the question of cumulative impacts has yet to be answered in the M-KMA, despite the work of the M-K Advisory Board to date. In particular, questions remain over the thresholds that might be applied to limit industrial activity, how such thresholds would be developed and applied, and who would manage such a management regime. This led to the simple question: does the mining industry currently have the social license to operate in the M-KMA? Workshop participants generally believed that the industry does have such social license, but that given the legacy of past activities, and sensitivities regarding industrial activity in a wilderness context suggest, proponents must demonstrate best practices in working in this area and develop an early track record of success. There was also a thought expressed by some participants that perhaps exploration was acceptable, but not mining; or that only small mines were acceptable and only those near the edge of the M-KMA.

It was also suggested that the M-K Advisory Board should consider the production of a video or print materials to communicate any special requirements for activity in the M-KMA. This could be in the form of a brochure aimed at particular target audiences, for example the mining sector.

Some participants suggested that a local strategic plan for mining in the M-KMA would be a simple and effective tool to clarify expectations on all sides.

Some participants also noted that a worker's handbook had been called for in relation to oil and gas activities in the M-KMA and there had been some discussion of a collaborative approach with industry to develop such a handbook. It was not known who should develop such a handbook or how it would differ from one to be developed for mineral exploration.

Certification

Some participants suggested that the mining industry should consider certification to assist in building social license, strengthening the market niche for those companies who pursue it, and ensuring best practices are applied. Industry representatives noted that a number of mining companies are already ISO 9000 certified, or even ISO 14001 certified. Moreover, MoE/MEMPR audits are done regularly in mine sites.

Next Steps

Bruce McKnight, Workshop Chair, explained that the results of the workshop will be reviewed by the Mining Committee of the M-K Advisory Board and that follow up actions would be considered, such as information materials to clarify expectations regarding mining in the M-KMA.

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Summary Report: Joint Solutions Workshop for Mining in the M-KMA

1. Introduction

This document summarizes the key outcomes from the *Joint Solutions Workshop for Mining*. The workshop brought together a variety of interested parties to explore opportunities and barriers for exploration and mining in the M-KMA, and was held in Fort St. John on March 29-30, 2006.

Supporting reference materials are provided in Appendices, under separate cover.

1.1 Background

The M-KMA comprises 6.4 million hectares of land in northeastern BC, of which 25% is park and 75% is special resource management zones, where careful resource development is permitted in a manner that ensures natural values are maintained. The legislation creating the M-KMA—the *Muskwa-Kechika Management Area Act*—sets out the management intent for the area in the preamble as follows:

- *“Whereas the Muskwa-Kechika Management Area is an area of unique wilderness in northeastern British Columbia that is endowed with a globally significant abundance and diversity of wildlife;*
- *And Whereas the management intent for the Muskwa-Kechika Management Area is to maintain in perpetuity the wilderness quality, and the diversity and abundance of wildlife and the ecosystems on which it depends while allowing resource development and use in parts of the Muskwa-Kechika Management Area designated for those purposes including recreation, hunting, trapping, timber harvesting, mineral exploration and mining, oil and gas exploration and development;*
- *And Whereas the long-term maintenance of wilderness characteristics, wildlife and its habitat is critical to the social and cultural well-being of first nations and other people in the area;*
- *And Whereas the integration of management activities especially related to the planning, development and management of road accesses within the Muskwa-Kechika Management Area is central to achieving this intent and the long-term objective is to return lands to their natural state as development activities are completed...”*

The Act also specified local strategic plans for some sectors (but not mineral exploration or mining) to ensure maintenance of wilderness characteristics, wildlife and the habitat on which they depend.

Lack of information or misinterpretation of this legislation and subsequent planning may have created an “expectation gap” between performance standards of industry, requirements of permitting agencies and expectations of other interested communities and stakeholders.

During the past seven years since the M-KMA was created, mineral exploration activity levels in the M-KMA have been far lower than other comparable areas of BC. It has been suggested that this may be caused by the expectation gap and investor concerns about certainty of permitting requirements, access challenges and security of tenure.

To respond to this issue, the M-K Advisory Board is convened a workshop to bring together interested parties and to jointly develop strategies and solutions that might enable exploration and mining in while achieving the overall intent of the M-KMA. Invitations were extended to key individuals and organizations with experience and interest in this topic. All participants were encouraged to participate in a spirit of open-minded and creative problem solving.

1.2 Contact Information

Workshop Chairperson:

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Workshop Coordinator:

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2. Workshop Scope and Objectives

2.1 Workshop Objectives

The specific objectives of this workshop were to:

- share information about the vision for the M-KMA and the planning and management framework for the area;
- share information about the requirements of the mineral exploration and mining sectors and government permitting agencies;
- share information so that the mineral sector is more fully aware of the management responsibilities of various regulatory agencies, as well as the interests of First Nations, local communities and stakeholder groups;
- identify key issues of concern from a range of perspectives regarding exploration and mining activity in the M-KMA;
- generate solutions to these issues that can enable exploration and mining activity while ensuring other resource values are respected and protected, through a series of case studies;
- identify strategies to refine and implement these solutions, and disseminate learnings more broadly within Government agencies, First Nations, and stakeholder groups; and,
- provide opportunities for the building of working relationships among those with interests in mineral exploration and mining in the M-KMA.

2.2 Scope of Discussions

The workshop was intended to encourage discussion of a wide range of issues that determine opportunities and barriers to exploration and mining in the M-KMA. However, the focus of the workshop was on generating solutions *within the context of the existing planning and regulatory regime*. In particular, issues such as unresolved aboriginal claims and any perceived weaknesses in existing legislation were noted for future discussion, but were not to be discussed in any detail at the event. Opportunities were provided for exploring improvements in planning or permitting approaches that can fulfill the regulations as they are currently set out, or other suggested strategies to improve coordination and communication among interested parties.

2.3 Outcomes

At the end of the workshop, it was anticipated that participants would:

- share a more complete understanding of the management intent for the M-KMA, and its unique planning and management regime;
- have a greater appreciation for the requirements of the mining industry for exploration and mining activity;
- have identified together a range of issues facing mining in the M-KMA and generated jointly potential solutions to these issues;
- have identified more significant policy or legislative issues for further consideration and investigation by the Mining Committee of the M-K Advisory Board;
- have generated potential strategies to disseminate outcomes from the workshop to their respective constituencies;
- have established one-to-one working relationships with representatives from communities and constituencies with interests in mining in the M-KMA.

2.4 Invitees

Invitations to the workshop were extended to representatives from the following groups and constituencies:

- M-K Advisory Board members;
- Provincial planning and regulatory agencies, including MEMPR, ILMB, MoE and MoFR;
- Mining Association of BC and AMEBC;
- Mining and exploration companies;
- Local government;
- Research institutions with a history of activity in the M-KMA;
- First Nations communities in and around the M-KMA;
- Local communities, including Toad River and others;
- Other tenure holders, such as Guide Outfitters;
- Conservation organizations;
- BC Trappers Association; and
- Tourism interests.

A list of registered participants with contact information was distributed to all attendees at the event and is included in Appendix 3 of this report.

3. Workshop Results: Opening Presentations & Plenary Discussion

3.1 Opening Comments

Workshop Chairperson, Bruce McKnight acknowledged that the workshop was being held in the territory of Treaty 8 First Nations, welcomed all participants to the workshop and also introduced:

- Janet Priestly, Assistant Deputy Clerk from the Fort St. John Mayors Office who welcomed all participants to Fort St. John; and,
- Tom Briggs, who welcomed all participants in his capacity as Vice Chair of the M-K Advisory Board, and stressed the importance of this opportunity to form relationships across disciplines and sectors.

3.2 Planning and Management of Activities in the M-KMA

The objective of this session was to provide all participants with a clear understanding of the origins of the M-KMA, its management intent, and to clarify how this context influences expectations regarding mineral exploration and development in the area.

3.2.1 *Presentation: Origins of the M-KMA*

The following presentation was delivered by Jim McGregor (Regional Director, Northern Region, ILMB), Jason Lawson (Planning Team Leader, Peace Region, ILMB), and, Wayne Sawchuk representing the M-K Advisory Board.

Origins of the M-KMA

- M-KMA formally established via special legislation in 1998, as product of the Fort St. John, Fort Nelson LRMPs. Expanded in 2001 to include Mackenzie LRMP.
- Mosaic of designations:
 - Protected areas (1.64 m ha);
 - Special Management Zones (3.63 m ha); and,
 - Wildland (no logging) zones (0.92 m ha).

Profile of the M-KMA

- Home to Kaska Dena and Treaty 8 First Nations
- 50 interconnected and unroaded watersheds
- One of the largest intact predator prey systems in North America
- Multiple land uses, including:
 - Guide outfitting;
 - Traditional hunting and gathering by First Nations;
 - Trapping;
 - Tenured and non-tenured recreation and tourism;
 - Oil and gas development;
 - Mining; and,
 - Forestry.

M-KMA Management Area

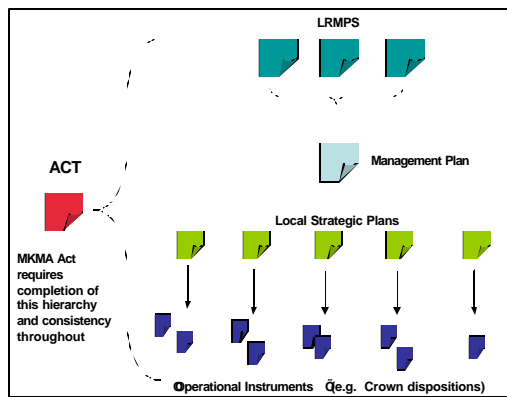
- One of a kind governance model includes:

- Act
- Management Plan
- Planning requirements
- Dedicated Trust Fund
- Advisory Board
- Heralded on national stage as “leading model of conservation biology in action” (NRTEE)

Intent of the M-KMA Act

- “...maintain in perpetuity the wilderness quality, and the diversity and abundance of wildlife and the ecosystems on which it depends while allowing resource development and use in parts of the M-KMA designated for those purposes.”

Planning Regime



Components	Existing Components for M-KMA
Statutes	M-KMA Act (1998)
Strategic Land Use Direction	Completed LRMPs (Fort Nelson, Fort St. John, Mackenzie)
Management Direction	M-K Management Plan (1997) = <i>A regulation under the Act</i>
Specific Management Direction by Sector	Local Strategic Plans: <ul style="list-style-type: none"> ▪ Park Management Plans ▪ Oil and Gas Pre Tenure Plans ▪ Landscape Unit Objectives ▪ Recreation Management Plan ▪ Wildlife Management Plan
Regulatory Framework	Various Statutory Decision-Makers for approvals of 'operational instruments' (e.g., licenses, tenures, permits, etc)
Operational Guidance	Best management practices, set out by regulatory agencies: <ul style="list-style-type: none"> ▪ Geophysical Guidelines ▪ Conflicting Tenures Guide

Planning Requirements

- Local Strategic Plans required:
 - Oil and Gas Pre Tenure Plans;

- Recreation Management Plan;
- Park Management Plans;
- Landscape Unit Objectives;
- Wildlife Management Plan.
- Some industrial activities do not require local strategic plans:
 - Geophysical exploration (this refers to oil and gas geophysical exploration which is considerably different from that utilized by mining);
 - Mining exploration

M-K Advisory Board

- Established under the *M-KMA Act* to advise on natural resource management in the M-KMA
- Mission:
 - *Provide respected and trusted advice that ensures the dynamic ecosystems, wilderness, wildlife and cultural diversity of the Muskwa-Kechika Management Area are maintained in perpetuity*
- Made up of individuals noted for their scientific, financial or community service experience and expertise
- Appointed by the Premier
- Not formal representatives for specific constituencies, but collectively reflective of the diversity of groups and individuals with interests in the M-K Management Area

M-K Trust Fund

- Established under the *M-KMA Act*
- Provides funding for projects recommended by the M-K Advisory Board
- Trustee approves Expenditures
- Past investments include:
 - Support for planning (e.g., pre tenure planning);
 - Inventory projects (e.g., fish)
 - Research initiatives (e.g., Stone's sheep, caribou, use of TEK)
 - Development of management decision-support tools (e.g., CEAMF, CAD)
 - Management projects (e.g., barrel clean up, trail maintenance)
- Trust Fund model being revised for 2006-2007 to meet GAAP

Recent Governance Changes

- New governance model developed by Board-Agency Task Group:
 - *Strategic Direction and Strategic Plan (2006-2015)*
 - *Business Plan (2006-2009; rolling document)*
 - *Annual Expenditure Plan Consistent hierarchy of goals and objectives links annual expenditures to strategic challenges and opportunities*
- Board Committee structure has been revised to deliver on specific programs in the Strategic Plan
- Also sets the stage for closer collaboration between agencies and the Board:
 - Includes proposed annual workshop to identify trends, clarify priorities, and scope out projects for each year

3.2.2 Questions and Discussion

Q: Why wasn't a requirement included for a local strategic plan for geophysical or mining activities at the time that the M-KMA was established?

A: At the time, it was thought that the impacts were too site specific to justify a regional planning approach such as a local strategic plan,

A: It should also be noted that the original M-K Act contained joint sign off by MoE and MEMPR for regulatory approvals. That section of the act became unenforceable when agency responsibilities were adjusted in 2001—this occurred throughout British Columbia, not just in the M-KMA.

Q Given that the requirement for joint sign off has been removed, could a more generic requirement for agency consent be inserted in the Act, rather than naming a specific ministry?

A: One of the reasons for this workshop is to explore how the M-K Board approaches issue such as this. It could be that more separate and unique responsibilities between ministries, with a collaborative approach rather than joint sign off would be more effective.

Q: Is there a best management practices manual for mining?

A: Not as such, but there is a (new) *Handbook for Mineral and Coal Exploration in BC*. This document attempts to guide how to operate in a results-based world. It focuses on good practices' rather than best practices, as techniques and approaches continue to evolve. This document will be available after Friday March 31st from the Ministry of Energy, Mines and Petroleum Resources website (www.gov.bc.ca/em).

Q: Are there guidelines around geophysical explorations in the M-KMA?

A: There are oil and gas geophysical exploration guidelines for the M-KMA that were created jointly by the M-K Advisory Board and the Oil and Gas Commission. No such guidelines exist for mining. It should also be noted that the geophysical exploration techniques employed are dramatically different for the two industries. Oil and Gas relies to a great extent on seismic surveys, which utilize heavy equipment on the landscape and can be intrusive. Mineral exploration geophysics relies more typically on hand-carried electrical and electromagnetic techniques as well as airborne surveys also used in oil and gas.

3.3 State of Mineral Exploration and Mining in BC

The objective of this session was to ensure all participants have a clear understanding of the state of the mining industry in BC, and current trends.

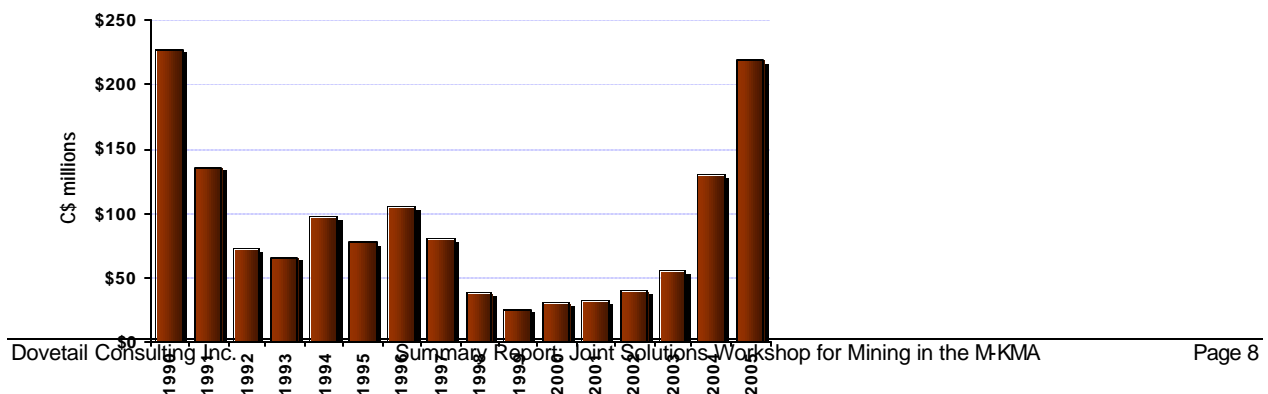
3.3.1 Presentation: Mineral Exploration in BC: Challenges and Opportunities

Dan Jepsen, President and CEO of the Association for Mineral Exploration British Columbia (AME BC; formerly BC Yukon Chamber of Mines) made the following Power Point presentation.

AME BC Overview

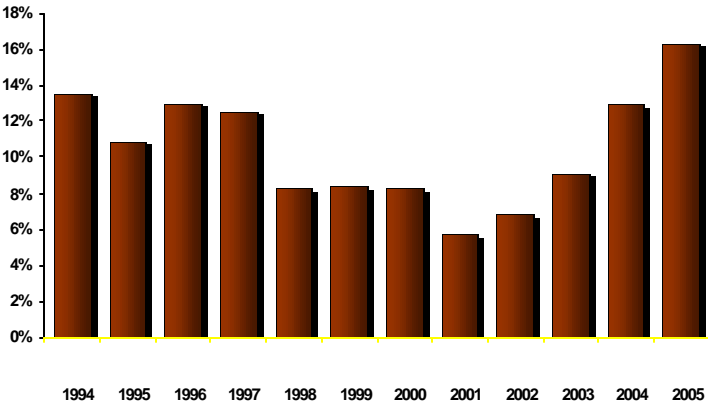
- Over 3,600 individual and 180 corporate members
- Formed in 1912 – 100th anniversary in 2012
- 27 Directors, 120 Volunteers serving on 13 committees
- Mineral Exploration Roundup – 5,400 participants in 2006

Exploration Expenditures in BC



Data Courtesy: NRCAN, BC Ministry of Energy, Mines and Petroleum Resources

BC's Percentage of Canadian Exploration Expenditures



Data Courtesy: NRCAN, BC Ministry of Energy, Mines and Petroleum Resources

Mineral Exploration and Mining

- BC has 650 exploration projects
- 18 mines in environmental assessment process
- Sustainability – Find new deposits / recycle, etc.
- Hidden resources – unlike forestry or tourism “The deposit is where it is – it can’t move.”
- Orphaned and abandoned mines – Britannia ARD
- Mobile industry (in terms of the capital not the resource) vs. forestry and others
- Embrace social license
- Need big area to look – small area to operate
- Very small footprint (28,000 ha in over 125 years)
- Relationships outside sector:
 - Council of Tourism Associations of BC, MABC, and AME BC MOU signed
 - Guide Outfitters Association of BC,
 - BC Trappers Association, MABC, and AME BC – MOU “in the works”
 - MOU with Coastal First Nations
- \$100-\$150 million annual investment in mineral exploration to find 1 new mine – only 1/2000th of prospects will lead to a new mine
- High wages – over \$94,700 in salary and benefits in 2005
- Rural vs. Urban Contributions – over 70% of BC’s export income originates outside BC’s major cities
- Mineral products account for 60% of BC rail and sea freight

Issues and Challenges

- Metal reserves at 25 year low
- In 10 years, if we do not find any new metal mines, there will be none in BC
- Greenfield Exploration
- Demographics: 40% of professionals plan to retire within 10 years – over 90,000 workers required within 10 years
- Perception is reality
- 10 year hang over – globally
- Land use and access – 2 zone vs. land use plans
- First Nations Treaties
- Over 100 land use designations
- Encouraging global interest in BC mineral exploration and mining – Fraser Institute Survey (BC has climbed from 44th of 47 jurisdictions in 2003 to 23rd of 64 in 2006)
- Complex permitting processes – 7 to 10 years

Opportunities

- Land Use process ending, not beginning
- Draft MOU with Coastal First Nations
- Mineral Titles Online
- World metal demand and high metal prices
- Increased confidence in BC
- Joint Solutions
- Treaties – Big Bang theory
- New Relationship with BC First Nations
- All countries have community and indigenous challenges
- 2 Zone – good legislation; needs clarity
- Government and public see the need for mineral exploration and mining
- Urban / Rural
 - Urban – Vancouver centre for financing
 - Rural – where mines and much of the employment will occur
- New mapping tools – plan link
- Commitment to explore unique solutions
- Global economy – must do it right
- Permitting Process Streamlined – 37% reduction in regulations

Workshop Outcomes

- This is not industry's effort to drive mineral exploration and mining agenda
- Encourage government, industry, First Nations, and stakeholders to work together on solutions for access and use
- Understanding issues and solutions – where we can work and what we have to do in the areas where mineral exploration and mining occur
- Increase understanding of everyone's needs, desires, issues, and thoughts

What it is

- Explore solutions
- Work together

- Increase understanding
- Ability to do it right

What it is Not

- Dismantle zoning
- Industry initiative to ignore or damage environment
- Industry opportunity to bypass environment and land use planning processes

3.3.2 Questions and Discussion

Following the presentation, participants discussed the statistical aspects of mining. It was emphasized that since only 1 in 2000 prospects result in a mine, the success rate is pretty low. In addition, the timeline for a return on investment is very long compared to oil and gas—this is due to a complex set of reasons, including both environmental and economic factors. Placed in the context of the M-KMA, it was suggested that the obstacles that need to be overcome in order for mining to occur are not much different from those found in the rest of the province.

3.4 Mineral Exploration Practices, Tools and Techniques & the Regulatory Regime

The objective of this session was to profile current practices, tools and techniques for mineral exploration, and highlight some of the emerging best practices.

3.4.1 Presentation: Permits and the Ministry of Energy, Mines and Petroleum Resources

Graeme McLaren from Ministry of Energy, Mines and Petroleum Resources explained that he had coordinated the joint solutions workshop in 2004. He also has a history of working in the M-KMA, and spent about 3 years working on the pre-tenure plans.

Introductory Comments

- We all share responsibility to mine and use the products of mining in a proper manner.
- Changes in science and technology have resulted in improvements that mean a lighter footprint from mining activities. For example, we can better assess slope stability. We are also better equipped to predict and deal with environmental issues.
- There have also been changes in how we deal with social issues. For example, there is more collaboration and consultation.
- The BC Mining Plan – contains 4 cornerstones:
 - reaching out to communities;
 - ensuring public and workers are safe;
 - competitiveness; and,
 - minimizing environmental footprint.
- Actions that can be taken to ensure that these cornerstones are upheld include things like participating in meetings such as this one—an example of reaching out to communities.
- The Ministry has moved to a performance based managing structure. Based on the *Mines Act* for BC and the *Health Safety and Reclamation Code of BC*, those who wish to engage in mineral exploration must go through the application and permitting process outlined below.

Notice of Work and Reclamation Program

- This is required if there will be mechanical disturbance of the ground. If this is not the case, it is not mandatory that a proponent apply, but it is recommended. We encourage companies to come and talk to us so that we know they are there.
- Interagency referrals also occur as well as First Nations consultation. There is a 30-day window for these activities before a Notice of Work permit is issued.
- Permit Conditions can include such things as safety and structural permits required for trenching or drilling.
- A Security Bond is also required, and this ensures that reclamation will be undertaken proportional in scope to the scale of the disturbance. Other authorizations may also be needed from Ministry of Forests and Range (MoFR) or Ministry of Environment (MoE) for the use of timber or water.

NE Mine Development Review Committee

- In NE British Columbia, the North East Mine Development Review Committee has been set up. This is an interagency committee that includes FN and other local interest groups.
- The Committee addresses mine projects that are an advanced exploration stage.

Closing Comments

- In this workshop there are a range of interests and issues in the room, all of which have an ‘interest’ in the M-KMA
- The end solution for all of us needs to be ‘balance.’

3.4.2 Presentation: Regulation and the Ministry of Environment

Nancy Wilkin, Assistant Deputy Minister– Ministry of Environment (MoE), offered her perspective on the M-KMA and the challenge for the workshop.

Opening Comments

- The MoE mandate says that BC must be a healthy naturally diverse environment with clean air, land and water and a natural diversity of species and ecosystems.
- The ministry regulates, partners, stewards and encourage best practices.

Legal Framework for MoE

The Legal framework for the Ministry of Environment includes the following Acts:

- *Environmental Management Act*;
- *Groundwater Protection Act*;
- *Water Act*;
- *Environment Assessment Act*;
- *Wildlife Act*;
- *Fisheries Act*;
- *Migratory Birds Convention Act*;
- *Wildlife Amendment Act* (gives authority over private land for species at risk);
- *Environment Land Use Act*;
- *Park Act*; and,
- *Species at Risk Act*.

The ministry has overall authority on the land base with respect to parks through the *Park Act* and *Environment Land Use Act*, and has shared jurisdiction for other Crown land.

Shared Stewardship

- The key message is about shared stewardship. The ministry will never be able to fulfill its mandate to protect environmental values by itself.
- In the results based management world, MoE sets standards at the front end, and undertakes monitoring and reporting at the back end. MoE depends on licensed qualified professionals (QPs) hired by industry to deliver many of the functions needed for environmental management. Partnerships are critical.
- There is a special *Act* for the M-KMA. In this workshop we need to figure out what this actually means in the Special Management Zones of the M-KMA where mineral exploration is allowed.
- It is always a challenge to be the best in terms of industry practices. The advantage of the M-K Advisory Board is that it is clearly multi-party.

3.4.3 Questions and Discussion

Species at Risk Act

Q: What are the implications of the Species at Risk Act (SARA) for the M-KMA, and is it the Provincial or Federal Government who enforces it?

A: The SARA coordination office currently has responsibility for three recovery plans: spotted owl, mountain caribou and marbled murrelet. Although it may appear that there are jurisdictional conflicts between the Federal and Provincial Governments in the enforcement of the SARA, there is in fact a bilateral agreement whereby the federal government must consult with province on SARA. If the Federal Government thinks that the Province is not adequately enforcing SARA to protect an endangered species, then the Federal Government can step in. The province needs to show that there is a recovery strategy and action plan.

Oil and Gas

Q: A workers handbook has been called for related to oil and gas tenure development. Who should develop this workbook and how is this different from that used with mineral exploration?

A: Companies needed to understand what the M-KMA is and what special requirements are in effect for this area. The Pre Tenure plans make it clear that it is each company's responsibility to educate their workers on the intent and special conditions of the M-KMA. It would be great to have a workers handbook, and there has been some discussion of a collaborative approach to develop such a document, but for now it is left to the responsibility of the company to find the information and disseminate it to their staff.

3.5 Key Topics for Mining in the M-KMA

The objective of this session was to identify key issues of concern and interest for all parties involved with mineral exploration and mining in the M-KMA.

Bruce McKnight offered a presentation summarizing key issues for mining elsewhere in BC that had been identified through a series of joint solutions workshops with industry and government in 2004. Participants were asked to form groups to review, refine, clarify and add to the above list. Table 1 summarized the revised list that emerged as a result of this exercise.

Table 1: Summary of Key Issues for Mining in the M-KMA

Topic Area	Specific Issues
Certainty/ Clarity	<ul style="list-style-type: none"> ▪ Access to land: <ul style="list-style-type: none"> - Road deactivation, access management - When is access justified? - Control of access—who, how and when? - Issues differ across seasons and landscape ▪ Access to information: <ul style="list-style-type: none"> - Complexity of land use plans, few user friendly information sources ▪ Two-zone system: <ul style="list-style-type: none"> - 'Mineral zone' not always clear or stable, concern that 2-zone system is rhetoric, SMZs seen as 'high risk' for investment, social license required ▪ Regulation and policies: <ul style="list-style-type: none"> - Inconsistent interpretation and application, uncertainty about what rules apply where, bonding prohibitively expensive, permit approvals complex and time consuming ▪ Results based regulatory framework: <ul style="list-style-type: none"> - Concern over current approach being replaced by excessive process, clarity over expectations for standards of performance is critical, clarity needed re responsibility of professionals ▪ Cumulative Impacts <ul style="list-style-type: none"> - Mining, Oil and Gas, Forestry and other land uses—macro and micro scales of impact - Whether considered concurrently or sequentially, impacts may differ—sequential development is not always a viable alternative. ▪ Managing mining in a wilderness context <ul style="list-style-type: none"> - Access Coordination—consideration of wildlife, commercial operators when doing surveys and using helicopters - Visuals - Deactivation—what are the thresholds for deactivation requirements for mine roads and power supply? - Adequate bonding
Social License	<ul style="list-style-type: none"> ▪ Social license to operate: <ul style="list-style-type: none"> - Recognized importance for longer term success, requires complex skills for industry ▪ Consultation requirements: <ul style="list-style-type: none"> - Clarity needed on who needs to consult and with who—for all involved - Ambiguity about when, how and how much - Needs to be balanced with confidentiality for industry ▪ Legal vs. social license: <ul style="list-style-type: none"> - First Nation consultation is government responsibility, not legally required for industry. However, government encourages industry to go to FN 'early and often'
Perception vs. Reality	<ul style="list-style-type: none"> ▪ "Where there is a lack of clarity, perception fills the gap" ▪ Industry perception of land use: <ul style="list-style-type: none"> - Concern that SMZs are 'off-limits' to industrial access - Insufficient effort to communicate 'realities' - Access different for different industries—makes for unfair comparisons - Pre-tenure planning work needed ▪ Public perception of mining: <ul style="list-style-type: none"> - Viewed as 'bad' or polluting by many, value not appreciated despite everyday use of mining products - No clear champion working to correct public misperceptions - Bonding—what is balance between expectations from public and industry? - Is public consultation adequate or not? ▪ Investor perceptions: <ul style="list-style-type: none"> - BC viewed as high risk jurisdiction with hostile government policies - Need for pro-active communication to counter this view within BC industry and to international colleagues
General	<ul style="list-style-type: none"> ▪ Limited government and First Nation capacity: <ul style="list-style-type: none"> - To support mineral exploration in BC, monitor activity, enforce environmental protection ▪ Financial incentives: <ul style="list-style-type: none"> - Favorable risk/reward balance needed to attract investors and to create incentives to meet expectations for social and environmental requirements ▪ Succession planning: <ul style="list-style-type: none"> - Recruitment into the mining industry constrained by negative perceptions and uncertainty over future of activity in BC ▪ Resource User Conflicts <ul style="list-style-type: none"> - Between tenure holders over competing use of the same land base ▪ Liaison <ul style="list-style-type: none"> - Needed between mining sector and other local tenure holders

3.6 Additional Presentations

3.6.1 Churchill Mine Reclamation

Garry Davies of Teck Cominco Ltd. made a presentation to the workshop about the voluntary reclamation of a mine in the M-KMA in partnership with Muskwa Kechika Advisory Board. Copies of this presentation—which includes many visual images of the reclamation process—are available from the M-K Information Office.

Teck Cominco and MSRM were presented with an award for this initiative. (See <http://www.teckcominco.com/sustainability/awards.htm>)

History

- Mining project permitted in '60s, closed in '72. Standards of the day did not call for much reclamation. At that time, it was accepted practice to tear buildings down, remove metal but leave the concrete in place.
- In mid 80s there was a failing of the tailing pond. MoE and Teck Cominco did a study and determined that it was not acid generating, and no action needed to be taken. The Security Bond was returned by government.
- It was determined by the government at the time that the access road—which was built by the company but partly funded by government under the 'Roads to Riches' program—was a 'public road.' As a result, the bridges were left in place. However, nobody took responsibility for the bridges, and over the years they became derelict.

Rationale for Reclamation

- Some safety concerns—particularly related to a 'grizzly' grill left in place.
- No *requirement* for reclamation by the company—as they no longer had any tenure or responsibility to do any further work.
- Decision by Teck Cominco to 'do the right thing,' nonetheless.
- As all permits had expired, the company had no legal right to bring machinery into the area, so therefore had to go through an extensive permitting process in order to conduct the rehabilitation.

Reclamation Planning Process

- From 1999 to 2004 a Multi-Agency Committee was formed including:
 - Ministry of Environment
 - Land and Water BC
 - DFO Ministry of Sustainable Resources
 - Ministry of Energy, Mines and Petroleum Resources

Permits Required

- MEMPR Reclamation Permit to allow work on Crown Land
- MoE and Land Water BC approval to allow construction of landfills on Crown land.
- Permit from MEMPR from MoE for landfills
- MoE permission to enter M-KMA (consistent with Access Management Area Regulation, under the Wildlife Act)
- DFO approval to allow for fording of the river and creeks with heavy equipment and to remove bridges
- Approval and Funding
 - Initial costs for the program were estimated to be \$300K, but a significant contingency was also built in. At the end it cost \$340K.

- Joint work plan approval by M-K Trust Fund program and Teck Cominco.
- Trust Fund provided matching funds on a 50/50 basis

Rehabilitation Approach

- Make the smallest footprint possible. Natural succession was fragile and could not be disturbed.
- Remove safety hazards
- Tailings were removed from the floodplain
- Some buildings were left as a refuge for hunters
- Improve roads and trails
- All the metal and tailings encapsulated in a concrete structure as a landfill
- Closed 5 Portals, pushed rubble 20 feet into the portals to seal them
- Removed bridges

Benefits

- Use of local and regional contractors as well as company heavy equipment
- Use of local business for re-supply
- Improvement to Wokkpash access corridor
- Improvements to viewsheds

3.6.2 COTA BC – AME BC Memorandum of Understanding

Petrus Rykes (Council of Tourism Associations of BC) and Dan Jepsen (AME BC) profiled the 2004 *Memorandum of Understanding* between the two organizations. The MOU was established as a means of creating understanding and as a conflict resolution policy, and includes provisions related to:

- Compensation for outfitters who are displaced from their tenures as a direct result of mining activities; and,
- Procedures for informing government about common concerns such as water and highway issues for the tourism, mining and forestry sectors.

Dan also reported that there are similar MOU process underway between AME BC/ Mining Association of BC and both the Trappers Association, and the Guide Outfitters Association of BC.

Petrus and Dan emphasized that the AME BC – COTA BC MOU creates an important avenue for communication, and enables relationship building. Dan suggested that the greatest impact from the MOU is the respect and trust that forms between different interest groups. The MOU also creates opportunities for dialogue and understanding, both on the ground and between administrations. Petrus noted that the MOU provides an excellent mechanism to work things out—“as solutions can only come after all parties have greater understanding about what people want.”

Both speakers explained that Government has limited capacity, and that solutions found outside governmental and the legal processes make it easier for BC to do its job. The speakers closed by urging participants, who belong to prospective signatory organizations for such MOUs, to encourage their leadership in moving forward on such initiatives.

4. Workshop Results: Case Study Analysis

The objective of this session was to investigate opportunities and barriers to exploration and mining activity in the M-KMA by creating a hypothetical example of a potentially attractive 'sedex' mineral deposit somewhere in the M-KMA. The case study included a complex mix of land use designations and management issues and participants were asked to investigate four exploration scenarios with different types/stages of development. For a detailed description of the Case Study see Appendix 1.

4.1 Description of Scenarios

Participants convened in a series of facilitated working groups to examine various scenarios of mineral exploration for the case study, as follows:

- Scenario 1: involving mapping, line cutting, geophysical surveys, geochemical surveys;
- Scenario 2: involving drilling and trenching (2a) and more extensive grid drilling activity (2b); and
- Scenario 3: involving bulk sampling and underground diamond drilling.

Further details of the scenarios are included in Appendix 2.

The objective of these sessions was to generate practical solutions to issues identified earlier (see Section 3.5, above) that can enable exploration and mining activity in the M-KMA while ensuring other resource values are respected and protected.

Each working group was asked to consider the following questions for a given scenario:

- Are agencies comfortable issuing permits for the proposed activity?
- Are other sectors and communities content with the permits and the conditions under which they have been approved?
- Does industry have sufficient confidence that permitting conditions are such that investment can be attracted to proceed with exploration and mining activity?
- If one or more of the above is not achieved, what are the problems and how can they be overcome?

4.2 Scenario 1: Results of Discussion

Scenario 1 involved mapping, line cutting, geophysical surveys, and geochemical surveys.

Additional Assumptions for Scenario 1

- Participants estimated that the scope of the work outlined would result in costs in the range of \$120 to \$300K.

Permitting

- Although no *Mines Act* permits or Notices of Works (NOW's) are required for the scope of work proposed, it was suggested that a permit would be required for any industrial use of the access route. Opinion varied on whether additional permits should be sought from MoFR for the tree cutting necessary for the helipads. It was suggested that under current regulations, written permission (a 'free use permit') must be obtained from MoFR for timber removal of up to 50 cubic meters in total.

Notice and Consultation

- All workshop participants agreed that early efforts should be made to notify affected First Nations, tenure holders, communities and others with interests in the area. This consultation could include letters, phone calls, and in some cases face-to-face discussions (particularly for First Nations, local guide outfitters, other tenure holders and communities).

- The intent of this early consultation would be to avoid ‘surprises,’ and to combat any rumours or misperceptions over the scale and intent of activity. Discussions with affected parties also serve as a source of information on values of concern in the area.
- In some cases, agreements aimed at mitigating impacts can be struck at this stage with other tenure holders, for example by adjusting the schedule of helicopter flights with local guide outfitters. It was noted however that these are ‘good faith agreements’ that cannot be legally enforced. Moreover, if such agreements are broken, even inadvertently, this can rapidly sour relations.
- Confidentiality was described as the limiting factor regarding the degree of engagement with other parties. Competition and the possibility of ring-staking is a concern, especially since the introduction of Mineral Titles on-line (internet-based claim staking), although it was pointed out that the proponent could preemptively stake the entire area and then selectively drop uninteresting portions after ground follow-up, before holding cost became onerous.

Identification of Values

- There was considerable concern about the identification of values that might be impacted from exploration activity, and questions were raised about sources of data that could guide exploration proponents in planning activities.
- In most cases, it was noted that MEMPR would likely know that activity had been proposed in a particular area, through informal communication with proponents. In the past, MEMPR would issue a referral to MoE in an effort to identify issues of concern related to this activity. The role of MoE has changed in recent years however, and the agency now has a focus primarily on setting standards and monitoring. As a result, this agency no longer has the capacity or time to handle referrals of this nature.
- Workshop participants discussed other potential sources of information on resource values in a given area that might be available for proponents, such as:
 - Integrated Land and Resource Registry;
 - Other information available through ‘Front Counter BC’;
 - Information from the lodge owner/guide outfitter and other tenure holders
 - Information that could perhaps be compiled by the M-K Advisory Board on current activity in the M-KMA;
 - Information on ‘hotspots’ in the M-KMA that could be compiled by MoE or others, to identify sensitive site level features (e.g., cultural sites) or areas of concern (e.g., ungulate winter range, calving areas, etc).
- Questions were raised about the degree to which CADs, or other technical information about wilderness values can be readily understood or interpreted, even if they were available.
- It was also suggested that the proponent could be required to retain the services of a professional biologist to examine some of this data. It was also suggested that this could include field assessments, although costs were of concern.
- Opinions varied on the responsibilities for compiling and maintaining this information, with suggestions including the M-K Advisory Board, or government agencies. There was agreement however, that readily accessible data is a key aspect of providing certainty for prospective proponents and investors. It was also noted that ambiguity over the nature of values in an area, or uncertainty over the implications of data sets (e.g., CAD) could easily undermine confidence for proponents.

Managing Impacts from Scenario 1

- Participants generally agreed that the most significant potential impacts from this particular scenario related to helicopter flights, particularly in light of the timing of the activity and possible impacts on lambing season for wildlife.
- It was suggested that these potential impacts could likely be identified through the early discussions and consultation with the local guide outfitters or other knowledgeable persons in the area, and addressed through adjustments in the timing, routing, or frequency of helicopter flights.

- The location for helicopter pads was also identified as a possible impact. Suggestions for addressing this included possible advice from guide outfitters or others, and/or the use of a professional biologist to advise on location of these pads in advance.
- Fuel storage was mentioned as a possible impact, but it was suggested that this was readily addressed through existing practices, assuming that storage was at the lodge.

Monitoring

- One of the working group suggested that some form of monitoring should be undertaken to verify that the activity was proceeding as planned and to identify any emerging issues of concern.

Certification

- One group suggested that the mining industry could explore the possibility of a certification scheme, similar to approaches used in the forest industry (e.g., FSC, SFI). Such certification could assist in encouraging best practices in areas such as the M-KMA.

Cumulative Impacts

- One group pointed out that the acceptability of the activity proposed under this scenario raises broader issues related the distribution and intensity of mining development in the M-KMA as a whole, or from other forms of industrial activity in this or adjacent areas. Cumulative impacts management is one possible approach to address this issue, although no such regime is yet in place in the M-KMA.
- These questions triggered a broader conversation regarding expectations for industrial activity in M-KMA special management zones at all, and the need for clear communication of the scope of actual opportunities for mining in this area.

4.3 Scenarios 2a and 2b: Results of Discussion

Scenario 2 involved drilling and trenching (2a) and more extensive grid drilling activity (2b).

Permitting

- Workshop participants agreed that additional permits would be required, and that agencies would be comfortable issuing the permits.
- In addition, bonding would be required. The amount of the bond would be determined by government officials based on a standardized calculation of projected remediation costs.
- Several participants suggested that the proponent should retain an RPBio, review available information, and contact local interests. The selection of the RPBio would be guided by preferences of the local communities—as a way of building trust.
- It was noted that all ministries have some responsibility to oversee the process, but that different agencies would become involved at different stages and for specific purposes. As the complexity of permits and referrals is unwieldy, it was suggested that it would be advantageous to establish a coordinated referral process.

Notice and Consultation

- Consultation would be a legal requirement for this level of exploration and would be outlined under the Notice of Work Permit. Some of the critical target groups for consultation include: First Nations; regional government; provincial government agencies, such as MEMPR, MoE, MoFR, ILMB; guide-outfitters; trappers; and, other local tenure holders.
- Proponents should be encouraged to contact local interests well in advance—not only in the 30 day window. This will help overcome capacity issues for First Nations who often cannot respond within 30 days.

- While consultation is necessary, it was suggested that accommodation may also be required, especially to counter the ‘not-in-my-backyard’ (NIMBY) effect. Given that the intent of the M-KMA is to have wilderness and wildlife remain in perpetuity, it was suggested that all parties would have to make concessions to achieve an appropriate balance.
- The consultation requirement is different in the M-KMA from other areas of Crown land. Several participants argued that a higher standard of management is required in the M-KMA.

Identification of Values

- All groups were concerned that there is as yet no single source of information on wilderness, wildlife or other values for the M-KMA.
- It was noted that MoE may no longer be in a position to address referrals. To respond to this concern, a set of guidelines has been prepared for prospective mineral exploration activities in the northeast. Some respondents argued that these guidelines are complex however, which creates a disincentive to prospective developers and investors.
- It was also suggested that AME BC might prepare an information package summarizing M-KMA values and Resource Management Zone (RMZ) direction for potential proponents. Front Counter BC was also put forward as a potential depository of information, although most groups identified the M-K Advisory Board as needing to have some role in the dissemination of information.
- It was suggested that part of the cost of development is baseline assessment and inventory work by the proponent—particularly in light of inventory availability in the M-KMA and the limited number of available government studies.
- Like the previous scenario, participants noted that components of the work are timed during critical seasons for wildlife. One potential source of accurate wildlife population and movement data was identified as the M-KMA CAD. Some participants noted that the CAD is a tool best equipped to address issues at the regional or landscape scale, that it is neither intended as a tool to predict where wildlife may be at any particular time, nor as a replacement for accurate site level data. Some participants argued that if species at risk are present in an area, then that area should be precluded from development. Others countered that this is not consistent with the management direction for Special Management Zones (SMZs) in the M-KMA.
- Scenic values would need to be considered at this stage as the tree removal and lights/noise would be more intrusive. Participants noted that unless the viewshed is legally recognized as a visual quality objective (VQO); the highest standard applied to forestry) then the proponent is simply required to do the best job it can. Within the M-KMA however, it is assumed that the proponent will make efforts to minimize visual impact, for example, by adjusting the location of the camp.

Managing Impacts

- In the M-KMA, vehicular access is managed under specific and restrictive provisions in the Access Management Area regulation. Participants noted that while conservation officers can undertake enforcement and compliance, gates or other forms of access control would be needed to prevent unauthorized use of the access road. There were mixed opinions regarding the effectiveness of gates.
- One group suggested that because the building of roads is not a capital expense for forestry (the cost gets taken off stumpage), forestry roads may tend to be more destructive. In mining, the removal of trees for road building is minimized because of the cost associated with it. As a result, mining roads are often “dog-legged”, winding around trees and following natural contours, which is less intrusive on the view shed or environment.
- Trench reclamation for most trenches would occur at the end of the work program, but final reclamation could take several years because proponents may want to keep some trenches and the access road available for further inspections or tests.

- Many groups suggested that adjustments in the timing of work provided a ready means to mitigate impact on other tenure holders and wildlife. Unfortunately, this potential solution has limitations as the proponents may only have a small window of opportunity for their activities, due to the availability of drill rigs. Winter drilling can also be a problem because of weather dependent logistics and waste removal during winter.
- Compensation for disruption of work for other tenure holders, such as guide outfitters might be considered at this stage.

'Show Stoppers'

- Several industry participants stressed that proponents must be able to identify issues that may be insurmountable. In particular, it was emphasized that proponents would want to know at the earliest stage of exploration whether a full scale mine would be allowed in a given area, should a viable deposit be found. In this context, considerable ambiguity still exists over the acceptability of mining in M-KMA—although it was recognized that there is no *guarantee* that mining can occur on Crown land elsewhere in BC. An opportunity to mine is guaranteed provided that the proponent follows all the rules and meets all the requirements. Greater understanding of such things as CAD core areas—which immediately flag to mine companies to stay away—would alleviate misunderstandings about acceptability.
- Similarly, clarity is also needed over possible restrictions for mining related to the Species at Risk Act—for example related to critical habitat for mountain caribou.

Certainty for Mining Exploration and Development

- Several groups suggested that the standing Mining Committee of the M-K Advisory Board could liaise with mining companies and provide information on the specifics of the M-KMA. Others pointed out that the M-K Advisory Board does not engage at the operational level, but instead focuses on advice related to strategic issues for the area.
- One group suggested that the M-K Advisory Board develop a local strategic plan for mining, similar to the pre-tenure plan prepared for oil and gas. It was suggested that expectations for the oil and gas industry are clearer as a result of the completion of this planning, and that the longer-standing relationship and history of dialogue between the M-K Advisory Board and the oil and gas industry have made it easier to operate in the M-KMA. Not having that for mining was recognized as a deterrent.
- It was also suggest that a MOU between the mining industry and parties in the M-KMA be created to clarify shared expectations, and in recognition that the likelihood of working inside M-KMA increases with relationship and trust. Participants did not come to a conclusion on which parties might be signatories to such an agreement. Overall, the need for information on the M-KMA to inform exploration and investments decisions was emphasized by all to be a key issue—whether delivered through a MOU, a local strategic plan, a committee of the M-K Advisory Board. Information needed includes such things as baseline environmental data, mapping of critical habitat, and any site specific restrictions.
- Many participants also pointed out decisions on the acceptability of an individual mine proposal cannot be considered in isolation from other impacts in the same region of the M-KMA. In that context, many participants suggested that strategic information about how much habitat can be impacted in a given area is needed, together with clarification of such thresholds and how they are established.

What is different in the M-KMA?

- Overall, it was agreed that some of the major differences between the M-KMA and other areas in BC are that increased consultation is required; wildlife plans must be in place prior to work; and that there are access restrictions on roads.
- In addition, the M-K Advisory Board provides a higher level of oversight because of its multi-party representation.

- Notwithstanding this, one participant pointed out that the actual odds of a prospect becoming a mine are not that different in the M-KMA than elsewhere in BC, and similarly that the risks are comparable in the M-KMA and other Crown land areas.

4.4 Scenario 3: Results of Discussion

Scenario 3 involved bulk sampling and underground diamond drilling.

Assumptions:

- Critical habitat issues were addressed in earlier stages.

Permitting

- Potential acid-generating rock issues were identified as the most significant issue for permitting at this stage. Participants agreed that not only would extensive baseline data be required, but there would be a significant bond requirement.
- Monitoring of activity was also raised as a concern. MoE/ MEMPR audits were suggested as one way to ensure compliance.

Notice and Consultation

- Due to the increased impact of scenario 3, participants suggested that there should be a requirement for the proponent to hold a public information session.
- All groups agreed that most issues that had not already been addressed in previous scenarios could be worked out through various agreements with other tenure holders, including possible compensation. Specifically, compensation may be required for any guide outfitters in the area who could lose a season as a result of the proponent's activities.

Managing Impacts

- Several groups identified waste rock and acid drainage as the most significant impact from this scenario. It was pointed out that one strategy for mitigating acid rock drainage was to take advantage of the natural geology, by mixing limestone into the layers of potentially acid generating waste rock as a buffer to cope with lower pH, by neutralizing the acid
- Other potential problems included visual impacts because of rock storage and the larger camp, and road access issues, due to increased traffic and permanent rather than removable bridges.
- One group noted that roads and excavations can be designed from the beginning so that they look more natural. This is advantageous for addressing both visual and reclamation issues. M-K Advisory Board members noted that as per the *Wilderness Definition* proposed by the Board, land disturbed by industrial activity should be returned to its pre-disturbance level of capability within a single human lifetime (75 yrs).
- Reclamation would be needed seasonally and at the termination of the work, and the reclamation strategy would need to be held in place with a bond. Several participants suggested that for progressive reclamation to be successful, a clear timeline for reclamation is needed, including site rehabilitation promptly at the conclusion of activity. It was noted that relationships with other interests in the M-KMA would be undermined if timelines and expectations were not met, thereby creating a legacy of concern.
- When considering cumulative effects, the rhetorical question was raised: "Is one development for 20 years with a footprint of 5000 ha too high a risk to the wilderness quality in the M-KMA?"
- As for the differences between the M-KMA and the rest of BC, participants identified a number of specific strategies that are needed, such as: access controls along the road corridor, flight path restrictions to minimize impacts on wildlife, marking of sites with less visually intrusive means, and efforts to achieve natural contouring during site reclamation.

5. Workshop Conclusions

5.1 Review of Joint Solutions

Bruce McKnight, Workshop Chair, and Julian Griggs, Workshop Facilitator, summarized the proposed solutions for mining in the M-KMA that had been identified by workshop participants through the case study exercise, as presented under the headings below.

5.1.1 Consultation/Communication

All of the parties at this workshop agree that one of the features that makes the M-KMA 'special' is the need for improved consultation and communication "early and often" with all those affected by mining exploration activities. While this is a voluntary rather than a formal requirement, participants generally agree that demonstrable efforts in this regard can help to overcome many of the potential barriers to mining in the area, and can also serve as a source of valuable local information for prospective proponents. Participants also highlighted that the legacy of past mining has left some negative impressions among communities and others in the M-KMA, that have yet to be overcome.

Some mining industry representatives have noted that further clarification is needed over the range of parties who should be consulted, and to what degree. Other workshop participants have countered however, that such information is readily available through contacts such as LRMP Coordinators, local Chambers of Commerce, agencies including MEMPR, and the M-KMA Information Office. As one participant put it, "In a community like the M-KMA where everyone know one another... there really is no excuse for not knowing who to consult."

Concerns were also raised over potential delays in approvals that might result from higher expectations regarding consultation. In particular, concerns were raised over any changes to the 30-day approval timeline. Some mining representatives also noted that it is as yet unclear which party—if any—would approve a proposed consultation plan.

Finally, it was also noted that consultation activities are not tax deductible for the mining industry. Changes in the relevant tax provision could create greater incentives for industry to engage in more extensive consultation programs.

5.1.2 Referrals

Ministry of Environment representatives have made it clear that the mandate of the agency has been focused on setting standards for activities, and monitoring. As a result, there is more limited capacity to handle referrals for proposed developments—including those for mineral exploration. To address this issue, a set of guidelines have been prepared in NE BC setting out suggested approaches for assessment of baseline conditions and for avoiding impacts to environmental values.

Some industry representatives have noted that these guidelines are complex, and that they demand significant technical knowledge in areas that often fall outside the skills sets of exploration proponents.

Workshop participants agreed that one potential solution to address this concern was greater reliance on Qualified Professionals, such as Registered Professional Biologists (RPBios). Depending on the scope of the exploration activity, an RPBio could be retained, it was suggested, to assist in the review of information about local conditions, and potentially in contacting local communities, First Nations and other tenure holders.

Another potential solution was to secure additional resources to support enhanced capacity within MoE to handle mining related referrals, for the M-KMA or for BC as a whole.

5.1.3 Information

Workshop participants agreed that information plays a critical role in ensuring that mining activity could continue in the M-KMA while ensuring that the intent of the M-KMA Act is fulfilled.

Some participants highlighted that valuable knowledge can be readily accessed through consultation with local First Nations, communities and other stakeholders. Some confidentiality issues may arise however, regarding the location of particular wildlife resources.

Additional sources of information on values in the M-KMA were also pointed out, including the Integrated Land Resource Registry² and information on rare, threatened and endangered species available from the Conservation Data Centre (CDC).³ The availability of information on other environmental 'hotspots' was also noted as being crucial for planning of industrial activity, for example critical habitat designated under the *Species at Risk Act*. In this context, the CAD was highlighted as being of significant potential value, although a number of participants pointed out that the data sets are not available at the present time, and that the significance of 'core' or 'connectivity areas' remains ambiguous. Ensuring that reliable and consistent information is available to proponents and regulators alike is a key concern. It was suggested that Front Counter BC could assist in addressing this concern.

As noted above, mining industry representatives questioned whether all exploration proponents should be expected to have the technical knowledge to access and interpret specialized data on values in the M-KMA. Moreover the costs involved in hiring RPBios or other qualified professionals to assist may be prohibitive for smaller exploration projects.

Questions remain over the scope, timing, costs and responsibilities for monitoring of local conditions in and around development project sites. Monitoring activities are also not tax deductible for industry.

5.1.4 Managing Impacts

The scenario exercise identified a number of potential impacts from the proposed exploration activities. Participants agreed that the majority of these impacts could be mitigated through strategies such as:

- Adjustments in the timing of activities, where possible;
- Adjustments in the location of activities—acknowledging that flexibility is limited for some aspects of an exploration program, such as drill sites;
- Adjusting access routes and usage, for example by minimizing air traffic and disturbance to wildlife, and through the location of work camps;
- Access control measures to prevent unauthorized use of new access routes, such as gates;
- Efforts to reduce light and noise in wilderness areas, and limiting the use of reflective or bright coloured marking materials;
- Avoidance of impacts to wildlife in the construction of trenches through creation of exit ramps; and,
- Adopting the highest standards for fuel storage and waste disposal for camps.

It was noted however, that not all impacts can be avoided and some participants suggested that a 'no net loss' approach could be adopted, through which some kind of offsets for habitat impacts would be contemplated. This idea was not discussed in any detail.

5.1.5 Reclamation and Security Bonds

Participants agreed that reclamation was a key issue of concern in the M-KMA, together with adequate security bonds to ensure that all sites can be reclaimed appropriately. M-K Advisory Board members noted that this issue is addressed in part in the Board's proposed *Wilderness Definition*.

² <http://srmwww.gov.bc.ca/irp/FAQ.html>

³ www.env.gov.bc.ca/cdc/

Agency staff informed the workshop that there is a standard approach adopted for determination of security bonds. This approach takes into account the costs likely to be incurred by the Crown to reclaim a site using contracted services.

Several participants noted that there is as yet no consistent monitoring in the M-KMA.

5.1.6 Compensation

Participants generally agreed that compensation is likely to be required for more advanced exploration programs, when the impacts on First Nations, communities, guide outfitters, or other tenure holders in the area is significant. Despite this, many questions remain over:

- The scale of compensation required;
- At what stage compensation should be required; and,
- Which parties should be compensated and on what basis.

For the particular case study considered, it was suggested that the guide outfitter would likely need to be compensated for impacts on his/her business under scenario 3 and possibly scenario 2, depending on the success of impact mitigation strategies. Individuals with traplines may also need to be compensated, although the level of compensation would be proportionately less than for the guide outfitter.

It was noted that MoE has completed a guidebook on coordinating tenures in the NE, entitled *A Practical Guide to effective Coordination of Resource Tenures*.⁴

5.1.7 Clarity of Vision for M-KMA

Participants acknowledged that overall, further effort is needed to establish clear expectations regarding the scope, distribution and intensity of acceptable industrial activity in the M-KMA. In particular, mining industry representatives asked for further clarification over what activities would need to be adjusted and in what manner in the M-KMA.

There is also a shared sense that the question of cumulative impacts has yet to be answered in the M-KMA, despite the work of the M-K Advisory Board to date. In particular, questions remain over the thresholds that might be applied to limit industrial activity, how such thresholds would be developed and applied, and who would manage such a management regime. This lead to the simple question: does the mining industry currently have the social license to operate in the M-KMA? Workshop participants generally believed that the industry does have such social license, but that given the legacy of past activities, and sensitivities regarding industrial activity in a wilderness context suggest, proponents must demonstrate best practices in working in this area and develop an early track record of success.

One participant compared the ambiguity over requirements in the M-KMA to the clarity that has been established over requirements under *Ecosystem Based Management* (EBM) for forestry on the coast. In that area, workers can be provided with simple information materials (a small wallet-sized card) summarizing what needs to be done.

It was also suggested that the M-K Advisory Board should consider the production of a video or print materials to communicate any special requirements for activity in the M-KMA. This could be in the form of a brochure aimed at particular target audiences, for example the mining sector.

Some participants suggested that a local strategic plan for mining in the M-KMA would be a simple and effective tool to clarify expectations on all sides.

⁴ Copies are available online from: <http://srmwww.gov.bc.ca/rmd/crt/index.htm>

5.1.8 Certification

Some participants suggested that the mining industry should consider certification to assist in building social license, strengthening the market niche for those companies who pursue it, and ensuring best practices are applied. Industry representatives noted that a number of mining companies are already ISO 9000 certified, or even ISO 14001 certified. Moreover, audits are none regularly in mine sites.

5.2 Reflections on Progress from Presenters

Presenters from the opening session were invited to offer their reflections on progress at the conclusion of the workshop, as summarized below

- *Dan Jepsen, AME BC:* Dan offered thanks for the opportunity to come to Treaty 8 territory and speak. He noted that “there is more common ground among the interests at the end of this workshop than at the outset.” He also stressed that the workshop had been valuable in terms of providing information on the vision for the M-KMA, and expressed his thanks to the Board for convening these discussions. In closing, Dan highlighted that Canada is a more desirable place for mining than it used to be, and that he was looking forward to future opportunities to work together.
- *Graeme McLaren, MEMPR:* Graeme encouraged participants to see this as first step towards a more open dialogue for future discussions. He stressed the questions, “What can we do together?” and “Why isn’t mining happening in the M-K?” He stressed the importance of collaboration in seeking answers to these questions in the future.
- *Jim McGregor, ILMB:* Jim joked that most of his knowledge of the M-KMA had previously been gleaned from Wayne Sawchuck’s interviews on CBC radio over the years! This workshop provided him with the opportunity to learn a lot more. Jim stressed that “we have all come a long way in trying to find some common ground,” and noted that this workshop was exceptional because everyone was open and did not hide their feelings. In closing, Jim proposed that the agencies ability to make information more available could be improved by bringing Front Counter BC into the CAD process, and by working closely with AME BC.
- *Tom Kearns, MEMPR:* Tom stressed that progress had been achieved by meeting as a community of diversified interests and engaging in dialogue. “Because we have begun to explore the issue of access, certainty over land use, wildlife concerns and other issues will eventually be established.” Tom noted that the greatest stumbling block appears to be the lack of information that is readily available about the M-KMA, and suggested that “we must find ways and means to get the information out to those who need it.” In closing, he indicated confidence that “the necessary answers would be found” through better communication, and a plan to share information more widely.

5.3 Closing Comments: Workshop Chair

Bruce McKnight thanked all of the workshop participants, M-K and workshop staff for their collective efforts in making this event a success. He highlighted that the main message from this workshop is that communication is the key to clarity and certainty about mining in the M-KMA. Bruce also noted that “it seems interesting that one of the apparent differences between the oil and gas industry and mining is that oil and gas would apparently like to put a fence around the M-KMA so that the M-KMA ideas about resource management don’t spread beyond the M-KMA borders, whereas the mining industry believes that ideas about exploration and development in the M-KMA will eventually spread out across all of BC as a model of best practices and industry should be prepared for them.” In closing, Bruce suggested that “it is now our challenge to make sure that we make what we have developed here work in practice.”

Bruce also explained that the results of the workshop will be reviewed by the Mining Committee of the M-K Advisory Board and that follow up actions would be considered, such as information materials to clarify expectations regarding mining in the M-KMA.