

Environmental Impact Assessment Made in the North

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Abstract

The adaptation of EIA process to suit regional interests and cultures has led to a variety of approaches to EIA worldwide. A particularly interesting example of this is the Mackenzie Valley Resource Management Act (MVRMA), which provides a unique regulatory and impact assessment regime in the Mackenzie Valley in Canada's North. Based on land claim agreements between Aboriginal groups and the Canadian government, it creates an integrated system for resource management. Key features include Aboriginal co-management and decision making by administrative tribunals. EIA under the MVRMA has an unusually broad definition of impact on the environment, to include biophysical impacts and direct impacts on social, cultural, and heritage resources as well as on wildlife harvesting.

The Mackenzie Valley Environmental Impact Review Board – the main instrument for Environmental Assessment and Environmental Impact Review – has now had four years of experience with this 'made in the north' EIA process. Key elements of the MVRMA are described using a case study to show how the Mackenzie Valley Environmental Impact Review Board is implementing these key elements in EIA practice. The presentation will also highlight some of the more interesting differences between the MVRMA approach to EIA and the approach of the Canadian Environmental Assessment Act, which applies to the rest of Canada.

Co-management

The term co-management has a very particular meaning in the context of Northern Canada. Under the Mackenzie Valley Resource Management Act (MVRMA), the term specifically refers to a shared approach to natural resources management. The North has a strong wealth of natural resources to offer, ranging from minerals, oil and gas, timber and freshwater. However, the unique situation of the North's original residents, or First Nations, requires an approach that differs from many other parts of the world, when making decisions about the land. As is often the case, there are many different opinions on how the land should be managed. Ideally, the co-management approach enables a shared or balanced outcome, where traditional aboriginal knowledge is factored in and weighted equally with western science. Gone are the days when decisions were made in Ottawa and carried out without the consent, concern or consultation with First Nations.

The theories behind co-management discuss the importance of managing resources at smaller scales, of decentralizing management of resources. It is believed that by adopting this local-level management approach, local and traditional knowledge can be better factored into decisions, thus giving local people greater responsibility and accountability for resource management decisions. The co-management approach is one such response of government to adopt alternative resource management strategies, as a way to address criticism and other issues related to current management schemes. It is a way for government to pass responsibility onto resources users and to lessen the burden of resource management on government agencies (Campbell 1996).

The Mackenzie Valley Resource Management Act (MVRMA) is an act of Parliament assented in June of 1998, which established an integrated system of land and water management in the Mackenzie Valley. The Mackenzie Valley is defined in the Act as:

that part of the Northwest Territories bounded on the south by the 60th parallel of latitude, on the west by the Yukon Territory, on the north by the Inuvialuit Settlement Region, as defined in the Agreement given effect by the Western Arctic Claims Settlement Act, and on the east by the Nunavut Settlement Area, as defined in the Nunavut Land Claims Agreement Act, but does not include Wood Buffalo National Park (MVRMA, section 2).

The distinct regions throughout the valley include the Gwich'in, the Sahtu, the Akaitcho, Tli Cho and the Deh Cho. These smaller regions have all either negotiated or are in the process of negotiating with Canada, as to their Aboriginal rights and entitlement to the land they claim as theirs. Upon successful negotiation, the First Nations claimant groups become an integral part of the MVRMA and its land and water management processes, establishing their own regional boards and nominating members to the larger valley-wide boards.

The MVRMA's co-management process differs from that of the Canadian Environmental Assessment Act (CEAA) for example in that the determination of significance are made by the Board, usually by consensus, but at minimum in a democratic fashion. The co-management approach, by virtue of having the Review Board composed of half First Nations representatives, is intended to present an inherently balanced outcome. In the case of CEAA, the process is also designed to gather evidence from all stakeholders, but the determination of significance rests with the responsible federal authority.

The Mackenzie Valley Environmental Impact Review Board is an example of the co-management concept applied. The role of the Review Board is to conduct environmental assessments in a timely and expeditious manner having regard to (MVRMA section 115):

- a) The protection of the environment from the significant adverse impacts of proposed developments; and
- b) The protection of the social, cultural and economic well-being of residents and communities of the Mackenzie Valley.

Board members must be appointed to the MVEIRB by the Federal Minister of Indian and Northern Affairs Canada (INAC). Appointments are determined by the Minister of INAC and terms may be renewed. Currently, the Board is represented by eight members plus a chairperson; First Nations nominated members include one from the Gwich'in, one from the Sahtu, one from the Akaitcho and one from the Deh Cho. Members may or may not be of First Nations ancestry and must include up to half nominated by the Government of Canada and of the Northwest Territories (GNWT), and one chairperson. Therefore, at all times, one half of the board members must be nominated on behalf of First Nations, and no more than half can be nominated by the territorial and federal government, for a total of eight members plus a chairperson.

Administrative Tribunal

A series of boards were established as part of this new integrated system of managing land and water in the Mackenzie Valley. As the Mackenzie Valley stretches from the northern end of the Alberta border all the way to the Mackenzie Delta, and is comprised of 5 individual land claimant First Nations, the result is a somewhat complex network of regional boards that tie into the larger Mackenzie Valley-wide boards.

Regional boards have various mandates under the MVRMA that include the issuance of water use licenses and land use permits, renewable resources planning and general land use planning. The MVEIRB, as mentioned previously, is responsible for the environmental assessment and environmental impact review of larger or more contentious development projects in the Mackenzie Valley.

The MVEIRB is an administrative tribunal, with powers to recommend whether a project should or should not proceed. Although it is not responsible for the issuance of any licenses or permits per se, it may make recommendations as to how, or under what conditions, permits or licenses should be issued. Recommendations arise as a result of the EA process, and are legally binding, via the Minister of Indian and Northern Affairs Canada, who is required to sign off.

The Mackenzie Valley EA process itself follows the principles of natural justice and the body of administrative law whereby:

- i) a public record is opened when a project is referred to the Review Board,
- ii) participants to the process are registered as parties,
- iii) evidence is submitted throughout the course of the EA,
- iv) a public hearing in order to gather additional evidence from parties may or may not be utilized,

- v) and eventually the record closes, and
- vi) the board deliberates on what is contained on the record before formulating and issuing an official decision.

This “quasi-judicial” approach in the Mackenzie Valley differs from the rest of Canada, governed by the Canadian Environmental Assessment Act (CEAA). In the case of CEAA, the process itself is also court-like, whereby a registry and public record is established, public consultation is conducted and then a determination may be made as to the continuation of the Environmental Assessment by means of a comprehensive study, or to refer the project to a mediator or review panel. However, notwithstanding a mediator or review panel, the determination on a project rests with the responsible federal authority. The review panel approach outlined in CEAA, where the Minister appoints unbiased members to the panel, compares more closely to the quasi-judicial EA process governed by the MVRMA. (Canadian Environmental Assessment Act 2003)

Definition of Environmental Impact

The Canadian Environmental Assessment Act (CEAA) and the MVRMA use the same definition for environment, which is (MVRMA 1998):

- “environment” means the components of the Earth and includes*
- (a) land, water and air, including all layers of the atmosphere;*
 - (b) all organic and inorganic matter and living organisms; and*
 - (c) the interacting natural systems that include components referred to in paragraphs (a) and (b).*

They differ however, in the way they define impacts or effects on the environment. The CEAA definition is as follows (CEAA 2003):

- “environmental effect” means, in respect of a project,*
- (a) any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the Species at Risk Act,*
 - (b) any effect of any change referred to in paragraph (a) on*
 - (i) health and socio-economic conditions,*
 - (ii) physical and cultural heritage,*
 - (iii) the current use of lands and resources for traditional purposes by aboriginal persons, or*
 - (iv) any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or*
 - (c) any change to the project that may be caused by the environment, whether any such change or effect occurs within or outside Canada;*

The MVRMA defines effects on the environment simply as:

- “impact on the environment” means any effect on land, water, air or any other component of the environment, as well as on wildlife harvesting, and includes any effect on the social and cultural environment or on heritage resources.*

A comparison of the two definitions reveals a number of differences. Firstly, CEAA uses the term “*environmental effects*”, which includes effects of the environment on the project, while the MVRMA uses the narrower term “*impacts on the environment*”. Secondly, CEAA makes explicit reference to species at risk while the MVRMA does not.

The CEAA definition includes socio-economic effects, effects on heritage, and effects on aboriginal resource use only if they come about as consequences of changes to the physical environment caused by the project. Direct socio-economic impacts are not considered under CEAA. The MVRMA definition includes all effects on the social and cultural environment or on heritage resources. The MVEIRB is required to consider all impacts on heritage resources or the social and cultural environment of the residents of the Mackenzie Valley, including direct impacts that are not associated with any change to the physical environment. The MVRMA definition on the other hand makes no reference to general economic impacts but is limited to impacts on harvesting. The MVRMA, however, does provide the MVEIRB with a guiding principle that includes “*the protection of the social, cultural and economic well-being of residents and communities in the Mackenzie Valley*”.

Another noteworthy point is that unlike CEAA, the MVRMA, which is a consequence of aboriginal land claim settlements, does not distinguish between aboriginal and non-aboriginal land uses or heritage resources. Finally, CEAA explicitly includes environmental effects outside of Canada.

For the general environmental impact assessment work, the inclusion of direct social, cultural, and economic impacts is the most significant difference between the two pieces of legislation. The case study below gives an example of how this difference translates into environmental assessment decisions. Figure 1 provides a brief comparison between the two definitions.

| | MVRMA | CEAA |
|--|-----------------------|----------------------|
| terminology | impact on environment | environmental effect |
| Species at risk | implicit | explicit |
| Direct social and cultural impacts | √ | X |
| Distinction between aboriginal and non-aboriginal land use | implicit | explicit |
| Effects of environment on project | X | √ |
| Effects outside of Canada | implicit | explicit |
| Economic impacts | X ¹ | √ (indirect) |

Figure 1: Environmental effect/impact definition

Decision Path

EIA under the MVRMA is a three step process consisting of Preliminary Screening, Environmental Assessment, and Environmental Impact Review (see figure 2).

Preliminary Screening (PS) is a cursory look at the potential environmental impacts and the potential for public concern of a proposed development. A Preliminary Screening only needs to establish that there *might* be significant adverse impacts on the environment or public concern. Preliminary Screenings can be conducted by various agencies or departments with regulatory authority.

¹ Although economic impacts are not included in the definition, the MVRMA does mandate the MVEIRB to consider the economic well being of the residents of the Mackenzie Valley.

Environmental Assessment (EA) is a more in-depth examination of the potential impacts of a development. It is conducted by the MVEIRB, if a preliminary screener (or the MVEIRB itself) concludes that a development might have significant adverse impacts on the environment or be cause for public concern. It establishes whether or not significant adverse impacts or public concerns are *likely*.

Environmental Impact Review (EIR) follows EA where the EA concludes that significant impacts or public concern are likely and cannot be mitigated with known technology. This step is comparable to a panel review under CEAA.

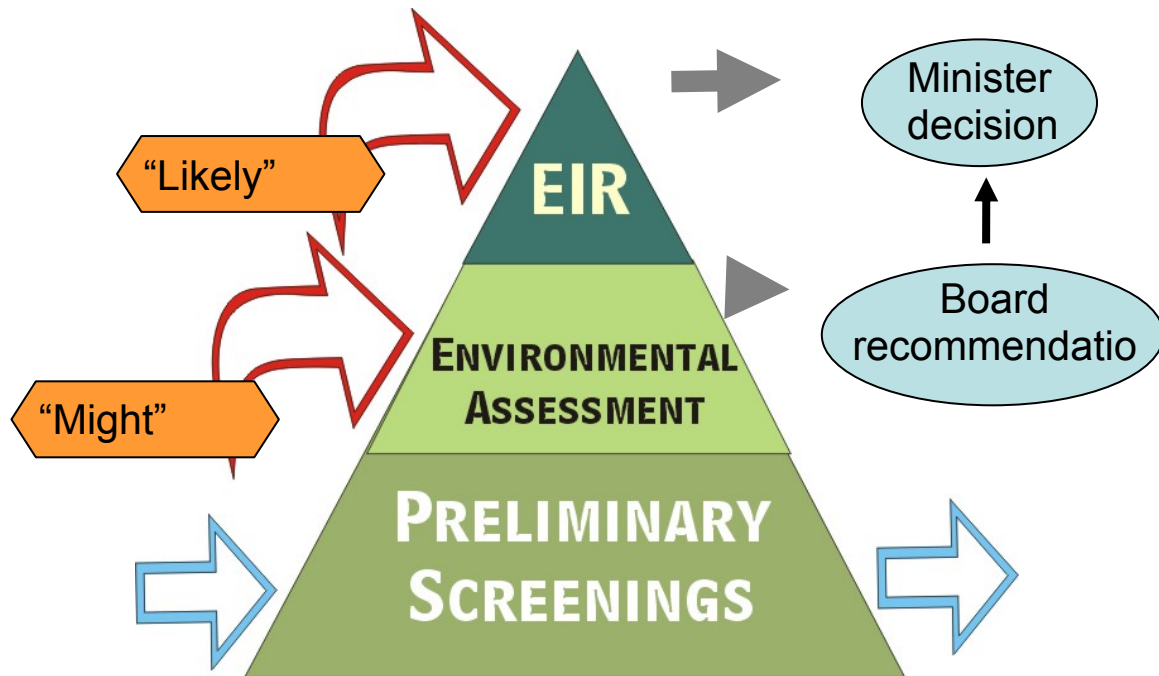


Figure 2: Three stages of EIA

Figure 3 presents the decision path through the EIA process under the MVRMA. The process is application-driven and does not get triggered until an application for a permit, licence or other authorization required to carry out the development is submitted to a regulatory authority. The authority, most often a regional Land and Water Board, then performs a Preliminary Screening. If the screening determines that there might be significant adverse effects on the environment or public concern, the regulatory authority will refer the development to the MVEIRB for an Environmental Assessment. The MVEIRB cannot refuse a referral. Notwithstanding the Preliminary Screening, other government agencies or local governments can refer a development if, in their opinion, it has an impact within their jurisdiction. Alternatively, the MVEIRB can initiate an assessment on its own motion.

In its *Report of Assessment*, the MVEIRB will make the following determinations:

- The proposed development is not likely to cause significant adverse impacts or public concern and should proceed through the regulatory process.

- The proposed development is likely to cause significant impacts that can be mitigated and should proceed through the regulatory process with certain conditions.
- The proposed development is likely to cause significant adverse impacts and/or public concern and should undergo an Environmental Impact Review.
- The proposed development is likely to cause significant adverse impacts and/or public concern so severe that it cannot be mitigated and should be rejected without a review.

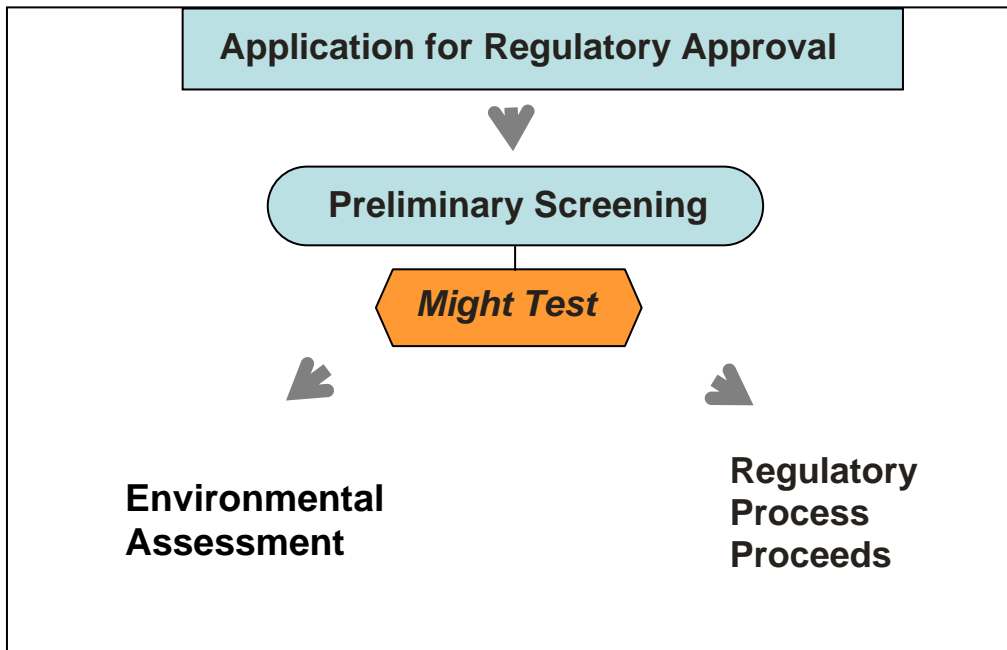


Figure 3a: Preliminary Screening Decision

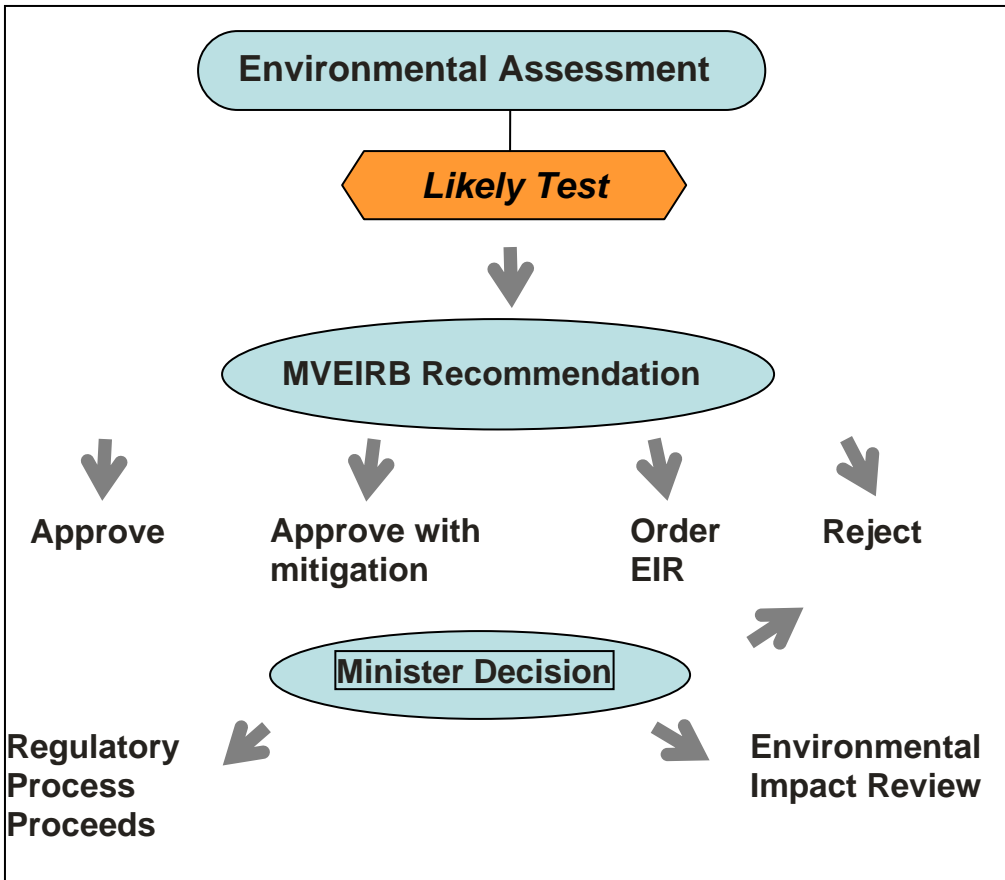


Figure 3b: Environmental Assessment Decision

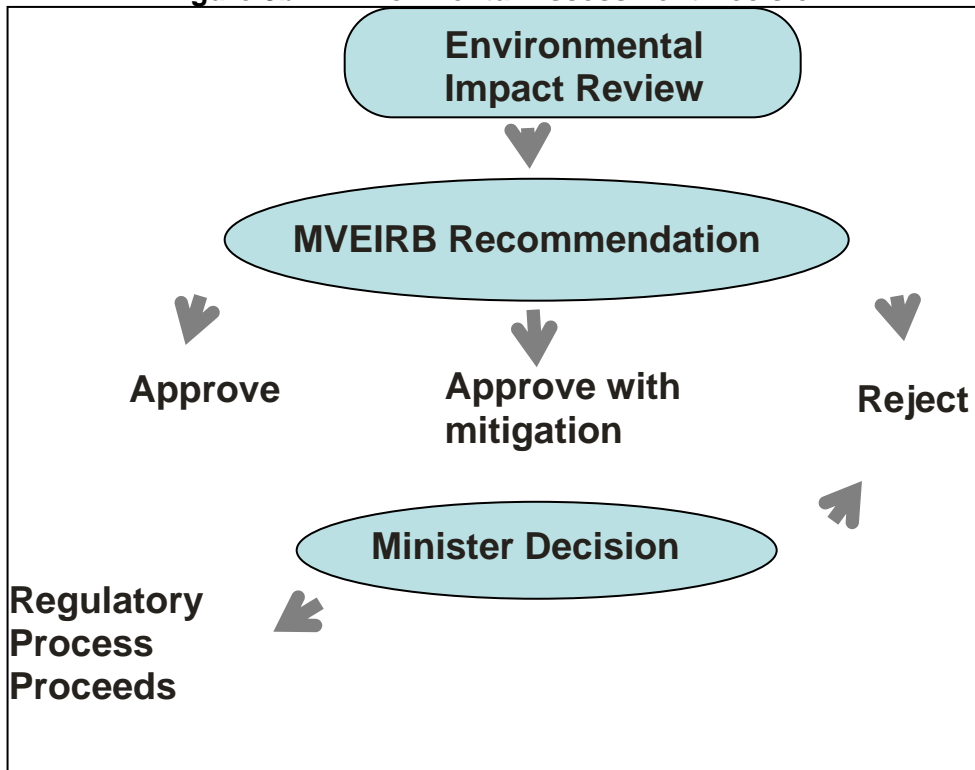


Figure 3c: Environmental Impact Review decision

The *Report of Assessment* is submitted to the federal Minister of Indian Affairs and Northern Development. If required, the minister will consult with other responsible ministers before making a decision. The minister's options include:

- Adopt the Board's recommendation
- Refer the report back to the Board for further consideration.
- Consult with the board to modify the recommendations.
- Reject the report after consulting with the Board and order an impact review

The decision path in an Environmental Impact Review is essentially the same as in Environmental Assessment, except that no higher level of scrutiny is available.

Case Study

In September 2002, Northrock Resources Ltd. applied to the Sahtu Land and Water Board (SLWB) for a Land Use Permit and a Water Licence to construct approximately 75 kilometers of temporary winter access road and to drill a 3000 metre exploratory oil or gas well. The SLWB conducted a Preliminary Screening, in the process, soliciting comments from 26 organizations. The Preliminary Screening Report concluded that all potential adverse impacts on the environment could be mitigated with known technology and therefore, the development should proceed through the regulatory process. The report, however, also concluded that there might be significant public concern in the nearby community of Tulita and therefore, the development should be subjected to an Environmental Assessment. The proposed development did not pass the *might* test.

The MVEIRB then initiated an Environmental Assessment in March 2003 with a focus on three issues raised by the community of Tulita. These were:

1. The proposed use of a portion of the access route differed from what had been used in previous years and related impacts.
2. Impacts on traditional land use, particularly harvesting of wildlife.
3. Impacts on culturally important areas.

The MVEIRB concurred with the SLWB that there were no significant adverse impacts on the physical and biological environment. Any impacts on culturally important sites or on traditional aboriginal resource use were not results of changes to the environment, but direct impacts from the development. Under the CEAA definition, these would not be considered environmental effects.

After reviewing the Developer's Assessment Report, conducting a community hearing, and reviewing published information, the MVEIRB made the following determinations:

1. The access route portion proposed by the developer was considerably shorter and would result in no more impacts than the route suggested by the community.
2. Because the access route traversed prime hunting areas (as evidenced by the Sahtu Renewable Resources Board's harvest study), a temporary displacement of game animals and thus a reduced hunting success for the duration of the project, was likely. Moreover, the MVEIRB found that a number of community members did not participate in the wage economy, depended on subsistence hunting for a large part of their income, and did not stand to benefit from the

- development. Consequently, the Board determined that for these individuals, a significant impact by the development was likely.
3. Sacred and culturally important areas that have been identified in the general vicinity of the development were not affected. However, the access route crossed a traditional trail, the well site was close to the same trail, and several archaeological sites had been identified along the access route in the past. The MVEIRB thus determined that impacts on cultural and heritage resources were likely.

Considering these conclusions and the available mitigation measures to minimize the identified impacts, as well as potential beneficial impacts on the local economy, the MVEIRB recommended that the development be approved subject to mitigation measures. After modification, the development passed the *likely* test. The recommended measures included:

1. The developer should use the shorter access route as proposed.
2. The developer should identify individuals that have traditionally hunted in the area with the help of the local Renewable Resources Council and pay compensation to those individuals in accordance with the Sahtu Dene and Metis Comprehensive Land Claim Agreement.
3. The developer should have the access route and well site area surveyed by a qualified archaeologist prior to conducting any work.

In addition to these recommendations, the MVEIRB's Report of Environmental Assessment issued in August 2003 included non-binding 'suggestions' to further minimize impacts of this and future developments. The Minister of Indian Affairs and Northern Development accepted the recommendations in September 2003. The Sahtu Land and Water Board was then able to proceed with the regulatory process and Northrock Resources has drilled the well during the 2004 winter season (Mackenzie Valley Environmental Impact Review Board 2003).

References

1. Campbell, Tracy. 1996. Co-management of Aboriginal Resources in *Information North*, Vol 22, no.1 (March 1996), Arctic Institute of North America.
2. Government of Canada. 2003. Canadian Environmental Assessment Act.
3. Government of Canada. 1998. Mackenzie Valley Resource Management Act.
4. Mackenzie Valley Environmental Impact Review Board. 2003. Report of EA and Reasons for Decision for the Northrock Summit Creek B-44 Exploratory Well.