Fair Mining Practices

A New Mining Code for British Columbia

~ Chapter Summaries ~

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FAIRMINING COLLABORATIVE

Introduction

Focusing on positive solutions to complex mining issues, *Fair Mining Practices, A New Mining Code for British Columbia* is a compilation of innovative mining laws from around the world applied to the issues faced by First Nations and other communities in British Columbia.

A multi-purpose document, it is a valuable resource for communities whether they are developing mining and resource policies based on traditional laws and customs, negotiating with mining companies, grappling with the tide of internet claim-staking, or searching for solutions to the legacy of mines.

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This project began during a conversation over a cup of coffee. Since that initial conversation, *Fair Mining Practices: A New Mining Code for British Columbia* has taken on a life of its own, with help, input, and guidance generously provided by many.

The growth of *Fair Mining Practices* comes at a crucial time when many communities are grappling with how to develop resources in a way that will provide real long-term benefits that sustain communities, culture and nature.

Many communities affected by mining find that current mining laws and practices do not bring the promised benefits, nor reduce the impacts of extractive activities. This is particularly true for Indigenous peoples, whose traditional territories are commonly entered for mining purposes. The sheer size of modern mines, compared to relatively small local communities, can lead to an unbalanced relationship. The balance shifts further in favour of miners when mining laws promote the industry above all other interests – including those interests that have had the longest standing.

Many jurisdictions worldwide have enacted legislation that recognizes Indigenous peoples' rights and interests and incorporates long-term ecological health, strong social and cultural rights, and economic equity. *Fair Mining Practices: A New Mining Code for British Columbia*, provides an overview of innovative mining legislation from around the world, organized into solutions for many of the issues faced by communities.

The evaluation of 'best' practices is inherently a subjective decision, however guidance has been drawn from various leaders in the field, recognized for their strong respect of land, water, and the rights of Indigenous people.

We are grateful to the many people who have put their time and energy into creating, editing, and reviewing this document and for the privilege of working alongside communities courageously shaping their own visions of mining and land use.

We welcome your feedback.

Amy Crook

Executive Director, Fair Mining Collaborative

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Chapter Summaries

Summary of Chapter 1
Community Preparation Background Paper
Negotiation of Agreements

British Columbia is in the midst of a rush of mineral exploration and mining. Communities are challenged to respond in a way that minimizes impacts and maximizes benefits from resource development. One way that First Nations communities can engage is through agreements with proponents, the provincial government, and other First Nations. **Chapter 1: Negotiation of Agreements** discusses inter-governmental agreements between First Nations, access agreements, impact-benefit agreements and accommodation agreements, and provides examples of innovative laws from other jurisdictions that may inform First Nations' policy documents and BC mining laws.

Developing written protocols or agreements with neighbouring First Nations for coordinated negotiations on the industrial issues affecting adjacent, shared or overlapping territories may help prevent the use by third parties of a 'divide-and-conquer' approach to exploiting resources on First Nations' traditional territories.

Mineral exploration potentially infringes aboriginal rights and title, so common law requires consultation and, if necessary, accommodation with First Nations in whose traditional territories mineral exploration would occur. Other jurisdictions protect Indigenous rights and title through laws that require finalized agreements to be made between Indigenous communities and proponents before mineral exploration activities may commence. In BC, proponents should similarly be required to enter into access agreements with First Nations before engaging in such mineral explorations. Absent this requirement, many First Nations resource policies require finalized agreements and consent between Indigenous communities and the proponent before mineral exploration activities may begin on traditional territories.

BC law provides 30 days for First Nations to review an exploration permit application (called Notice of Work). This may not be adequate time to review the permit, especially where a community has received a number of Notice of Work applications. BC law should follow the lead of other jurisdictions and provide sufficient time for meaningful negotiations to occur.

Impact Benefit Agreements (**IBAs**, also referred to as Resource Agreements) may be negotiated to formalize relationships between First Nations and proponents, reduce the potential impacts of mines on and secure economic benefits of mines for First Nations, and serve as evidence of a First Nation's consent to a project. IBAs commonly include business and employment opportunities, community development program contributions and training and education programs.

While several other jurisdictions have enacted laws that promote the negotiation of IBAs, in BC, there are no legal obligations for a proponent to enter IBAs with affected First Nations. Other jurisdictions also have laws that recognise and encourage Indigenous people's right to financial

participation. Negotiation outcomes could be improved by enacting similar laws in BC, and by First Nation's including similar provisions in their resource policies.

Accommodation agreements are negotiated between a First Nation and the provincial government. In the Canadian mining context, "accommodation" often refers to the Crown's duty to address First Nations' concerns and reconcile conflicting interests. Although not required by law, many First Nation resource policies call for these agreements to be signed before the First Nation will consent to the proposed project.

Many First Nations' resource policies require that accommodation agreements contain the following minimum requirements:

- provisions of technical, legal and financial resources to participate effectively;
- financial and community benefits from the project;
- the procedure for First Nation peoples participation in the regulatory process; and
- the procedure for harmonizing the regulatory process with the Crown's duty to consult and accommodate.

Irrespective of what type of agreement a First Nation community contemplates entering into, there are important preliminary tasks that can help prepare for negotiations, including:

1. Gathering adequate information;
2. Developing negotiation strategies and identifying negotiators;
3. Signing negotiation protocols (including funding agreements); and
4. Determining minimum agreement content requirements.

These steps are discussed in depth in Chapter 1.

In conclusion, agreements are a powerful tool for ensuring development occurs in consideration of First Nations values and interests. BC mining law should include provisions that ensure agreements are entered into in advance of project development and mandate sufficient timeframes for fair negotiation. In addition, First Nations communities should develop resource plans, protocols and policies to better ensure mining activities are carried out in accordance with their interests and values. *Fair Mining Practices* is a resource to assist with achieving both these goals.

Summary of Chapter 2
Community Preparation Background Paper
First Nations' Resource Policies

Communities from around the world have formulated policies that assist in their responses to industrial activities within, and surrounding, their communities. For many First Nations in BC, resource development on their traditional territories is a major issue. **Chapter 2: First Nations' Resource Policies** discusses the contents of innovative resource policies developed by a number of First Nations to help assert more control over how resources are managed on their lands.

By establishing resource policies, First Nations can clearly inform proponents and other levels of government of their interests and expectations. For example, resource policies can set out appropriate consultation processes and terms and conditions to attach to exploration applications and mine permits. These policies can also guide First Nations' staff in the review of mining proposals and the protection of the traditional territory before and during mine operations.

First Nations' resource policies generally begin by specifying the objectives or purpose that a First Nation wants to achieve through its policy. Some commonly stated objectives are to promote collaborative decision-making, protect or minimize harm to the environment and provide social and economic benefits to First Nations communities.

Principles to guide decision-making by First Nations' governments are also often included in resource policies. These guiding principles are essentially standards to be applied when evaluating proposed resource developments. Below are examples of guiding principles from First Nations' resource policies:

- **Meaningful Consultation**: Resource policies often define what consultation means from a particular First Nation's perspective. Consultation may be defined broadly, for example, as a two-way dialogue that facilitates the exchange of information to assist in making fully informed decisions. It may also be given a very detailed definition that includes, for example, specific requirements regarding notice, funding to retain appropriate expertise, and full disclosure of the effects of the proposed project.
- **Consistency with First Nations' Land-use Plans:** Land-use plans are a tool First Nations can use to identify what parts of their traditional territories are necessary or suitable for different activities. First Nations who have a land-use plan can include guiding principles in resource policies requiring consideration of whether proposed projects are consistent with that plan.
- **Protection of Cultural Activities and Heritage:** Some resource policies include guiding principles to ensure social and cultural sustainability and protection of cultural heritage sites. For example, a policy may require that projects do not interfere with or create obstacles to the transmission of land-based culture and practices to future generations.

- **Environmental Stewardship:** Many First Nations' resource policies include environmental stewardship (sometimes called environmental sustainability) as a guiding principle. For example, the Ta'an Kwach'an Council *Lands and Resources Act* adopted the polluter pays principle, under which the proponent will not be released from its legal obligations until a First Nations land steward conducts a site visit, confirms compliance with all terms and conditions attached to resource licences and issues a letter of clearance.
- **Socio-Economic Benefits:** First Nations' resource policies commonly set out principles regarding social and economic benefits. These principles may be set out broadly, such as by requiring that any mining activity have a positive financial impact on the First Nation. They may also contain specific provisions, such as requiring that proponents conduct interviews at First Nations' community offices and schedule work rotations to allow employees to take part in traditional cultural practices. The social and economic benefits outlined in First Nations' resource policies are often divided into "Employment and Business Opportunities" and "Financial Benefits and Compensation".
- **Intergenerational Equity**: Similar to the principle of sustainability (below), this principle requires that the present generation not act in a way that jeopardizes the well-being of future generations. An intergenerational equity principle may include requiring scaling back the pace of development within a traditional territory to ensure that wealth associated from mineral extraction will be available for future generations, and establishing trusts to preserve capital paid under impact benefits agreements for the benefit of future generations.
- **Sustainability:** Rather than identifying different cultural, environmental, social, and economic principles, many First Nations' resource policies organize their guiding principles around the concept of sustainability. Sustainability involves consideration of economic, environmental and socio-cultural factors, such as the management of natural resources without compromising the needs of future generations, conservation of cultural and spiritual values and traditions, ecological conservation and restoration of damaged ecosystems.

Operational principles are also often found in First Nations' resource policies. These explain how First Nations' decision-making processes will be implemented. Many First Nations explicitly recognize the need to use traditional knowledge and incorporate it into planning, management and operational decisions in a manner acceptable to the community.

In conclusion, First Nations' resource policies provide a means by which First Nations can articulate and communicate their goals, values and decision-making processes to proponents and to other government agencies. These policies can also help clarify internal decision-making and information-sharing processes within a First Nations community.

Each resource policy will be unique to each First Nations community. These policies can serve to promote shared-decision making by First Nations on the management and development of land and resources within their traditional territories.

Summary of Chapter 3
Indigenous Rights, Consultation and Consent

In Canada, approximately 1,200 Indigenous communities are located within 200 km of mining activities. Around the world, mining activities are often carried out with little regard for, and in violation of, the rights of Indigenous peoples on whose traditional territories the mines are located.

Canada is a signatory of the International Covenant on Civil and Political Rights (ICCPR), the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the International Convention on the Elimination of All Forms of Racial Discrimination (ICERD), which recognize that Indigenous groups have vested rights owing to their historical possession and occupation of the land. Canada is also a signatory to the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), which enshrines the principle that Indigenous peoples have the right to participate meaningfully in decisions affecting them.

As a signatory to the ICCPR and the ICESCR, Canada is bound to respect the special relationship that Indigenous peoples have with the land they inhabit and to protect Indigenous peoples' rights to use their traditional land. As a signatory to UNDRIP, Canada has committed to recognizing First Nations' right to use, develop and control their traditional territories, obtaining their "free, prior and informed consent" before taking steps that may affect their rights or the use of their land and consulting with them in good faith.

Unfortunately, both BC and the federal government have failed to create a legislative regime to ensure the protection of these rights.

In BC, First Nations rights are sometimes enshrined in historic Crown-First Nations treaties and modern land claim agreements. These agreements span only a small area of the province, leaving the majority of BC's First Nations without control of their traditional territories. Lands not subject to a treaty are at greater risk of being exploited by logging, mining, and oil and gas interests as First Nations struggle, with limited financial resources, to regain control over their territories.

In addition to modern land claim agreements, First Nation communities seeking to protect their traditional territories may attempt to do so in the courts. Over the course of a number of cases, Canada has developed an extremely complex, costly and difficult common law test for recognizing and protecting Aboriginal rights and title. To bring a case in Canada seeking recognition of Aboriginal title can cost a First Nation tens of millions of dollars and take decades to conclude. Often, the Crown will raise dozens of technical issues and create significant delays, which result in further costs to the First Nation claiming the right.

It doesn't have to be this way. A number of countries, and even other provinces in Canada, have enacted legal provisions that explicitly protect several types of internationally recognised Indigenous rights. These provisions include recognizing and affirming Indigenous rights in mining

legislation, supporting the preservation and development of Indigenous culture, and protecting Indigenous peoples' rights to traditional use of land. Also, recognizing that traditional knowledge is an important method of promoting meaningful participation of Indigenous peoples in decision-making, a number of other jurisdictions have also made strong commitments to protect and promote Indigenous knowledge. These include granting equal weight to traditional and scientific knowledge, requiring the protection of Indigenous knowledge, protecting Indigenous languages and protecting the confidentiality of traditional knowledge. Additionally, innovative laws in other jurisdictions recognize Indigenous legal systems in legislation, consider Indigenous customary law in the exercise of legal functions and powers, recognise Indigenous people's right to self-governments, and provide funding to help Indigenous peoples develop their own mining regulatory programs. The right to a healthy environment is also recognized in a number of jurisdictions. Perhaps most importantly, Indigenous peoples' right to own and manage their traditional territories is recognized in Constitutions and laws around the world. BC needs similar laws.

Intertwined with the issues surrounding traditional territories is the Crown's duty to consult. Canada's courts have recognized that provincial and federal governments (the Crown) must act honourably in all dealings with Aboriginal peoples. Part of the honour of the Crown is the duty to consult with Aboriginal peoples and to address their concerns in decision-making processes. However, BC mining law does not explicitly provide a clear process for consultation.

Other jurisdictions have addressed uncertainties around consultation through innovative legislation that creates a clear process for consultation for decisions relating to mining activities, requires consultation as a perquisite for a mine permit, establishes a participatory decision making process and bases dispute resolution mechanisms on traditional legal systems and governance. BC could bring clarity to consultation requirements through similar laws.

The duty to accommodate flows directly from the duty to consult. Compensation, in the form of land or natural resource transfers, is one of the main approaches to accommodation. Unfortunately, the only persons who are currently entitled to compensation under BC's mining laws are landowners. BC's definition of "landowners" does not currently include First Nations with aboriginal title and there are no provisions explicitly providing compensation rights to First Nations.

Stronger legal provisions have been enacted in other jurisdictions to ensure that compensation is provided to Aboriginal peoples for disturbances caused by mining activities. These provisions include recognizing compensation as a form of accommodation, requiring compensation as a precondition for a mining permit, and requiring revenue sharing for resource development on traditional territories.

Finally, although the duty to consult and accommodate First Nations is required under Canada's laws and Constitution, their free, prior and informed consent is currently not required in advance of mining activities on traditional territories. Unlike Canada, numerous other jurisdictions require free, prior and informed consent. One way of showing that consent has been given is by negotiated agreements, a requirement in some jurisdictions. BC should adopt similar legal provisions.

In conclusion, Aboriginal rights in BC lag behind both legal precedent and international law. Canada has signed international treaties and declarations that recognise Indigenous peoples' rights to use traditional territories and to participate meaningfully in decisions affecting them. Canada's courts have found that the Crown owes Indigenous people a duty to consult and a duty to accommodate their interests regarding resource development on their traditional territories. However, these changes and commitments are not yet reflected in BC law. As discussed in Chapter 3, many other jurisdictions require consultation and free, prior and informed consent in advance of mining activities taking place on Indigenous territory, and have codified and protected Indigenous rights in their laws. By following this example, BC can clarify the process for consultation, accommodation, and free, prior and informed consent in the province.

Summary of Chapter 4
Mineral Tenure and Land Use Planning

In British Columbia, the provincial government grants sub-surface mineral rights through its 'free-entry' mineral tenure system, which places an unreasonably high value on mining activities. An outdated concept, free entry is governed by the *Mineral Tenure Act,* which has remained largely unchanged since 1859. The system fails to require notification to or consultation with First Nations, does not mandate consideration of regional and municipal land use plans, contains no provision to control the concentration of mining activities and cumulative impacts in a particular region, and does not adequately protect watersheds, cultural heritage, agricultural lands or parks. Under it, the government has no discretion to deny the issuance of a mineral lease to proponents.

A competitive bidding system to govern the issuance of mineral leases would encourage proponents competing for a mineral lease to present progressive plans for mineral development. Such a system would allow the government to retain some control over mineral resources so it can protect the public interest. A similar system for petroleum and natural gas production is in place under BC's *Petroleum and Natural Gas Act*.

Other jurisdictions go further, with innovative laws that allow for the conservation of minerals for future generations. Indigenous rights are accommodated in some jurisdictions through laws that recognize and affirm Indigenous rights in mining legislation, make mineral claims and leases conditional on obtaining Indigenous peoples' free, prior and informed consent, require notification to Indigenous people when conditional mineral claims are staked on their traditional territories and require shared decision-making with Indigenous people about mineral tenure.

Moreover, BC laws do not require landowner consent for proponents to enter land to conduct mining activities. BC lags behind Alberta, Newfoundland and Labrador, and New Brunswick in this regard.

Another major issue is the prioritization of mining over land use plans: BC's mineral tenure laws prevent the implementation of land use plans that appropriately recognize, protect and promote other valuable land use activities important to local communities. Many other jurisdictions employ land use plans to limit areas in which mining activities may occur. Such laws are found in Ontario, the Northwest Territories, the Yukon, the US, West Virginia, and Sweden. Some of these jurisdictions also require that land use plans be in place *before* new mining activities commence. BC should likewise restrict mining activities according to land use plan designations.

Land use plans currently exist for almost all regions in BC. However, many of these plans lack the necessary legal authority to control where mining activities take place. Land use plans with legal authority to prevent mining activities should be required before new mining activities are approved.

Moreover, while land use plans developed by First Nations must be *acknowledged* by the government when making decisions regarding First Nations traditional territories, they currently carry little legal weight. Thus, BC First Nations have limited opportunities to participate in land use and resource management plans to control mining activities on their traditional territories. BC should enact laws recognizing First Nations' right to designate no-go zones for mining activities. It should also involve First Nations in protected area designation, cite Aboriginal people's participation as an objective in land use planning legislation, empower First Nations boards and committees to carry out land use planning, and incorporate traditional knowledge into land use plans. These kinds of laws would strengthen BC's land use plans and make them an important and appropriate tool in deciding where mining should and should not be carried out.

Finally, BC's laws fail to adequately protect areas of cultural and historic significance, parks, protected areas, watersheds, important habitats, sensitive ecological areas, and alternative land uses, such as agriculture. BC should designate "no-go" zones around cultural sites to better balance the economic benefits of mining with cultural and environmental concerns, as well as other economically valuable uses.

Additionally, in BC, mining activities are allowed in many types of protected areas. Accordingly, BC's parks, protected areas, watersheds, important habitats and sensitive ecological areas are not adequately protected from mining activities. Many other jurisdictions prohibit mining activities in parks, drinking water source areas, important watercourses and wetlands, migratory bird sanctuaries, and ecologically sensitive areas. Finally, recognizing the importance of protected area networks, innovative laws in other jurisdictions have created continuous networks of protected areas in which mining activities are prohibited. By adopting laws like these, BC's "protected" areas would be truly protected from mining interests.

Further, agriculture is not explicitly recognized as an alternative land use that warrants the creation of a mineral reserve. Restricting mining activities on agricultural lands would enable BC to better balance the short term economic gains realised from mining with the long-term sustainable economic benefits of agriculture.

In conclusion, modernizing BC mining law could achieve a more equitable division of land use, with municipalities, First Nations and landowners all having greater input about where and how mining activities are undertaken.

Summary of Chapter 5
Mineral Prospecting and Exploration

British Columbia's recent boom in mineral prospecting and exploration has cast light on some of the deficiencies in BC mining law. **Chapter 5: Mineral Prospecting and Exploration** compares BC's current prospecting and exploration laws with laws from other jurisdictions in Canada and abroad, to highlight where BC should modernize and strengthen its legislation.

BC does not have any laws regulating the manner in which prospecting activities are conducted. Accordingly, prospecting occurs without any government guidance, direction or oversight. There is also no statutory requirement for the government or a proponent to notify or consult First Nations before prospecting occurs on their traditional territories or for miners to enter into access agreements with First Nations before prospecting activities may commence. Other jurisdictions have legislation that better protects Indigenous people's interests and the environment. These laws include requiring prospectors to obtain consent from Indigenous people before entering the land, requiring prospectors to take a cultural awareness program on issues related to Indigenous interests and requiring a signed agreement to respect Indigenous people's heritage. Other jurisdictions also mitigate environmental consequences of prospecting by attaching conditions to prospecting activities or requiring permits for prospecting activities. Introducing similar regulations for prospecting in BC would better protect First Nations' interests and the environment.

If a mineral deposit is discovered during prospecting, the next step is to explore that deposit further. In BC, exploration permits are required for many exploration activities and in most cases are obtained by submitting a Notice of Work application to the Ministry of Energy and Mines. The information currently required in a Notice of Work application is often insufficient for the government to make an informed decision about the potential social, cultural, economic and environmental consequences of the proposed exploration activities and the proponent's capacity to manage these potential consequences. In addition, First Nations often have very little time or resources to provide comments and recommendations in response to Notice of Work referrals.

BC should follow the example of jurisdictions with more stringent permitting processes and require proponents applying for exploration permits to include cultural heritage assessments, socio-economic benefits plans, environmental protection plans, closure and reclamation plans, and estimates of revenue and expenditures, as well as details of the miner's experience, and technical and financial resources.

Additionally, the Chief Inspector of Mines is empowered to exempt a proponent from having to obtain a permit for exploration activities. When this happens, there is no residual legal requirement to complete an environmental protection plan, which creates a gap in environmental protection planning. Unlike BC, other jurisdictions require an environmental protection plan for all exploration activities.

Once the province receives a Notice of Work application, it refers it to other affected government agencies and stakeholders, including First Nations. The legal basis for referring the Notice of Work to First Nations stems from the Crown's common law duty to consult and is not explicitly required by the relevant legislation. Furthermore, there are no provisions to ensure consultation occurs when a proponent is exempt from having to submit a Notice of Work application or requiring notifying the public about proposed exploration activities.

In most cases, First Nations and other stakeholders only have 30 days to comment on a Notice of Work application, which is often insufficient to evaluate the impact of the proposed exploration activities and to prepare a sufficient response.

After First Nations and other stakeholders have a cursory opportunity to comment on the Notice of Work Application, the government decides whether to grant an exploration permit. BC has no legislation specifying what factors the government must consider prior to issuing the permit. Thus, permits may be awarded irrespective of whether First Nations' consent has been obtained or whether the proponent has proven it has the ability and resources to meet its social and environmental obligations. Other jurisdictions require Indigenous people's consent prior to issuing an exploration permit. Decision makers in other jurisdictions must also consider input from other government agencies, and must consider specific factors, such as the proponent's financial resources, technical competence, track record, and plan for local employment. Requiring the BC government to consider these factors prior to issuing an exploration permit would strengthen and clarify the decision making process and help BC meet its duty to consult with First Nations.

The only way the public can challenge the issuance of a Free Miner Certificate or approval of a Notice of Work application is through a judicial review. BC should provide a legal process for challenging the issuance of prospecting and exploration permits.

Exploration permits are usually issued with certain attached conditions. However, the Chief Inspector has discretion to waive most of these. In BC, exploration permits do not require mandatory posting of security bonds, do not adequately protect cultural heritage resources, and do not adequately regulate environmental issues in exploration camps. Laws in other jurisdictions attach conditions to exploration permits that address these issues. Examples include mandatory posting of security for all exploration activities, and extending compensation to third parties, including Indigenous people. Also, laws in other jurisdictions require the proponent to immediately cease work and notify the local Indigenous community, as well as the government if a cultural site or object is discovered. Additionally, stronger measures to protect the environment are attached to permits in other jurisdictions, where laws require wider riparian setbacks, mandatory reporting of the discovery of uranium or thorium, suspension or relocation of vehicles in cases of road degradation, and installation of permanent erosion control structures on abandoned roads. Additional measures to protect the environment include requiring ongoing refuse management and site maintenance at exploration camps, and shorter time periods for the removal of the exploration camp.

Although drilling activities are regulated in BC, additional conditions attached to the exploration permit could substantially reduce the environmental impacts of drilling. Laws from other jurisdictions include bans on the use of harmful contaminants in drill fluids, more stringent requirements regarding the storage of fuel and lubricants, regulation of the management of drill fluids, requirements for the management of ground subsidence areas and regulations for drill hole abandonment. Some jurisdictions also require that drill cores be preserved, which could help avoid unnecessary repeat exploration, preservation of borehole logs, which can contain important information for regional groundwater aquifer mapping, and identification on exploration equipment, which allows inspectors to more easily identify proponents and enforce the terms of a permit or licence. Incorporating these provisions into BC law would substantially improve the effectiveness and enforcement of reclamation in areas disturbed by exploration activities

In conclusion, modernization of BC mining laws pertaining to mineral prospecting and exploration would help clarify the relationship between First Nations and prospectors and ensure better protection against the environmental impact of exploration activities.

Summary of Chapter 6
Environmental Assessment for Mining Activities

Described as the most widely used environmental management tool in the mineral sector, environmental assessments (EAs) are the process of identifying, evaluating and mitigating the biophysical, social, and other relevant effects of a proposed activity prior to deciding whether to authorize, require modifications, or reject it.

Mine projects in BC may be subject to EAs under both provincial and federal laws. **Chapter 6: Environmental Assessment for Mining Activities** provides a brief description of the federal EA regime and then focuses on BC's EA laws by comparing BC's current EA laws with legislation from other jurisdictions in Canada and abroad.

In BC, EAs of mining activities are generally conducted after the mineral exploration stage and before the mine development stage. In the first step of the process the proponent submits a project description to the Environmental Assessment Office (EAO). Next, the EAO Executive Director determines whether a project is a reviewable project. A project is reviewable if it falls within the threshold criteria set out in the *Reviewable Projects Regulation* or if the Executive Director designates a project as reviewable. Proponents may also ask to have a project reviewed.

Mines with an initial production capacity of under 75 000 tons per year are not required to undergo an EA before being permitted. They are also not required to undergo an EA if they increase in size by less than 750 hectares or 50% of the mine area. Thus, mines may incrementally expand into mines that exceed the 75,000 tonnes of ore per year without undergoing an EA. Moreover, certain classes of activity, such as mineral exploration, are excluded from the EA process.

Other jurisdictions require EAs for all mining activities and advanced mineral exploration, or have thresholds that reflect environmental, wildlife, and social values by considering factors beyond mere project size and capacity. Some also allow local governments, including Indigenous governments, to determine that projects should be subject to an EA or provide for public participation in the determination of whether a project is exempted from review. To ensure that BC's thresholds correlate to the potential environmental and social impacts of proposed mining activities, BC should similarly require EAs for all mining and advanced mineral exploration activities. At a minimum, BC should add thresholds to reflect environmental, wildlife and social values and provide for First Nations and public involvement in project designation.

The next step in the EA process is for the EAO Executive Director or Minister of Environment to determine the scope of the review, including its geographical scale, the information and analysis to be included, the issues and effects that will be considered and who will be consulted during the EA. Apart from a requirement to undergo public consultation, there are no legal requirements for the scope of an EA. Without prescribed minimum standards, important factors may not be consistently assessed across the province. Accordingly, BC should follow the example of other jurisdictions,

which have specific EA content requirements. Specifically, BC laws should require that all activities likely to be undertaken in relation to a proposed mining project are considered.

Also, BC laws should prescribe what information must be included in an EA. In particular, BC laws should require the following:

- Consideration of adequate baseline data. BC laws do not require baseline studies as part of the EA process or ensure the adequacy of baseline studies that are provided. Other jurisdictions prescribe minimum time periods over which baseline data must be collected, require that baseline data collected for individual EAs be included in a larger database, require baseline data to include socio-economic information and require that local communities and First Nations be engaged in the collection of baseline data.
- That information and analysis provided by proponents be unbiased. EAs in BC are largely founded on information and analysis provided by the proponent. BC law should require that qualified professionals prepare baseline studies and assessments to be used in EAs and that any gaps or uncertainties in data be disclosed.
- An alternatives analysis. The identification, analysis and consideration of potential alternatives to a proposed project are an important part of an EA. An alternatives analysis of proposed mining projects which considers alternative mining processes, facilities and locations, and land uses should be legally required in BC. The types of alternatives to be considered should be specified, including the alternative of not proceeding with the proposed mine. Other jurisdictions require specific information that must be provided for each alternative; establish standards for carrying out the alternatives analysis, consider impacts on Aboriginal people and wildlife resources, prohibit the justification of activities that harm the environment solely on economic bases; prohibit the use of public resources to pursue a particular alternative before a project is approved and require the provision of clear reasons for eliminating alternatives in the EA.

While public consultation is required in EAs in BC, public participation in the EA process is limited by lack of formal involvement mechanisms, lack of funds and lack of expertise. Laws in other jurisdictions encourage public participation by providing for public involvement in advisory committees, requiring the proponent to provide financial assistance to parties participating in EAs, requiring special or alternative notice provisions where individual accommodation is required, requiring EA reports to be written in clear language with a concise and non-technical summary, requiring that proponents' experts attend public meetings and hearings and requiring the recording and consideration of verbal comments.

The government's role in consulting First Nations in the EA process is informed by whether or not the First Nation has entered into a treaty. For treaty First Nations, if the treaty requires First Nations' consent, BC law prescribes that no reviewable project may proceed without that consent. For non-treaty First Nations (the vast majority in BC), the EA Act does not prescribe consultation requirements. Consultation is still required, however, pursuant to the government's constitutional

and common law duty to consult First Nations on matters that may affect their Aboriginal rights (see: ***Chapter 3: Indigenous Rights, Consultation and Consent***). Many First Nations and proponents have criticized BC's failure to legally formalize the process and scope of the consultation process. Due to lack of certainty in process, decision-making authority and resources, BC fails to ensure meaningful consultation. BC should develop a separate First Nations consultation protocol and agreements for EA review. It should also consult potentially affected First Nations at the beginning of the EA process, provide time extensions for EAs based on project complexity and First Nations' consultation needs and provide adequate financial assistance to First Nations for their meaningful participation. Funding should also be made available for traditional land use studies, translation services where needed, and capacity building.

Another important weakness in BC's EA process is its lack of an explicit purpose provision and guiding principles in the *Environmental Assessment Act* ("*EA Act*"). Many other jurisdictions have clearly defined and enforceable purpose provisions, as well as clearly defined and substantive decision-making criteria and guiding principles. Additional guidance may be provided to decision makers through laws that set clear legal standards for determining the significance of adverse effects and that define clear levels of EA review.

In addition to lacking legal guidance on which to base decisions, the Minister is not required to take into account the working group's recommendations, First Nations' positions, or public opinion. BC's former *EA Act*, and laws in other jurisdictions, require public comments to be taken into consideration when reviewing and issuing decisions on EA applications. Additionally, the Final Agreements signed with some First Nations require an agreement between First Nations and proponent as a pre-requisite for EA approval. Other jurisdictions require the involvement of concerned communities in significance determinations in EAs and consideration of traditional knowledge in decision-making. Making these considerations mandatory would make the BC's EA process more transparent, democratic and fair.

BC's EA law should also include requirements regarding the evaluation of a proposed project's effects. Currently, the EAO Director has broad discretion to order what potential effects will be considered in an EA. Provincial policy recommends that potential effects be assessed for their valued components, including social, heritage, health and economic components. This policy lists the types of project benefits that should be considered and the factors that should be analyzed in evaluating the significance of residual adverse effects after mitigation.

At minimum, BC law should require the assessment of direct and indirect effects, whether short-term use outweighs long-term effects, the impact of catastrophic events even where the probability of an occurrence is low, cultural effects, the effects of a proposed project on First Nations' traditional land uses, and the effects on species-at risk, biodiversity and species important to First Nations.

The assessment of cumulative effects is not required for provincial EAs. Rather, the EAO Executive Director has discretion to determine whether and how cumulative effects are assessed. While

provincial policy states that the EAO will consider cumulative impacts when evaluating projects and the impacts for valued components, where relevant, in practice, there has only been one project in BC where the EAO considered cumulative impacts that did not also undergo a federal EA. Further, the only guidance or methodology that the policy provides for determining whether the impacts are significant is that the relevance of the cumulative impacts is to be based on the extent to which past or proposed actions may combine with the project to make adverse impacts 'significant'.

Without an assessment of cumulative effects, the impacts of a project may be viewed in isolation from other activities and without consideration of whether project impacts can be adequately mitigated in the local region. Many other jurisdictions require that cumulative impacts be assessed, including assessment of the cumulative effects of different types of activities in the project area, assessment of cumulative socio-economic effects, and consideration of cumulative effects when determining the significance of effects.

BC's laws also lack sufficient guidance on environmental mitigation requirements. Defining what constitutes acceptable mitigation of adverse effects in the *EA Act* would help provide clarity. BC should also involve First Nations and local communities in developing appropriate mitigation measures.

The final stage of the EA process is when the Minister of Environment and Minister of Energy and Mines decide whether to approve the project by issuing it an Environmental Assessment Certificate (an "EA Certificate"). At the time of writing, only two mining projects have ever been denied an EA Certificate in BC (although projects are regularly withdrawn or terminated by the proponents).

Neither the EAO Executive Director nor the ministers are required to give reasons for their decisions or respond to the public's comments. This lack of transparency reduces public confidence. BC should enact laws similar to those in other jurisdictions which require the regulatory authority to provide reasons for its EA decision and written responses to comments submitted by the public and Aboriginal groups.

Once the EA Certificate is issued, the only way the public can appeal the decision is through a judicial review. Many jurisdictions have incorporated appeal mechanisms in their Environmental Assessment laws to permit members of the public to challenge the Environmental Assessment decisions. BC's *EA Act* should include a similar appeal mechanism.

A proponent can apply to the EAO for an amendment to an EA Certificate. However, public consultation requirements under BC law do not apply to applications to amend EA Certificates. Also, the legislation does not explicitly contemplate the right to amend an EA Certificate for environmental protection or adaptive management purposes or require amendment of an EA Certificate if research or monitoring determines that impacts are greater than anticipated, or that additional mitigation or other measures are required. Other jurisdictions provide for participation by the public and Aboriginal groups in applications for major amendments. BC law should also

require that the EA Certificate be reviewed regularly and encourage adaptive management in decision-making and through research and development.

An EA Certificate is issued with attached conditions and commitments, which set out a proponent's legal obligations under an EA. Conditions address procedural issues common to every project whereas commitments are intended to address project-specific issues raised in the EA. There are no legal requirements guiding proponents in developing these commitments.

Enforcement of conditions and commitments occurs through monitoring, evaluation, management and communications. Although BC law provides some recourse for non-compliance, it fails to require the necessary follow-up plans and actions to identify those incidents. Accordingly, BC's EA laws should require monitoring plans for all potential adverse effects, monitoring of actual effects and comparison of actual and predicted effects, follow-up programs and periodic investigations to assess compliance. Further, BC should promote the participation by First Nations in such follow-up activities.

Finally, BC's current EA model does not adequately evaluate long-term risks and benefits associated with projects and ignores broader issues, such as society's need for the project and whether minerals might be better left for use by future generations. One potential solution is the "sustainability assessment" model, which attempts to balance current needs with the needs of future generations. The sustainability assessment model moves away from merely determining the likelihood of significant adverse effects to the use of an evaluation matrix that compares predicted beneficial results of a project with likely negative effects.

Summary of Chapter 7
Permits for Mine Development and Operation

The mine permit phase is the fourth phase in the mine licensing process, following staking, exploration and environmental assessment (if required). **Chapter 7: Permits for Mine Development and Operations** considers the legal requirements associated with the application for and issuance of a mine permit in BC and identifies laws from other jurisdictions which, if adopted in BC, would strengthen BC's mining regime.

A mine permit is the document that gives a proponent rights to use the land to extract minerals. In BC, mine permits are usually required for surface or underground development or production, major expansions or modifications to existing producing mines and underground exploration requiring excavation, large pilot projects, bulk samples, trial cargos or test shipments. Generally, mine permits are required for all projects, including those that fall below EA thresholds. Thus, they provide an extra layer of public consultation and government oversight of mine projects.

However, the Chief Inspector of Mines has the power to exempt even large-scale mines from the requirement to obtain a mine permit where he or she deems it justifiable based on the "nature of the proposed work". There are no specific legal requirements to guide the Chief Inspector in making this decision. In contrast, other jurisdictions require permits for all large-scale mines.

Proponents are required to include specific information in a mine permit application, including a regional map, information on present use and condition of the land and watercourses, a mine plan, a plan for environmental protection of land and watercourses during the construction and operation phases, a commitment to annually report on reclamation and environmental monitoring, reclamation plans and an estimate of the total expected costs of outstanding reclamation obligations. The regulatory authority may tailor the mine permit application content requirements in order to avoid duplicate submissions. As detailed engineering and design information is generally not provided at the environmental assessment stage, authorities will generally focus their attention on this information at the mine permit stage.

However, additional information is needed for the government to make an informed decision about potential social, cultural, economic and environmental consequences of the proposed mine. Other jurisdictions require that mine permit applications include information on baseline data collected over a minimum time period, descriptions of land-use productivity, a plan for promoting local employment and business opportunities, details on the proponent's technical and financial resources and information on proponent's past mining practices and compliance history.

Proponents are not required to pay an application fee when submitting a mine permit application. Numerous other jurisdictions legally require mine permit application fees. BC should charge application fees that are based on the scale and complexity of the proposed mine to account for the different government resources required to review more complex applications.

Once the ministry receives the mine permit application, the Chief Inspector may refer the application either to various advisory committees, such as a Regional Mine Development Review Committee ("RMDRC"), or to other government agencies for review. BC's laws should require that other government agencies whose statutory interests may be affected by a proposed mining operation be notified of mine permit applications and recommendations made by other government agencies be included as mine permit conditions. Finally, approval should be required from other government bodies responsible for environmental protection.

While provincial policy requires consultation with First Nations, it is not explicitly required under BC's mining laws. Further, while BC provincial policy states that the public has opportunities to influence mine permitting decisions by participating in public meetings, open houses and other public forums, as well as by submitting comments during the public comment period, there is no guarantee that the public will be notified of a mine permit application or that public opinion will affect the Chief Inspector's decision about whether or not to issue a mine permit. BC law should require notification and consultation with First Nations on mine permit applications. It should also require public notification of mine permit applications, public information sessions during the government's review of mine permit applications and funding for public participation in mine permit application reviews. BC should also establish legal criteria for use of public comments.

The Chief Inspector of Mines has broad discretion to approve a mine permit application where he or she "considers the application for a permit is satisfactory". The Minister of Energy and Mines may approve a mine permit application where he or she "considers it to be necessary in the public interest". In assessing whether a permit is "satisfactory", the Chief Inspector must ensure that certain, limited criteria are met, such as design standards for major impoundments, major dumps, tailings impoundments, water management facilities and plans for the prediction and mitigation of acid rock drainage.

If the Chief Inspector refers the application to a RMDRC, the RMDRC reviews the mine permit application, provides government agencies with a statutory interest in mine development proposals 60 days to review the application and makes a recommendation to the Chief Inspector as to whether or not the mine permit should be granted.

When deciding whether to grant the mine permit, the Chief Inspector must take into consideration written representations submitted by affected or interested persons, recommendations from the RMDRC and any written representations from other government ministries and agencies. However, BC laws do not specify which factors must be taken into account whether to issue the permit and what factors will necessarily lead to a denial of the mine permit application.

Other jurisdictions require consideration of the interests of Indigenous peoples, consideration of whether mine plans comply with existing land use plans, the nature of the mineral reserve, cumulative effects, consideration and evaluation of post-mining uses of mine-related facilities, the proponent's past mining practices and history of compliance, and the proponent's ability to meet legal requirements.

Some other jurisdictions also specify factors that would automatically lead to a denial of the mine permit application, for example where lands are unsuitable for mining, where cumulative impacts are not sufficiently mitigated, if site reclamation is unfeasible, if the proponent has previous convictions or does not have a local office. Other jurisdictions also require independent environmental studies and site inspections during reviews of mine permit applications. Incorporating similar provisions into BC law would ensure that factors important to First Nations and British Columbians are given precedence in the decision making process.

A decision by the Chief Inspector does not need to be accompanied by written reasons and is not subject to appeal (apart from by judicial review), which makes it difficult for the public, First Nations, landowners or the proponent to challenge the issuance or denial of mine permit applications. Other jurisdictions require reasons for decisions and provide a statutory right of appeal.

The Chief Inspector of Mines has broad powers to impose mine permit conditions, which can help fill legislative gaps and promote more responsible mining practices. However, the only condition required under BC law is the requirement to file reclamation security, which the Chief Inspector has the discretion to exclude. Mandated minimum permit conditions would help ensure greater consistency and certainty of local community protection from mining activities across the province. Specific conditions required by other jurisdictions include conditions specified by other government agencies, recognition of Indigenous peoples' constitutional rights, the publication of annual environmental, socio-economic and cultural monitoring reports an annual fee requirement and a specific term for which the mine permit remains valid.

Mines generally have lifespans of several decades, during which time mine site conditions often change. In BC, if a proponent wishes to have its mine permit conditions revised, it must apply to the Chief Inspector. BC's laws do not provide sufficient details on when a mine permit amendment must be sought, the factors that the Chief Inspector must consider in evaluating the application, or the extent of consultation. Other jurisdictions have laws that clearly specify that mine permit conditions must be amended to reflect material changes, such as mine expansion. This provision should be coupled with a requirement that companies provide notice of material changes to the regulatory authority, as is required under Ontario legislation. Also, in other jurisdictions, the regulatory authority can amend a mine permit for environmental reasons. If a mine permit is amended, other jurisdictions legally require public consultation and that the regulatory authority consider whether reclamation is feasible. In order to properly manage mines over their operational life, BC should include similar provisions in its mining law.

In dealing with mine permit renewal applications, the Chief Inspector has broad powers to impose changes on existing conditions, including mine permit terms. BC laws do not specify what the Chief Inspector must consider in deciding whether or not to approve a mine permit renewal. Other jurisdictions have laws that require the regulatory authority to consider specific conditions, including the proponent's past performance. Additionally, other jurisdictions have established

deadlines for submitting mine permit renewal applications and require an application fee for mine permit renewals.

Changes in mine ownership are common in the mining industry. It is imperative that successive owners and operators are bound by the same obligations as the original proponent, including permit conditions and agreements entered into with First Nations. BC's mine permit transfer application process does not require new proponents to provide sufficient information, specify what factors the Chief Inspector must consider in evaluating applications for mine permit transfers or hold new owners and operators legally responsible for newly acquired mining operations. Other jurisdictions address these issues with laws that require new owners to submit a plan for continued mining activities and proof of capacity to carry it out, deny transfers of mine permits if the transfer is not in the public interest, require new mine owners to assume all existing liabilities upon transfer of the mine permit and require an application fee for mine permit transfers.

Summary of Chapter 8
Compliance & Enforcement in the Mineral Sector

In the 1980s, a study of environmental law in Canada showed that although legislative and regulatory measures were satisfactory in principle, enforcement efforts had been inconsistent and inadequate in practice. This problem was coined the "implementation gap". Thirty years later, the same problem still exists. As discussed in **Chapter 8: Compliance and Enforcement in the Mining Sector**, legal provisions exist to support strong law enforcement at mines in BC. The problem lies in practical implementation, or lack of implementation, of these laws. Accordingly, this chapter reviews the existing enforcement regime for mining activities in BC, discusses key issues facing the enforcement of environmental laws at mines in BC and suggests ways to improve enforcement at mine sites and protection of local communities and ecosystems from mining activities based on model laws from other jurisdictions.

In BC, mine proponents must comply with commitments and obligations under an Environmental Assessment Certificate, provincial mining legislation and mine permit conditions, provincial and federal environmental legislation and licences issued thereunder, and legal obligations and licences issued under other legislation (e.g. forestry, transportation, right-of-ways, etc.).

Under British Columbia's *Environmental Assessment Act*, the regulatory authority is granted broad powers to inspect any works or activities connected with a reviewable project. However, despite having powers to implement strong sanctions for non-compliance, the EAO has been criticized for failing to enforce EA commitments and conditions

Compliance provisions are provided under both the provincial *Mineral Tenure Act* and *Mines Act*. Additionally, legal provisions under BC's *Mines Act* empower inspectors to inspect mines. Under the *Mineral Tenure Act,* if a proponent contravenes the *Mineral Tenure Act*, *Criminal Code*, *Heritage Conservation Act*, *Mines Act* or associated regulations, BC's Chief Gold Commissioner is empowered to order the proponent to come into compliance within a specified period of time, suspend the proponent's Free Miner Certificate (FMC) suspend any exploration or mineral development or production until the proponent complies and cancel a mineral claim if the proponent deliberately fails to comply with orders or other legal requirements.

Failure to comply with the *Mines Act*, regulations, the Health, Safety and Reclamation Code (HSR Code), or orders made under these instruments, constitutes an offence, for which, upon conviction, a proponent may be given a fine up to $100,000, imprisoned for up to one year, or sentenced to a fine and imprisonment.

Under the *Environmental Management Act*, the Conservation Officer Service (COS), the enforcement arm of the Ministry of Environment, is given broad powers to conduct inspections and investigations. COS's enforcement powers at mines are relatively restricted, although it is

empowered to issue a remediation order when asked to do so by the Chief Inspector or where the land or water use is "*formally changed*" from that approved under the mine permit.

Various offences that may occur at mine sites are also listed under the *Water Act.* Under the *Water Act*, the maximum sentences for proponents who commit non-continuing offences are a maximum fine of $200,000, maximum imprisonment of 6 months, or both, and for continuing offences a maximum fine of $200,000 for each day the offence continues, maximum imprisonment of 6 months, or both. The *Water Act* also lists high-penalty offences, for which the penalty includes increased fines (maximum of $1 million) and lengthier imprisonment terms (maximum one year).

Under the federal *Fisheries Act*, inspectors have broad powers to conduct inspections, examine and sample substances and products, and conduct tests and measurements. Offences under the *Fisheries Act* include both summary and indictable offences.

The *Canadian Environmental Projection Act* (CEPA) governs a number of toxic substances that may be used or produced at mines in BC. Enforcement officers are granted broad powers to inspect any place where toxic substances are located. Enforcement officers may issue an order requiring proponents to refrain from doing a contravening action, stopping or shutting down an activity, unloading or reloading the contents of any conveyance and taking other measures he or she considers necessary to facilitate compliance or restore or protect the components of the environment damaged or put at risk by the alleged contravention. CEPA also permits any adult Canadian to request that the government investigate an alleged offence.

BC's regulatory authorities are granted broad discretion in implementing environmental and social protection measures, which can allow for inconsistent application of the law. Also, where there are no minimum legal requirements, the regulatory authority may simply decide not to enforce laws relating to environmental and social protection. For example, neither the *Environmental Management Act* nor the *Mines Act* requires an independent body to ensure compliance throughout the various stages of the lifecycle of a mine. The *Mines Act* merely provides that an inspector *may at any time* inspect a mine. Other jurisdictions provide more direction to the regulatory authority, with laws that require inspections at all stages of the mining life cycle and at designated frequencies and establish sentencing for environmental offences.

There has been an increasing trend towards replacing actual intervention with voluntary compliance and technical advice. The failings of this approach have been widely recognized. In BC, the Chief Inspector is not required to include specific information in annual compliance reports. Public disclosure of the identities of violators has been recognized as a powerful deterrent to non-compliance. Accordingly, other jurisdictions have enacted laws that require the disclosure of monitoring reports, compliance results and offences to the public. Some jurisdictions have also enacted legal provisions that grant individuals the right to request or initiate public investigation of alleged offences and grant enforcement powers to the public and local communities. In addition, other jurisdictions have laws that grant standing to members of the public to sue for environmental harm caused by mining activities, involve Indigenous people in proponent compliance and

enforcement and grant enforcement powers to local government and enforcement officials. BC should enact similar laws that allow First Nations, interest groups, and members of the public to contribute to the enforcement of environmental law.

One of the greatest challenges to effective enforcement is the lack of government capacity and availability of resources. Over the past decade, provincial and federal government departments responsible for enforcement at mines have suffered from severe budget cuts, which has resulted in a reduced workforce, a significant reduction in the number of site inspections and prosecutions and a deterioration of the protection of local communities. Other jurisdictions address capacity issues through laws that charge fees to recover inspection and administrative costs associated with issuing orders and allow recovery of enforcement and remediation costs from proponents.

To address jurisdictional issues regarding the enforcement of environmental laws, the federal and provincial governments have established a harmonization process for inspection and enforcement of environmental protection laws. For example, under Canada's amended *Fisheries Act,* the federal and provincial governments can enter into agreements to download responsibility for administration and enforcement to the Province. These agreements increase the burden on already resource-poor provincial regulators, permit governments to effectively abandon the field, risk the possibility that neither level of government will assume responsibility and risk a bias where one level of government is benefiting financially from a project. Other jurisdictions address these issues by appointing an independent monitoring and enforcement agency for mining activities, prohibiting persons with conflicts of interest from carrying out mine inspections and creating a specialized court to rule on environmental matters. Enforcement activities could also be co-ordinated through the provincial inter-agency compliance and enforcement committee, which BC's Environmental Assessment Office recently joined.

Although proponents in BC may face penalties for disobeying the law, those penalties do not always reflect damage caused by the offence. Nor do the sentences necessarily require the proponent to pay for remediation. Laws in other jurisdictions expand liability to hold proponents financially responsible for damage they cause to Indigenous knowledge systems, local economies and livelihoods, and biological diversity. Recognizing that consultants hired by proponents to complete environmental assessments need to be held accountable, other jurisdictions have extended liability to consultants completing environmental assessments. Other jurisdictions also empower the courts to order that proponents post security, provide for cancellation of mineral tenure for continued non-compliance, prohibit offenders from applying for new licences, subject mining companies to profit stripping, legislate heavier penalties for repeat offenders, encourage creative sentencing provisions, establish long or indefinite limitation periods for commencing an action and replace strict liability offences with absolute liability offences for mining activities.

Summary of Chapter 9
Mine Closure and Post Closure

Historically, closed mines were simply abandoned, leading to widespread and toxic contamination of local ecosystems. Today, mine closure has become an integral part of the planning process *before* mining activities begin. **Chapter 9: Mine Closure and Post Closure** discusses BC's laws related to mine closure and post closure and compares them with innovative legislation from other jurisdictions.

To help set acceptable reclamation objectives, identify methods of achieving these objectives and develop a cost estimate as a basis for mine reclamation security, BC requires mines to create and file both short-term operational plans detailing reclamation over the upcoming five years and long-term conceptual final remediation plans for mine closure. Some contents of the conceptual final remediation plans are legally required while others are only encouraged under provincial policy.

However, the requirement for and content of closure plans in BC is subject to the Chief Inspector's significant discretion. In addition, there are inadequate legal requirements to promote transparent and consistent closure plan reviews, revisions, and amendments. There are no mandatory legal requirements to have closure plan reviewed by interested parties or that any such recommendations made actually be adopted.

To help ensure that important content is included in all closure plans, plans meet set standards, and the potential for adverse effects is considered in advance and thereby minimized at closure, BC should incorporate mine closure policy requirements into law.

To promote consistent and adequate reviews of closure plans, other jurisdictions require consultation with First Nations on the content of closure plans, require that closure plans be made available to the public, involve local communities in review of mine closure plans and involve the local government in review of closure plans.

Also, to help guard against errors and omissions and promote a multi-collaborative review process, comments from other government agencies should be granted legal weight and information sharing should be required of all regulatory agencies. Other jurisdictions have laws that require mandatory review of closure plans by other relevant government departments, require other agencies and government departments to assist the mining regulatory authority in the review of closure plans, require oversight of related processes the responsibility of one government department, require proof of economic feasibility of closure plans and require support of the closure plan review process by requiring miners to pay for the review costs.

Closure plans need to be reviewed and updated regularly to reflect changing or unexpected conditions. In BC, however, there is no legal requirement to update reclamation and closure plans. Instead, updates are governed by non-binding policies and on a case-by-case basis according to conditions contained in individual mine permits. Other jurisdictions require that closure plans are

reviewed and updated at minimum every five years and following unexpected environmental impacts, require consultation with local authorities when updating or amending closure plans, and require reviews of and updates to closure plans following unexpected environmental impacts.

Post-closure land use is key in closure planning as it sets goals for closure activities. BC does require that specific factors related to land use be taken into account in closure planning, but the law fails to integrate local and First Nations' land use plans into the closure planning process. Other jurisdictions have enacted laws requiring that closure plans conform to regional land-use plans, that landowners be consulted on post-closure land use and that different types of reclamation requirements be clearly specified for various post-closure land uses. BC should incorporate similar laws into its mining legislation, and go further, by mandating a specific post-closure land use that allows for the exercise of specific First Nations rights, such as the restoration of habitat for specific species, or suitable growing conditions for native plants.

The sudden stoppage of work at a mine, or its sudden closure, can occur for a variety of reasons, and be temporary or long-term. BC Law mandates a 90-day notice before mine closure, and seven days notice for work stoppage. However, there are no legal provisions that prevent a mine from filing a 7-day work stoppage notice and remaining "un-closed" indefinitely. Other jurisdictions have laws that address this issue with clear notice requirements for both temporary and permanent mine closures and minimum content requirements for stop-work notices.

Prior to mine closure, proper planning and laws should be in place to help ensure the continued economic prosperity of communities following the closure of a mine. Alternatives for promoting longer-term benefits for local communities after mining activities end include research and development, and local manufacturing.

Research and development is a key component in building a long-term sustainable development strategy for the mining industry and can be encouraged through a technology policy or through legal provisions that authorize particular agencies to carry out research and development, and that secure funding for such research from operating mines. Other jurisdictions have enacted legal provisions that empower agencies to conduct research and development and mandate financial contributions to a research and development fund by operating mines.

Current resource policies in BC favour the export of unprocessed natural resources over local manufacturing into value-added goods. This renders obsolete the potential long-term benefits that could otherwise be gained from the creation of stable manufacturing jobs. Other jurisdictions promote local manufacturing through laws that promote local processing and value-added manufacturing of mineral ore and that ensure that domestic needs are met before exporting raw materials.

For successful site reclamation, mines need to reclaim areas while mining, rather than leaving all mine site reclamation until after the mine closes. This is referred to as progressive reclamation. While many jurisdictions, including BC, recognize the benefits of progressive reclamation, BC

mining law contains no explicit requirements for progressive reclamation. BC law also lacks a fixed end-date for reclamation, thereby failing to ensure effective, timely, and responsible mine closure. Other jurisdictions have laws which explicitly require progressive reclamation, require clearly defined reclamation completion schedules and set legally enforceable time limits for completion of separate phases of site reclamation**.**

When reclaiming mine sites in BC, the miner must meet certain reclamation standards. BC's Health, Safety and Reclamation Code states reclamation standards for re-vegetation, growth media, metal uptake, landforms, watercourses, water quality, disposal of chemicals and re-agents, monitoring and post-closure land use.

- **Re-vegetation:** Although BC's approach to re-vegetation is notable, greater detail and more specific legal requirements for re-establishing natural succession and processes (such as nutrient cycling and soil formation) have been adopted in other jurisdictions. For example, other jurisdictions have established measurable and enforceable criteria to determine if ecosystem restoration goals have been attained. Some jurisdictions also require conservation of topsoil through salvaging, measures to prevent erosion, weeds and contamination, and specified time limits for its removal. Other jurisdictions require that re-vegetation be commenced promptly (to reduce soil erosion and loss of soil nutrients), preceded by ground preparation and testing with trial plots, accomplished with native species and similar to the natural vegetation cover of surrounding areas. Additional requirements of laws of other jurisdiction include the cross-reference of mining reforestation activities with forestry laws, thresholds to demonstrate effective re-vegetation within set time periods, regular inspections of re-vegetation activities and assessment of re-vegetation by other agencies and government departments. By including similar laws in its mining legislation, BC reclamation standards for re-vegetation can be strengthened to ensure that sites are restored to self-sustaining ecosystems.
- **Landforms:** BC law does not have clear reclamation standards for site topography. Under BC law, land and watercourses must be reclaimed, where practicable, "in a manner that is consistent with the adjacent landforms". In addition, land must be left in a manner that ensures long-term stability, where stability is defined as "safety of an earth mass against structural failure or movement". Other jurisdictions have laws with clear descriptions of final site topography requirements and require assessments of the effect of mine workings on the stability of the ground surface. BC should incorporate similar provisions in its mining law.
- **Water Courses and Water Quality:** BC law contains few requirements regarding watercourse rehabilitation, water quality standards and long-term water treatment. In addition, the Chief Inspector retains significant discretion regarding the application and enforcement of these requirements. Laws in other jurisdictions require hydro-geological analysis of reclamation plans in sensitive areas, mandate restoration of meandering watercourses and rehabilitation of stream-banks, mandate erosion control measures and promote joint reclamation planning where two or more mines share a common boundary.

Taking this one step further, BC should prohibit mines from meeting water quality objectives by using long-term water treatment facilities.

- **Chemicals and Re-agents:** A wide variety of chemicals are generally used at mine sites. Sufficient care must be taken to ensure these toxic chemicals are not released into the environment during or after mining activities are complete. BC mining law does not contain adequate legal requirements for managing chemicals and re-agents. BC should enact a law that clearly address responsibilities for the disposal of chemicals and toxins.

Once reclamation has been completed, there may still be significant environmental effects. Some of these may take years to develop or become apparent. BC law already requires reclamation monitoring and reporting; however, additional legal requirements would enhance both mitigation efforts and accountability. Laws in other jurisdictions set clear legal thresholds for action in reclamation monitoring programs. In addition, other jurisdictions mandate the inclusion of a monitoring schedule in post-closure environmental program plans, monitoring of vegetation and animal tissue for metal uptake, the online posting of annual reclamation reports to simplify public access, environmental audits to evaluate results of post-closure environmental monitoring and independent review of the adequacy of site reclamation. Finally, other jurisdictions require annual reclamation reports to encourage adaptive management of closure plans.

Mining activities require a variety of infrastructure that must be adequately decommissioned to protect local communities after mine closure. However, BC's laws do not contain adequate legal provisions regarding the long-term decommissioning of mining infrastructure. The following are legal provisions that promote comprehensive decommissioning of mine infrastructure:

- **General Provisions:** Other jurisdictions have laws that mandate sharing of infrastructure decommissioning information with local communities and also mandate the preparation and implementation of management plans for contaminated soils.
- **Mine Openings**: BC law has specific requirements regarding sealing mine openings, but lacks specific, enforceable legal provisions regarding the marking and rehabilitation of mine openings. Other jurisdictions have specific legal requirements for fencing and signage for the mine worksite and specific legal requirements for rehabilitating open pits.
- **Mine Waste Dumps:** Mining activities inherently disturb large volumes of soil and rock. As a result, waste rock, ore and other soils are generally stockpiled at the mine site during operation. An understanding of slope stability is necessary for the safe and economic design of waste rock, ore and other stockpiles. Absent such understanding, stockpiles can pose a serious threat to local downstream communities. To address this issue, other jurisdictions mandate an engineering analysis of stockpile slope stability. Other jurisdictions also have legal provisions that mandate mine waste must be stockpiled in such a manner as to facilitate phased reclamation.
- **Access Roads:** Although BC's provincial policy outlines adequate re-vegetation and sediment prevention measures for decommissioning roads, these policies are not legally binding. Detailed legislation governs re-vegetation of mine access roads in other

jurisdictions. Legal provisions in other jurisdictions also mandate that roads to be decommissioned must be cross-ditched to avoid erosion gullies. BC should adopt similar measures to limit erosion and sedimentation resulting from abandoned mine access roads.

In BC, a miner is released of all legal obligations under the *Mines Act* when all legal conditions under the mining legislation and mine permit have been fulfilled to the satisfaction of the Chief Inspector and there are no on-going inspection, monitoring, mitigation or maintenance requirements. No other government department or affected party is required to sign-off on the closure certificate. Other jurisdictions require the maintenance of mine facilities in saleable operating condition for two years after closure to promote new ownership, require thorough assessments of reclamation activities before releasing miner's obligations and require reviews by other affected agencies before the release of legal obligations. Adopting these additional requirements in BC could promote further economic activity, and protect the public purse from unforeseen occurrences.

Orphaned mines are mine sites where the mine owner cannot be found or is financially unable to complete the remediation works. BC has over a thousand historic mine sites that have potential to generate acid or leach metals into the environment. Although some work is being done to address orphaned mine issues, BC has inadequate legal provisions in place to carry out the remediation of orphaned mines. Other jurisdictions have laws which prioritize the remediation of mines through consultation with land-use planning agencies and promote community involvement in orphaned mine clean-up. In addition, the European Union requires member states to establish an orphaned mine inventory that is publicly available and regularly updated. Finally, a number of other jurisdictions have adopted legal provisions that ensure a more secure source of funding for cleaning up orphaned mines. This initiative often takes the form of operating mines paying into an orphaned mine fund. BC law needs similar provisions in order to deal with the numerous orphaned mines in the province.

Summary of Chapter 10
Securing the Cost of Mine Clean-up

Security is a type of guarantee intended to ensure that there are sufficient assets available to cover the costs associated with any outstanding reclamation or decommissioning work should a mining company default on its obligations. These costs can be very high: Canada's taxpayers will pay an estimated $1 billion to remediate the Giant Mine near Yellowknife, and an estimated $700 million to clean-up the Faro Mine in the Yukon. In BC, over $70 million taxpayer dollars have already been spent to remediate the Britannia Mine. Further, these costs are likely underestimates and do not include future costs to taxpayers. The extensive environmental disturbance caused by mining activities, coupled with the fluctuating nature of mineral markets makes it imperative that adequate funds be secured in advance to cover any outstanding mine reclamation and decommissioning costs.

Despite advancements, gaps remain in BC's regulation of mine securities. **Chapter 10: Securing the Cost of Mine Clean-up** compares BC's laws regarding mine securities with laws from other jurisdictions that uphold the polluter-pays principle in a more comprehensive and effective manner.

Under the *Mines Act*, the Chief Inspector is empowered to require that the mining company deposit sufficient security to cover costs for government to complete outstanding reclamation work if the company defaults on its obligations. The actual amount of security is negotiated between the provincial government and the miner using the reclamation cost estimate that the miner submitted in the mine permit application.

BC law states that the reclamation cost estimate must include the costs of long-term monitoring and maintenance. Provincial policy sets out specific additional factors to be considered in reclamation cost estimates and additional guidance. Additional securities may also be required as a condition of licences issued under other provincial laws.

The availability of funds to carry out site remediation is heavily dependent on the type of security instrument used. The selection of an appropriate security instrument should be based on the level of assurance it provides that the miner will take all necessary and reasonable measures to protect the environment, balanced with the need to minimize tying up capital required for progressive reclamation. BC law does not provide adequate guidance to the regulatory authority regarding the selection of appropriate security instruments or how accessible the security deposit must be. To address similar issues, some jurisdictions have imposed legal limits on the regulatory authority's discretion in accepting different types of security instruments by specifying factors that must be taken into account in choosing an acceptable security instrument. Also, recognizing that securities need be easily and quickly converted into cash, legal provisions in other jurisdictions provide that any proposed form of security can be rejected if it is not convertible to cash within 180 days.

Securities have been required of most of the mines currently operating in BC. However, under provincial mining legislation, there is no mandatory legal requirement to post security**.** Instead, the Chief Inspector has the discretion to require security as a condition of the mine permit. Laws in other jurisdictions require security to be posted for all mines, require mandatory posting of security for mineral exploration activities, require mandatory timelines for posting security and impose consequences for failing to meet these timelines.

Further, in BC, policy provides that the amount of security required is determined on a case-by-case basis, based on the miner's reclamation estimate and negotiations carried out between the miner and the lead government agency. Other jurisdiction have laws that set minimum mine securities applicable to all mines, require a preliminary site inspection before setting security and require consideration of site-specific conditions and probability of successful reclamation when setting security amount. In addition, other jurisdictions only allow security amounts to be reduced in specified cases, such as where a miner's past performance warrants reduction or to promote a reduced site 'footprint'. Some jurisdictions apportion security relative to the degree of disturbance of lands across the mine site, require security for reclamation of tailings impoundments, require calculation of security based on independent contractor rates and/or government rates, require professional certification of reclamation cost estimates, and adjust the security amounts annually for inflation. Some jurisdictions also have laws which provide for additional security to cover administrative costs, require security for unexpected occurrences, require security to cover the costs of alternate water supplies, require additional security for mines using cyanide and toxic chemicals, apportion security relative to the degree of disturbance of lands and require professional certification of reclamation cost estimates. Similar laws are needed in BC to ensure that adequate funds are secured to cover remediation costs.

In BC, miners can, and often do, request that the reclamation cost estimate submitted as part of the mine permit application be kept confidential. Consequently, the public is unable to evaluate whether the cost estimate is reasonable or adequate to cover all necessary site remediation activities. Other jurisdictions have laws that mandate public disclosure of reclamation cost estimates and base security on consultation with local municipal governments, landowners and Indigenous people.

The amount of security held by the government should be reviewed periodically, as environmental conditions at mine sites are continuously changing. These changes include when new deposits are developed, mining activities are expanded, or new extractive technologies are introduced. BC law grants the Chief Inspector power to amend security whenever he or she considers it necessary. Further guidance is provided in provincial policy, which recommends a review every five years or whenever significant changes occur at the mine. However, security reviews are not always consistently carried out: a recent review of coal mine permits in BC found that lapses of 10 to 20 years occurred between mine security increases.

Other jurisdictions provide for regular reviews of securities by requiring reviews of security at frequent intervals, providing broad legal powers to review and re-calculate security – especially

where site inspections indicate deviations from closure plans, mandating fees to cover administrative costs of security review and requiring public notice and public review when miners request security reductions.

When a miner doesn't complete reclamation, or fails to meet permit conditions, the government needs to access the security funds. In BC, the Chief Inspector may, after giving notice, apply all or part of the security toward the cost of the work required. Although these are relatively strong legal requirements, they remain largely dependent on the Chief Inspector's discretion**,** without any oversight. Other jurisdictions set more specific rules on the circumstances in which the regulatory authority should apply the security to complete work. Examples include requiring forfeiture of security where mine reclamation is not completed within set time limits, allowing government to access security when a miner fails to comply with government-issued orders and making the miner liable for government clean-up costs that exceed the available security.

In BC, security is returned to a miner once all legal conditions under the legislation and mine permit have been fulfilled to the satisfaction of the Chief Inspector and there are no on-going inspection, monitoring, mitigation or maintenance requirements. Mine securities in other jurisdictions are not released until the miner has gone through more comprehensive checks and balances. For example, other jurisdictions require public involvement, and a site inspection, before security is released. By releasing security in stages, other jurisdictions have greater assurance of proper re-vegetation and groundwater restoration. This type of provision is often accompanied with a requirement to retain a set percentage of the security for a minimum of five years after completion of reclamation. Similar provisions require the demonstration of self-sustaining re-vegetation for a set time period before release of security.

In conclusion, mine securities in BC are vulnerable. Policy, rather than law, forms the backbone of the current system, and the Chief Inspector of Mines has discretion in all aspects of the mine security process. BC needs to tighten up its security requirements to protect local communities, the environment, and the future financial wellbeing of the province.

Focusing on positive solutions to complex mining issues, *Fair Mining Practices: A New Mining Code for British Columbia* is a compilation of innovative mining laws from around the world applied to the issues faced by First Nations and other communities in British Columbia.

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