

Final Report

Social and Economic Review of the Impact of Land Survey and Registration Systems on Canada Lands



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Executive Summary

This paper characterizes the social, economic, and environmental impacts of efficient and effective land survey and registry systems on Canada Lands. The primary focus of the analysis was First Nation groups. However, the scope of the study also included the other jurisdictions within the Canada Lands system, such as the North, offshore and national parks. The paper is based on the results of four lines of enquiry: a literature review, interviews, case studies, and a workshop.

A property rights infrastructure provides a framework for the identification, documentation, registration and protection of interests in land. It also integrates the detailed information essential to the orderly development and management of the land. A property rights infrastructure includes a land registration system and a survey system. These are essential mechanisms “by which governments regulate the use and development of land” (Canada 1990).

Canada Lands include Indian Reserves, Canada’s offshore area, the North (Yukon, Northwest Territories and Nunavut), and Canada’s national and historic parks. Canada Lands are held in trust by the Government of Canada for the use and benefit of Canadians. The federal government’s obligation to manage these lands includes the responsibility to ensure orderly development and to promote economic growth.

By helping to specify the rights and obligations of the owners and investors in land, survey and registration systems provide security for land tenure and enable efficient markets for land transfer. This combination of security and efficiency enables the protection of environmentally and culturally sensitive areas, and also enables investment in resource exploitation and real estate development in other areas. The ultimate impacts are economic growth, social and cultural preservation, and environmental protection.

First Nations representatives who were consulted were the most enthusiastic of the sampled groups. There seemed to be a genuine interest in improving the current land survey and registration systems and, in some cases, adapting the systems in place to indigenous models of land, landholding and land development. Further, the First Nation lands and economic development staff interviewed regarded establishing effective methods of control of land and land development as necessary tools for the economic and cultural survival of First Nations.

Regulators who were consulted at the federal, provincial and territorial levels reported that the land survey and registration systems used in their jurisdictions were reliable and effective in describing and safeguarding interests in land; effecting agreements on the use of land; and in enabling the protection of environmentally sensitive areas. As well, these systems provided good access to land-related information.

Investors who were consulted applauded the benefits of land survey and registration systems. As compared to other interviewees, this group displayed an understanding of the value of describing, securing, and registering the rights, which they have in land both in terms of exploration and discovery operations. Where a resource extraction company's worth is represented by the volume of its reserves, and increasing these reserves is an important part of demonstrating their value, the means which are used to guarantee their land rights are of obvious importance. A respondent described land survey and registration as "absolute necessities" in supporting economic activity.

The lenders who were consulted displayed little knowledge of the benefits of survey and registration systems to their activities in particular. They acknowledged the benefits provided (on patented lands) by land registration systems in respect to providing security of their investment and a means that could be used to recover land in case of default. However, the perception of Indian Reserve land was of an asset that was useless to them, given the impossibility of recovery and the vesting of the underlying title in Her Majesty.

The legislative and legal basis for government involvement in surveys and registration on Canada Lands is not by historical chance, but rather is the result of real economic imperatives. Information, and in particular cadastral information, has special economic characteristics that mean that governments are often involved with its collection and provision. Information is a form of "*public good*" and is often associated with "*external*" benefits. Because public goods and externalities are, in turn, often associated with "*market failure*" there will be a role for government in these markets. Furthermore, provision of public goods often includes elements of a "*natural monopoly*" that governments usually seek to own or regulate. "*National interest*" arguments, which are not purely concerned with economics, often provide an additional stimulus for government involvement.

The past success of the land survey and registration systems may endanger their future provision. It is clear from the interviews that, outside of the land management community, the importance of land surveys and registration systems is not well understood. They are often viewed as well-functioning utilities that are imposed upon users. In this respect, the perception of value of the survey and registration systems has been prejudiced by their very effectiveness. Should this view result in a decrease in support for land surveys and registration on Canada Lands or, in the future, devolved Native lands, there could be long-term economic, social, and environmental implications.

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1. *Introduction*

This paper characterizes the social, economic, and environmental impacts of an efficient and effective land survey and registry system on Canada Lands. The primary focus of the analysis was First Nation groups. However, the scope of the study also included the other jurisdictions within the Canada Lands system, such as the North, offshore and national parks. The paper is based on the results of four lines of enquiry: a literature review, interviews, case studies, and a workshop.

The literature review covered over 30 reports, and concentrated in particular on the experiences of native groups in Canada and around the world. There appears to be no literature that uses empirical data to explicitly identify the social and cultural benefits of land surveying and title registration to First Nations' lands in Canada. However, there are studies from other countries that do suggest expected benefits. Moreover, the absence of information concerning First Nations' lands illustrates the utility of the present study. Much of the literature that deals with Indian lands in North America is concerned generally with Indian economic development, in terms of governance, accountability, and trust. It is within that development paradigm that survey and title systems can implicitly (if not explicitly) be grouped.

Interviews were held with 23 representatives of government, native groups, resource developers, land developers, lenders, and legal experts. Those without direct contact with survey and registration systems had some difficulty expressing their importance. This is symptomatic of a view of the property rights system as a low profile and well functioning utility, rather than a key component of development. Typical of this view are comments such as "the survey had to be done as a condition of approval" or "the survey is just necessary." This illustrates the fact that some users are unaware of the purpose of surveys and registration and view the land description and registration phases of a project simply as requirements with which they must comply, rather than as intrinsically valuable and necessary inputs to the land development process. In this respect, the perception of value of the survey and registration systems has been prejudiced by their very effectiveness.

Five case studies were conducted that examined the impact of land survey and registration systems on Indian reserves and in the North. The case of the BHP Ekati Diamond Mine illustrates the role of claims in establishing and exploiting rights to mineral resources, and thus creating jobs and economic development in the North. The case of a residential subdivision on the Muskoday Indian Reserve illustrates the role of surveys and registration in land use planning for subdivisions, power, water, and sewers. The case of the Sechelt First Nation illustrates the role of land management powers as a component of self-government. The case of the Rama Casino lands on the Mnjikaning First Nation illustrates the need for surveys and registration in

land development. The case of the Siksika First Nation illustrates the use of land survey and registration to assist in financing land development.

The workshop brought together representatives from Native groups, government, and industry for a day of discussions. The following framework was used to structure the examination of the impact of land survey and registration systems:

Impacts	Land Types	Stakeholders
Economic Impacts	Native Lands	Land Holders
Social and Cultural Impacts	Offshore	Land Investors
Environmental Impacts	The North	Governments
	Parks	

Discussions tended to focus primarily on Native Lands and often dwelled on the impediments to land management created by the Indian Act and its administration by Indian and Northern Affairs Canada.

The results from each of these lines of enquiry are described in detail in the Appendices to this report. Chapter 4 below summarizes the highlights.

2. *Land Survey and Registration Systems*

A property rights infrastructure provides a framework for the identification, documentation, registration and protection of interests in land. It also integrates the detailed information essential to the orderly development and management of the land. A property rights infrastructure includes a land registration system and a survey system. These are essential mechanisms “by which governments regulate the use and development of land” (Canada 1990). The primary objectives of the two systems are:

- Land registration systems: “regulate the acquisition and exchange of rights to land by providing a public record of the ownership of the rights”.
- Land survey systems: “ensure the orderly and systematic identification of units of land and ensure that the location and extent of rights in land are properly described in legal documents and demarcated on the ground.”

In practice, it is often difficult to isolate either the *land survey* or *registration* system and to gauge the effectiveness of each separately. Rather, they are typically treated as a unit, as components in the building of institutions that guarantee *property rights* through the definition of property on the ground *and* within a legal process. The overall enterprise may include cadastral surveys, mapping, land records regularization, and information systems applications. Land management initiatives are often packaged, outside of North America, with other reforms of rural development to achieve broader social goals. As Simpson (1976: 3) put it, land registration “is merely part of the machinery of government. It is not some sort of magic specific which will automatically produce good land use and development ... In short, land registration is only a means to an end ... not an end in itself.”

A number of factors have combined in recent years to exert pressure on the land registration and survey systems on Canada Lands, and native lands in particular. These factors might be summarized as follows:

- *Economic pressures* – a combination of increased development (in the widest sense) on Canada Lands, together with a reduction in budgets available to Federal government departments and agencies dealing with them, has strained the survey system.
- *Social and political pressures* – There are intense pressures on governments to address native concerns. These pressures have resulted in a variety of responses, including land claims settlements, self-government agreements, and the beginnings of a process of devolution of

powers from government to native groups. In many of these cases, management powers for land related issues are being transferred to native groups, who will have the opportunity to adapt systems for land registration and surveys in ways that are appropriate to their needs and culture.

- *Legal pressures* – as native peoples have begun to define their own futures, a number of court challenges have been taken. These have covered a wide range of subject matters and many have related to land issues. In those cases, land registration and survey information is central to the arguments.

Land survey and registration systems are essential requirements to support development of land-based resources. Where native groups wish to participate in a non-native economy, especially by development of land-based resources, traditional systems of land tenure may be inadequate to support that participation.

Many native groups appear to be moving toward a model where at least some of their land base will be developed in support of increased economic activity such as resource development. Native groups may need to ensure that rigorous land survey and registration systems exist on at least those portions of their land where economic activity demands it. For example, a recent study¹ by Brian Ballantyne reported that the majority of First Nations interviewed found that land disputes were common – whether related to title or boundaries – but that all First Nations expressed a desire to retain the control of their records and registration process.

¹ Ballantyne, Brian; Dobbin, James (2000) “Options for Land Registration and Survey Systems on Aboriginal Lands in Canada”, prepared for the Legal Surveys Division of Geomatics Canada, January.

3. *Canada Lands*

Canada Lands include Indian Reserves, Canada's offshore area, the North (Yukon, Northwest Territories and Nunavut), and Canada's national and historic parks. Canada Lands are held in trust by the Government of Canada for the use and benefit of Canadians. The federal government's obligation to manage these lands includes the responsibility to ensure orderly development and to promote economic growth.

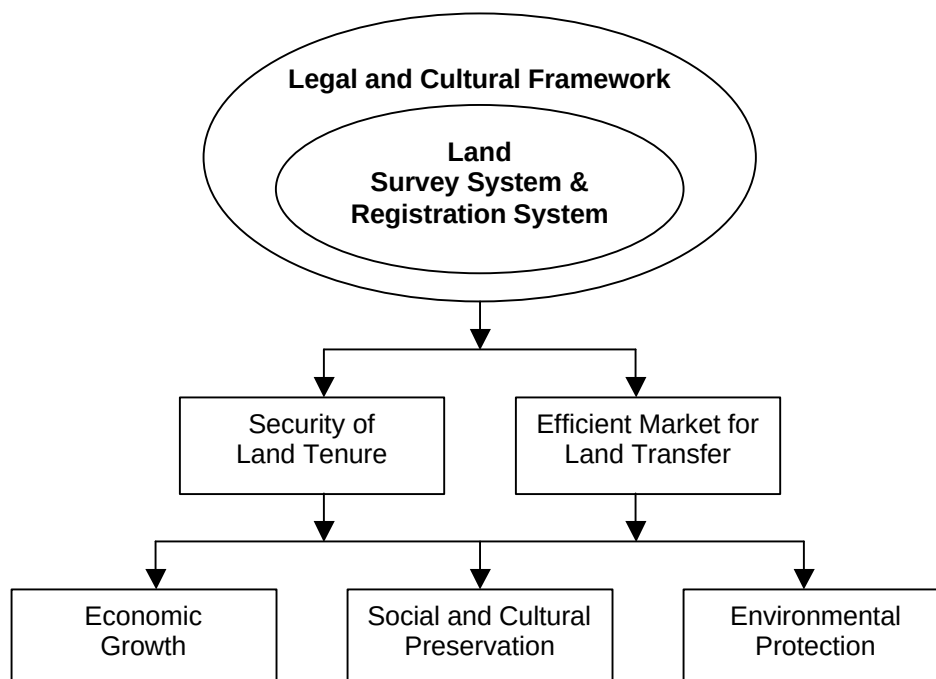
The impact of land survey and registration systems on Canada Lands is derived from the economic, social, and environmental importance of Canada Lands. The following points describe the extent and importance of these lands.

- *Native Lands* – The land survey and registration function of the Canadian government involves services to over 600 First Nations on 2,366 reserves totalling 270,000 square kilometers of land across Canada. The Indian Act and the Canada Land Surveys Act mandate the government's responsibilities. Land survey and registration on native lands supports significant economic potential from mining, forestry, and oil and gas. Land survey and registration also supports social and cultural aspirations of natives for self-governance, and preservation of environmentally sensitive areas.
- *Offshore* – The offshore area is about 10.2 million square kilometres, defined as “those submarine areas, not within a province, adjacent to the coast of Canada and extending throughout the natural prolongation the land territory of Canada to the outer edge of the continental margin or to a distance of two hundred nautical miles from the baselines from which the breadth of the territorial sea is measured, whichever is the greater”. Significant oil and gas potential exist off of Newfoundland and Nova Scotia at Cohasset, Hibernia, Sable Island and Terra Nova.
- *The North* – Approximately 40 percent of Canada's lands lie north of 60 degrees latitude, approaching 4 million square kilometres. The total value of oil and gas production in the North was \$218 M and the total value of mineral production was \$515 M in 1998. The sedimentary basins in the North are continuations of the oil and gas-rich Western Canada Sedimentary Basin, but in comparison are as yet lightly explored. There is now growing interest in developing areas such as the Mackenzie Delta and Fort Liard.
- *Parks* – There are 39 national parks and reserves in Canada, located in every province and territory, ranging in size from 8.7 to 44,802 square kilometres, and together encompassing about 224,466 square kilometres, or about 2% of Canada's land mass. In addition, there are 849 national historic sites. These parks and historic sites contribute to the preservation of our natural environment and our historical identity.

4. *The Impact of Land Survey and Registration Systems*

As shown in Figure 1, a land survey and registration system is one part of the overall legal and cultural framework that a society uses to govern land transactions and use. By helping to specify the rights and obligations of the owners and investors in land, survey and registration systems provide security for land tenure and enable efficient markets for land transfer. This combination of security and efficiency enables the protection of environmentally and culturally sensitive areas, and also enables investment in resource exploitation and real estate development in other areas. The ultimate impacts are economic growth, social and cultural preservation, and environmental protection.

Figure 1: The Impact of Land Survey and Registration Systems



The specific impacts depend on the viewpoint of those involved. Table 1 summarizes the impacts of land survey and registration systems on Canada Lands from the points-of-view of landholders, land investors, and the government. A particular group may hold elements of all

three points-of-view. For example, the government is a landholder, land investor, and governor of lands. The following sections discuss these impacts in more detail.

Table 1: Impacts of Land Survey and Registration Systems

	Economic Growth	Social and Cultural Preservation	Environmental Protection
Landholder	Provides certainty and stability Increases investment in property and resource exploitation Increases access to capital Improves land markets Assists in resource exploration Basis for royalties	Protects interests in lands and culture Reduces disputes and defuses social tensions Promotes social justice and equity Need for cultural sensitivity Increases employment opportunities	Assists environmental management and conservation activities Assists land use planning and control
Land Investor	Reduces risk of land development and resource development Reduces transaction costs of land development and resource development	Not applicable	Basis for understanding environmental responsibilities
Governance	Promotes economic development Basis for taxation Increases international competitiveness	Provides social services Supports self-governance Aids self-sufficiency Establishes sovereignty and national identity	Assists environmental management and conservation activities Assists land use planning and control

4.1 *Economic Impacts*

Economic activity is determined by the balance between risk and return. Land survey and registration systems improve the potential for economic activity by lowering the risk of development and increasing the potential for return to both landholders and investors. Development risk is lowered by increasing certainty in the ownership, location, and description of the land. Return potential is increased by lowering the transaction costs in land markets. The result is increased investment in property improvement and increased exploitation of natural resources, both of which produce economic growth. The following sections expand on these effects based on the results from the various lines of enquiry.

Landholder Viewpoint

- *Provides certainty and stability* – By providing impartial legal descriptions of land parcels, land survey and registration systems provide security and comfort for the sale or lease of property. The identification of the true owner and extent of a parcel of land are ensured.
- *Increases investment in property and resource exploitation* – The increased security and sense of ownership that accompanies legal title to land increases the likelihood that property will be improved and used to its fullest extent and in its most productive manner. “The best use of land may be unlikely without [secure tenure], but security will not by itself ensure that land is properly used” (Simpson 1976: 10-11). Tribal-trust lands in the United States, which may not be usable as collateral (similar to the situation, generally, of Indian Reserve lands in Canada) were found to be 85 to 90 percent less productive than fee simple lands; and individual-trust lands were found to be 30 to 40 percent less productive than fee-simple lands within reservations (Anderson and Lueck 1992: 448).
- *Increases access to capital* – Investment in property requires access to capital. This access is facilitated if land can be used as collateral. The Indian Act is major barrier to lending on reserves in Canada because it prevents banks from taking security on most loans.
- *Improves land markets* – Land registration facilitates land transfers and thus reduces costs, and increases liquidity, within land markets. Land markets are important to ensure that land is always used in the most productive manner possible.
- *Assists in resource exploration* – Claims to property are important to the orderly conduct of the resource exploration industry. Without the certainty provided by these claims, resource exploration activities would not be to attract the necessary investments.
- *Basis for royalties* – Land surveys enable the calculation of financial compensation for the use of land and the extraction of its resources. The ability of land owners to attract outside investors to develop land is important to the economic utilization of land.

Land Investor Viewpoint

- *Reduces risk of land development and resource development* – Land surveys and registration provide improved security regarding access to land and its resources. Supporting institutions and procedures provide impartial dispute-resolution mechanisms. The main concern of resource companies is that they have an interest in a piece of property. The fact that the interest they receive is not a Certificate of Title but is limited to leasehold is not a major concern. The security they require flows from two things: the physical marking of the lands claimed on the ground; and legal notice, the documentation of the physical extent (sketch) and recording of interest (filing of the claim). The companies take comfort in the fact that the claim is filed and, by virtue of being lodged with the government, secured, and that their claimed lands are plotted on government-maintained mapping and therefore available for viewing by others.
- *Reduces transaction costs of land development and resource development* – The costs of identifying, exchanging and securing interests in land are reduced.

Governance Viewpoint

- *Promotes economic development* – A primary interest of government is the creation of wealth and improving living standards. For the reasons outlined above, land survey and registration systems are an important component of economic activity that involves land.
- *Basis for taxation* – Improved land survey and registration, through property taxation, brings revenues to local government and funds provision of services. These revenues in turn enable the multitude of government activities that contribute to economic development, social and cultural development, and environmental protection.
- *Increases international competitiveness* – All other things being equal, investment capital will flow to the opportunities that have the lowest risk and highest potential return. Since land survey and registration systems influence both of these factors, their relative quality is an important determinant of the flow of investment capital among regions in the world. Therefore land survey and registration systems help to determine a nation's international competitiveness.

4.2 Social and Cultural Impacts

The right to land has always been central to the identity of people – nationally, regionally, or individually. It is not surprising, therefore, that the delineation and recognition of ownership of land is so important to the social and cultural definition of both Canada and First Nations as distinct entities in their own eyes, and in the eyes of the outside world.

Landholder Viewpoint

- *Protects interests in lands and culture* – Reduces the risk of dispossession by arbitrary local authorities. Surveys were regarded as socially beneficial in identifying culturally sensitive areas in the interviews.
- *Reduces disputes and defuses social tensions* – Provides an impartial means to resolve boundary issues of land use and occupancy overlap. For example, the ease of distinguishing between “Band-owned” and “common” lands was identified as a key social benefit of land registration in interviews. Helps to stabilize situations where social tensions lead to unrest and land invasions.
- *Promotes social justice and equity* – The benefits of survey and registration programs are often implicitly noted in the description of cases where land rights are poorly defined and where the property rights system is either incomplete or excludes the claims of indigenous peoples. “The absence of any definition as to the land or territorial rights of indigenous groupes ... results in an absence of responsibility in which land and property is frequently abused” (Anaya & Crider, 1998: 217).
- *Need for cultural sensitivity* - Infusing cultural aspects into the understanding of land and the procedures for dealing with land was a repeated theme of First Nation interviewees. One respondent related that the concept of private property, although officially provided for in the

governing legislation, is still a foreign concept in their community. According to Hanstad (1996: 12), the novel juxtaposition of a formalized registration system alongside a customary landholding system of long standing can actually increase land disputes which have the potential to turn to litigation.

- *Increases employment opportunities* - The ability to lease lands provides revenue and jobs to First Nation members. The employment is seen as enabling social goods as well.

Land Investor Viewpoint

- *Not Applicable* – Land investors rarely have social or cultural interests in the land.

Governance Viewpoint

- *Provides social services* – The provision of social services is enabled by the community tax base, which in turn depends partially on the land registration system.
- *Supports self-governance* – The graphical product of a land survey is seen as a key communication tool during land negotiations due to their accurate depiction of area, location, and aspect. The land survey and registration system subsequently provide a structure that supports First Nation management of the land regime.
- *Aids self-sufficiency* - A government can succeed only when it is operating in a viable economic system, one that creates and sustains wealth and thereby serves the needs of its citizens. “We cannot achieve self-government at the community level without first having achieved a level of self-sufficiency.” (Aboriginal Banker, 1999/2000: 1-2). “Improvements to land registration and survey laws and practices are not all that is required, but they can provide a vital contribution to the progress and self-sufficiency of Indian and other aboriginal peoples in Canada.” (McEwen 1992)
- *Establishes sovereignty and national identity* – The delineation of Canada Lands is an important part of establishing Canada and its identity, especially in the North. The federal government has a fiduciary responsibility to First Nations. The delineation of the exterior boundaries of Indian Reserve lands also safeguards the Crown’s proprietary interests to adjoining lands.

4.3 Environmental Impacts

Much of the world is treated as a “commons” wherein individuals have the right to freely consume its resources and return their wastes. The “logic of the commons” ultimately produces its ruin as well as the demise of those who depend upon it for survival. Garrett Hardin noted the commons relationship between people and their environment in his classic 1968 paper “Tragedy of the Commons” (Science 162:1243-1248). By helping to specify responsibility for land, land survey and registration systems help to ensure that the environmental impacts of land use are minimized.

Landholder Viewpoint

- *Assists environmental management and conservation activities* – Stewardship of resources was seen in the interviews as an important function that is bolstered by survey and registration systems through the identification and recording of mining, forest, riparian and water resources. “The absence of any definition as to land or territorial rights of indigenous groups ... results in an absence of responsibility in which land and property are frequently abused” (Anaya and Crider 1998: 217).
- *Aids land use planning and control* – Surveys are regarded as a useful tool in identifying commercial, industrial, and residential areas for the planning of land use, both immediately and over the long-term.

Land Investor Viewpoint

- *Basis for understanding environmental responsibilities* – Land investors are increasingly interested in ensuring that they are good environmental citizens. For the reasons outlined above, land survey and registration systems help them to achieve that.

Governance Viewpoint

- *Assists environmental management and conservation activities* – Land survey enables the location and isolation of environmentally sensitive sites. Environmental sustainability was identified as being linked with survey and registration systems in that there is an archive of information on the location, extent, nature, and duration of certain rights granted through a lease. In terms of environmental damage that may be discovered subsequent to the expiry of land leases, the register and survey records provide a tie to a specific land user who can be shown to have been operating on a particular site at a particular time. In this way, the “environmental cadastre” aspect of land records prove useful in locating pollution sources and possibly apportioning costs for cleanup.
- *Assists Land use planning and control* – Land survey and registration systems limit unplanned and inappropriate land development, and minimize haphazard, unregulated and, hence, unsafe sprawl development. Surveys are regarded as beneficial in identifying environmentally sensitive areas. Proper land use planning based on the identification of parcels that are susceptible to environmental damage is viewed as a necessary strategy. “Without a registration system, how could environmental clauses in agreements be enforced and without a survey system, how could you define areas where sustainable development is to occur?” (interview).

5. *Attitudes to Land Survey and Registration Systems*

First Nations interviewees were the most enthusiastic participants of the sampled groups. There seemed to be a genuine interest in improving the current land survey and registration systems and, in some cases, adapting the land survey and registration systems in place to indigenous models of land, landholding and land development. Further, the First Nation lands and economic development staff interviewed regarded establishing effective methods of control of land and land development as necessary tools for the economic and cultural survival of First Nations.

From one First Nation representative comes the following estimation of what is lacking in land administration: there must be a recognition by individual First Nation members that land survey and registration is a viable activity for them to be involved with; that it is not necessarily the exclusive province of the federal government; and there is work to be done in the area of property rights systems. There is support from all First Nation representatives interviewed for the involvement of First Nation members in the land survey and registration apparatus as practitioners: e.g., surveyors, land administrators in registration and land use, etc.

The Gathering Strength Report indicates the federal government's intent to develop and implement professional development strategies in land management. Initiatives will support accelerated transfer to First Nations of land registry and survey functions. The Report envisages that these initiatives will strengthen First Nation's capacity in key areas of governance and economic development.

Regulators consulted at the federal, provincial and territorial levels reported that the land survey and registration systems used in their jurisdictions were reliable and effective in describing and safeguarding interests in land; effecting agreements on the use of land; and in enabling the protection of environmentally sensitive areas. As well, these systems provided good access to land-related information. The maintenance of operation standards for the survey system through the Manual of Instructions for the Survey of Canada Lands was perceived as a useful guarantee of service by one class of users.

Investors consulted applauded the beneficial inputs realized from the use of land survey and registration systems. As compared to other interviewees, this group displayed an understanding of the value of describing, securing, and registering the rights, which they have in land both in terms of exploration and discovery operations. Where a resource extraction company's worth is represented by the volume of its reserves and increasing these reserves is an important part of demonstrating their value, the means which are used to guarantee their land rights are of obvious

importance. A respondent described land survey and registration as “absolute necessities” in supporting economic activity.

The lenders consulted displayed little knowledge of the benefits of survey and registration systems to their activities in particular. They acknowledged the benefits provided (on patented lands) by land registration systems in respect of providing security of their investment and a means, which could be used to recover land in case of default. However, the perception of Indian Reserve land was of an asset that was useless to them, given the impossibility of recovery and the vesting of the underlying title in Her Majesty.

6. *Government Involvement in Land Survey and Registration Systems*

The legislative bases for the Canada Lands Survey System are the *Canada Lands Surveys Act* and the *Canada Lands Surveyors Act*. Under the *Canada Lands Surveys Act*, the Minister of Natural Resources Canada, through the Surveyor General of Canada Lands, is responsible for establishing and maintaining viable systems of survey on Canada Lands; for ensuring the custody of records of surveys; and for causing to be made cadastral surveys of Canada Lands. Surveys and plans of Canada Lands are made under the instructions of the Surveyor General of Canada Lands. The Act prescribes in detail the regulatory activities of the Division.

Under the *Canada Lands Surveyors Act*, the Minister of Natural Resources Canada, through the Association of Canada Lands Surveyors, is responsible for the examination, admission and qualifications of candidates for commissions as Canada Lands Surveyors. The Act, authorizes the Association to establish the standards of qualification, conduct, knowledge and skill of Canada Lands Surveyors; authorizes the Association to grant commissions as Canada Lands Surveyors to person who have acquired the appropriate education, qualifications and work experience; authorizes the Association to receive complaints and take disciplinary measures; and requires Canada Lands Surveyors to obtain a license to practice cadastral surveying on Canada Lands.

The legislative and legal basis for government involvement in surveys on Canada Lands is not by historical chance, but rather is the result of real economic imperatives. Information, and in particular cadastral information, has special economic characteristics that mean that governments are often involved with its collection and provision. Information is a form of “*public good*” and is often associated with “*external*” benefits. Because public goods and externalities are, in turn, often associated with “*market failure*” there will be a role for government in these markets.

Furthermore, provision of public goods often includes elements of a “*natural monopoly*” that governments usually seek to own or regulate. “*National interest*” arguments, which are not purely concerned with economics, often provide an additional stimulus for government involvement. Each of these highlighted concepts is discussed further below.

- *Public goods* – The defining characteristics of a public good are that consumption of it by one individual does not actually or potentially reduce the amount available to be consumed

by another individual, the marginal cost of providing an additional unit is zero, and individuals cannot be excluded from using the good or service. Cadastral information is an optional public good because individuals can be excluded from using it. However, there are strong arguments that it is in the interest of ‘peace, order and good government’, to make cadastral information widely available and to ensure that it meets consistent standards.

- *External benefits* – “Externalities” arise where: production of a good by one “agent” imposes costs on and/or delivers benefits to other producers or consumers; or consumption by one individual imposes costs on and/or delivers benefits to other consumers or users. A public good is therefore a special form of externality; provision for one group of users will benefit other potential users because it is not possible or desirable to exclude them. In markets with “external” benefits, there is often under-provision and excessive prices because private providers take no account of the wider social benefits when setting prices since no financial benefit will accrue to them.
- *Market failure* – Public goods are often associated with “market failures” in a competitive economy. Problems arise from difficulties in making goods non-excludable and in pricing them. These “market failures” would typically lead to under-provision of a public good in a free market. They begin to provide the economic justification for some form of government involvement in the market either in terms of economic regulation or ownership of information providers. As a result, public goods generally become a public responsibility, e.g. for financing and regulation, but this does not necessarily imply public provision.
- *Natural monopoly* – Public goods often lead to natural monopolies. Cadastral systems are not cheap to build and maintain and they also require specialized skills bases. Such a large investment effectively acts as a barrier to entry, and many of the features of natural monopoly apply. The natural monopoly situation is strengthened because information providers may find it difficult to extract revenues from users. Key reasons are highly dispersed user benefits and high costs of collecting revenue compared with the income so generated.
- *National interest* – Cadastral information is very important to government’s primary responsibilities. Government has a responsibility to ensure order, to encourage material and other progress, and to protect the environment. Government has to support minority groups and to protect individual rights to property. While much of the cadastral information can be collected by the private sector, the specification of the product and quality control are therefore an irreducible state responsibility.

7. *Conclusions*

In summary, the interviews, case studies, and workshop provide evidence of the value of land survey and registration systems in enabling the achievement of social, economic, and environmental benefits.

The importance of these systems is growing as Canada Lands come under increasing economic pressures for land development, environmental pressures for land conservation, and social pressures to address native concerns.

The benefits are most direct in the case of resource development in the North and the offshore. The size of these lands and the value of their minerals, fossil fuels, timber, and other resources make efficient and effective land survey and registration systems both challenging and vital to Canada's national interests.

On First Nation lands, the social, governance, and legal environment of native groups complicate the achievement of benefits. The situation has been noted by McEwen (1992): "Improvements to land registration and survey laws and practices are not all that is required, but they can provide a vital contribution to the progress and self-sufficiency of Indian and other aboriginal peoples in Canada."

There are legal and economic imperatives for government involvement in land survey and registration systems. The federal government has a legislative obligation to ensure that land surveys and registration are provided on Canada Lands. And, perhaps most importantly, there are sound economic rationales for making land survey and registration systems a public responsibility.

It is concerning, however, that the past success of the land survey and registration systems may endanger their future provision. It is clear from the interviews that, outside of the land management community, the importance of land surveys and registration systems is not well understood. They are often viewed as well-functioning utilities that are imposed upon users. In this respect, the perception of value of the survey and registration systems has been prejudiced by their very effectiveness. Should this view result in a decrease in support for land surveys and registration on Canada Lands or, in the future, devolved Native lands, there could be long-term economic, social, and environmental implications.

A. Literature Review

A.1 Introduction

As defined by Legal Surveys Division (Canada, 1990: 1-1), a *land survey system* and a *land registration system* are the essential elements of a *property rights system* that denotes “the method by which governments regulate the use and development of land.” The primary benefits (which are defined as objectives in the 1990 study) of the two systems include:

- Land registration system

“to regulate the acquisition and exchange of rights to land by providing a public record of the ownership of the rights; and

- Land survey system

“to ensure the orderly and systematic identification of units of land and to ensure that the location and extent of rights in land are properly described in legal documents and demarcated on the ground.”

A land registration system safeguards rights; it records documentary evidence of rights in land “to preserve and protect the documents or to preserve the record of the rights, and to permit public access to them” (Canada, 1990, 2-27). Further, a land survey system is identified as a component of a *boundary system* (Canada, 1990: 1-4), which denotes “a method by which governments regulate the creation, description and demarcation of boundaries.” These, then, are the overriding benefits of the two systems which have been identified (a) in a Canadian legal, economic and social context; and (b) by an agency responsible for maintaining an essential part of the property rights system (for both surface and sub-surface rights) on Indian lands, the Canadian territories and the offshore. The benefits from other jurisdictions identified below rounds out the picture.

A.2 Breadth of the Material Reviewed

The literature consulted covers the period 1967 to 2001, and comprises studies of initiatives on every continent, as well as contributions from Indian lands within the United States and Canada. Evidence of the results of the various initiatives is often conflicting between various locales; i.e., while one survey or registration (titling) initiative has succeeded in one country, the identical approach may fail in another due to unique local factors. A common difficulty in analysis of the

success of these initiatives is controlling for influences from a multitude of cultural and economic forces.

Throughout this period, the role of reforming land management institutions in economic development has been recognized. The various mechanisms identified as means to this end have been conceived variously as *land tenure reform*, *land reform*, *cadastral reform*, *land titling*, *property formalization*, *land registration improvement*, *improving land management*, etc. What is clear from this range of operations is that an approach that conceives of survey and registration without an acknowledgement of the wider superstructure of land management and governance is of limited use. The dynamic has been noted by McEwen (1992) in relation to Indian lands in Canada: “Improvements to land registration and survey laws and practices are not all that is required, but they can provide a vital contribution to the progress and self-sufficiency of Indian and other aboriginal peoples in Canada.”

Surveying and registration initiatives have been applied to systems in which individual rights to land are recognized in an open land market, as well as systems in which individual rights are limited group or collective rights - the latter in the case of Indian Reserves in Canada. With respect to post-colonial countries in Africa, land registration and survey appear to be seen as a movement counter to traditional notions of property (Atwood, 1990: 662) that enforce a concept of group rights to land and informal agreements to achieve transfers, etc.

In many of the studies analyzed, it is difficult to isolate either the *land survey* or *registration* system and to gauge the effectiveness of each separately. Rather, in practice, they are typically treated as a unit; as components in the building of institutions which guarantee *property rights* through the definition of property on the ground *and* within a legal process. The overall enterprise may include cadastral surveys, mapping, land records regularization, and information systems applications. Such initiatives are often packaged, e.g. outside of North America, with other reforms of rural development to achieve broader social goals. As Simpson (1976: 3) put it, land registration “is merely part of the machinery of government. It is not some sort of magic specific which will automatically produce good land use and development ... In short, land registration is only a means to an end ... not an end in itself.”

Some examples of the international literature abound with statements on the efficacy and benefits of land titling programs. Proponents of the establishment of cadastral systems in less-developed countries champion the need to formalize individual and communal land rights in order to achieve a set of supposed benefits, i.e., to:

- “Promote security of tenure
- Improve access to land
- Promote economic and sustainable development
- Reduce poverty
- Support environmental management, and
- Support national development in the broadest sense”

(Williamson, 1997)

This review of the literature will not summarize individual studies on a piecemeal basis; rather, it describes the supposed or predicted benefits of survey and land registration systems and, with reference to various strands of the literature, reports on the evidence of success () or failure () of survey or land registration systems in delivering the stated benefit. Cases where there are either conflicting results or insufficient information to draw conclusions (?) will also be noted. Rather than an inventory of successful measures, it gives a summary of the claims and actual goods delivered (or not, as the case may be) as a result of survey and registration systems.

Some of the studies make recommendations, despite the absence of objective data demonstrating the effectiveness of survey or titling initiatives. This consists either of imagined characteristics of well-functioning survey and registration systems or commentary in the nature of ‘best practices’ based on project experience. The structure of this review is: First, the results of *comprehensive reforms* among the components of which are cadastral initiatives; second, a summary of *survey and registration initiatives*.

A.3 *Comprehensive Initiatives*

Comprehensive initiative benefit - social: defusing social tensions

de Janvry (1981: 390) identifies several ways in which reforms, including property redistribution, help to stabilize a situation where social tensions lead to unrest and land invasions, e.g. as has been observed in Colombia. Incorporating peasants into the title registration system achieves the aim of reinforcing the institution of property while not addressing the systemic causes of unrest and, as such, is a superficial treatment and not a complete antidote for social tensions.

Comprehensive initiative benefit - social & economic: establishing capable governments of Indian Nations

Establishing and strengthening governing institutions within Indian nations in general provides benefits by enabling local administrations to:

- (1) Efficiently make and carry out strategic choices and policies;
- (2) Provide a political environment in which investors* - large or small, tribal members or non-members - feel secure; and
- (3) Mobilize and sustain the tribal community’s support for its institutions and for particular development strategies”

(Kalt, 1996: 5)

*By “investors,” Kalt refers not only to agents with financial resources to invest in Indian enterprise but to anyone who has an interest, i.e., capital - social or otherwise - invested in the community by virtue of involvement or membership in the fair and proper operation of governance within an Indian nation. Kalt makes several references to case studies which illustrate the benefits of separating the political function of Indian nation governments from its

administrative and judicial roles. One beneficial principle which Kalt's research highlights is the necessity of having an independent and fair means of dispute resolution within native communities. Kalt asserts that only with this aspect of local governance in place will "investors" have the confidence to commit their resources (human and financial) to building and strengthening economic and social goods.

Comprehensive initiative benefit - social & economic: limiting unplanned and inappropriate land development

By controlling the supply of land that is allowed to be developed for housing, regulating land markets, and providing basic infrastructure to informal settlements in developing countries, unregulated development of the built environment can be minimized. These initiatives are identified by Durand-Lasserve (1997: 11) as contributing factors to the minimizing of haphazard, unregulated and, hence, unsafe sprawl development.

✓ Comprehensive initiative benefit - social and economic: to allow land settlement claims to provide access to land and resources.

Settlement of comprehensive land claims opens doors for aboriginal people to realize the potential of their relationship with the land and their designs for their territory more fully. (Notzke, 1994, 175) Resolving outstanding disputes over land tenure and resource control gives business certainty and economic stability. Assured rights give business people access to the most important assets available for local development - land and resources. (Elias, 1995: 139) Elias identifies that domestic production, and therefore mixed economies, depend on access to lands and resources. (1995: 9) But, access alone is not sufficient: aboriginal people also need the right and authority to decide how resources and lands will be used." Land settlement claims can provide this certainty and inevitably converted to a local benefit. (Elias, 1995: 33)

? Comprehensive initiative benefit - improved land management due to surveying, land registration and land use controls - economic & social: municipal revenue from taxation; "human development"

Improved land management (stemming from its component initiatives of cadastral surveys, land registration, land use regulation, property taxation, etc.) brings revenues to local government and funds provision of services (Badiane, 1997:17). The "human development" benefit stems from the provision of social services from the community tax base.

? Comprehensive initiative benefits - social and economic: to resolve boundary issues of land use and occupancy overlap

Placing boundaries on a land where none exists is not an easy task for northern aboriginal peoples. This applies to the land selection process within the claims areas as well as to boundaries separating claims regions. (Notzky, 1994:194) Overlap agreements can be signed between First Nations for the duration of a specific issue of mutual concern (e.g. wildlife harvesting by Gwich'in within Inuvialuit Settlement Region (ISR). Notzky (1994:195) also notes the Overlap Agreement where the Gwich'in claim to the ownership of a block of land within the ISR and the principles for mutual consultation in its management and development.

? Comprehensive initiative benefits - social: tribal recognition first and deal with territorial aspects after.

Groves describes Canadian legislation as focusing on regulating all aspects of federal reserve lands and considering the people connected to those lands as agents for the administration of those lands. Groves compares this with the American system which recognizes Tribes as distinct and deals with their lands as consequential subjects for jurisdiction. (Groves in Notzke:1994, 177)

? Implied comprehensive initiative benefit - social and economic benefit: to promote self governance through models for First Nation's administration of land

The *Royal Commission on Aboriginal People's* Report suggests the provision of models where Aboriginal governments would exercise core jurisdiction in most matters affecting their lands, including the administration of lands in accord with a nation's traditions of tenure and governance (this would cover various survey and registration models). RCAP indicates that "the increased Aboriginal control over decision making, management and use of traditional lands and resources; and governments that are responsive to the people served; have the legal authority and capacity to define and meet local and regional needs; and contribute to self-sufficiency through the development of local and regional lands, resources and economies." (RCAP, Vol2, Chapter 3 s3.1 Part1)

A.4 Best Practices in Aboriginal Business and Economic Development

This section was gleaned from a Symposium of the same name, held at the Banff Centre for Management, held January 16-20, 2001. The symposium was attended by 73 participants drawn mostly from first nation councils and enterprises (YT - 3; BC - 11; AB - 35; SK - 2; MB - 10; ON - 3; PQ - 7; NS - 1; NB - 1). A breakdown of attendees by sector follows: First Nation government, including councillors, economic development personnel (38; including 4 in Treaty Land Entitlement); First Nation enterprise (25); treaty council (1); Industry Canada (2); national aboriginal business association (1); Metis National Council (1); university (1); construction (1); management accounting (2); legal practice (1).

The seminar was led by Robert Breaker (a former Siksika Nation Chief, who now directs Aboriginal Leadership and Self-Government Programs for the Banff Centre for Management), along with Stephen Cornell & Manley Begay (now with the University of Arizona) and Joseph Kalt of the Harvard Project on American Indian Economic Development (Harvard University); and Kenny Grant of Lexecon, Inc. Presentations were made by Raymond Endfield of the White Mountain Apache Tribe (Arizona), Regis Pecos of the Pueblo de Cochita (New Mexico), Chief Sophie Pierre (St. Mary's First Nation, BC), John A. (Rocky) Barrett of the Citizen Potawatami Nation (Oklahoma), and Robert Dickson speaking on Niigon Technologies Ltd. of Moose Deer Point (Ontario). The academic presenters spoke on the principles of economic development which they have investigated through statistical study of the practices of 67 US tribes, while the indigenous government officials gave histories and anecdotal economic development evidence from their home communities.

Economic development is conceived as a nation-building exercise and founded on the assertion of sovereignty. Sovereignty (to be qualified below) underpins the development of governing institutions; strategy and policy; and tools and resources - all of which lead to “action” or economic activity (Udall / Harvard course materials - “The Development Pyramid”). A distinction was made between the use of the term *sovereignty* in the US and its application in Canadian parlance. In the Canadian context, sovereignty typically refers to a formal separation of states and may or may not entail an economic union (as in the case of the Quebec debate, for example). American usage, by contrast, was qualified as denoting assertion of a particular variety of self-determination within the larger federation. The key distinction is that American tribes apply the term *sovereignty* to the activity of nation-building through economic development. This notion is manifest in the type and themes of presenters and case studies assembled for the conference.

Among the conference’s “Starting Assumptions” were:

- *“Most problems faced by Indian nations are not “Indian” problems. They are problems that societies everywhere face.*
- *Indian nations are no less capable of solving these problems than other nations are.*
- *However, indigenous peoples often face constraints that other societies do not face; this complicates the problem-solving process.*
- *Finally, what we are talking about today is not simply economic development. The topic - and the challenge - is larger than that. The fundamental task is to build societies that work.”*

(Udell / Harvard)

Further, “Societies that Work:”

- *“Are capable of effectively pursuing their own objectives;*
- *Provide their citizens with opportunities to lead productive, satisfying lives;*
- *Deal with internal differences and disputes fairly and effectively, without tearing the society apart;*
- *Are capable of establishing and maintaining productive, mutually beneficial relationships with other sovereigns or societies.”*

(Udell / Harvard)

A.4.1 *Lessons From the Harvard Research*

The research engaged in by Cornell et al under the auspices of the Harvard program includes reference to *investors* in tribal activities. The term is broadly construed and can apply equally

well to investors in the usual sense of native or non-native agents with financial resources and to band members who, in a sense, are shareholders in the common enterprise represented by the Band Council or tribal government. When speaking of the success of native enterprise, the researchers refer to critical factors which attract and benefit investors of both types. One trait shared by investors is their need for *security* - whether in the form of guarantees relating to access to resources or to the degree of reliance that they can place in dispute-resolution mechanisms. The environmental characteristics which support economic success all contribute to increasing security that the investment will be safeguarded by supporting institutions and procedures.

In summary, Cornell et al identified five essential components of nation-building:

- “Stable institutions and policies,
- Fair and effective dispute resolution,
- Separation of politics from business management,
- A competent bureaucracy, and
- Cultural ‘match’”

(Cornell & Kalt, 1999?: 12)

The ‘best practices’ framework of the symposium was enriched by an examination of governance structures in a variety of settings. A broad base of institutions of good governance is essential to fostering economic development on Indian lands. The presence of an independent judiciary was found to be correlated (Cornell & Kalt, 1999?: 14) with lower levels of unemployment in a controlled study of 67 US tribes. “If you control for the effects of other factors of employment, you find that simply having an independent judicial system reduces unemployment, on average, by five percent.” The supposition is that an independent judiciary and its supporting institutions of law enforcement is the guarantor of fairness in business dealings.

The presence of a functional property rights system was not mentioned expressly in the presentations. Factors were identified but the detailed mechanisms that ensure a positive economic climate were not explored at the symposium - the general point being made that a prosperous economic climate is formed by institutions of government that remain objective, inviolable, and insulated to various degrees from the political realm. The mixing of political and management functions of government was the principal danger of government structure explored in light of First Nations. The factors listed above will not be explored here, but in a separate section. What follows is a description of some of the issues surrounding the proposition of asserting nationhood.

A.4.2 *How Do We Define Our Particular Indian Nation?*

The first problem of self-government involves determining who the “self” is. In other words, does self-government proceed from an understanding of nationhood based on identification with

government-created bands - which are understood to be creatures of statute (either the *Indian Act* in Canada or the *Indian Reorganization Act* of the USA - which (latter) gives the model of governance for roughly half of the Indian nations in the US)? Or, does national identity flow from membership in a treaty or from modern-day tribal affiliations? Does it incorporate traditional alliances extant before European contact, and what role does self-identification play in the process? How does mutual self-interest - based on occupation on the shore of a river, or presence in a specific watershed - operate in defining a nation's identity?

An example in the context of Alaska tribes given by Professor Cornell showed the difficulty of identifying the nation, given the simple presence of artificial boundaries imposed by white governments. Political boundaries have imposed artificial cleavages between unified peoples and established administrative divisions having no sense except as administrative pod-separators. The *Indian Reorganization Act* (IRA) of 1934 which was modelled on the organization of the American Legion - seen by the Bureau of Indian Affairs as a *social* organization model and therefore one of great utility to Indian tribes - similarly imposed artificial power structures which are wholly inadequate in light of current issues. Furthermore, the power structures established by the IRA and Canada's *Indian Act* are, in many cases, seen as abhorrent to traditional and hereditary organizations. There are cases, such as the Six Nations of the Grand River, where the thriving traditional power structure is at odds with the form of band government imposed by the *Indian Act*.

A.4.3 *We Are Nations Among - Nations? States? Municipalities?*

The recent trend of devolution of the federal government's responsibilities in Canada to provincial governments has required that bands deal increasingly with municipalities. Dr. Cornell identified the fact that, although US Indian bands have a position of not dealing with state governments and preferring the 'nation to nation' approach, the state is becoming the point of contact in many areas. A participant from Saskatchewan's Treaty 4 organization referred to the need to deal with municipalities on matters such as land use and zoning, transfer of land to reserve status, etc. In relation to downloading of responsibilities, a participant from Campbell River, BC noted that, in the arena of health care, "we have decision-making [power] but not infrastructure;" i.e., the responsibility has been delegated to the first nation without the resources or authority required to carry it out properly.

A.4.4 *Choctaw Advocacy in Mississippi*

The experience of the Choctaw Nation in developing gaming resorts on their lands exposed how critical political alliances are in establishing, nurturing, and maintaining tribe-owned enterprise. The tribe is one of the success stories highlighted in the course. Coming from a situation of 75% unemployment in the 1960s and building a 40-acre industrial park in 1960, the tribe has turned around its economic state. They now operate a hotel/casino complex and are in the process of building another one on tribal lands. Revenue from this and the tribe's other industrial ventures is being put back into education, health care and social services. The social environment in which the tribe operates required that they canvass their members and proceed on the basis of consensus. Consultation and information gathering from tribe members are seen as critical steps in tribal activities nowadays - a step which was not always taken by previous administrations.

Externally, contacts with politicians at a state level and in Congress have been instrumental to the success of the tribe's ventures. There is a need to advocate with legislators for regulations that favour not only the tribe's operations, but similar organizations of other tribes and organizations as well. For instance, a state law that required casinos to be located only on water bodies was overcome by securing federal legislation that made the Choctaw casino the only land-based one in the state of Mississippi. The assertion of influence on the local political scene was identified as a goal and benefit of being economically active - both in the Choctaw example and in the case studies. For instance, when an enterprise became successful and significant property taxes were paid (or good will contributions were made) to the neighbouring municipality, the financial support was seen as increasing the leverage that the tribe had in influencing local laws. As mentioned above, the importance of municipal-level authority in regulating land use is not to be under-estimated.

A.4.5 Discount the Possibility of Success Unless Starting From a Position of Strength

A distinction was made in the case studies between business ventures undertaken from positions of weakness (i.e., poor organization, institutional gaps, high rates of unemployment, politically opportunistic leaders, dependency on federal programs) and those entered into by bands with a healthy political and institutional structure. A band council which was desperate to be seen to be correcting a situation of high unemployment was shown to have made poor business decisions, while a band with a sound institutional framework and an objective decision-making (include dispute resolution) structure succeeded in business enterprises.

A.4.6 Land Use in Cultural Context

Economic activities that would entail use of certain lands in the community must be qualified by cultural values. In discussion, this point was identified variously as an expression of long-standing cultural practice and a hindrance to economic growth. For instance, one tribe's proposal to allow non-Indians to use their substantial wild areas for hunting was rejected on the basis of the area's special cultural significance. In this light, it would have been inappropriate for outsiders who are unfamiliar with the special land use protocols to be present in the area. Another perspective came from a participant who saw inconsistency in cultural practice as a stopper. A proposal of economic activity that was favourably viewed by one traditional authority would be opposed by those within the tribe having a different religious interpretation of land use prohibitions. Respecting collective wishes meant that the more cautious approach prevailed and the resource use was not allowed.

A.4.7 Collective Vs. Individual Property on First Nation Lands - Which Ensures Economic Success?

When asked if the Harvard research identified an individual or collective property rights regime as a precursor of economic success, Professor Cornell advised that there is no compelling argument either way, and that it was more a question of the nature of the institutions which are

established to deal with land in the particular context. “Some of the biggest success stories in our study occur on reservations which view land as a collective resource,” he said.

According to Robert Breaker, the biggest challenge facing Indian nations is to *de-colonize* themselves. This entails deciding what form of governance they will accept. It requires consideration of the models proposed by government (e.g., as proposed in a *governance continuum* put forward at a leadership forum held in Ottawa [date unknown]) in which Indian nations would be converted into municipal structures and absorbed into the Canadian landscape. It requires an examination of the value of the *Indian Act*, and whether the nations will allow the federal government to remove the safeguards and benefits that it provides - not the least of which is protection of the land base.

A.4.8 What Kind of Governance Do We Want?

The design of governance institutions - including those dealing with land - requires addressing a set of nation-building questions posed by Dr. Begay,

- What kind of life do you want as a nation?
 - ...what kind of language?
 - ...what kind of worshipping?
 - ...what kinds of jobs?
 - ...what kinds of activities will take place on your lands?
- Will you continue to seek funds from INAC and, so, perpetuate the role of band government as INAC’s program administrator, or take on the nation-building challenge?

The last question, above-noted, posed by Dr. Begay was central to the topic of ‘challenges.’ Both he and Robert Breaker led the discussion from desires and wants onto the question of competencies required to achieve the desired goods. True to Mr. Breaker’s background as a teacher and Director of Education, he asserted that de-colonization also requires a revisiting of traditional values in the construction of government - and, in its incipient form, to examine the values, beliefs and attitudes transmitted by the mainstream education system versus those which permeate indigenous knowledge systems. The institutions which indigenous nations create would be incomplete unless they incorporate key values of traditional culture.

Stressing the importance of cultural orientation, Mr. Breaker led the discussion onto the challenge of continuing dependency and wardship vs. sovereignty & nation-building. He pointed out that, if one accepts the *Indian Act* as one’s governing system, it produces an *Indian Act* governance mindset in leaders, decision-makers and managers in native government. To shift to a *nation-building* approach requires that Indians “dump” some of the accustomed attitudes, values and beliefs. Some will note the monumental importance of the fiduciary relationship with the crown which has existed since 1763. However, “to move to a nation-building mindset, we may have to relieve the federal government of some of its fiduciary responsibilities.” Unfortunately, this point was not pursued in conference. Nevertheless, its mere mention was

significant, given the venue, the association with noted researchers, and the critical mass of indigenous decision-makers participating.

A.5 Survey and Registration Initiatives

Survey benefit - economic & social: to delineate exterior boundaries separating Indian Reserve lands from other territorial jurisdictions; to safeguard the Crown's proprietary interests in relation to lands adjoining reserves

These principal functions of the office of the Surveyor General of Canada Lands achieved both practical and socio-political purposes; i.e., the boundaries of the parcels constituting Indian Reserves are manifested physically by ground survey and legally recorded on a plan of survey as being under a distinct legal regime of land tenure and management (after McEwen, 1992).

? Survey benefit - economic: to support land development on Indian Reserves

According to McEwen (1992), there is "growing pressure for surveys to support all manner of reserve land development and transactions." The literature does not specifically address the Canada Lands' surveying system's performance in this respect. McEwen (1992) characterized the issue as one of arriving at minimum standards, while satisfying the legal and technical requirements, given the government's limited financial resources for land management.

Survey benefit - economic: to support long-term interests, such as expropriations and surrenders of Indian Reserve lands

Major transactions involving Indian Reserve lands depend on unambiguous parcel definition by Official Plans prepared under the *Canada Lands Surveys Act*. McEwen (1992) identifies this as an essential function of actual field survey.

✓ Survey benefit - economic and social: to identify the condition of external boundary lines and encroachments onto Indian Reserve land

Through field survey investigation of the external boundaries of Indian Reserves, encroachments may be uncovered, providing a base for further action. Discrepancies between legal allocations of parcels to individual Indians and actual occupation may be similarly discovered (McEwen, 1992). Identification of resource extraction activities on the margins of Indian Reserves is an important fact-finding function of such work.

? Survey benefit - economic: protection of forest resources

The benefits of survey and registration programs are often implicitly noted in the description of cases where land rights are poorly defined and where the property rights system is either incomplete or excludes the claims of indigenous peoples. The "unclear definition of territorial rights" in respect to the land claims of the Mayagna indigenous community on Nicaragua's Atlantic coast, for example, is identified as a hindrance to equitable distribution of forest resources. "The absence of any definition as to the land or territorial rights of indigenous groupes...results in an absence of responsibility in which land and property is frequently abused"

(Anaya & Crider, 1998: 217). Where there is more certainty as to the nature and extent of indigenous ownership, other players in developing the resource are more likely to participate in responsible management and extraction.

? Implied survey and registration benefits - economic: to accelerate transfer of land registry and survey functions

The Gathering Strength Report indicates the federal government's intent to develop and implement professional development strategies in land management. Initiatives will support accelerated transfer to First Nations of land registry and survey functions. The Report envisages that these initiatives will strengthen First Nation's capacity in key areas of governance and economic development.

? Implied survey and registration benefit - economic: forest management development

Notzky notes that there are 42 major forestry tenure systems used to grant property rights to forest operators - from comprehensive freehold to non-exclusive common property rights. Forest tenure systems are the major instrument for implementing public forest policy. Identification of land tenure and property rights defines the mechanics of the process and can determine who may not obtain this access. It can entail rights over the forest itself, beyond mere acquisition of timber. (Notzke: 1994, 83)

? Registration benefit - social: to enable sustainable (urban) development

Durand-Lasserve (1997) identifies the integration of informal settlements into the wider land market as a key step in providing the necessary infrastructure to informal neighbourhoods which, in turn, is a characteristic of sustainable urban development. This link between registration and sustainable development was not fully demonstrated with empirical evidence.

? Registration benefit - economic: promoting the best use of land

"The best use of land may be unlikely without [secure tenure], but security will not by itself ensure that land is properly used" (Simpson, 1976: 10-11). Simpson goes further to say that the best use of land requires, primarily, ease of disposition; i.e., ensuring that land parcels are available to the land market and that land transactions are easily made. In a similar vein, Atwood (1990: 662) echoes Uchendu's (1967) observation that titling "has been advocated as a way to weaken...ethnic barriers" to achieving evenly-distributed land use on a regional basis.

✓ Partially demonstrated registration benefit - economic: reducing costs associated with identifying the true owner of a parcel

✓ Partially demonstrated registration benefit - economic: reducing the risk of dispossession by arbitrary local authorities

The proposition dealt with here is the improvement over that aspect of customary land tenure systems whereby traditional practices expose buyers to serious risks when acquiring property. Atwood (1990:663) cites cases in early colonial Uganda and early independent Côte d'Ivoire

where the above-noted benefits were demonstrated as substantial improvements over previous informal landholding practices.

*** *Predicted registration benefit - economic: promoting land transfers***

African land privatization experience reported by Atwood (1990: 663) suggests that land registration by itself does not increase activity in the land market. At the inception of privatization in Uganda and Côte d'Ivoire, for instance, an initial increase in the volume of land transfers was spurred more by the imposition of the requirement for privatization rather than by any single mechanism such as registration.

Additional points that denigrate the role of registration

In addition to the ineffectiveness of registration applied in isolation, Atwood reported certain features of formal registration systems that make them unattractive to those used to customary systems. In summarizing research on the Kenyan experience Atwood (1990: 663) notes that a formal system will not be used to transfer land if the costs of executing a transaction are prohibitively high. As well, certain transactions remain outside of the formal system where procedures mandate a minimum parcel size or affect only those transactions which have been approved by government officials.

Registration benefit - social: to consolidate and register customary tenure

Registration benefit - social: to reduce litigation in land

Registration benefit - economic: to increase security of tenure

Registration benefit - economic: to promote improvements to land

According to Hanstad (1996: 12), the novel juxtaposition of a formalized registration system alongside a customary landholding system of long standing can actually increase land disputes which have the potential to turn to litigation.

Simpson (1976: 9) notes that security of tenure can exist without formal recognition by state-sanctioned systems, including those of survey and registration. Occupation of land is central to an individual claim. Traditional systems of land use and state recognition of individual property rights provide a measure of certainty of occupational rights. Conflicts will arise when land titling projects attempt to supplant customary tenure systems with common law rules.

Hanstad (1996:7) describes how imposition of a new regime which allows registration of title has been accompanied by fraudulent land takings, notably in the US and Australia but not uncommon elsewhere. Hanstad reports of studies which demonstrate increases in "productivity-enhancing investment" in Thailand, Costa Rica and St. based on comparisons between titled and untitled farm operations.

Registration benefit - economic: to enhance access to credit

Atwood (1990: 664) speaks of the securing of mortgages with property as a means of reducing the “information cost,” i.e., reducing the cost of acquiring information as to the borrower’s credit-worthiness. The public nature of the registry and its measures of quality assurance in certifying title enable it to verify the borrower’s collateral. However, land is valuable as collateral only where there is a viable land market and lending institutions may have assurance that the properties they acquire through foreclosure will be marketable or valuable assets. This objective has not been demonstrated in the African context, where informal lending is the norm.

Moreover, although they report that titled farmers had “far greater access to credit” than untitled farmers, Feder & Nishio (1999: 34) allow that access to credit is enhanced only for *large-scale* producers. Hanstad (1996:9) accepts the fact that “many studies” cite a link between registration of title and enhanced access to credit, yet he notes weaknesses in the methodology of such studies and the need to demonstrate a *causal* link. The link, although plausible, has been investigated without controlling for the possibility that factors other than titling are the cause of the enhanced access to credit (Hanstad, 1996: 9).

The Indian Act is a major barrier to lending on reserves in Canada because it prevents banks from taking security on most loans. Lack of access to capital impedes economic development at community level. “The experience of emerging nations around the world demonstrates clearly how successful political change involves corresponding changes in the economic system. A Government can succeed only when it is operating in a viable economic system, one that creates and sustains wealth and thereby serves the needs of its citizens. We cannot achieve self-government at the community level without first having achieved a level of self-sufficiency.” (Aboriginal Banker, 1999/2000: 1-2)

? *Registration benefit - social and economic: to record financial interests in land to assist acquisition to finance*

The Indian Act is to preserve Indian land base and does not serve as an ideal legislative framework for financing reserve businesses. However, there are sections within the Act that provide registry systems for recording financial interests in reserve lands. s21 - Reserve Land Registry is for internal interests such as Certificates of Possession and allotments to individual Indians. s55 - Surrendered and Designated Land Registry is a registry for external interests. Reiter (1990:19) notes that the main problem with both these registry systems is that they have no system of priority for the registration of interests and there is no assurance fund which pays those who have lost as a consequence of relying on the system (both of these elements are found in the provincial system too). The security problem can be circumvented by allowing non-Indians to use reserve lands for a limited time. After the lease expires, the land reverts back to full reserve status; the band has a reversionary interest. Indians have a usufructuary interest in reserve lands (use and benefit of land). Hence a mortgage or other charge will only apply to a leasehold interest on reserve land (Reiter, 1990:20)

Registration benefit - economic: to promote on-farm investment

Conclusive proof of the dependency of farm investment on registration of title cannot be shown without gathering of further empirical data. Atwood’s (1990: 665) summary of the African cases suggests that, while tenure security flowing from title registration may encourage innovations

and investment, this occurs in the minority of large agricultural operations. In the vast majority of operations, which are small farms, culturally-ingrained practices (e.g., of periodically relocating holdings) and the hegemony of unsophisticated farming practices conspire to discourage investment by individual farmers.

Registration benefit - economic: to stimulate a viable land market

Feder and Nishio (1999: 28) describe the process by which parcel registration decreases the uncertainty faced by potential buyers. When the marketability of parcels is so increased, it becomes easier to transfer land. The market enables pressures to transfer land into higher-valued uses to flow and stimulates activity. Studies reported by Hanstad (1996: 10) present conflicting outcomes regarding land market performance. For example, a 1980 study of the establishment of a land registration system (Caribbean) reported a significantly higher number of land transactions following implementation. A 1990 study of the advent of formal titling in Honduras showed either no difference in the incidence of transactions between titled and untitled areas, or a slightly lower incidence of transactions in the titled area. Honduras' experience in titling also seems to thwart the entry of smallholders into the land market. As Fandino (1993: 51) reports, "land market transactions are blocked for holders of plots smaller than 17 hectares."

? Registration benefit - social: to reduce land disputes

? Registration benefit - social: to protect rights in land through systematic adjudication

The Indonesian titling project consists of the survey of parcels and adjudication of all claims to the land in a meeting conducted with all adjoining owners in the project area. The Indonesian Land Administration Project (Indonesia, 1996) aims to reduce the potential for disputes by systematic registration of all non-forest land in the country. In this way potential claims - both based on conflicting use or on legal grounds - are identified, vetted and resolved at the time of registration.

Although the standards for ground survey appear to elude the initial design of the Belarus titling initiative, a program of "systematic delineation" of rights in land was envisaged (Butler, 1996: 20). The approach conceived of at that time included adjudication of rights so as to exclude any instances of budding disputes from the system.

? Registration benefit - economic: to increase agricultural production & productivity

The theoretical mechanism by which titling, in the Latin American context, brings about improvement and increase in agricultural production, is well-established. In the four-step program, described by Stanfield (1985), the secure title gives the farmer the ability to use the land as collateral against a loan. Having assurance that his parcel will not be taken from him and the knowledge that the proceeds of his investment will accrue to him give the farmer incentive to invest in his agricultural enterprise. The process outlined by Stanfield:

- *A secure title enables the farmer to use the land as collateral for securing loans from financial institutions.*

- *A secure title provides farmers with incentives to invest in their farms by increasing the probability that the capital they accumulate will provide them with future benefits.*
- *With this combination of increased ability to secure operational and long-term capital and the farmer's increased incentive to use this capital in the farm enterprise, farmers with secure title will actually increase their long-term capital investments as well as their purchase of production inputs.*
- *With higher investments and greater use of production inputs, the value of production per hectare will be higher for the holdings with secure title than for those without good title.*

In analyzing agricultural productivity of Indian lands in the American west, Anderson & Lueck (1992: 448) do not identify the presence or absence of registration as a determining factor. Rather, they identified a correlation between productivity and type of land tenure. The type of tenure - i.e., whether the land was tribal-trust, individual-trust, or fee simple land within an Indian Reservation - was the key determinant of productivity.

In addition, dealing with trust land of either type was associated with higher transaction costs “resulting from multiple owners of small parcels” (fractionation of ownership); delays in land dealings due to remote administration by the Bureau of Indian Affairs; and the complicating effects of tribal politics on land use decisions. Tribal-trust lands, which may not be alienated and which are not usable as collateral (similar to the situation, generally, of Indian Reserve lands in Canada) were found to be 85 to 90 percent less productive than fee simple lands; and individual-trust lands were found to be 30 to 40 percent less productive than fee-simple lands within reservations.

Anderson & Lueck speculate about the parcels which were surveyed pursuant to the 1887 *General Allotment* (Dawes) Act. They discuss the proposition of whether the agriculturally best-suited lands were the first ones selected for allotments and surveyed, to eventually become fee simple lands; or whether the lands which were surveyed for allotments benefited from the lack of restrictions which otherwise impeded the betterment of trust lands. Whether allotments have been surveyed (starting in 1887), in this context, is not a determinant of productivity but, rather, it appears to be a hallmark of the more productive lands. The causal link between surveying and productivity is difficult to establish.

? *Registration benefit - economic & social: to bring Indian Reserve lands into a flexible provincial legislative framework*

In addressing the wider range of legislative measures available for administering patented lands through provincial legislation than the regime which applies to Indian Reserve lands in a province through federal statutes, McEwen (1992) identified the desirability of registering land in the provincial land registration system. He highlighted provincial statutes such as a *Condominium Act* and *Landlord and Tenant* legislation which are currently not available on Indian lands in the provinces and cited the example of the Sechelt Band who engineered this change via the 1986 *Sechelt Indian Band Self-Government Act*.

Registration benefit - economic: protection against unregistered dealings, or subsequent conflicting registrations

McEwen (1992) described the system of dual registration that applies to the eight Cree bands and one Naskapi band who participate in the *Cree-Naskapi Land Registry Regulations*, 1986. Under this arrangement, registration would occur in both the local community's registry office and at a centralized registry in Quebec City. Commenting on the almost total lack of use of the system several years later, McEwen theorized that cultural preference and simple demographics may explain the situation. "The limited extent to which the system is being used by the communities it was designed to benefit may simply reflect the fact that aboriginal peoples living in remote, and sometimes fairly simple, surroundings may have little familiarity with, or see much use for, a sophisticated type of land registration that is more appropriate for settled areas where individual land tenure, rather than communal holding, predominates."

? *Registration benefit - social and economic: to secure individual allotments on communal land.*

In Canada, legislation allows for Band Council to allot possession of reserve land to individual members. However, this and transfer of this allotment to another band member are subject to ministerial approval.

If a customary land allotment pattern is followed Bands can allot land to individual members at discretion of the Band Council and ministerial validation is avoided. However, the allottee has no more legal security of tenure than the Band Council is prepared to permit. Individual land tenure under a customary system is flexible and informal. Cases indicate that the division between 'landowners' and landless band members isn't very pronounced. Every family by custom has the right to fence off or use a parcel of land to graze some livestock (there are some acceptable limits). Where there is no defined land policy on the Reserve; the council handles disputes over land individually. There is no land registry, and as a result no data regarding the number of landholders and size of holdings. Literature cases identified that inheritance of land parcels is often a source of contention. Notzky notes that there are problems with communal system where historically only a limited number of families reap major benefits. (Notzky, 1994, p178 -180)

? *Registration benefit - economic: to reduce the incidence of uneconomical fragmented parcels*

Despite the noble sentiment driving this goal, the mechanisms are not in place in all titling initiatives to achieve it. Fandino (1993: 50) notes that, in Honduras, titling regulations expressly prevent formalization of title for smallholders with less than five hectares of land. The intention of the law is to discourage the existence of small parcels which, in the case of Honduras, play an "essential role" in the nation's agricultural sector. It is unclear whether the titling program's refusal to formalize smallholdings is instrumental in precipitating a reduction in their numbers.

Projected registration benefit - social and economic: to enable choice between remaining under legislative land administrations or opting for new land management regimes.

Reserve lands pass from a communal title to a title called "chartered lands", which are held and defined according to a Charter which is consistent with Federal law. Chartered lands includes reserve lands, fee simple and claim settlement lands. In theory this regime places control and

decision making power to land management with First Nation governments. This would also devolve federal fiduciary obligations from Canada to First Nations governments in the area of land management. Notzky highlights concerns from First Nation groups about the possibility of land alienation under this regime. (Notzky, 1994, 181)

? *Registration benefit - social and economic: to ensure final agreements will provide certainty with respect to ownership and use of land and resources.*

In the Nisga'a Final Agreement in Brief, individual parcels within Nisga'a Lands will initially be registered under a Nisga'a land title system and, following a transition system, may be registered under the provincial land title system. (Anderson, 1999:267-269)

Registration benefit - economic: fee simple to allow Band to manage its land.

Band lands are made fee simple reserve lands. The economic implications of fee simple reserve lands enables the band to buy and sell land and use it as collateral to finance development projects. Title is registered in the provincial land titles registry. This means that the land has lost the protection of the Indian Act (e.g. management, possession, inalienability and surrender, exemption from seizure), however the Band has the power to manage its band (subject to powers of province). Notzky refers to the communal ownership of Sechelt lands reflected in the decision-making process pertaining to issues that could potentially lead to alienation of land or resources. (1994, 183) Safeguards can be incorporated such as in the Sechelt Constitution and Sechelt Act. Here, no Sechelt lands can be mortgaged, sold or otherwise have the title to them transferred, unless action is approved by referendum by a vote 75% in favour by all Band electors. Notzky notes while Sechelt lands adopted corporate features in their land ownership, they also incorporated culturally and socially conditioned safeguards to ensure their land base as a future homeland. (Notzky, 1994, 194)

A.6 Summary

This review covers the material listed in the attached list of references. There appears to be no literature which uses empirical data to explicitly identify the social and cultural benefits of land surveying and title registration to First Nations' lands in Canada. However, there are studies from hither and yon which do suggest expected benefits and which do identify actual benefits, and which, therefore, offer some principles. Moreover, the absence of evidence from First Nations' lands merely illustrates the utility of this present study.

Finally, much of the literature that deals with Indian lands in North America is concerned generally with Indian economic development, in terms of governance, accountability, and trust. It is within that development paradigm that survey and title systems can implicitly (if not explicitly) be grouped.

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B. Interview Summary

A review of the literature on property formalization identified distinct benefits accruing to users of land survey and registration systems in less-developed countries. A host of economic and social benefits were either proven or asserted without being clearly demonstrated in all regions studied; for instance, a particular benefit may have been demonstrated in one country yet fail to obtain elsewhere. Such discrepancies indicate the need for further study to test for benefits in specific locations. The literature suggests the usefulness of interviews with functionaries and users of land: “An indication of transaction costs might come from interviews with rural notaries, land chiefs, government clerks, and users of the land registry mechanism...and from information on the costs of using other formal services in rural areas such as rural banks or government recording systems” (Atwood, 1990: n6). In this study of users of survey and registration systems on Canada Lands, canvassing the various categories of system users gave the opportunity to determine the usefulness of the systems; the difficulties experienced; and areas for system improvement. Most importantly for the current study, interviews are a reliable means of gauging the effectiveness of land survey and registration systems in terms of enabling economic and social benefits on Canada Lands.

To gather data, a formal questionnaire was administered through a combination of telephone calls, faxes, and emails between February 19th and March 1st to over 50 individuals. The questionnaire was directed at a range of people working in various capacities connected to Canada Lands. **Input was sought from six sectors:**

- Federal government and agencies;
- Provincial and territorial governments and agencies;
- First Nations and First Nation organizations;
- Investors and industry;
- Lending agencies;
- Environmental and legal experts.

Interviewees were selected on the basis of having experience or expertise in advising, or working on or with, Canada Lands - either with or within First Nations; in the North; in National Parks; or in Canada’s offshore.

The questionnaire consisted of four sections:

- Identification - sought the interviewee's position, affiliation, and nature of their involvement with Canada Lands;
- Survey - questioned interviewees on the contribution of the land survey system to economic and social goals;
- Registration - questioned interviewees on the contribution of the land registration system to economic and social goals; and
- General - asked for a description of a major project in which land survey and/or registration played an important role, and the relationship of these systems to sustainable development.

Interview subjects were assured that their privacy would be protected through the aggregation of responses. Organizations and consultants who are not connected as such with a specific First Nation were advised to respond to questions with respect to First Nation communities or Canada Lands with which they are involved in their operations.

The questionnaire was introduced as a means of receiving input from the client groups of Legal Surveys Division as users of land survey and registration information on Canada Lands. The methods of the study were described as including:

- Questions on the social and economic benefits which were perceived as being made possible in some way by land survey and registration systems; and
- Questions on the perceived difficulties and suggestions for improvement in survey and registration systems.

In general, interview subjects who were not directly involved with surveys, land description or land management were quite obviously challenged by the direct questions within item (1). To alleviate the obvious discomfort of such subjects, some direction was given in the form of examples of benefits: as a possible economic benefit of land survey, the provision of accurate area measurements was cited as an enabler of resource extraction; the elimination of conflict over land between land owners or users by boundary adjudication was cited as a possible social benefit of land survey. Similar examples were given to assist the interpretation of questions on land registration. Where an interviewee was uncomfortable with the specific questions as presented in the written questionnaire, the questions were introduced in general terms. The interviewer's acknowledgement of the subject's difficulty was often helpful in alleviating any concerns they had about being unqualified or unfamiliar with the topics being explored.

The difficulty expressed by those without direct contact with surveys is symptomatic of a view of the property rights systems as low-profile and well-functioning utilities rather than mechanisms that have a distinct role in enabling development. Typical of this view are comments such as "the survey had to be done as a condition of approval" or "the survey is just necessary." This illustrates the fact that some users are unaware of the legal purpose of surveys and registration and view the land description and registration phases of a project simply as requirements with which they must comply, rather than as intrinsically valuable and legally necessary inputs to the land development process. In this respect, the perception of value of the survey and registration systems has been prejudiced by their very effectiveness. In the interview

summaries, which follow, a low level of recognition of benefits from these systems is apparent in responses of the resource users/investors, lenders, and legal experts interviewed. The comments are nevertheless indicative of issues that important from the perspective of the various system users. Selected responses to the questionnaire are reproduced verbatim throughout this summary.

Whether interview subjects addressed the specific question of benefits of survey and registration directly, the interviews were thought provoking and prompted some unexpected responses. Importantly, they gave participants the opportunity to comment on issues, which are important to them in regard to the effectiveness of the property rights system on Canada Lands. In this light, the questionnaire campaign - as a means of data-gathering - was a valuable tool in opening up discussion and the opportunity to report on system effectiveness appears to have been appreciated by participants.

B.1 Federal Authorities

The federal authorities consulted consist of regulators in the fields of oil & gas rights disposition, National Parks, and the offshore. The various survey systems which are used for referencing rights in these three areas are universally applauded in all three sectors.

In the offshore, the system of survey available in the area administered by the Canada-Newfoundland Offshore Petroleum Board was seen as uncomplicated and reliable mainly due to the non-ambiguous mathematical definition of holdings provided by the Offshore Oil & Gas Grid. There has, for instance, never been a boundary dispute in this area. The robustness of the system in terms of reliably dividing parts of the offshore is supported by the use of time-saving systems such as the Global Positioning System. Benefits to the offshore petroleum industry of land survey and registration were not identified by the interviewee; rather, the impression one got was that the systems in place clearly and reliably define the interests of the 91 license holders in the area administered by the Board.

The property fabric represented by the Canada Lands Survey System is seen as an important contributor to the orderly development of the resource extraction industry and to economic benefits on Canada Lands. Likewise, land survey enables economic benefits by supplying accurate acreages for the calculation of financial compensation for such uses as access roads on privately held property.

Land survey also enables the location and isolation of environmentally sensitive sites. This applies at several stages during petroleum extraction operations: from the initial determination of whether the affected site is within or outside of the leased area; through to the restoration and, finally, the remediation of the site, knowledge of parcel boundaries is critical in assessing responsibility and costs. The certainties with which land may be described with the use of surveys and the seeming guarantee of standards, in a sense, by the Manual of Instructions for the Survey of Canada Lands are seen as important supports in land dealings. The consultation service provided by Legal Surveys Division in terms of reliable acreage figures is valued and LSD's objectivity is respected by the Oil & Gas administration.

Social benefits were identified as being only tenuously linked to land survey by federal Oil & Gas regulators. The certainty and precision provided by surveys is linked with enabling better

agreements regarding land in the context of National Parks. The graphical product of a land survey is seen as a key communication tool during land negotiations due to their accurate depiction of area, location, and aspect. This usefulness is compounded when cadastral fabric is overlaid on orthophoto mapping.

The land registration system for resource rights on Canada Lands is seen as beneficial in that records are easily accessible both from the national register (for Indian lands) and through the Indian Oil & Gas administration in western Canada. The social benefit that accrues from registered and public knowledge of resource extraction rights is seen as an aid in avoiding conflict over land.

Difficulties are sometimes encountered when changes to survey plans are required by NRCan. When fieldwork and plan are complete and have been submitted to the regulator, it is sometimes difficult to secure amendments to plans given that the surveyor has been paid the bulk of his fees at that point.

Environmental sustainability was identified as being linked with survey and registration systems, in that there is an archive of information on the location, extent, nature, and duration of certain rights granted through a lease. In terms of environmental damage that may be discovered subsequent to the expiry of land leases, the register and survey records provide a tie to a specific land user who can be shown to have been operating on a particular site at a particular time. In this way, the “environmental cadastre” aspect of land records prove useful in locating pollution sources and possibly apportioning costs for cleanup.

B.2 Provincial/Territorial Authorities

The territorial agency interviewed identified land surveys as providing both economic and social benefits in terms of certainty of ownership. Certainty is critical in defining what land is owned by the territory and, therefore, in defining the rights to revenues from that land. Ambiguity in the interpretation of boundary calls to follow either artificial boundaries such as straight lines or to follow the natural boundary of a body of water presents a challenge for territorial lands and resources personnel. Resolution of such discrepancies in land claims agreements is readily achieved through good relations with the federal survey authority and provides benefits in terms of stability in resource agreements. Land registration is perceived as contributing to this certainty of land description; however, land survey is the immediate concern and is therefore immediately associated with enabling economic and social benefits.

Where both components of property rights systems work in concert is in the management of resource extraction activities which straddle crown and settlement lands. The creative use of both systems is viewed as essential to coordinating land rights in both surface and sub-surface dimensions. Similarly, land survey and registration systems are seen as contributing to land stewardship efforts; however, the term “responsible/appropriate development” is preferred to “sustainable development” due partly to the over-use and uncertain meaning of the latter term.

The traditional understanding of land use by some territorial residents does not typically entail registration of rights of an intermittent or transitory nature. The need to make application to an official register is a new development to which they are not accustomed. For instance, where

land is sought for recreational purposes, hunting camps or outposts, land users are advised to obtain leases; however, the cost of doing so is often prohibitive, in comparison to the sparse or temporary nature of the particular land use.

Key to the provision of economic and social benefits in the context of provincial users is the ease of access of the survey and land registration systems and the ease of understanding of land-related data. Users of such information in terms of provincial land which is subject to claims by Native groups rely on the aspects of certainty of description and ease of access no less than users interested solely in patented lands.

B.3 First Nations

First Nations interviewees were the most enthusiastic participants of the sampled groups. There seemed to be a genuine interest in: (1) improving the current land management systems; and, in some cases, (2) adapting the land management systems in place to indigenous models of land, landholding and land development. Further, the First Nation lands and economic development staff interviewed regarded (3) establishing effective methods of control of land and land development as necessary tools for the economic and cultural survival of First Nation's.

B.3.1 The past & current state

From one respondent comes the view that surveys have never been a positive enterprise for First Nations - much less a beneficial experience. Land survey is associated with loss of land, as are surveyors, to an almost militant degree: the off-hand remark, "*the surveyors come in, the guns come out*" typifies the distrust with which surveyors are associated in this community. Historically, surveys are associated in this area with the diminution of First Nation lands to 0.2% of the area originally occupied.

One First Nation respondent identified the loss of the bulk of their First Nation lands as a "major project...in which land survey and/or registration played an important role." The ironic intent of this comment is obvious. It illustrates a diametrically opposed vision of systems, which are, from the perspective of the administrators, routine instruments of land management.

B.3.2 Adaptation of systems

Aside from residual distrust of land management systems, pragmatism prevails in some communities. Ironically, from the younger members of the First Nation community in which surveyors were so poorly regarded is the report that, for practical purposes, effective governance of the First Nation's territories requires use of the land management mechanisms, which are available. Land registration, for instance, is viewed favourably in that, if it is used in a way, which respects local Native cultural norms and practices, it can be a useful tool for land management. The land registration system is seen as a means by which the First Nation can regain control of the traditional territories, which have been lost.

B.3.3 Establishing appropriate systems for future land management

From one First Nation representative comes the following estimation of what is lacking in land administration: there must be a recognition by individual First Nation members that land management is a viable activity for them to be involved with; that it is not necessarily the exclusive province of the federal government; and there is work to be done in the area of property rights systems. There is support from all First Nation representatives interviewed for the involvement of First Nation members in the land survey and registration apparatus as practitioners: e.g., surveyors, land administrators in registration and land use, etc.

Development of First Nation capacity in land survey and registration is viewed as essential to progressive land management. The goals of land survey and registration are associated with comprehensive land use management with the aid of geographic information systems. Proposed applications of locally driven First Nation land administration include: residential subdivision development, airport development and road, water and sewer development.

B.4 Issues Identified

One respondent identified the value of land surveys in providing unambiguous land definition. Surveys are regarded as a useful tool in identifying commercial, industrial and residential areas for the planning of land use both immediately and over the long term (economic benefit). Surveys are regarded as socially beneficial in identifying culturally or environmentally sensitive areas.

Land registration is seen as providing the direct social benefit of eliminating the possibility of multiple sales of parcels. As well, the contribution of land registry (and by implication, a land survey system) in providing a structure which supports First Nation management of the land regime is acknowledged.

Stewardship of resources was seen as an important function, bolstered by survey and registration systems in the identification and recording of mining, forest, riparian and water resources. Land registration was seen as economically beneficial in facilitating land transfers through the use of a central registry. The ease of distinguishing between “Band-owned” and “common” lands was identified as a key social benefit of land registration.

Another respondent described land survey and registration as “absolute necessities” in supporting economic activity. By providing legal descriptions of parcels, these systems allow security and comfort for leasing purposes. In turn, the ability to lease lands provides revenue and jobs to First Nation members. The employment is seen as enabling the social good as well.

Economic benefit of land survey:

“Lands rented out to farmers defines what they are renting and the number of acres they are paying for. There is no argument regarding what is not cultivated.”

Social benefit of land survey:

“...provides surveyed residential lots for our members to define what they may use in terms of residential lands.”

The aspects of land registration, which are perceived as instrumental in ensuring:

- That there is a record of all lands belonging to the First Nation;
- That interests in land are secure;
- That third parties interested in First Nation lands have access to the register;
- That all parties to land transactions can feel secure that their interests are properly recorded in the system.

Economic benefit of land registration:

“The terms and conditions of agreements are enforceable. Lessees are able to finance a registered leasehold interest.”

Social benefit of land registration:

“Crown Corporation right of way agreements and easements provide services to the community.”

Difficulties experienced with the land survey system include the cost of surveys both in financial terms and in time delays. The process of obtaining approved land surveys is perceived as:

- Taking too long;
- Being too expensive; and
- Entailing too many levels of approval

Improvements in land survey are seen as flowing from implementation of a more expeditious process of confirming surveys. At the suggestion of one First Nation which is under the *First Nations Land Management Act*, an improved process would include surveyors being retained under First Nation instructions without seeking instructions from LSD - whether they originate in Ottawa or in regional offices.

One notable deficit of the land registration system is the inordinate amount of time it takes (often in the order of six to nine months or more) to receive a Certificate of Possession from INAC. The delay experienced by individuals seeking copies of documents in the registry is perceived as a problem, as is the lack of an absolute guarantee of the interests registered in the system.

Suggested improvements in land registry are associated with development of a locally controlled First Nation land registry system with the INAC registry becoming a subsidiary or appendage thereof. In an improved system, online access to land registry records would be a must, as would re-tooling of regulations for land registry.

Infusing the cultural aspects into the understanding of land and the procedures for dealing with land was a repeated theme by First Nation interviewees. One respondent related that the concept of private property, although officially provided for in the governing legislation, is still a foreign concept in their community. Another respondent indicated that, contrary to survey and registration providing benefits to their community, the notion of enclosing areas and restricting the parties entitled to use them has actually upset the social and economic fabric of the First Nation community. Where, traditionally, areas used for hunting were not “marked” as such by artificial monuments, current practice limits use through the registration of rights of selected individuals or families.

Examples were given of business enterprises which were formally and legally entitled to do business; these operations, however, sat on lands subject to challenges of ownership by other band members. The failure to acknowledge customary entitlements to use land in the official land registry system has been known to impede the establishment of business enterprises when the unregistered claimants have no recourse but to disrupt business operations.

Because of the sometimes poor access of Indian Reserves to transportation networks and urban services, some Indian reserve’s have remained in the category of the undeveloped backwaters of Canada and. However, because of the low level of development, one First Nation representative views the land in his rural community as especially valuable in terms of plant and animal resources, particularly in terms of medicinally useful compounds. The need to conserve such undeveloped land, in light of increasing reserve populations, is seen as a challenge for First Nation’s. Proper land use planning based on the identification of parcels which are susceptible to environmental damage is viewed as a necessary strategy.

“...Without a registration system, how could environmental clauses in agreements be enforced and without a survey system, how could you define areas where sustainable development is to occur?”

The education of decision makers within First Nation councils in land matters is critical to success of land management and, indeed, of effective governance of each First Nation’s territories. In regard to land use and resource management, one First Nation representative says that “the biggest challenge is to re-educate [our members]” on the means which must be used to establish local control of their lands.

B.4.1 Investors

The “investors” category included individuals from organizations, which are involved in resource extraction on Canada Lands. The importance of survey and registration is soundly acknowledged by interviewees in this class. The identification of ore bodies which cannot be seen, both in terms of their physical location and in terms of securing rights legally to a specific patch of ground within a property rights system, is an essential benefit of land survey and registration systems to the mining industry.

Endorsements of the value of the survey system include:

- ‘Surveying the proper location of underground resources is absolutely critical;’ and

- ‘There are literally billions of dollars at stake with the proper location of resources.’

The high cost of surveys in remote areas is cited as a concern as is the slowness of accessing up-to-date information on the disposition of mining rights. Also complained about is the lack of current and reliable base mapping. Where the survey fabric is old and not well-maintained, the work and therefore the cost of surveys is higher but the use of time-saving techniques such as GPS is perceived as a welcome improvement.

The only area for improvement identified in respect of the survey system is the migration to NAD 83. Although such a move is anticipated to bring with it difficulties with transformations, integration with applied survey standards elsewhere is seen as a necessary technical evolution.

The importance of the land survey and registration system to the mining industry was related by interviewees at the industry association level. The significance of this notion was underlined by the suggestion gathering data on the benefits to the industry and their concerns should involve individual member companies of the association(s) interviewed. The reason for this suggestion is that conditions of the physical terrain, the physical survey fabric and reference frameworks, as well as local practices vary throughout the country and the regional concerns need to be identified. According to one association representative interviewed, a comprehensive study of industry views needs to be undertaken over a period of four to five months to receive input from all regions.

B.4.2 Lenders

Interviewees in the Lenders category submitted that land, in the sense of security for monies borrowed, did not enter their weighing of the worthiness of a borrower’s application. Where a Band Council approves the granting of, e.g., a housing loan to an individual band member the loan may be secured by a Ministerial Guarantee.

A lender of money to First Nation band members who hold Certificates of Possession under the Indian Act, would not be concerned with the certification of boundary or title information by a property rights system. The position of one lender interviewed was that, because Indian Reserve land - being land held in trust by Her Majesty - may not be seized by the lender on default of payment, the issue of land as security did not arise. Therefore, they would not comment on the realization of the benefit of secure title accruing from survey or land registration systems.

It was explained that practices vary from First Nation to First Nation. For instance, in some First Nation’s, when a First Nation member defaults on a loan secured by a Ministerial Guarantee, the amount owing may be repaid to the guarantor from Band Monies and then the borrower’s rights to the parcel are retracted by the Band Council. In this scenario, another Certificate of Possession to the parcel may be granted to a First Nation member who is prepared to pay the amount owing on the loan.

Alternatively, where a locatee owes money to the First Nation for band housing, the Band Council may have the parcel surveyed so that a Certificate of Possession may be granted to the individual. However, to gain control of the property until the loan is repaid to the First Nation, the Band Council may require that the Certificate of Possession be pledged back to the First

Nation until the loan is repaid. In this case, it cannot be said that the survey truly provides the benefit of security for the loan; rather, the benefit to the First Nation which issued the loan is the security derived from registration of its interest in the Indian Lands Registry.

B.4.3 Environmental and Legal Experts

Several members of the legal profession were approached - all of whom had some involvement in advising First Nations in specific actions involving land and resources. Lawyers, however, were apparently wary of commenting on the specific questions of the study except to say that land survey and the quantification of the spatial extent of land rights are essential to clarifying and implementing the specific terms of agreements concerning land. The precision of surveys in applying agreements to the ground was seen as a benefit.

Where there is an actual conflict in interests over land - e.g., where one use of land straddles an external Indian Reserve boundary, land survey allows a precise description of the encroachment and facilitates agreements for compensation or transfer as may be required. Where there is a prospective claim to land by Native bands, the land registration system was seen as useful in respect of allowing cautions on the subject lands.

In addition to the above-noted pragmatic responses, another interviewee posed questions on the underlying concepts of property embedded in the question of benefits on First Nations lands. He pointed out that, in the context of Indian Reserves, an inquiry of this sort relies on an understanding of land and Natives' positions with respect to land that is affected by the superimposition of a significantly different value system, i.e., European systems of landholding. On a conceptual level, what the exercise requires is (1) an understanding of Native property rights and property rights systems in international perspective; and (2) an understanding of Native concepts of property rights as including relationships with not only land but also air, water, and sacred sites - as well as the significance of place names. With an understanding of the cultural precepts, the question of benefits can be broadened and enriched and the results appreciated more thoroughly.

B.5 Conclusions

Regulators consulted at the federal, provincial and territorial levels reported that the land survey and registration systems used in their jurisdictions were reliable and effective in describing and safeguarding interests in land; effecting agreements on the use of land; and in enabling the protection of environmentally sensitive areas. As well, these systems provided good access to land-related information. The maintenance of operation standards for the survey system through the Manual of Instructions for the Survey of Canada Lands was perceived as a useful guarantee of service by one class of users.

From the First Nations representatives interviewed comes the strong sense that land survey and registration systems are beneficial inputs to nation-building. Those interviewed report a desire on the part of their First Nation's to take local control of their affairs. The management of resources and land use are important components of this responsibility, yet there appears to be a gap within First Nation governments in the expertise that is required to deal with these matters.

Put another way, there is the opportunity (and, from one interviewee's perspective, the requirement) for First Nation members to become trained and qualified to administer land registration and land planning systems, as well as to become qualified as land surveyors.

Investors consulted applauded the beneficial inputs realized from the use of land survey and registration systems. As compared to other interviewees, this group displayed an understanding of the value of describing, securing, and registering the rights, which they have in land both in terms of exploration and discovery operations. Where a resource extraction company's worth is represented by the volume of its reserves and increasing these reserves is an important part of demonstrating their value, the means which are used to guarantee their land rights are of obvious importance. Having said that, the views and concerns of specific operators in various regions across the country warrant canvassing and interviews.

The lenders consulted displayed little knowledge of the benefits of survey and registration systems to their activities in particular. They acknowledged the benefits provided (on patented lands) by land registration systems in respect of providing security of their investment and a means, which could be used to recover land in case of default. However, the perception of Indian Reserve land was of an asset, which was useless to them, given the impossibility of recovery and the vesting of the underlying title in Her Majesty.

This study of selected users of the land survey and registration systems has succeeded in broaching the issue of the value of these systems with those consulted. Very often, the question of what is the effectiveness of land survey and registration struck interviewees as far too obvious to be of concern to service providers such as Legal Surveys Division. The fact that LSD had commissioned a study on this point seemed to be a welcome gesture. In conducting the interviews, we encountered some difficulty in explaining the links between these property rights system components and economic and social goods precisely because, typically, interviewees perceived survey and registration as being effective and dependable to the degree of invisibility such as one would perceive municipal servicing infrastructure. It often required the restating of some of the reported benefits to introduce the concept of this study.

In summary, the interviews provide evidence that value is recognized by a broad cross-section of users of land survey and registration systems in terms of enabling the achievement of social, economic, and environmental benefits. While the directness of the link between these systems was not always apparent to the system users interviewed, all users perceived value in the accuracy provided by land surveys; in addition, the users consulted approved of surveys and registration as contributing to better agreements concerning land dealings. For instance, where the land use of one parcel is mingled with uses which are important to other parties - such as environmentally sensitive areas or subordinate rights such as easements and rights of way - surveys were reported as essential tools for communicating and resolving land issues. Perhaps the most striking result of the telephone consultations is the need for further research on the actual contribution of these systems.

B.6 List of Interviewees

Ken Allred	Land Survey Consultant and Vice President, Alberta Land Surveyors Association
Ed Bear	Lands Manager, Muskoday First Nation
Yvonne Bedard	Assistant Manager, Credit, Peace Hills Trust Ltd.
Jeff Beddoes	Deputy Surveyor General, British Columbia
Dr. Manley Begay	Harvard Project & Native Studies Programme, University of Arizona
Al Berti	Land Advisor, Indian Oil & Gas, INAC
Jennifer Brennan	Assembly of First Nations
Lou Cavello	President, Aurora Geosciences Ltd.
David Comba	Prospectors' and Developers' Association of Canada
Jeremy Dolgin	Lawyer, Reynolds Dolgin
Brenda Etienne	Senior Negotiator, Lands, Kanesatake
Stephen Faulknor	Legal Counsel, Justice Canada (Parks)
Carson Gillis	Land Director, Nunavut Tungavik Inc.
Stephen Harris	Legal Counsel and Deputy Registrar, Lands Canada-Newfoundland Offshore Petroleum Board
Stephen Howard	Land Surveyor, Land Survey consultant to First Nation's, BC
Mel Jacobs	Union of Anishnawbe Council
Tim Keopke	Yukon Land Claims Negotiator
Ella Legresley	Senior Land Planner, Yukon Government
Robert Louie	Chairman, First Nation Lands Advisory Board
Donny Maracle	Chairman, National Aboriginal Capital Corporation
Allan Millbank	Native Investment & Trade Association
David Nevin	Manager, Community & Economic Development, Shubenacadie
Mike Vaydik	NWT Chamber of Mines

C. Case Studies

C.1 BHP Ekati Diamond Mine Case Study

C.1.1 Introduction

The BHP Ekati Diamond Mine brings enormous wealth to the NWT. The operation has meant hundreds of permanent jobs for employees and for service companies working under contract. Operations within the BHP Ekati block of mineral claims, such as the building of roads and excavation of pit mines carry on without reference to parcels within a survey system per se; rather, such activities are mapped using Global Positioning System (GPS) methods for planning purposes. Within the mine lands, there is no real need to legally differentiate parcels by land survey, as the *Mine* is the sole rights-holder within the claim block. Mineral claim staking and legal survey upon expiry of an allowed ten-year exploration period are the important - but largely unheralded - inputs of property definition to the mine's operations. In addition, leases of surface rights are obtained for the construction of buildings and sites housing plant and equipment.

A mineral claim gives the claim-holder the right to explore the lands and the obligation to expend certain monies in exploration to keep the claim in good standing over a ten-year period. By the expiration of the ten-year period, a mineral claim must either go to lease or revert to the Crown. About half of the area originally claimed for the BHP Ekati Diamond Mine has been surveyed and leased by BHP Ekati.

C.1.2 Subject Lands

Location:	"The Barrenlands;" approximately 300km north-east of Yellowknife
Size of mineral claim block:	3,400 sq. km (344,000 ha.); 10,960 ha of this area is covered by land leases
Operator:	BHP Diamonds Inc.
Minerals of interest:	kimberlite "pipes" which are mostly under lake beds
Affected Indigenous Groups:	Dogrib Treaty 11 Council Akaitcho Treaty 8 Kugluktukom Katimayeen & Kitikmeot Inuit Association (BHP, 2000a: 2) North Slave Metis Alliance (BHP, 2000c: 3)

Currently known reserves of kimberlite pipes allow for 15 years of diamond mining and have the potential for ten additional years. The mine accounts for an estimated 4% of the world's diamond production by weight (Werniuk, 1998: 9).

The site is traversed by 26 km of service roads and 29km of "haul roads" which (latter) connect the pits with the stockpile, crushing area, and areas where waste rock is dumped. Equipment and supplies travelling from Yellowknife to Ekati account for approximately half of the truck traffic on the 445km ice road during its annual ten-week lifespan (Todd, 2001). "To date, 314 ha of tundra habitat have been used for construction of the mine and 611 ha of the total lease area...have been affected by the operation" (BHP, 2001/URL1).

C.1.3 Economic and Social Impact

Immediate economic benefits of the mine are 600 full-time jobs and 150-200 permanent positions with contracted service companies. The mining operation is reported to have contributed 19% of the NWT's GDP (BHP, 2000d:2). During the mine's projected 25 year (or longer) lifespan, it is forecast to contribute over \$6 billion to the Canadian economy, with \$2.5 billion of that figure being injected directly into the NWT economy.

The area's four Aboriginal groups benefit from the mine in the form of Impact and Benefits Agreements (IBA), the terms of which are private. The IBA's are designed to give the Aboriginal groups incentives such as preferential hiring, training, and the awarding of contracts to Aboriginal businesses within the member communities. BHP also established a heritage fund to foster community activities (BHP, 2000c: 3). Through IBA's, northerners residing in small centres, and belonging to one of the four Aboriginal groups noted above, are encouraged to work at the mine and given regular transportation to their home communities. This achieves employment and industrial training for Aboriginal beneficiaries of IBA's and returns workers to their home communities every two weeks, thus supporting the integrity and traditional lifestyle of these sparsely populated locales. BHP's approach to involving Native groups of the NWT is directed towards participation of Aboriginal people in training and employment in their industry, rather than contributing to financial contributions alone (BHP, 2000c: 3). It is understood that entering into BIA's with the Aboriginal groups is a requirement of doing business imposed by territorial and federal governments on BHP Ekati.

Archaeological investigations have been conducted since 1994 at the Ekati site and efforts are made to minimize damage to important cultural sites within the claim area.

C.1.4 Land Management and Development Issues

The BHP Ekati Diamond Mine grew out of an intense period of claim-staking that began in 1989 and continued in earnest into 1992. Marking claims and securing rights in land is, from the perspective of mining companies, not an extremely large investment compared to the cost of physical plant and infrastructure required to do the actual mining and processing.

The effects of mining operations in the NWT are closely monitored, studied, and evaluated by the Mackenzie Valley Environmental Impact Review Board. The MVEIRB maintains a public register of documents in relation to land use applications by operators. Pursuant to the

Mackenzie Valley Resource Management Act (SC 1998, c. 25), land development projects, which are thought to have prospective impacts in a geographic area, may be referred to the MVEIRB. The MVEIRB is charged with “the protection of the environment from the significant adverse impacts of proposed development;” and “the protection of the social, cultural and economic well-being of residents and communities” (s. 115). The *Canadian Environmental Assessment Act* is no longer applicable, save for special situations (MVEIRB, 2001/URL2). Applications made to the MVEIRB must include the scope of work, the proposed use of the land, the need for water licenses and land use permits. The anxiety over a project’s referral to the Board arises from perceived uncertainty as to the Board’s terms of reference and the proper application of its authority (Burlingame, 2001). The major uncertainty in expansion of the BHP Ekati mine does not, therefore, stem from a lack of *title* assurance but from the application of land use control by the MVEIRB which is, as yet, a largely unknown quantity.

A large slate of legal surveys is scheduled for the 2001 season before the expiration of the ten-year period in which claims must either go to lease or lapse. All of the approximately 400 claims acquired for the BHP Ekati Diamond Mine are anticipated to go to lease eventually. On average, each of the nine land survey consultants completes between 60 and 70 claim surveys in the June-to-mid-August season, which is equivalent to 135,000 Acres per year (Todd, 2001). Helicopters are used extensively and are a necessity in dealing with claim sites, which may be upwards of 30 miles from the main camp. As discussed below, the cost of completing legal surveys with helicopters is expensive (at \$700/hr. plus fuel) and often amounts to \$3,000 simply to access the site to be surveyed (Hewlko, 2001).

C.1.5 Perceptions of Security of Tenure and Integrity of Claim Boundaries by Mining Companies

The main concern of mining companies is that they have an interest in a piece of property. The fact that the interest they receive is not a Certificate of Title but is limited to leasehold is not a major concern. The security they require flows from two things:

- the physical marking of the lands claimed on the ground; and
- legal notice - the documentation of the physical extent (sketch) and recording of interest (filing of the claim).

The companies take comfort in the fact that the claim is filed and, by virtue of being lodged with the government, secured, and that their claimed lands are plotted on government-maintained mapping and therefore available for viewing by others. The boundaries of claims of a standard size are not typically a concern either, as the *Canada Mining Regulations* specify the standard dimensions of mineral claims. Robust means of determining boundaries of mineral claims are to be found both in documentary sources and in the improvisation and common sense approach to boundaries that is taken by individual surveyors upon encountering problems when surveying a claim. If, for instance, a situation arises which requires interpretation, the Mining Recorder’s office will be contacted and the solution discussed and approved. In an area where travel costs are so high, eliminating the need for repeated visits to the field and the “common sense” approach to problem-solving is a valued strategy. Holders of interests in mineral claims are

given further assurances of the integrity of claim boundaries from the work of the Claims Inspector who examines claim boundaries in the field (Hewlko, 2001).

The existing reliable land survey and registration systems are perceived as well-functioning utilities that operate neatly in the background. Legal surveys are not typically seen as important steps in themselves due, perhaps, to the relative quietness with which they are achieved. From the Mine's perspective, the more pressing item on the land development agenda today is the need to gain the approval for proposed land uses from the MVEIRB.

Issues of concern regarding land surveys in mining areas include the misunderstanding of grid coordinates and the technicalities surrounding datums, adjustments, etc. on the part of technical personnel employed by the mine. While systems are available that allow non-surveyors access to GPS-derived coordinates, the existence of mapping data (e.g. NTS sheets) which are based on the NAD27 datum sometimes causes misunderstanding and mis-direction as to what land is to be surveyed. Confusion between NAD27 and NAD83 coordinates contributes to this situation (Hewlko, 2001).

An example of a potential boundary issue concerns the staking of claims including a lakebed by two different companies. The claims originated from opposite directions and fell short of one another somewhere in the middle of the lake. Considering the importance of lakebeds as the likely locations of kimberlite pipes - the repository of diamonds in this area - the prospective of unallocated ground (between 200 and 300 metres in maximum breadth) posed no mean point of contention. This situation, as with most mineral claim surveying, did not require an elaborate technical solution. Rather, through consultation with the Mining Recorder, the land surveyor relied on ordinary practice of fixing the prior claim at its maximum dimensions and allocating the balance of ground to the subsequently recording claimant.

In summary, details and methods of survey - both the legal and technical details, it would appear - are not matters of great interest to mining companies. What is essential from their perspective is the understanding that the systems of measuring land, demarcating boundaries, and recording interests in lands are reliable and trustworthy.

C.1.6 Case Study Participants - Contacted

Denise Burlingame - Senior Public Affairs Office, BHP Ekati Diamond Mine.

Bruce Hewlko - Sub-Arctic Surveys, Yellowknife.

Gary Miller - Senior Surveyor, BHP Diamonds Inc.

Graham Nichols - VP External Affairs, BHP Diamonds Inc.

Jody Todd - Geology Coordinator, BHP Ekati Diamond Mine.

John Witteman - Environment Manager, BHP Ekati Diamond Mine.

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C.2 Muskoday First Nation Case Study: Residential Subdivision

C.2.1 Introduction

This case study examines a residential subdivision on the Muskoday Indian Reserve in Saskatchewan. The Reserve is located 19 km SE of Prince Albert and has a total area of 9,686.8 ha.

C.2.2 Legal Description

Lots 1 to 141 East Side Subdivision, Muskoday Indian Reserve No. 99, Saskatchewan. Township 47-24-2:

The residential subdivision comprises three surveys:

Lots 1 to 22 and Roads, East Side Subdivision, TP 47-24-2, Muskoday Indian Reserve No.99, Saskatchewan. Plan 73625 CLSR SASK. Surveyed by J.S Redding. Plan dated Dec 1988.

Lots 23 to 86 Inclusive and Roads. East Side Subdivision, Muskoday Indian Reserve No. 99, Saskatchewan. Plan 78496 CLSR SASK. Surveyed by Wilfred. J Peters. Plan dated December .

Lots 36 to 40 being a re-alignment of lots 36 to 40 plan 78496 CLSR and Lots 92 to 141 inclusive and road being subdivision of the remainder of Lot 20 plan 55574 CLSR. Plan 2037R RSS SASK. Surveyed by T.R. Webb. Registration Plan dated May, 2000.

C.2.3 Description of Land Development

The need for a residential subdivision resulted in 1985 when the Indian Act was amended to return Indian status rights to women who had lost them through marriage to non-Indians. Large numbers of band members were expected to return to live on the Reserve. DIAND has funded this subdivision project.

In 1988, 22 lots and extensive roads were surveyed and are shown on Plan 73625. No details of existing buildings are shown on the plan. In 1995, 63 lots were added to this subdivision and are shown on Plan 78496 as Lots 23-86. 39 out of the 63 lots had existing buildings. Survey ties to these buildings were measured and outlines of buildings shown on the plan. The boundaries of these lots were surveyed on the basis of existing possession. A subsequent survey in March 2000, added 49 more allotments to the residential subdivision area. The exact number of existing houses on these 49 lots is not clear. Survey ties are not shown on plan 2037R RSS. The total number of allotments in the residential subdivision is 134. The average lot is 30 metres wide.

The initial process for a residential subdivision involved a Band Council Resolution to approve the subdivision and a Land Use policy statement from INAC stating that the proposed land had been set aside in their long term plans for this purpose.

Extensions to the 1995 subdivision survey began in 1997 as a result of the engineering firm (Catterall and Wright) extending the water and sewer distribution system in the subdivision area. Natural gas, power and phone connections were also laid, and roads gravelled.

The surveying was not carried out until after the construction of roadways, services and some buildings was completed. Major earthworks were necessary, and any survey pins placed prior to construction would have been lost. Catterall and Wright were responsible for the subdivision design and modifications as the construction process proceeded. Road alignment was shifted if concern was raised of an existing building being too close to the road. If a survey of the boundaries had been completed prior to construction, then such modifications would have been time consuming and costly.

The cost of the most recent survey (March 2000) averaged \$300-\$400 per lot. In 1988, the total cost for underground gas was \$8,700. This involved services to the subdivision and an upgrading to some off-site homes. The Band paid \$3,800 for the provision of telephone services and costs of underground gas. The remaining \$4,900 was funded by INAC \$4,900.

When engineering construction was completed in 1998, a kindergarten, fire hall, clinic, Band office, church, and public works building existed within the subdivision community. A proposal for a school adjacent to the Band office is in the planning and development stage. At present, students are bussed 25 km to Birch Hills and Prince Albert schools.

C.2.4 Analysis of Survey Benefits

Without a planned subdivision, houses were built “helter-skelter”. This not only used up useable land for agriculture, but also increased the cost of providing services such as power, water and sewer to the houses. The development of a subdivision survey allowed for installation of power, water and sewer services to be installed at a reasonable cost.

The subdivision surveying was carried out mainly as a formality to legalize the subdivision and provide documentation. Surveyed boundaries are not a necessity for housing. More often than not, the location of a new house is determined by measuring 25 metres back from the engineering curb stop. Survey pins are rarely used to mark the building foundation location. The completion of a surveyed registration plan provides a way for the Band to control who is where on the land.

People living on the reserve are not believed to be concerned about strictly defined boundaries. There are few fences. However, any new fence would require the location of survey pins to ensure the fence is located on the boundary line. To the contrary, homeowners in the subdivision were believed to be happy with the survey as it identifies how much land they can use for residential purposes and avoids boundary disputes.

There were delays in getting the Registration Plan approved. The surveyor and the Band were frustrated with the amount of time required to receive official approval of plan registration. Without this approval they could not receive payment for the cost of the survey from the Band.

In terms of the greater Muskoday Reserve area, the economic benefit of surveyed lands were identified: “lands rented out to farmers defines what they are renting and the number of acres they are paying for.” There is no argument regarding what is not cultivated. Another benefit of a survey system is that it defines areas where sustainable development is to occur.

The importance of surveys in land use development was emphasized. Surveys provide a sense of order to the land and improve the land records of that area for future development. This history is important when encumbrance checks are carried out for future land development proposals. An example from another Saskatchewan Indian Reserve was cited where development funding came from a source other than INAC. No encumbrance checks were carried out with Natural Resources or INAC. As a result a graveyard was dug up during construction. Had the land records been searched, then this information would have been discovered prior to any construction and modifications made to the planning.

C.2.5 Analysis of Registration Benefit

Under the *Framework Agreement on First Nation Land Management* and Muskoday’s Land Code, Muskoday administer their own land registry. The terms and conditions associated with the registering of land are enforceable in the courts. For example, an environmental clause in an agreement is registered with the land and enforced.

Lots on a Registration Plan are not long-term leases. The band gives certain rights and prerogatives to use the land, but no mortgage rights. It was suggested that an improvement to lands registration on First Nations Reserves is the provision for long term leases on residential lands. Lessees are able to finance a registered leasehold interest and protection is provided for lessors and lessees.

C.2.6 Socio-economic Impacts

Provision of power, water and sewer services, as the result of the residential subdivision, forms part of the foundation of the community’s infrastructure. A strong basic infrastructure facilitates other progress for the First Nation and contributes to economic renewal in the community. A café-gas station-convenience store opened on Muskoday Reserve in the fall of 1998. It provides jobs for 18 full-time and part-time workers from the 1,200-member reserve. Cafe profits stay on the Muskoday reserve, to be spent as the band sees fit. There are proposals for a new community hall and gymnasium.

C.2.7 Case Study Participants - Contacted

Mr. Ed Bear - Muskoday Lands Manager, Ph 306-764-1282

Mr. Wilfred Peters - Surveyor, Ph 306-343-8187

Ms. Melissa Bryant - INAC - Lands Transactions, ph 306-780-6003

Mr. Thomas Webb - Surveyor, ph 306-955-5330

Mr. Al Nicholson - Engineer, Catterall and Wright Engineers, ph 306-343-7280

Mr. Bill Wright - Engineer, Catterall and Wright Engineers, ph 306-343-7280

C.2.8 *Census Data*

Muskoday First Nation

Band Code: 371

06555; Muskoday First Nation, 19 km SE of Prince Albert

Total Indian reserve Area: 9,686.8 ha.

Governance: Membership Authority: Section 11 by Indian Act

Geography: Environmental Index - Geographic location between 50 and 55 degrees latitude.

Location: 19 km SE of Prince Albert

City: Prince Albert

Residency: Registered Off Reserve: 894, Total Registered Population: 1332

Education: Less than Grade 9: 19%, Grades 9 to 13: 29% (Without Secondary School Graduation Certificate: 76%, With Secondary School Graduation Certificate: 24%), Trades Certificate or Diploma: 5%, Other Non-University Education Only: 36% (Without Certificate or Diploma: 29%, With Certificate or Diploma: 71%), University: 12% (Without Degree: 71%, With Bachelor's Degree or Higher: 29%)

[source: INAC website, January, 2001]

C.2.9 *References*

Cooper Mitch, The Edmonton Journal. *Hitting paydirt in Prince Albert; THE ALBERTA WAY*, March 7, 1999 pF8.

C.3 *Sechelt First Nation Case Study*

C.3.1 *Introduction*

Sechelt is among the first First Nations in Canada to negotiate for expanded powers over their land base through a self-government agreement with the Federal Government. By means of provincial enabling legislation, the Band have also secured powers in the nature of a municipal corporation within British Columbia. The Sechelt model was really the prototype for self-government arrangements in Canada. In order to safeguard against the possibility of the experiment not working, it was implemented for twenty years on a trial basis only. In 2004, a referendum of Band members will be held to decide if the arrangement is to be continued - a renewal which is seen, at this point, to be certain.

C.3.2 *Background*

The federal *Sechelt Indian Band Self-Government Act* (1986) (SIBSGA) and British Columbia's *Sechelt Indian Government District (SIGD) Act* empowered the Sechelt Band to assume powers akin to those of a municipality. The SIGSGA's purpose is "to enable the Sechelt Indian Band to exercise and maintain self-government on Sechelt lands and to obtain control over and the administration of the resources and services available to its members" (s. 4).

Under the SIBSGA, Sechelt lands (approximately 1,000 hectares) were transferred to the Sechelt Indian Band in fee simple and the Sechelt Indian Government District was "established as a legal entity with the capacity of a natural person," having the power to "do such...things as are conducive to the exercise of its rights, powers and privileges." Referenda are required in cases of major transactions involving Sechelt lands. For instance, the Band could decide to sell part of Sechelt's fee simple land base, but a majority of registered members would have to approve such a disposition.

The SIGSGA includes the power to make laws in relation to;

- access and residence on Sechelt lands;
- zoning and land use planning in respect of Sechelt lands;
- expropriation, for community purposes, of interests in Sechelt lands by the Band; etc.

These powers to deal with land obviously require the security, which can be supplied by effective land description and survey. The Band's experience to date under self-government has been beneficial, mainly due to the lack of interference from INAC. The land management powers available to the Band have not been exercised to the fullest as yet.

C.3.3 *Land Management and Development Issues*

The federal legislation, in conjunction with BC's *Indian Self Government Enabling Act* (RSBC 1996, Chapter 219), grants the SIGD the power to tax residents on Sechelt Indian District Lands.

Registration of interests in land continued, under s. 27 of the SIGSGA, in the Reserve Land Register kept by INAC's Indian Lands Registry. Section 28, however, allows registration of interests in Sechelt lands to be done in the BC land registration system. To date, the provincial system has been not widely used and the use of land by Band members is *not* commonly registered in the Indian Lands Registry.

After enactment of the SIGSGA, band government still faced some of the same challenges, as did the former Band Council created under the *Indian Act*. However, the improvement over the previous administrative structure was the element of local control. Disposing of land rights locally, for instance, without approval from INAC, was seen to be a great improvement. Bureaucrats within INAC were perceived as having no idea of what was needed to operate a government on an Indian Reserve. For example, prior to the SIGSGA, the Band attempted to establish a gravel mining operation on their lands. The restrictions and delays that would have resulted from INAC involvement, and the inability to control the land directly, frustrated Band officials. Once granted the power to manage their own (fee simple) lands, the Band's first venture in land development was the construction aggregate operation - a great source of pride to the Band.

The local control of Sechelt land has, from the Band's viewpoint, worked extremely well in terms of economic development. The construction aggregate operation has been successful and is undergoing expansion. Spurred by demand from the US west coast, work to deepen the berth to accommodate larger ships and to extend the existing wharf by 720 feet has commenced (ENR, 2000). As compared to the previous control of development by INAC - where transportation of gravel across Band lands was opposed by Indian Affairs - the Band enjoys its ability and freedom to make its own decisions about land development. In fact, once gaining self-government, "CON-AG" was the first project commenced by the Band.

Land development on a small scale is also handled locally. For instance, where small housing projects are concerned, the approach taken by the Band is to approve construction locally and then seek the required registration through the Indian Lands Registry. The official registry system that is operated remotely by INAC is seen as having no benefit to the Band. With regard to land survey requirements within the Canada Lands Surveys system, the "red tape" encountered in plan approval and correction is also perceived as a roadblock to development. Land survey in general, however, is seen as beneficial in terms of:

- Providing markers in the ground for practical purposes;
- Facilitating precise legal description; and
- Allowing an official record of the boundaries of parcels

On the latter point above, surveys *are* seen as valuable in case of dispute over a boundary. Where an officially recognized and objective record of the boundary is available, land survey is seen as a valuable element of land management.

The SIBSGA allows the Band to apply provincial laws as needed; land planning, for instance, which is not expressly provided for under the *Indian Act*, is being undertaken with the help of a \$25,000 provincial grant to develop SIGD's first Official Community Plan. Within this process,

the Band is developing a zoning regime for Sechelt lands. To the extent that identification of parcels through survey is seen generally as a system, which supports land use planning, the land survey component is valued in this venture.

The Sechelt Indian Government District abuts the Municipal District of Sechelt and is among a group of coastal communities with common concerns about land and economic development. The development of tourism is one sector in which SIGD has taken leadership: for instance, in conducting eco-cultural tours in the unique west coast setting of Sechelt - both in historical and environmental aspects. There is general concern from neighbouring municipalities that there is a “level playing field” between their territories and territories belonging to or claimed by Native Bands (Vancouver Sun, 1995).

In their *Community Based Economic Development Task Force; 1999 Draft Task Force Report*, the Municipal District of Sechelt identified the need to coordinate economic development efforts on the Sunshine Coast as a whole. The Report identified the need to “work for similar zoning, land use, subdivision and servicing requirements for the Coast” (MDS, 1999).

Among the special projects identified for consideration is:

Seek partnership with the Sechelt Indian Band for tourism, industry, economic development, etc.

“There was additional discussion at the various meetings that there should be an incentive to include the entire Sunshine Coast when considering economic development for the area. This will require the participation of the Regional District, the Town of Gibsons and Sechelt Indian Band as well as related business associations. These governments and business associations should be invited to participate in such an endeavour.”

C.3.4 Summary

The need for proper land description in support of the Band’s development aspirations is recognized by the Sechelt Band. Their experience over the past 15 years with land management and disposition processes that are unfettered by the requirements of INAC as the fiduciary have shown the Band that the self-government route they have taken is workable for the management of future lands which they may acquire.

C.3.5 Case Study Participants Contacted

Mr. Harold Fletcher - Sechelt Indian Government District Clerk

C.3.6 Census Data

Education (Total Population 15 Years and Over by Highest Level of Schooling (20% Sample Data)): Less than Grade 9: 11%, Grades 9 to 13: 44% (Without Secondary School Graduation Certificate: 76%, With Secondary School Graduation Certificate: 26%), Trades Certificate or Diploma: 6%, Other Non-University Education Only: 31% (Without Certificate Or Diploma: 36%, With Certificate Or Diploma: 64%), University: 7% (Without Degree: 44%, With Bachelor’s Degree or Higher: 56%)

Residency: Registered Off Reserve: 445, Total Registered Population: 1037

[source: INAC website, March, 2001]

C.3.7 *References*

ENR. Anonymous. "Aggregates: Here Comes Foreign Cargo." *Engineering News Record*. 245(24): 118-119.

MDS. Municipal District of Sechelt. Community Based Economic Development Task Force; 1999 Draft Task Force Report, District Of Sechelt

File No. 6750-20. July 16, 1999

URL: <http://www.thesunshinecoast.com/secheltchamber/sedpsite/July%2016%201999.html>

Vancouver Sun. "Local Government Concerns." December 9, 1995, Final Edition, p. B1.

C.4 Chippewas of Mnjikaning First Nation Case Study: Rama Casino Lands

C.4.1 Introduction

This case study examines the Rama Casino Lands in Orilla, Ramara, Ontario. What follows is the summary of interviews with people involved with the Rama Casino lands of the Mnjikaning First Nations. Interviews were initiated on February 9, 2001. Interviewees include Band employees and consultants, Federal INAC and Legal Surveys staff, Provincial and local government employees and the private surveyor involved. Some people have not been available, have declined to be interviewed, or have not been qualified to comment.

C.4.2 Legal Description

Lots 5-10, Front Range Mnjikaning First Nation Indian Reserve No.32, Township of Ramara, County of Simcoe.

C.4.3 Description of Land Development

Prior to the development of the Casino Rama land, few surveys were carried out on the Mnjikaning lands.

In the early 1980s, the Mnjikaning First Nations's Band set aside lands as an industrial park and leased space to several small businesses, including manufacturers of automotive signals and water heaters, small engines, and moulded port-o-lets. However, the construction of Casino Rama signalled a departure from the industrial focus to a concentration on tourism, gambling, and entertainment. Lease agreements with the industrial tenants either expired or were terminated and the space taken over for First Nation administrative use. A driveway into the neighbouring Plaza encroached upon the above lands but an encroachment agreement was obtained.

The land used for the Rama Casino development was one complete parcel, but surveys were conducted for the requirement of access roads. This led to 4-5 subsequent surveys. The reasons the casino was chosen for that site were:

- The land was vacant
- The land was already designated for leasing, but had not been used (i.e the initial ground work had been done in terms of designation/surrender)

In 1994, land was expropriated for the purpose of road construction in the Snake Avenue Subdivision. At that time, an official with the band secured only verbal permission for the land takings. The Chief saw this process as appropriate at that point. Several years later, and since the commencement of Casino Rama operations and the prosperity which it has brought, it appears that values have changed on the Indian reserve. Whereas verbal agreements without much regard to exact quantities of land taken for First Nation purposes were the norm before the

advent of Casino Rama, the approach to land and property has changed; land is more prized today for its commodity value than in the past. Some of the original owners in the Snake Avenue Subdivision have passed away since the initial expropriation agreements were made. The prevailing mentality of the current owners leans toward receiving top dollar values in compensation for the expropriated lands.

The initial survey work for Casino Rama was executed between September 7 and November 1995. Plan 78406 is dated April 1, 1996. The surveyor who was involved with the survey and plan preparation of the Rama Casino lands recalled no difficulties with the surveying process on this land and it was described as “run of the mill” in terms of Canada Lands.

Since the completion of the Casino Rama development, expansion of an ‘Entertainment Centre’ and a 300 room hotel are taking place. Properties are bought from individual Band members to satisfy these developments.

C.4.4 Analysis of Survey Benefits

Marc de Bellefeuille (Legal Surveys Division NRCan - Toronto) indicated that Chippewas of Mnjikaning First Nation are progressive in terms of land surveying in that they require all newly allotted parcels to be surveyed. This is not common practice in Ontario, although parcels are typically granted to band members on the condition that they are surveyed within two years of occupation. In the same region of Ontario as Mnjikaning First Nation is Hiawatha First Nation, whose requirements (either by Band Council Resolution or Band Bylaw) require that new lots be a minimum of one acre in area. It was advised that most First Nations do not engage in comprehensive land use planning. Some of the larger Indian reserves do have officers dedicated to the function of land planning. Alternatively, the larger bands may establish an agency, which coordinates land use activity in the form of a band-owned economic development corporation.

It appears that, while a survey was not an initial necessity because the land parcel was already one designated lot, the subsequent surveys to establish access roads within it were necessary. Since few surveys were conducted prior of the Casino development, encroachment problems were discovered once extensive surveys were begun for the Casino lands. These encroachments are over sidelines where occupants assumed their boundary to be at right angles to the main road (Rama Rd.) while, in fact, the lines cross the road at an angle other than 90 degrees. Buildings were identified as too close to property lines and/or over the property line. Some owners moved their buildings to be in accordance with the boundary limits, but others refused to move, despite given a time limit. For example, an elder who has refused to move, described her property as the land and buildings in which her children grew up. While some of the elders may be reluctant to recognise the surveyed boundaries, it is the next generation that are showing a greater interest in rectifying these encroachments. The ‘up’ side to the discovery of these encroachments is that they have highlighted the need for a comprehensive land use plan.

The costs of surveying seem to be a stumbling block to clarifying some land issues that could benefit First Nation interests in the land. Documentation relating to Mnjikaning lands in the Snake subdivision (Plan 76652 CLSR) identifies that the survey and plan costs were considerable. “The underlying titles were not respected when the subdivision was made. The preparation of a number of Registration Plans to subdivide the new lots in an attempt to reflect

what existed before the new plan is considered a step backwards and an ineffective use of the regional survey budget.” A letter to the Legal Surveys Division in 1999 (2) requests the preparation of a new RSO plan for the purposes of finalizing an estate. The current legal description is required in order to complete the required transfers and to correctly identify the lands omitted on Plan 76652. This identifies the benefits of surveying and registration to settling estates.

C.4.5 Analysis of Registration Benefits

The registration of lands for the First Nation’s community were described as a definite benefit - both socially and economically. First Nations have more control over their lands as a result of registration, and they appeared pleased with this greater autonomy.

The land registration system was described as “working as efficiently as it could given the red tape”. First Nation’s had been somewhat frustrated about the time taken to register their lands that had been surveyed. There were a number of register archives that contributed to the lengthy process of registration: Federal archives, Provincial registry, Band register etc. No suggestions were offered to help improve this system and to speed up the process. It was believed that the registration of the lands went smoothly as a result of good communications between all parties.

C.4.6 Analysis of Survey and Registration Benefits

Land registration allows the Band to insist on a survey to be completed. However, the survey and registration adds to the costs for the person associated with the land area. It was noted that in many cases, it is the elders, with little money, who are burdened by these survey costs. The lack of surveys carried out in the past now means the Band and its members are paying for these surveys and the costs associated with the encroachments. In one case, a parking lot was constructed without prior knowledge of the parcel’s boundaries. The Band must pay to rectify this.

C.4.7 Analysis of Other Land Management and Development Benefits

The Mnjikaning First Nation is in the process of revising their land use bylaw, 79.10 (See Appendix III for an outline of the bylaw that is still in existence). The intention of this initiative is to develop, on a proactive basis, a long-range plan for First Nation lands. To prevent inappropriate or haphazard land use, the plan will include mechanisms such as land use zoning. This plan proposes identifying all of the encroachments on the reserve that were mentioned earlier. Surveys are a necessary step in this process.

Mnjikaning’s involvement with the *First Nations Land Management Act*, starting in 1995, has been difficult in the sense of locating all Band members for the vote on the First Nation’s Land Code. Community meetings have been held to inform Band members. Some of the concerns which have surfaced from these meetings include:

- Band members do not want to allow the First Nation Council to have powers to expropriate land.

- Band members are concerned about bringing contaminated land into the land management regime under the FNLMA.
- Some members of the community feel safer with land management regulated under the Indian Act.

According to one interviewee, the federal government initiated, in November 2000, an 18-month time frame for securing approval of the Land Code by the First Nation membership. In addition to the community meetings, First Nation representatives have conducted home visits to inform band membership of details of the Land Code.

In conjunction with the Omemawaji (Tribal Council which includes Scugog, Alderville, Moose Deer Point, Georgina Island, Christian Islands and Mnjikaning First Nation's), Mnjikaning are undertaking demographic studies of their community to establish baseline data in support of infrastructure planning (e.g. schools, etc.)

C.4.8 Socio-economic impact

Since the casino was developed, employment has increased and band members are moving back to the area. According to Ontario's Casino Corporation's (OCC), Rama Casino is the largest employer of Aboriginal people in Canada and has created more than 6,000 direct and indirect jobs. The number of jobs in the Orillia area has increased by 38 per cent. The casino's effect on the local economy is also reflected in a significant jump in housing sales. In 1998, Orillia experienced its biggest annual increase in housing sales in 11 years. The number of houses changing hands in May 1998, compared to May 1997, rose by almost 50 per cent. Since 1996, when the casino opened, new housing starts have increased 13 per cent.

OCC estimates that Casino Rama has doubled annual tourism spending in the area to \$84 million. 15,000 patrons a day visit the casino based on a yearly average. The Orillia Hotel Association reports increases of up to 50 per cent in winter off-season occupancy, thus extending the tourist season. In Ramara Township, building permits rose 50 per cent between 1997 and 1998, and the number of residential building permits issued in June 1999 was almost double the number issued in June 1998.

Since the initial Casino development, a number of other land development projects have been initiated. There is a senior's centre, sports facility, new school, two Mnjikaning community based businesses and enough work to employ 200 band members, from the 40 employed prior to the casino development.

These social and economic benefits to the Mnjikaning First Nation can be attributed to a variety of factors. The survey and registration of land are included as just one of the many factors in the successes

C.4.9 Case Study Participants -Contacted

Mr. Marc deBellefeuille - (Legal Surveys Division NRCan - Toronto)

Mr. Ben Snake - Chairman of Casino Rama Expansion Project and Director of Planning (Chippewas of Mnjikaning First Nation); ph 705-329-3325

Ms. Melanie St. Germaine - Administrative Assistant, Project Development (Chippewas of Mnjikaning First Nation); ph 705-329-3325

Mr. Dan Schilling - Band Manager for Chippewas of Mnjikaning.; ph 705-325-1377

Mr. Chester Stanton - CLS - surveyor responsible for initial survey and preparation of plans for the Rama Casino lands. ph:(705) 325-9521, Email: d.s@deardenandstanton.com

Mr Ken Brosseau - INAC, Lands Officer , ph 519-751-2061

C.4.10 Census Data

Census data are not available for Mnjikaning First Nation at this time

Bylaw 79-10

Mnjikaning First Nations Band Council Bylaw:”The Rama Land Use and Development By-law, No. 79-10”Dated July 18, 1979

Section 3: General Provisions

3.1 This By-law applies to all of the Rama Indian Reserve No.32 , the boundaries of which are shown on Schedule ‘A’ [not include in this case study] to this by-law.

3.2 The Minister of Indian and Northern Development is hereby requested to:

(a) Authorize a survey;

(b) Make any subdivision of Reserve lands;

(c) Approve any lease, or the construction or repair of building, or the establishment of a use;

only where the survey or the subdivision or the lease or the construction, repair or use complies with this By-law.

C.4.11 References

DIAND, File # E5673-06195. Letter to Estates Officer from Deputy Registrar of Surveys. Dated September 5, 1999

DIAND, File # 5630-06195-25. Letter to Legal Surveys Division from Lands and Trust Services. Dated September 21, 1999

C.5 Siksika First Nation Case Study

C.5.1 Introduction

The economic health of First Nation communities is often thought to be hindered by the inability of financial institutions to attribute value to the landed assets of band members. A business agency of the Siksika Nation, Siksika Resources Development Limited (SRDL) has taken a proactive approach towards ensuring the economic sustainability of their community. Critical impediments to economic and social development on Indian Reserves (Indian reserve) include a deficiency in infrastructure on Indian lands and the lack of recognition by the investment community of the value of Indian lands as security in financial transactions. As a consequence of this, Indian Reserve lands - whether held by individuals as possessory rights, or by the Band in trust for the First Nation - are excluded from the financial system to the mutual detriment of First Nation economies and the financial sector. SRDL's approach includes marketing leasehold interests in lands *designated* under the *Indian Act* and using the income to invest in First Nation business ventures on and off the reserve. Central to the mechanism of creating and safeguarding leasehold land and making it marketable to the large pool of off-reserve investors are identifying and securing such lands by means of land survey and registration, respectively.

C.5.2 Legal Description

1. Siksika Vacation Resort; in Sections 8, 9 and 16, Township 21, Range 21 West of the 4th Meridian, in Blackfoot I.R. No. 146 (headlease land described by Plan 59108 CLSR, dated January 1, 1974).
2. Additional lands to be developed by Siksika Resources Development Limited.

C.5.3 Background - Why Land Development is Imperative

The financial situation of Siksika Nation is typified by an insufficient local economic base to support the activities of its government. Transfer payments received from the federal government currently fall short of the needs of the Siksika Nation government (SNG) and, furthermore, are capped at a 2% annual increase rate for the next five years. Assuming an actual budget of SNG operations of \$50M in 2001 which is projected to grow at a rate of 6% annually, and \$50M in transfer payments supplied by the federal government, the transfer payment would increase to \$55.2M by 2006, while the actual SNG need (budget) would grow to \$66.9M - a shortfall of \$11.7M, which will grow to \$28.5M after a subsequent 5 year period. Unless the SNG actively develops its economic base, a financial crisis will occur with its attendant damaging social and health consequences.

While gas (and, to a lesser extent, oil) reserves last, royalties will contribute to the shortfall in revenue. SNG oil and gas revenues realized through the *Indian Oil and Gas* establishment are controlled by the federal government and yield a low (5%) rate of return in the Capital Trust Account for the First Nation. Where oil and gas revenue is paid directly to the First Nation (e.g., through the band-owned oil company), capital becomes available for investment and business development. However, the fact that the SNG's hydrocarbon resources will ultimately be

exhausted makes the development of a strong economic base a high priority. Capitalizing on Siksika's land base by earmarking between 5 and 10% of it for commercial purposes is an integral part of SRDL's strategy for eliminating unhealthy dependence on the federal government, providing jobs, and ensuring prosperity. Developing capital assets capable of generating long-term revenues requires land use planning, legal description, and survey of the lands to be designated and leased for commercial purposes.

C.5.4 Description of Land Development

As an early business development initiative, the SNG developed the *Siksika Vacation Resort* on a 317 Acre riparian parcel on the Bow River. It was initially described by metes and bounds for surrender to the crown in anticipation of commercial lease of cottage lots. The lands were later described by plan 59108 CLSR and surrendered for a term of 40 years by the (then) Blackfoot Band of Indians on February 21, 1974. An Order in Council approving the surrender was signed on May 7, 1974 and a lease concluded on November 4, 1975 from Her Majesty in Right of Canada to *Siksika Vacation Resort Company Ltd.* - a wholly owned corporation of the Siksika Nation. Legal subdivision of the parent parcel by plans 61805 and 60594 CLSR created 340 cottage lots for lease. Thirty-nine year leasehold interests were sold in these lots for a minimum of \$10,000 each. The proceeds were used to develop a golf course and related recreational amenities. In addition to the initial revenue from sales of leasehold interests, the SNG continues to receive average annual user fees of \$540 per lot for a (potential) total of \$183,600.

C.5.5 Analysis of Land Management and Development Issues and Benefits

Using the designation mechanism described above, legal surveys enable economic development in a three-stage process; they permit:

- The initial identification of land parcels and buildings which are owned by First Nations and free of debt;
- The protection of such assets through effective land use planning; and
- The migration of the assets, through designation under the Indian Act (s. 38), to a legal regime which
 - *Allows First Nation governments to participate in the open land market; and*
 - *Allows the generation of revenue from the sale of leasehold interests in the open land market.*

In the above scenario, before landed assets are transferred into the category of "designated" lands, their potential for generating revenue which can be used to build infrastructure and economic capacity for the First Nation is limited, if not stifled. The official landholding system does not acknowledge the value inherent in Indian Reserve land. In their status as un-designated Indian Reserve lands, the landed assets of First Nation's (i.e. common band lands, band-owned buildings) do not appear on a balance sheet as holding value - yet they are owned by the First Nation and unencumbered. It is not surprising, therefore, that leasing of Indian reserve land to

non-Indians occurs outside of the official system for registering transactions - the so-called “bushes” leases that are unknown to the official property rights system.

Business enterprise on First Nation lands is in a somewhat disadvantaged position in comparison to the activities of companies from off-reserve which have substantially the same goals, but which benefit from financial assistance from various levels of government. The Siksika Nation Irrigation Project (SNIP), for instance, is adjacent to the Eastern Irrigation District (EID) of southern Alberta. While no funding is granted to the SNIP, the EID receives 75% of its funding from the provincial government. This differential in support is regarded as an instance of preferential treatment of non-Native businesses - not only directly but in the downstream benefits of infrastructure development that accrue to associated businesses.

The key benefit of the designation process - i.e., of allowing leasehold interests in Indian Lands to be traded on the open property market - opens up lucrative possibilities for First Nation lands. The single improvement over un-designated Indian reserve land is in attributing value to these lands. SRDL foresees the application of this concept, in principle, to all of the First Nation’s communally owned resources and buildings.

According to one interviewee, theoretically, it would be possible for SNG-controlled public buildings such as auditoriums, schools, recreational facilities, etc. to be packaged as investment opportunities. SRDL’s current activities involve supporting the development of an irrigation project; and establishing a plan for an industrial park on the Indian reserve. As an example of how a leasehold interest could be created as a profit-generating vehicle: A High School on the Indian reserve valued at \$10M could be surveyed, designated, and offered to an investment syndicate as a 15-year leasehold interest with an option to renew for an additional 15 years. A First Nation would agree to lease back the High School for 15 years at an annual rent of \$670,000. From the syndicate’s perspective, this rental income would be tax-free since the depreciation of their \$10M investment over 15 years would match this figure. The First Nation would invest the \$10M initial revenue from sale of the leasehold interest at 10% interest, compounded over 25 years and would pay the rental fee out of the investment income. At the end of the first 15-year term, the profit on the \$10M would have amounted to \$20.5M. They could then use \$10M of this to buy back the option for a second 15-year lease which was offered to the syndicate originally. Over the 15 years, then, the First Nation would net \$10.5M in profit and retain ownership of the High School. Over this period, funds for investment and the operation of First Nation needs could be financed.

Siksika Energy Resources Company (SERC) is an initiative in which SRDL joined forces with a publicly-traded off-reserve company to sell SERC oil on the open market. This direct approach results in a greater financial return to the Siksika Nation, as compared to management of revenues through federally-regulated Indian Oil & Gas (IOG). The federal government-led process of managing revenue through IOG results in only 20% of the oil and gas revenue reaching the First Nation, while the balance is retained in an account earning low interest. The First Nation’s preference is to sell their product directly on the open market and invest the proceeds to fund further business development. The principle of control of Siksika Nation resources by the SNG itself appears to override any notion of preferring paternalism or dependency in their relationship with the federal government. As explained below, however, some First Nation members are wary of change to the status quo.

The SNG operates several enterprises which would benefit from the designation of lands, among these are: *Siksika Irrigation Land Corporation*, *Siksika Irrigation Equipment Company*, and *Siksika Energy Resources Corporation* - all of which are under the umbrella of SRDL. SRDL is controlled by the SNG. SRDL's organizational structure is cited as a key contributor to their effectiveness, and their professional approach to business organization is what sets them apart from other First Nation's where business enterprises have floundered. Integral to this is the separation of roles between councillors, administrators and business managers. SRDL staff recognize the principles expounded by the Harvard study by Cornell and Kalt: the importance of avoiding interference by the executive arm of government in affairs which are strictly managerial or administrative in nature.

The SNG regards its land base as a communal resource and, although rights are granted for use and occupancy by individuals, the SNG reserves the right to take control of all such land for First Nation purposes. Thus, the common conception that allotment of parcels on reserve for family housing mirrors (except for the usufructuary nature of the interest) the situation on patented lands is invalid. SNG's refusal to issue Certificates of Possession, which is provided by section 20 of the *Indian Act*, is done as an intentional negation of federal government administration of Siksika Nation lands (and an assertion of First Nation control over land allotment according to local traditional norms).

The commercial development of Siksika Nation lands and Siksika's *First Nations Land Management Act* initiative is not universally supported by band members. Some members are hesitant to codify existing practices for fear of being legally bound by laws and regulations that may not represent the best ways of dealing with land. Securing approval of the Land Code from the entire eligible membership of the band is a difficult process, since an almost 40% of registered band members reside off reserve and are difficult to contact. The decision to designate Indian reserve lands (s. 38) under the *Indian Act* and to lease them (s. 53) for commercial purposes must be approved by a majority of all registered members. The urgency of developing a robust economic base for the First Nation is not apparent to all members. Decades of unhealthy dependency and lack of control of the First Nation's affairs have aided the spread of fear that getting involved with the property market and formalizing rules for managing property relationships locally is risky and dangerous.

SRDL *Business Proposal Description Guidelines* require applicants to provide information on the type of economic activity proposed. In the past year, of the 71 proposals received, only 9 were successful. A key step in the task of scrutinizing the many applications sent to SRDL is an "encumbrance check." This process ensues once a business applicant's proposal to locate on a specific parcel of land is given preliminary approval by the First Nation. The encumbrance check involves canvassing all relevant departments of the Siksika Nation government as to the rights which have been granted to that parcel, and resolving prospective conflicts. The SNG's records of allocations of land by the First Nation to individual members for housing or commercial activity and to non-members for commercial or resource extraction activity are checked for possible conflicts with the proposed use. The notion of a cadastre is implicit in these activities.

C.5.6 Analysis of Survey Benefits

One interviewee identified the following *benefits of land surveys* in the context of Siksika Nation's development goals:

- Provides engineering inputs (quantities, elevations) needed for irrigation works
- Facilitates housing development
- Enables resource inventory management;
 - e.g., mapping of oil well location for input into SNG's Geographic Information System
 - e.g., mapping of agricultural, industrial and residential land uses
- Facilitates long-range community planning, e.g. over a ten or twenty-year timeframe - a keen interest of Siksika Nation government
 - Facilitates establishment of a housing plan, a development plan, and an infrastructure plan
- Provides supporting information for land claims
- Provides documentation of encroachments onto First Nation lands

The last-noted point is becoming a concern for Siksika Nation. They have observed agricultural operators adjacent to the Indian reserve using Siksika lands, and view legal surveys as useful in resolving this situation.

C.5.7 Analysis of Registration Benefits

The following *benefits of land registration* were identified in the context of Siksika Nation:

- Provides historical information on the ownership, area, and legal description of parcels
- Provides a system of securing financial arrangements (off reserve)
- Facilitates management of individual interests in First Nation lands
- In an integrated cadastre, land registration information may provide information on occupants of parcels for use by police and ambulance services

Federal government involvement in property relationships between First Nation's and potential investors was described by the First Nation as a hindrance, in some respects, to economic activities on reserve. For example, where a parcel of land is designated in preparation for the issuance of a lease for commercial activity. The lease may be granted to a non-Indian or to a Band corporation as head-lessee who may then sublet lands to tenants for revenue. An individual Indian seeking to operate land through a leasing arrangement for commercial gain is

treated as a non-Indian would be treated - the land (of which he has a share as a First Nation member) must be designated before he may engage in commercial transactions using it. In the First Nation's view, it is regrettable that, unless the land is surrendered (designated), INAC policy prohibits its use for revenue generation. This is regarded, by some, as the biggest obstacle that First Nation's face towards economic development. On a positive note, however, one banking institution consulted (the Bank of Montreal), which is familiar with the land market in southern Alberta has a keen interest in re-examining their views of possessory rights to land on Indian reserve's.

C.5.8 Case Study Participants - Contacted

Mr. Clarence Wolfleg - Land Code Developer, re: First Nation Land Management Act

Mr. Carlon Big Snake - Vice President if Corporate Business Development

Ms. Maria Big Snake - Environmental Technician

Mr. Allan Main - Surveyor for All West surveys

Mr. Richard Hankinson - Development Consultant to Alberta First Nations

Mr. Don Girardin - Land Management Officer; Treaty 7, INAC Edmonton

Mr. Trent Blind - Manager, Aboriginal Banking, Bank of Montreal, Calgary

C.5.9 Census Data

Location: 80 km E of Calgary (Blackfoot 146)

Total Indian reserve Area: 70985.8 ha

Governance: Membership Authority: Section 10 Indian Act by Band

Election System: Custom

Most Populated Site: Siksika Indian Reserve no. 146

Residency: Registered Off Reserve: 2061, Total Registered Population: 5328

Education (Total Population 15 Years and Over by Highest Level of Schooling (20% Sample Data)): Less than Grade 9: 17%, Grades 9 to 13: 40% (Without Secondary School Graduation Certificate: 90%, With Secondary School Graduation Certificate: 10%), Trades Certificate or Diploma: 7%, Other Non-University Education Only: 25% (Without Certificate Or Diploma: 42%, With Certificate Or Diploma: 58%), University: 11% (Without Degree: 86%, With Bachelor's Degree or Higher: 14%)

[source: INAC website, January, 2001]

D. Workshop

This chapter contains the highlights of a workshop held in Ottawa on April 12, 2001. The objective of the Workshop was to discuss the economic, social, legal, and environmental impacts of land management systems on Canada Lands.

Notes:

- The symbol // indicates that two similar ideas have been merged together.
- In some cases, comments are appended with a # such as “rapid changes in IT {#59}”. The system attaches a sequential # to every item for reference purposes only.

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D.2 Initial Reactions

D.2.1 Discussion Notes

RH: who else has bought into this beside LSD? Govt has all sorts of ways that they can create wealth using the lands overnight e.g. taxation & finance. How plugged into the fed govt are you? Very little political will to do it. Clearly surveys have a big role. Where do today's recommendations go?

DC: how do I tell my minister to invest in the plumbing? if it is going well, no one should notice it.

Heather: as users, we don't have expertise in cartography or geomatics; we need to use the expertise of LSD. Clearly LSD does not have the staff/resources to support what we do (e.g. establishing regulations on frontier lands).

BG: we need a vehicle to convince the powers of the importance of LMS. Much of it will benefit 1stN.

RH: you need surveys to generate wealth. Most govts don't realize this.

DN: once you cut last tree, caught last fish, poisoned last river, then and only then will you realize that you cant eat money

BE: a segment of the population is seizing the opportunities to exploit the lands. we need to turn this around - the people on the front lines. We have to devote more resources to lands and land usage. we have to develop a land regime that we are going to be in control of.

MN: we are into protection and not into wealth generation ... whenever we as 1stN build wealth, we are penalized by the govt thru decreased transfer payments. it is time for us to move forward.

BG: from northern perspective, what about offshore... parks.. etc. focus of this seems to be on 1stN.

RR: I have heard 3 policy issues raised here. we should focus on only 1 of them. first issue

that RH raised (survival, development, advancement) is outside scope of today. we need to focus today on the following: if 1stN assumptions/thinking (community vs. individual, ownership vs. using it...) on how land should be managed is different from non 1stN then the range of services/expertise in land management systems is different.

DN: I believe it is in govts best interest to keep ED off the reserves...

RH: you cannot create wealth without land. you cannot do this without good surveys. need to create mechanisms to do this (e.g. leasehold interests).. wealth from crown lands need to be created differently.

RH: 1stN are asking themselves, with transfer payments going down, how will we survive in 25 years? how do we create wealth to help us survive? with crown lands, need to bring in different players (justice, rev Canada...)

RR: the way the Indian Act is set up prevents surveying done in an appropriate way.

LJ: Indian affairs has required that dept of justice be dragged into every single negotiations. slows everything down. e.g. Walmart corporation looked at Millbrook.

MN: very unstable environment with elections every 2 years.

JC: I am the plumber. you don't need to convince me. you need LMS! Efficiencies of getting land surveys needs to be addressed.

KK: infrastructure. pipes in the ground. how do you invest in land which is legally your land. what are the things that are not in place with crown lands?

RH: to create leasehold improvement ready land, you have to create infrastructure. it all starts with a survey (rights of way, easements, where the pipes are etc)

D.2.2 Computer Entry

INITIAL REACTIONS to the presentation/Dialogue...

2. -Good group

-focus of workshop not clear yet

-this will be a difficult group to keep focused

-are the recommendations from this workshop going to be read by Senior officials in other government departments

-do surveyors care about what their work is really used for

-will any group every be convened to discuss a more integrated approach to the creation of wealth within Crown lands including lands set aside for the exclusive use of First Nations.

3. Indian Act does not allow innovative land management systems to be developed. Existing system of lands management and surveys is inefficient archaic and cumbersome.

Land Management is not solely directed at wealth building for Indian Communities, sustainability and protection should be priorities.

Wealth generation should benefit communities not individuals.

While we may be able to improve the surveying aspect there is 90% of the equation to still be solved. Building codes, regulations (enforceable) for businesses must also be created.

4. No one can deny the importance of land management systems in managing any type of

Canada Lands

The discussion here has been primarily about First Nations - most of participants from this sector. I am surprised no one from Indian Affairs Lands here. Also wonder if representation from Parks. I'm hoping we will get into discussion of diversity of systems needed, extending access to systems.

5. -If the objective of this workshop had been clearly articulated in the handout a better discussion would have ensued. It was not clear anywhere that the objective was to convey to First Nations the value of survey and land systems.

-The question that is resonating is: have we been asked to assist First Nations or is this initiative a "unilateral" move?

-The discussion has been interesting but not focused.

6. Many problems on Canada lands. Property rights are different from the rest of Canada. Problem attracting investors. Management of surveys is too long. Surveys should not go through Indian affairs. Land management systems are the basis for managing rights on lands whatever the philosophy on land use or ownership.

7. It seems almost impossible to separate the discussion of just infrastructure "the plumbing" and the larger discussion of social issues which are systemic of these types of workshops. There are big issues to deal with that will require the cooperation all involved. Is it possible to take a few smaller steps to establish a direction to solve the bigger problems?

8. I am interested in how First Nations can acquire more land and manage effectively the lands acquired. It is imperative that we get away from the stigma of Native people are the keepers of the, in some way we are and some ways we are not.

9. Land Management Systems are important. For First Nations there has to be a balance between traditional philosophies with respect to the use of lands (collective and individual use), and current uses. Yes, First Nations did have very sophisticated Land Use systems; the challenge now is to be eclectic, take what was relevant then and apply it now.

10. Land management systems provide the infrastructure and support necessary to enable the creation of wealth. The definition of wealth creation is viewed differently by different groups.

The lack of recognition of the value of land management systems is abundantly clear as shown by many self government agreements that do not provide funding for this activity.

11. Notes; There appears to be two or more systems in use for land registration and management and the system for First nation Lands is different than the mainstream and misunderstood by corporate Canada and thus the reluctance of investment on First Nation Lands. A uniform system, understood by everyone would facilitate investment on Reserve. Yours truly-Lloyd

12. initial notes:

expressions of what's wrong with the systems in place - had to be done to purge everyone's skepticism about participating.

proposition/ suggestion:

- that “investors” should be acknowledged to include not only off-reserve non-Natives with money in their pockets, but also (as Cornell & Kalt have defined the term), First Nation members and internal land users.

What is also clear is that Native rep’s want to acknowledge that ownership resides with them - and not the fed’s. - this is abundantly clear.

One point which was brought up has been found by the INAC/AFirst Nation Joint Initiative on LTS : that is, the need to engineer land-management systems which are Native.

One point briefly touched on (which the Joint Initiative did identify) is the expression of First Nation’s to avoid the individual landholding model in favour of communal rights to land!!!

13. Initial Scan of “surrounding” Issues - i.e., those other issues that will determine development prospects (along with appropriate land survey and registry systems):

- Indian Act impediments (creating barriers along with “protections”)
- Aboriginal concepts respecting land, ownership, stewardship, etc. (which is inadequately understood, and still under “development”(?), and which seeks a more successful model of “sustainable stewardship” than typically found elsewhere.)
- Other “pieces of the puzzle”?

The point is that surveys and registries need to be better understood as a necessary - although not in itself sufficient - condition for successful land and economic development, WHATEVER forms that development might take. Thus what are the more direct linkages and examples of the ENABLING role of surveys, under a variety of possible decisions or developments on the other issues. More pointedly, demonstrate that “plumbing” is important no matter WHAT kind of building, how financed, owned or leased, etc.

- Shifting investor/enterprise thinking toward a world of leasing rather than owning

D.3 Types of Impacts

D.3.1 Economic

What are the ECONOMIC IMPACTS of Land Management Systems on Canada Lands?

Note: the group brainstormed ideas and then categorized the ideas into several themes (appearing in bold)

Certainty & Stability

1. Protection of rights (Ex. pipeline on the seabed in the offshore)
2. - Security of interests in land - which puts (financial) investors at ease
3. Avoid overlaps and conflicting interests
4. when issuing exclusive right to exploit certain lands and legal title to oil and gas resources you need to be able to define the areal extent of the rights

5. creates certainty
6. Certainty - avoided costs
7. Stability - results in potential for investment
8. investors will not invest substantial funds to develop crown land unless there is a survey to define their legal interest in the land and how their legal interest will be protected
9. industry continually asking for consistency and stability vis a vis land management regulations and legislation to keep the system efficient
10. Well-known and established systems readily accessible to investors will promote development

Social/Community Development/Stewardship

1. If you invest in land management systems, is there a direct economic payback?
2. To date, the land management systems for first Nation Lands has slowed or prevented development.
3. Facilitates the orderly development of land
4. land resources are finite and legal survey and management systems are necessary to define the regulations that will be imposed on each parcel of land
5. Zoning bylaws to control land development to the advantage to the community
6. Develops communities
7. Help teach good land practices

Dispute Resolution

1. interesting point, competing needs i.e. fishery versus oil and gas proponents. How do land management systems address various interests?

Legal Interest

1. Avoid overlaps and conflicting interests
2. The title of Crown land cannot be transferred in fee simple Crown land cannot
3. In order to create wealth from Crown land it will be necessary to survey the parcel of land that will be dedicated to the creation of wealth
4. a legal survey is necessary to link land to other legal documents necessary for the creation of wealth from Crown lands
5. registration systems are required to facilitate registration of ownership to proprietary rights and the conveyancing of rights, provides public access to information - industry , investors etc
6. registration provides legal protection to lease holders

Regional Economic Development

1. Demonstrates that we are “open for business”
2. This is basic infrastructure - should not be impediment to investors/ developers
3. land management systems have an impact on wealth generation, regional economic development, job creation, development of research and technology

Enable Taxation

1. Community will benefit from a land taxes (need for a tax map)
2. leasing first Nation Lands is necessary but tax bylaws are also essential otherwise the nearby municipality will be the main beneficiary of development on Reserve.

International competitiveness

1. Demonstrates that we are “open for business”
2. surge of oil and gas activity off the East Coast has focused international interest in exploring the area and there is always an interest in the land management system as a starting point i.e. what are the rules?

Miscellaneous

2. Economic benefits - to whom? historically, land registration has been used to fragment Indian lands.

D.3.2 Social & Cultural**What are the SOCIAL & CULTURAL IMPACTS of Land Management Systems on Canada Lands?**

Note: the group brainstormed ideas and then categorized the ideas into several themes (appearing in bold)

Jobs/Employment

1. Jobs
2. Employment opportunities
3. increasing oil and gas revenues in one region can benefit all Canadians through collection of taxes, research and development and spin-off benefits
4. land perceived more as a “developable” resource, owing to its securing by l/r systems- perhaps this changes the approach to economic development and increases the level of commercial activity?

Divide communities

1. change in existing land tenure pattern in a community; assigning individual rights to lands which were understood as a common resource/heritage upsets traditional rules/practices regarding rights in land.
2. Highlights the different views of First Nations regarding lands
3. separation of individual rights
4. Divide a community (both positive & negative)
5. land management systems may favour one group over another - again, one interest group may benefit while another group is disadvantaged

Protection of lands/culture

1. Preservation Traditional and or historical sites
2. Preserves traditional medicines.
3. people need to feel that the culture of the community is being respected
4. the culturally important lands within First Nation communities should be protected and surveys could assist with defining the areas to be protected formal n
5. Protection of culture and way of life for future generations
6. Crown land with importance to First Nations should be identified by survey

Community Relations

1. this must join a community, not divide
2. Highlights the different views of First Nations regarding lands
3. people feel secure that development is conducted properly...provided the community agrees with the management plan
4. confidence in aboriginal management/government
5. Capacity building, Nation rebuilding
6. A clear and efficient boundary dispute mechanism will ease tension between neighbors
7. Need to build experience in using surveys by and for communities, to balance and offset perception that it is an instrument used by outsiders to the disadvantage of the community.

Consultation-importance of...

1. people feel secure that development is conducted properly...provided the community agrees with the management plan
2. land management systems for oil and gas development sometimes raise expectations on the part of the public that this development will cure all the economic ills and this expectation must be managed
3. some are opposed to land management rules which do not favour Canadian industry over international companies

Community Control

1. Need to build experience in using surveys by and for communities, to balance and offset perception that it is an instrument used by outsiders to the disadvantage of the community.
2. some are opposed to land management rules which do not favour Canadian industry over international companies
3. Some of the revenue from taxes will go to social and cultural infrastructure
4. community must feel that it is in control of the development
5. certainty, stability
6. support for community programs whereby all can benefit
7. by empowering and educating our people that developing implementing and controlling OUR own land management system will result in positive impact socially and culturally. By us being in control of the authoring of our land management systems, we have the ability to incorporate our traditional and cultural values.
8. people feel secure that development is being conducted properly....provided the community

agrees with the management plan

9. educates the people of the first Nation on their land holding and creates a need to have control of the said lands.

Change in how land is viewed

1. separation of individual rights
2. boundaries and fences are becoming a necessity to control development and to resolve disputes. The use of fences does not go down very well in some of the larger First Nation communities
3. imposition of one system upon the cultural identity of another
4. the concept of using surveys to create a legal interest for a third party is a concept foreign to many stakeholders in the community
5. Allows demarcation of land designated for leasing, homes, or other uses, thereby inviting individual and private “stake holding” and investment (along side of areas for communal uses)
6. many communities have large communal areas that are available to every one. The concept of trying to survey these lands for the purpose of gaining a greater measure of control may be resisted
7. change in existing land tenure pattern in a community; assigning individual rights to lands which were understood as a common resource/heritage upsets traditional rules/practices regarding rights in land.
8. perception of land is changed - when it is easily transferred with the use of a land registration system - perhaps towards a ‘commodity’ as opposed to a birthright, etc.

Loss of Land

1. surveyed land could mean land that is lost forever

Fiduciary Relationship with Crown & 1st Nations

Defines fiduciary relationship btwn crown and 1st Nations

D.3.3 Environmental

Note: the group brainstormed ideas and then categorized the ideas into several themes (appearing in bold)

What are the ENVIRONMENTAL IMPACTS of Land Management Systems on Canada Lands?

Establish/Enforces Regulations

1. links environmental legislation to a specific parcel of land
2. allows legislators to impose regulations on specific parcels of land as opposed to the total parcel.
3. establishment of codes and regulations to ensure sustainability
4. enforceable regulations

5. land management regimes ensure that resources are exploited using good oil field practice, protection of the environment and provide provisions for source of funds to mitigate any environment damage

Protection of sensitive areas /More effective planning

1. greater protection
2. ability to management resource development
3. Ensures responsible forest management plan... Stops clear cutting
4. Protection areas can be properly identified and designated
5. protection of sensitive lands by withdrawal from disposal
6. sustainable development is a framework around which land management systems must be developed and administered
7. allows the interest holder in a parcel of land to define what occurs within the land and to assure that the environment is protected
8. need to consider all impacts before decisions made
9. All things are interlinked (forest, water, animals and fish)
10. Protects endangered species and archeological sites.
11. environmental protection a key concern for First Nations

Community Consultation/Public education

1. community supported environmental protection/screening regimes
2. enforcement of community views
3. pubic education a key to explaining that resource development can take place without harm to the environment

Overlapping Jurisdiction Clarification/Dispute resolution

1. complex, overlapping jurisdictional responsibilities for environmental protection at the federal, provincial, community levels
2. allows for disputes to be resolved in a more organized manner. EG. which groups are responsible for environmental damage or consequences.

Negative impacts: Stifles Land Development, physical damage

1. Physical environmental damage to the land caused by the survey
2. more “hoops” to jump through prior to development

D.4 Impact on Types of Land

D.4.1 Native Lands

Impacts on Native Lands... What aspects of Land Management Systems are UNIQUE to NATIVE Lands...SEVEN most critical Impacts on Native Lands...

Voting Results (Top Seven)

Number of ballot items: 32 Total number of voters (N): 12

Total

- | | |
|---|--|
| 8 | 1. philosophical differences and views on the concept of land “ownership”, appropriate use, individual versus community ownership |
| 7 | 2. System must be competitive with other systems if it is to attract investors, developers |
| 6 | 3. First nations must decide how much and what type of development they wish to have and establish an appropriate land management system |
| 5 | 4. unique features such as sacred grounds, traditional hunting and fishing areas must be addressed in any land management system contemplated |
| 5 | 5. Native lands are held on behalf of the total band population. |
| 5 | 6. control of land in the context of the specific culture group - e.g., Mohawks way of managing land will be distinct from that of Blackfoot, etc. |
| 4 | 7. Aboriginal and First Nations philosophies of land tenure |
| 4 | 8. System must address the distribution of benefits from development |
| 4 | 9. Transfer of land can only be done by referendum |
| 3 | 10. community based-developed //More community driven |
| 3 | 11. The investment community, including banks, does not understand the full potential of First Nation lands and as a result have not developed mechanisms to realize this potential. Legal surveys are viewed as a means to transfer an interest in First Nation lands but not as a means to create sustained economic wealth from transfer of this legal interest. |
| 3 | 12. Most Governments understand that raw land has limited value and as a result have invested billions of dollars to develop infrastructure to increase the value of raw land. This investment is recovered through increased taxation and economic growth. Within First Nation lands the Government of Canada has refused to invest in infrastructure which means that the value of First Nation lands to potential investors is lower than surrounding lands. This situation is compounded by the fact that the Government of Canada and the Provinces have authority to collect taxation benefits generated from First Nation lands without having to invest in infrastructure. |
| 3 | 13. Review all existing land and how it may impact the lands owned by Native. |
| 3 | 14. must support local decision making |
| 2 | 15. Community control on the system as opposed to Federal or Provincial |
| 2 | 16. The interest holder of First Nation lands E.g. the members of First Nations have no control over how there interest in the lands can be developed. The control over most First Nation lands rests with the Government of Canada |
| 2 | 17. Ask First Nations to participate in the creation a First Nation Land Management Act |
| 2 | 18. government to government relationship |
| 2 | 19. land management challenges (whatever they may be) in context of very small community & population base |
| 2 | 20. run by Indians |
| 2 | 21. must be harmonized with the surrounding management regimes |
| 2 | 22. balancing traditional values with ‘common law’ notions of land management |

- 1 23. land management used as a tool for long-term health of a community
- 1 24. Political system is different
- 1 25. must respect culture
- 1 26. Question? Are First Nations exempt from country wide land description and survey systems ie.based on Global Positioning Systems?
- 1 27. bridging the gap between the way the systems are provided today and the way they will be provided in the future
- 0 28. only applicable to existing reserve boundaries
- 0 29. reflects the special relationship aboriginal people have with the land
- 0 31. only negotiable provided there is federal govt political will ...and money
- 0 32. Includes organized settlements (communities)

Note: The group examined the top 14 items, discussed, and merged the similar items together.

1. philosophical differences and views on the concept of land “ownership”, appropriate use, individual versus community ownership ...Aboriginal and First Nations philosophies of land tenure
2. System must be competitive with other systems if it is to attract investors, developers
3. First nations must decide how much and what type of development they wish to have and establish an appropriate land management system
4. unique features such as sacred grounds, traditional hunting and fishing areas must be addressed in any land management system contemplated
5. Native lands are held on behalf of the total band population. (primarily)
6. control of land in the context of the specific culture group - e.g., Mohawks way of managing land will be distinct from that of Blackfoot, etc.
7. System must address the distribution of benefits from development
8. Transfer of land can only be done by referendum (according to Indian Act)
9. More communal decision making process: community based-developed //More community driven // grass roots authority must support local decision making
10. The investment community, including banks, does not understand the full potential of First Nation lands and as a result have not developed mechanisms to realize this potential. Legal surveys are viewed as a means to transfer an interest in First Nation lands but not as a means to create sustained economic wealth from transfer of this legal interest.
11. Most Governments understand that raw land has limited value and as a result have invested billions of dollars to develop infrastructure to increase the value of raw land. This investment is recovered through increased taxation and economic growth. Within First Nation lands the Government of Canada has refused to invest in infrastructure which means that the value of First Nation lands to potential investors is lower than surrounding lands. This situation is compounded by the fact that the Government of Canada and the Provinces have authority to collect taxation benefits generated from First Nation lands without having to invest in infrastructure.
12. Review all existing land claims and how it may impact the lands owned by Native.

D.4.2 Other Lands

Note: the group brainstormed ideas and then categorized the ideas into several themes (appearing in bold)

Impacts on Other Canada Lands... What aspects of Land Management Systems are UNIQUE to FRONTIER Lands (offshore, the North, Parks)...

Offshore

1. difficulty in physical marking of boundaries in Offshore
2. joint management agreement with provincial governments in NS and NFLD - ownership issue set aside (offshore)
3. Offshore land management systems are not well developed
4. agreement by federal government to pay provinces monies equivalent to federal resource revenues, provide equalization offset provisions to mitigate losses in Equalization entitlements due to increased provincial revenues
5. Jurisdictional issues to settle in the offshore
6. There is a need a clearer land management regimes in the Offshore
7. Offshore land management system relatively new but supported by industry, however, improvements are continually being proposed. Difficulty if that the system is enshrined in legislation making change time consuming (offshore). Also changes must be supported by provincial governments - sometimes different agendas clash. (offshore)
8. (offshore) efficient means of defining and securing interests
9. free trade agreements impact on economic benefits which governments can provide (offshore)
10. Public registry systems are important to the offshore resource development industries
11. Many legislative stakeholders in the offshore (NRCan, DFO, Petroleum Boards, etc.)
12. federal - provincial - territorial jurisdictional issues in offshore
13. Need for a competitive land management system in the offshore (globalization)
14. The control of the seven districts of the Mi'kmaq Grand Council should be addressed

North

1. The population in these areas is sparse or non existent which reduces the importance and input of community participation
2. Infrastructure critical to Northern development
3. land claims provide fee simple title to First Nations
4. The population of the north will not support totally unique territorial systems
5. vast majority of land area in north is Crown land
6. (north) presence of Native claims and new regulatory bodies such as Land & Water Boards - these need (i) resolution and (ii) to find their proper way of functioning - e.g. so as not to stifle development
7. some First Nation owned lands include ownership of subsurface (minerals, oil and gas)
8. Northerners will need access to outside expertise to support local land management
9. wide range of economic activity must be supported by northern land management systems

Parks

1. (parks) need to balance environmental concerns with human use of land

All of the above

1. These areas are remote and are not really understood by most Canadians
2. Rights to off shore should apply to the Atlantic equal to the North.
3. The issue has tended to focus exclusively on resource development potential the role played by the Government of Canada is much more important
4. operations take place in harsh, dangerous environments - the need for stringent regulations, safety inspections etc, (offshore)
5. Ambiguities / confusion in distinguishing on and off-shore, in terms of usage, in the frozen north (most of year). S Also, difficulty in running separate regimes where “internal waters seem to apply to waters between islands, such as in Nunavut, even though the waters are technically “offshore”.
6. reliance on GPS due remoteness in North and offshore.
7. International comparisons will be very important for off shore and northern lands.
8. Development is in its infancy
9. most of activity is related to short term resource exploration, development and production
10. Most Canadians do not have strong opinions about the development of off shore and Northern lands
11. Vastness of the territory (Offshore and Territories)
12. DIAND (federal dept.) has many province-like responsibilities in the North and northern offshore
13. Consistency of regime across all regions of frontier lands desirable from a certainty point of view, but different operating environments require different approaches (offshore/on land)
14. is the survey control system in the North and northern offshore complete and accurate
15. need for map-staking (using gps coordinates)
16. Which one land would be more important, the North, Parks or Off Shore

D.5 Stakeholder Perspectives

D.5.1 Land Holder View Point

- **Land Holder View Point**
- **ARGUMENTS made in support of LMS:**

2. Mackenzie Pipeline issue. people are demanding that infrastructure is in place so that decisions can be made (pipeline readiness)
3. government downsizing of the last decade has seriously affected managers of Crown Land's ability to respond to recent surge of resource development activity in the North and in South

4. regulatory reforms are needed to bring in modern land management systems but process of legislation development is too slow and complicated to put new legislation in place in time in a timely manner
5. stewardship role means that all interests in land must be considered - for present and for future
6. As activity increases, more monies invested, there will be a corresponding need for certainty and confidence in the land and registration systems
7. Confidence in the system is paramount. The user has to be sure that the investment that is made will be protected by government infrastructure.
8. Land and resources related to the land have value. The stake holder needs a system that will allow them to maximize the potential of their land. The current system is rooted in controlling development not promoting development. Different vehicles are required to promote development.
9. Provides for the protection of individual rights
10. It is very difficult to function in the present system; however, the system is in place to protect First Nations from exploitation from outsiders as well as Band members. Is there a more effective means of protecting the assets of the First Nation and speeding up the process luring Outside investors?
11. Property rights transfer will be facilitated.
12. Land on First Nation territory cannot be leased below fair market value and thus there is some protection.

D.5.2 Land Investor View Point

- **Land Investor View Point**
- **ARGUMENTS made in support of LMS:**

14. security & confidence in system. potential investors must have assurance that system has integrity.
15. land investors can not be expected to make all the investment in survey and registration infrastructure - land holders must be prepared to provide this to encourage investment ->>> should be shared
16. a myriad of land management systems is a deterrent to investment
17. Provides security and confidence and hence is not a barrier to investment
18. The investor must have confidence in the regulatory regimes that his investment is secure.
19. (land investor - Indian Lands) - increased certainty in the documentation of physical extent / interests of third parties (easements, etc.) / duration of interests / restrictions on use / transferability of interests in Indian Lands improves (financial) investors' ability to deal with land - as a 'developable' commodity and as an asset which could be transferred for value
20. Land surveys are essential to investors. investors require security and certainty of their interest in land. without security they will reassess their risk and may elect not to proceed.
21. "I'm interested, but many places are inviting my attention. Why should I spend more time and effort facing more hurdles, when equally-attractive prospects elsewhere have systems and infrastructure in place, or are in a better position to supply the complementary services I need? (These include: A, B, C, Land Surveys and Registries, E, F, G...) You need to beef up these activities, if you want to solicit and accommodate more "action" and development." NEED TO

GET MORE PEOPLE SAYING THIS, IN RESPECT OF BOTH FIndian reserveST NATION AND NORTHERN AREAS.

22. Land investor viewpoint; The government of Canada has to make stronger commitment to corporate Canada the their investments on first Nation Lands are safe and protected. The dept. of Justice has scared many investors in their advice to Indian affairs.

23. Investors are interested in their rate of return on investment and the risk associated with their investment. Land tenure or clear definition of the interest in land granted to an investor is a priority before investment will occur. If an investor is uncertain as to the tenure of land or the scope of his interest he will reassess risk and may not proceed. Land survey and management systems based on surveys can help define the legal interest in land.

D.5.3 Government View Point

*** Discussion Notes**

- Minister wants us to be smart/efficient land managers -> LMS is an essential enabler of this.
- Goals of Govt: identify geology, what resources we own, sustainable development, retain economic benefits, target regional disparities, international obligations
- revenue generation is NOT at the top of our list of goals.
- Offshore: we are in our infancy re: development of offshore
- Process is slow because of the constant stakeholder consultations involved
- very labour intensive process...
- shortage of resources -> A lot of knee jerk management {#7}

- **Government View Point**
- **ARGUMENTS made in support of LMS:**

25.

4a. you could not meet our objectives without having LMS as a foundation (it all depends on boundaries and

corresponding rights: where are resources, who owns rights etc)

4b. As we go into more sophisticated development processes, we need more surveys, registering systems and

infrastructure (that is scalable to growth)

4c. with all the vast space available in Canada, why aren't more resources devoted to the development of instruments that

will create wealth (surveying, etc.)

4d. analogy to buying a house

4e. security & confidence in system.

4f. hurdles need to be reduced in advance for investors (despite Political pressures)

26. The provision of infrastructure enables or supports sustainable resource development

27. (government as regulator - Indian Lands) - improved LMS's could increase revenues from specific parcels of Indian lands and to specific Indian Reserves and, therefore, could increase self-sufficiency of Indian reserve's
28. need to streamline and reduce complexity should be made a government priority, the question is how best to communicate this to political masters who hold the purse strings and are continually downsizing?
29. Industry is telling us that our current regulatory regimes are complicated and expensive, we must reduce cost of system. Our systems are in competition with other regulatory regimes in other jurisdictions
30. Because of globalization Canada will have to become competitive. If there is an inefficient LMS, or non existent, it will be difficult to attract investors.
31. We are in a competitive global economy, effective LMS are a necessary component
32. Governments hold crown land in trust for the members of first nations or for Canadian citizens as a whole. they have a duty to use crown land in a manner that maximizes benefits. surveys are an essential component of wealth generation.

33. * Barriers to Acceptance

- lack of understanding
- philosophical view
- 1stNations have a different way of dealing with land (our way of doing land registry is alien to how 1stNations view it) e.g. Walmart in Millbrook example.
- see issues raised in morning discussions
- political impediments
- who is in drivers seat? (e.g. 1st Nations don't feel they are in control)
- Fed Govt goal of reducing regional disparities is often in contrast to other economic goals

D.6 Appendices

D.6.1 Agenda

08:30	Coffee	
09:00	Introduction and Summary of Findings to Date	Presentation
09:30	Initial Reactions	Group Discussion
09:45	Economic Impacts.....	Group Input and Review
10:15	Break	
10:30	Social Impacts.....	Group Input and Review
11:00	Environmental Impacts	Group Input and Review
11:30	Legal Impacts	Group Input and Review
12:00	Lunch	
13:00	Impacts on Native Lands.....	Group Input and Review
13:30	Impacts on Other Canada Lands.....	Group Input and Review
14:00	Break	
14:15	Land Holder View Point.....	Group Input and Review
14:45	Land Investor View Point.....	Group Input and Review
15:15	Government View Point.....	Group Input and Review

15:45	Final Thoughts	Group Discussion
16:00	Close	

D.6.2 Meeting Evaluation

Questions and Choices in Original Order

- 1. Suggestions you have for the Project Team...**
- 2. Anything you would like to say that did NOT get said today.**

Survey Results

1. Suggestions you have for the Project Team...

B) Text Responses

<i>Total Number of Respondents (N):</i>	12
<i>Number of responses to this question (n):</i>	3

1. More consultation.
2. I hope you will try to get some comments on this from those who did not attend - i.e. people in Indian Affairs Program - DIAND and also from Parks
3. I would like to suggest that the results of the feedback process be forwarded to Senior Government officials in key areas

2. Anything you would like to say that did NOT get said today.

B) Text Responses

<i>Total Number of Respondents (N):</i>	12
<i>Number of responses to this question (n):</i>	3

1. First nations do not have access to equalization grants and thus denied infrastructure funds to make lands more marketable. indian affairs does indeed put ec.dev money in first nations (7.5 million in Millbrook last year) but many prerequisite need to be in place. Indian affairs should away from unstable Band governments.
2. nice technology - good way to cover a lot of ground
3. I am not sure that the dialogue from this meeting will reach the appropriate ears. I was trying to emphasize the need for a more comprehensive approach which would involve players at more senior levels of government.