Divergent Mineral Rights Regimes

A Natural Experiment in Canada and the United States Yields Lessons

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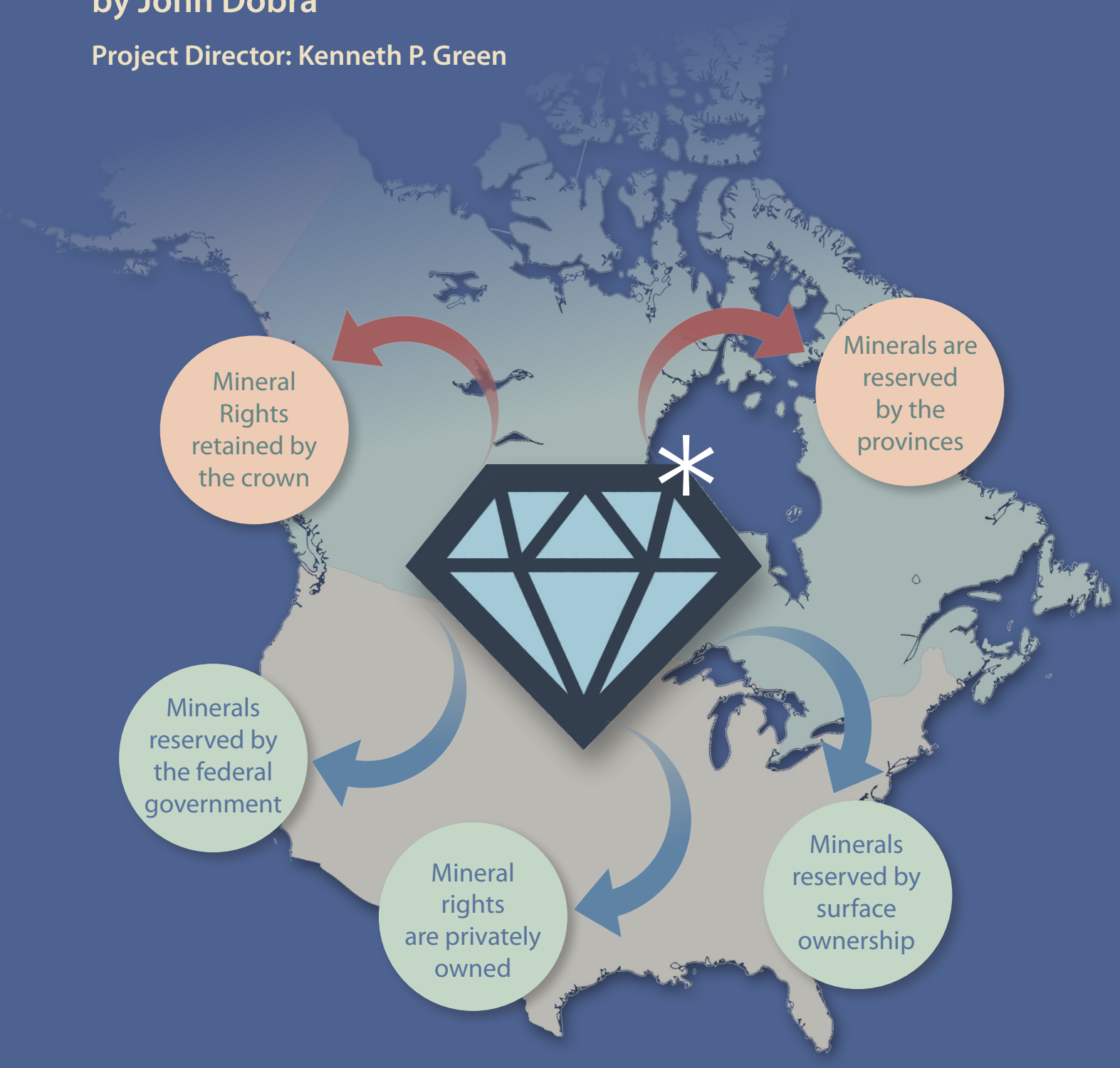


Contents

Summary / iii

1 History of Mineral Law and Policies in Canada and the United States / 1

2 Implications of Mineral Rights Regimes for Mineral Policy / 11

3 Summary and policy recommendations / 23

References / 27

About the Author & Acknowledgments / 31

Publishing Information / 32

Supporting the Fraser Institute / 33

Purpose, Funding, and Independence / 34

About the Fraser Institute / 35

Editorial Advisory Board / 36

Summary

The current state of mineral law and policies related to mining non-fuel minerals, and public attitudes towards mining are substantially different in Canada and the United States. Yet from an historical perspective, these two countries started out with the same laws respecting mining and mineral rights. The obvious questions are how did the systems diverge, why, and what are the implications? The key observations are that US mineral law and policies have been developed in a much less ordered process than those in Canada. In the United States, this process has yielded some useful adaptations of basic British common law such as ownership of minerals in fee simple title. The Canadian approach to policy, however, produces more intergovernmental collaboration and decentralization on matters such as environmental regulation.

After reviewing the literature, we found two key differences between the two mineral rights systems. The first is that in Canada, minerals are reserved by the provinces, while in the US minerals are either associated with surface ownership (primarily in the eastern US) or reserved by the federal government (primarily in the western US). The second is that in Canada, mineral rights are retained by the Crown or the provinces while in the United States mineral rights are privately owned.

These fundamental differences in property rights yield differences in regulatory and tax regimes that are predictable based on legal and economic theories and are tested using results from the *Fraser Institute Annual Mining Survey*. We examined differences between the United States and Canada on five policy parameters from the *Fraser Institute 2012 Mining Survey* that touch on critical differences in mineral rights regimes in Canada and the United States. These factors are:

- uncertainty over disputed land claims;
- uncertainty over protected areas;
- uncertainty over environmental regulations;
- regulatory duplication and inconsistencies;
- US and Canadian mining tax regimes.

From differences between Canada and the United States regarding how miners perceive the systems to differ on these parameters, we derived the following policy recommendations.

Recommendations for Canadian mining policy

1. The biggest difference between the US and Canadian systems is the presence of strong private property rights in the United States, and Canada's Crown-based ownership of mineral rights. This poses particular challenges for developing mining opportunities in First Nations jurisdictions, which could be overcome if provincial governments and First Nations explored avenues to create, strengthen, or emulate private property right regimes on First Nations' lands.

2. Unless Canada's leasing system is reformed, it is likely become a greater deterrent to mining investment.

3. Regulators and policymakers should strive to reduce uncertainty regarding environmental regulations as they are still seen as potential impediments to mining investment.

4. Regulators should work to reduce uncertainties and duplication over the promulgation and enforcement of mining regulations.

5. Uncertainty pertaining to land rights in Canada is seen as a deterrent to investment by nearly 50% of respondents.

Recommendations for US mining policy

1. Uncertainties in the regulatory regime are declining in the United States. Policymakers should work to reduce uncertainty over the promulgation and enforcement of mining regulations.

2. The regulatory regimes affecting mining created by the EPA and BLM should create a Board or Commission framework with members or commissioners appointed for staggered terms of service. This would lend stability to policy by encouraging competing interests to reach accommodation rather than seeking to impose policy and regulation through diktat.

3. Respondents to the Fraser Institute's mining survey perceive the US tax regime to be less hospitable to investment than is Canada's. Policymakers should consider measures to harmonize the tax treatment of mining in the United States with the tax regime in Canada.

1 History of Mineral Law and Policies in Canada and the United States

The current state of mineral law and policies related to mining and public attitudes towards mining are quite different in Canada and the US, though from an historical perspective, these two countries started out with the same laws respecting mining and mineral rights and have taken very different paths to their current states of affairs. And the obvious questions are how have they diverged, why, and what are the implications?

Answering these questions leads us to look at comparative histories, legal institutions, and the economics of their respective mineral industries. The first two subjects deserve and have received extensive scrutiny in the literature and we will treat them in rather broad strokes which, in the case of land and mineral law, incurs significant risks. Nonetheless, the more interesting issues from our perspective are the implications of these different paths from essentially the same starting point for mineral policy. This includes basic questions like who owns the minerals, how does one acquire the right to develop them, on what terms, and extends to what kind of regulatory apparatus exists to oversee the process of mineral development, and what kind of tax regimes have emerged? This leads to an examination of the policy implications of these issues on the ground today.

The beginning: British common law of mining

Generalizing about the common law is difficult at best because of the inductive nature of judicial rulemaking and the myriad of factual situations to which the common law has been applied. However, various sources cited below address both US and Canadian mineral laws that have identified three general principles or observations that are derived from British roots.

First, for millennia, both in Britain and Europe, miners have been granted free access or entry on the land to mine. This principle has obviously been attenuated in numerous circumstances for various reasons, but free entry is the presumption of the law.

A second general principle that is derived from the Old World is the ability of the Crown or the state or an individual land owner to grant title to land with a reservation of mineral rights. The "split estate" with surface and mineral title held by different parties is nearly universal in Canada and is common is the western US (Barton, 1993).

A third point, which is an observation rather than a principle, is that the details of mining law, e.g., the size of mining claims, rules of discovery, retention of title, abandonment, etc., can vary between mining districts, especially from a historical perspective. Mining legislation in both Canada and the US in the latter half of the 19th century has brought more standardization to these matters (Barton, 1993).

A final general observation is that there are always exceptions to the first two principles. For example, mineral entry is nearly universally banned in public parks. But, there are obscure exceptions. For example, the Crater of Diamonds State Park in Murfreesboro, Arkansas is a publicly owned diamond mine where visitors can dig for diamonds (Arkansas Department of Tourism and Parks, 2014). Another oddity is that the British Crown granted the Duke of York the colony of New York without reservation of minerals, and as recently as 1962, the State of New York has asserted its ownership of all gold and silver in the state (Swenson, 1968). So, broad brush statements about the common law of mining will almost always be subject to exceptions.

North of the St. Lawrence

The story of mineral development and mineral rights in Canada is quite different than it is south of the border. Since mineral rights in Canada remained reserved for the Crown, the story is much more orderly. Mining in Canada has early colonial roots dating back to the late 17th century (Carnstone, 2002). Prospectors and producers generally purchased licenses from the Crown which, upon discovery and production, established an administrative framework to collect revenues and regulate the process of claim staking and production.

Prior to Canadian independence, a number of gold rushes occurred under British administration that provide examples. Although not as large as California's gold rush, the rushes in British Columbia in the 1850s are illustrative of the contrast between British and American administration. Gold was discovered on the mainland of British Columbia in 1856, which at the time was a colony administered by the Hudson Bay Company (Barton, 1993). News of the discoveries attracted a multinational group of miners with the largest group being Americans, most of whom had California experience. Fearing a repeat of the lawlessness and vigilantism of California, the Governor of the Colony of Vancouver Island, James Douglas, moved to assert the rights of the

Crown, and issued a proclamation reserving all gold and silver for the crown, and prohibiting the sale of mineral lands, among other things. The proclamation was followed by *The Gold Fields Act* in 1859 (Barton, 1993) and regulations that generally followed an Australian model (La Croix, 1992).

The administrative apparatus established by the act created offices of the Gold Commissioner and Chief Gold Commissioner with regulatory as well as judicial powers. The act also defined rules for recording claims: it required miners to purchase a free miner permit and imposed general regulations on the size of claims and all aspects of mining, mine ownership, claim retention, water rights, etc. It also allowed miners in a district to elect mining boards that could establish by-laws to allow them to modify the regulations to fit local conditions. The latter provision allowed districts to engage in some of the *ad hoc* rulemaking that was common in California and elsewhere but it occurred under the authority of the Crown's administrative and judicial powers. Barton notes that the essential elements of *The Gold Fields Act* were retained in later legislation although with changes to reflect modern mining methods (Barton, 1993).

The mining claims, when recorded and maintained, are leasehold interests until mining ceases and the surface and mineral rights revert to the Crown. This contrasts with mineral rights in the US where the mineral rights when claimed, and surface rights, if patented, remain private rights after cessation of mining.

In Ontario and Quebec, prior to enactment of the *Gold Mining Act* in 1864 for the united province, mining was allowed by imperial instructions to the governors of the colonies in 1791 which reserved minerals for the Crown following the common law (Barton, 1993).[1] These rules with modifications were codified in colonial statutes in 1845. The law allowed for the sale of mineral lands subject to the approval of the provincial council. However, like the experience in the US in the same period, the sale of mineral lands was unpopular with miners. Purchasing large tracts of land for mining purposes at a price negotiated through a political process was not only a barrier to free entry; it had the appearance of cronyism. The 1864 act eliminated land sales and followed the British Columbia and Australian model of free entry, sales of mining licenses, and free mining.

With Canadian independence in 1867, unappropriated Crown lands and minerals reserved from private land were conveyed without reservation of the minerals to Canada. And with the establishment of the *Canadian Constitution Act* in 1867 Crown lands and mineral rights were vested in the provinces. Crown lands and mineral rights in Canadian territories remained vested with the federal government (*Canadian Constitution Act*, sec. 109,

1. Initially, the reservation applied to seven minerals but was limited to gold and silver in 1797.

1987).[2] This, it will be argued below, is another key difference between the Canadian and US mineral rights systems where mineral rights in most of the western states are reserved to the federal government rather than the states.

The importance of this difference—provincial ownership of mineral rights in Canada versus federal ownership in the western US—can be put in broad terms. In Canada legislation and regulation of mining is primarily a provincial issue while in the western US where most modern mining occurs, these are federal issues. Of course, in both countries federal legislative and regulatory powers impact mining activity as in the case of environmental issues. But on issues related to the right to mine, royalties derived from ownership of minerals as opposed to general tax powers, etc., these are provincial issues in Canada while they are federal issues in the western US. In the eastern US, in contrast, these are private and state matters. Consequently, examining Canadian law regarding mineral rights requires looking at the provinces.

South of the St. Lawrence

The divergence of mineral rights regimes in the US and Canada constitute a natural experiment with a common starting point. This point is the adoption of the Treaty of Paris in 1763 between Britain and France ending the Seven Years or French and Indian War in which France ceded its territories in Canada to Britain. The treaty brought North America east of the Mississippi River (Coggins and Wilkinson, 1981) under British common law related to minerals (and other matters) through a series of events that basically extended the traditions of British common law.[3] The northern colonies included Upper Canada (currently part of Ontario), Lower Canada (currently part of Quebec and also referred to as French Canada), and the Maritime Colonies. Territories in Northwestern Canada were unorganized until the creation of "Rupert's Land" in the 19th century (Baker, 1999). The southern colonies included the thirteen American colonies along the eastern seaboard and territories west of the Appalachian Mountains to the Mississippi River and north of Massachusetts claimed by these colonies.

The path of mineral law in the US and Canada obviously took divergent paths beginning with US independence in 1781 and the subsequent signing of the *Treaty of Paris* in 1783 which renounced all Crown rights to land claimed by the newly created states (Swenson, 1968). Prior to that, land grants by the

2. Mineral rights in aboriginal lands have subsequently been vested in the aboriginal peoples.

3. Excluding Florida which was ceded by Spain (along with West Florida which is in western Louisiana) in 1819.

Crown to individuals and commonwealths generally reserved mineral rights in gold and silver in the Colonies for the Crown following the custom of British law. Following independence, in the US, mineral rights were generally granted to owners of surface rights if they were still owned by the Crown. If the land was unappropriated, both the surface and mineral rights were owned by the states. When these unappropriated lands were sold or granted by the states to private owners, they were generally conveyed in fee simple title, i.e., with mineral rights.

The British Common Law concept of Crown land with reservation of minerals for the Crown was completely rejected in favour of *allodial* rights for private surface owners and the states in the case of unappropriated or public lands, that is, title not subject to feudal obligations to a sovereign (Swenson, 1968). In reality, the allodial status of land claims was a bit of anti-Royalist puffery since land in the former colonies was still subject to taxation and takings by eminent domain. As a practical matter, only the state can hold allodial title. But, for the purposes here, these land holdings were not subject to reservation of mineral rights for the Crown or the newly created Confederacy, they were held in fee simple, undivided, title by individuals or the states.

After independence, land became a major political issue for the Confederacy formed by the Continental Congress. Here, the focus is on mineral title, but the broader context is relevant. The major issues that the Congress faced were Revolutionary War debt and the lack of a tax power. Much of the Confederacy's debt was land owed to Revolutionary War veterans for service. The problem was that the Confederacy, the central government, did not own land.

The states, however, did own land or, at least, claimed ownership of lands west of the Appalachian Mountains to the Mississippi River, although their claims to title sometimes conflicted. The colonies also claimed lands in the Northeast including the present day states of Maine and Vermont. Nevertheless, ultimately these western lands were ceded to the Confederacy via cessions beginning with the Virginia Cession during the Revolutionary War and adoption of the Land Ordinance of 1785 and the Northwest Ordinance of 1787 by Congress. Later cessions by states to the federal government after the adoption of the Constitution in 1789 were held under the authority of Article IV, section 3 of the Constitution for "disposal" which originally meant land sales or grants, and the creation of new states which would enter the Union on an "equal footing" with the original 13 states.[4] These conveyances of land to the federal government were with no reservations of mineral rights in contrast to British common law.

4. The Continental Congress in the Northwest Ordinance, on July 13, 1787, provided that states created out of the territories were to be admitted to the union "on an equal footing with the original States, in all respects …"

The Land Ordinances also created the template for territories acquired later and established a preeminent role for the federal government in land policy. The federal government did not wait long to exercise this power with the Louisiana Purchase in 1803. Stretching from the Mississippi River to the Rocky Mountains, the French territory of Louisiana was the largest single expansion of US territory. Like lands acquired from the original states under the Land Ordinances of 1785 and 1787, the federal government created territories and, when criteria for admission were met, the territories were admitted to the Union as states. Also like lands acquired from the original states, these lands were sold or granted without reservation of mineral rights.

This practice, the conveyance of land in fee simple title, continued in the US through the 19th century through various land grants (to Revolutionary War veterans, e.g.), land sales, and, beginning in 1862, a series of Homestead Acts. Mineral law through this period was largely the province of state law and local custom (Coggins, Wilkinson, 1981). There were efforts in Congress to develop a policy on minerals in federal territories in the 1840s and earlier. Congress had developed a leasing system for lead mining on federal lands but then abandoned it. It also created a distinction between mineral and non-mineral lands and reserved the mineral lands (including surface rights in addition to the minerals) from sale or land grants. But the US Congress generally vacillated on the subject of mineral policy and eventually sold the mineral lands without reservation of mineral rights beginning in 1846 (Swenson, 1968). Part of the indecisiveness of Congress was no doubt due to the ongoing friction between the federal government and the states over states' rights and federal power to regulate economic activity within the states. The Civil War eventually settled the issue of federal power at least with respect to land policy in territories of the US. In addition, the limited leasing programs that had been tried were administered by various district land offices that were notoriously corrupt, and were unpopular with miners and the public.

By the end of the 19th century there was growing public concern and political pressure over granting windfall mineral rights to non-mineral producing entities like railroads and farmers. The *Enlarged Homestead Act* of 1909 for example, which doubled the acreage of the original Homestead Act, and railroad land grants applied only to non-mineral lands (Coggins and Wilkinson, 1981). In any event, the first general reservation of mineral rights by the federal government did not occur until much later with the *Agricultural Entry Act* of 1914 (Agricultural Entry Act) and the *Stock Raising Homestead Act* of 1916, but this gets ahead of the historical account of US mineral rights.

It was not until the mid 19th century with the acquisition of western lands with the annexation of Texas (1845), the Oregon Settlement (1846), the cession of the southwestern territories from Mexico (1848) following the Mexican War, and the California Gold Rush (1849), that mineral law and mineral rights became a federal issue. The land acquisitions by the US

in the 1840s and, particularly, the California Gold Rush, brought enormous changes in the mineral rights regimes south of the border, beginning with the annexation of Texas.

After Texas' independence from Mexico in 1836, Texas mineral law used the property rights regime that existed in the eastern US where most Texans originated. Mineral rights were attached to surface rights and land was held in fee simple title. However, a significant portion of the land in Texas was arid and not particularly suitable for agriculture, and as a consequence, was unappropriated and remained (with mineral rights) in the ownership of the Republic of Texas. With the annexation of Texas into the US in 1845 this property rights regime was retained, but with ownership of unappropriated lands and mineral rights vested in the state of Texas.[5]

Following the annexation of Texas the mineral rights and land ownership regime in the western US became much more complicated, starting with the first major mineral development – the California Gold Rush. As former territories of Spain, and then Mexico, mineral rights in California were severed from surface rights.[6] Consequently, mineral rights accrued to the US. But, unlike Canada, the US had no legal mechanism for conveying these rights to private ownership.

Events did not wait for the US Congress to come up with such a mechanism. When gold was discovered at Sutter's Mill in 1848 approximately a quarter to a half million people from all over the world descended on California (California Natural Resource Agency) and the federal government was essentially unable to enforce its mineral rights and, as a practical matter, did not

5. As an aside, the Northwest Ordinance of 1787 conveyed territories claimed by the states to the Confederated States of America which became the US in 1789 with the adoption of the current Constitution, to be used to establish new states to be admitted into the Union on an "equal footing" with the 13 original states. Politically, this has meant that new states should have the same number of senators and representatives in Congress. *Pollard's Lessee v. Hagan* — 44 US 212 (1845), established that the "equal footing" doctrine also applied to land rights. The original states owned the land (river beds) underneath navigable waters and so should newly admitted states. States created from territories acquired in the Mexican Session in 1848 and the Oregon Compromise did not acquire mineral rights in unappropriated, or "public," lands, like the original 13 states. Hence, in this respect, states created from territories acquired after 1848 were denied "equal footing" with states created before the Mexican cession via the Treaty of Guadeloupe Hidalgo. However, there is the counterpoint that these lands were not the subject of the Northwest Ordinance. Given the economic value of mineral resources in oil, gas, metals and industrial minerals and the royalties collected by the federal government ($billions in latest year) this represents a significant loss of revenues to states created after 1848 and a significant transfer of wealth through federal royalties to the states entering the Union earlier.

6. Barton (1993) discusses the European roots of royal reservation of mineral rights.

want to since mineral development promoted economic development and buttressed its policy of "manifest destiny" (US History.org, 2014). Because of significant diversions like the Civil War, it was not until 1866 that the US Congress passed legislation to convey mineral rights to mineral claimants in the western states and territories, and it was not until 1872 that the current basic framework of US mineral law was established (30 USC. §§ 22–24, 26–30, 33–35, 37, 39–43, 47). The 1866 act primarily sanctioned the use of local customs and created right of ways for transporting water over federal lands. The 1872 Act, among other things, standardized claim sizes and other matters that had previously been subjects of local customs.

The initial California Gold Rush in various locations focused on placer gold, i.e., gold that could be panned or sluiced from gravels of creeks and riverbeds. This period of development was generally fairly short lived. By 1851 in some areas, miners started dredging river beds, and hydraulic mining which used pumped pressurized water to wash away hillsides to expose more gold. Eventually, California gold mining turned to lode, or underground mining of solid rock. But lode mining generally required more capital investment not just in sinking shafts, but building mills, obtaining financing, etc. Essentially, the 49'ers, the Silver Kings of Nevada and Colorado were trespassers because they did not own the mineral rights and the US government did not have legal authority to convey them. As a consequence, miners were forced to develop local mining law that varied from mining camp to mining camp as described by Libecap (1978: 338–62). In California, each mining camp would develop local rules related to the size of claims, terms of tenure and abandonment, recording of claims, etc., and each type of mining—placer, hydraulic, dredging and lode—required different rules and regulations to make mining profitable.

This *ad hoc* rule making worked fairly well in California because local rules were easy to change with changing circumstances for placer, hydraulic mining, dredging and lode mining. The number of people involved, miners and possibly surface owners, was small, facilitating decision making, and the negotiators had strong financial incentives to compromise quickly to establish rules.

In 1850, on their way to the California, a group stopped on the Carson River near the present day site of Dayton, Nevada. Waiting for storms to pass in the Sierra Nevada Mountains that they would have to cross, some in the party tried panning for gold in a creek coming out of nearby mountains. They found some traces of gold, but certain that they would find far more in California; they named the gulch "Gold Cañon" and moved on. By the end of the 1850s the "easy pickings" in California were quickly disappearing and miners started moving east to Nevada where the prospectors had found gold on the westward trip. Exploration up Gold Cañon eventually led the small group of prospectors to what would become the Comstock Lode (Smith, 1943).

Following mining techniques including claims staking practices they were familiar with from California mining, the district developed and attracted more miners, however, the *ad hoc* rules began to break down and spawn legal disputes. Grant Smith's history of the Comstock describes the rules as allowing each miner a placer claim with a fixed square footage that depended on the number of miners working it (Smith, 1943: 64–70). However, in working the claims miners struck quartz veins leading underground and in following the veins, they were frequently led beyond the vertical boundary of their claim into an adjacent claim. This, as would be expected, created disputes, so new rules were designed to allow the discoverer of the vein an "extralateral right" to pursue it 200 feet wherever it led them.

While this solution seemed reasonable at the time, the principle of extralateral rights was incorporated into federal mining laws passed in 1866 and 1872. These laws established patenting of claims that conveyed federal mineral rights and surface rights to private ownership, but Smith notes that the issue of extralateral rights opened a Pandora's Box that led to an "orgy of litigation" which was the chaos from which US mining law was born (Smith, 1943: 66).

The technical issue in dispute in litigation had to do with the nature of the veins that made up the lode. Near the surface discoveries suggested multiple parallel veins along a north-south strike that dipped to the west. This meant that claims could be staked parallel to the original strike and followed wherever it led the miner. But, at depth it turned out that the parallel veins merged and dipped to the east. This led to legal disputes that were ultimately resolved in favour of the senior, that is, oldest, claims which were held by the biggest companies along the original strike. However, this resolution took years to achieve during which mining virtually stopped.

The basic features of the US mining law have remained generally intact since 1872 but with numerous modifications made by legislation and judicial decisions. The first key feature derived from common law is open access to federally owned lands and private lands where mineral rights have been reserved (Coggins and Wilkinson, 1981: 334). Certain federal lands have been closed to mineral entry such as National Parks, Monuments, and other designated areas but otherwise free access prevails. Procedures for staking and recording claims remain essentially the same. Rules regarding abandonment originally imposed a work requirement to maintain ownership but have since evolved into a claim holding fee. A claimant must prove a mineral discovery to receive mineral rights, and has the right to use the surface for reasonable mining purposes. If the miner established a viable mining operation they could apply for a patent to obtain surface rights for a standard price per acre (a practice that was discontinued in the 1990s).

Having said that the 1872 law remains the basic law of mining in the United States. It is important to note that the law has undergone numerous

revisions and has sparked controversy over the last century. One major change came with the reservation of "leasable minerals" including sand and gravel, coal, oil, gas, geothermal resources, oil shale, and oil sands under the *Mineral Leasing Act* of 1920 (Mineral Leasing Act, 1920). More recently, since the 1990s, a bill to reform the mining law has been introduced in every session of congress. These efforts, however, have reoccurred several times since the beginning of the 20th century. Critics of the mining law offer a laundry list of deficiencies in the law, which Morriss and colleagues (2004) address in their defense of the *1872 Mining Law*.

John Leshy, a former Solicitor General for the US Department of Interior, is a long standing critic of the law and an advocate of a leasing system similar to that of Canada (Leshy, 1987). Most of the criticisms revolve around economic issues and most specifically that the US government does not receive a royalty for the minerals produced from lands claimed under the law. However, these fiscal issues have been described as "green herrings" since the revenue that could be raised by a federal royalty would be relatively small, and the bulk of the criticisms come from environmental interest groups (Dobra, 1994).

2 Implications of Mineral Rights Regimes for Mineral Policy

The above analysis of mineral rights regimes suggests several hypotheses which can be tested. But first, it is useful to address some macro level observations about comparing Canada and the US because policies affecting the minerals industry are the result of the interaction between policy makers, the industry and the public. Consequently, policies reflect this endogenous relationship.

The most obvious differences are the size of their respective populations and diversity of the two nations' economies. Canada had a population of 34.4 million in 2013 (Statistics Canada, 2014) and a total workforce of 15.4 million of which 2.1 percent, or 308,000, were directly employed in mining (miningfacts.org, 2012). The US population is almost ten times larger at 313.3 million, and a labour force of 155.8 million of which 0.14 percent or 226,100 were employed in mining (Bureau of Labor Statistics, Natural Resources and Mining, 2014; Bureau of Labor Statistics, Mining (except Oil and Gas), 2014). Consequently, mining and energy development are much more important to Canada's economy than to the US economy. Indeed, much of Canada's economic development is driven by resource development and services related to resource development such as engineering and finance.

As a result, we would expect the tax and regulatory environment for resource based industries to be more favourable in Canada than the US, other things being equal. However, other factors also weigh in to determining the regulatory environment. One of these factors is the ownership of mineral rights and another is the locus of legislative and regulatory power in the government. As noted above, Canadian mineral rights are owned by the provinces and reserved from land that becomes privately owned through grant or sale in contrast to the US where the minerals are conveyed into private ownership. Consequently, we would expect US miners to enjoy more security in their property rights.

Provinces also create mining law and regulations. Numerous authors have noted that Canada's brand of federalism is highly decentralized compared

to other offspring of British rule like the US and Australia[7] with the US being the most centralized of the three countries. Canadian provinces obtain their jurisdiction over land and natural resources under Section 109 of the 1867 *Constitution Act* (Barton, 1993). The Canadian federal government does provide an overlay of tax and environmental law and regulation but the provinces exercise considerable autonomy in these matters relative to US states.

The US federal government, in contrast, has broad powers over interstate commerce from Article 2, section 8 of the US Constitution and substantial land holdings (approximately one third of its land area—primarily in the West where most mining occurs) that gives it considerable authority over resource use. Most major environmental policies in the US were initiated and administered at the federal level in the 1960s and 1970s, for example, the *Clean Air Act* of 1972, *Clean Water Act* of 1963, *National Environmental Policy Act*, and the *Federal Land Policy and Management Act* of 1976, considered to be the Bureau of Land Management (BLM) "organic Act". In the 1980s President Reagan's "New Federalism" devolved much of the implementation of these laws to the states, but the federal Environmental Protection Agency (created in 1970) still wields enormous regulatory power with respect to mining (Nathan and Doolittle, 1983) and much the same can be said of the BLM.

Section 109 of the Canada's *Constitution Act* grant of ownership and authority over land and natural resources was not only intended to give provinces control over resources for economic development, the provinces were expected to use the revenues from resource development to finance the functions of government. The fact that provinces also receive tax revenues directly from mineral development and that these revenues are a much more important revenue source to provinces than it is to most US states (with Alaska and perhaps Nevada as significant exceptions), suggests a financial incentive in Canada to provide a favourable policy environment.

Evaluation of the policy environment for the mining industry in terms of these generalities is difficult because it relies on subjective judgments, however reasonable these judgments may seem. Consequently, we intend to use data from the *Fraser Institute Annual Survey of Mining Companies* since 2008 to determine which issues raised in the survey were the most significant barriers to investment (McMahon and Cervantes, 2012). The 2013 Mining Survey identifies 15 factors and asks a sample of industry managers and executives to rate these policy factors in 93 jurisdictions around the world. Respondents rated policies on a five point scale ranging from whether the policy encouraged investment to whether they would not pursue investment in a particular jurisdiction because of the factor.

A recent Fraser Institute study on investment barriers in the British Columbia uses a similar methodology to look at policies in that province over

7. For example, see Cairns, 1992: 55–70; Hawke, 2002: 185–196; and Cutler, 2008: 627–654.

time (Wilson, McMahon, and Minardi, 2013). In this study's use of data from the *Fraser Institute Mining Survey* we will compare the average ratings in Canadian provinces against average ratings in US states.[8] The British Columbia study identifies four factors that stand out by far and away in the respondents' evaluation of British Columbia, these factors, in order of their salience, were:

- Uncertainty over disputed land claims
- Uncertainty over protected areas
- Uncertainty over environmental regulations
- Regulatory duplication and inconsistencies

In addition to these factors we also looked at a comparison of US and Canadian tax regimes. The analysis of the Mining Survey data below looks at the percentage of respondents reporting that the factor "encourages investment" or "is not a deterrent to investment." Hence, we can interpret the findings to reflect the favourability of the legal, tax, and regulatory regimes in the United States and Canada. These comparisons are illustrated in figures 1 through 5 below. Other potential responses beside "encourages investment" and "not a deterrent to investment" were "mild deterrent to investment," "strong deterrent to investment," and "would not pursue investment due to this factor." In the figures, the vertical axis is derived by adding the average percentage responding that the factor, e.g., tax regime, "encourages investment" plus the average responding that the factor "does not deter investment" for the Canadian provinces and US states included in the survey.

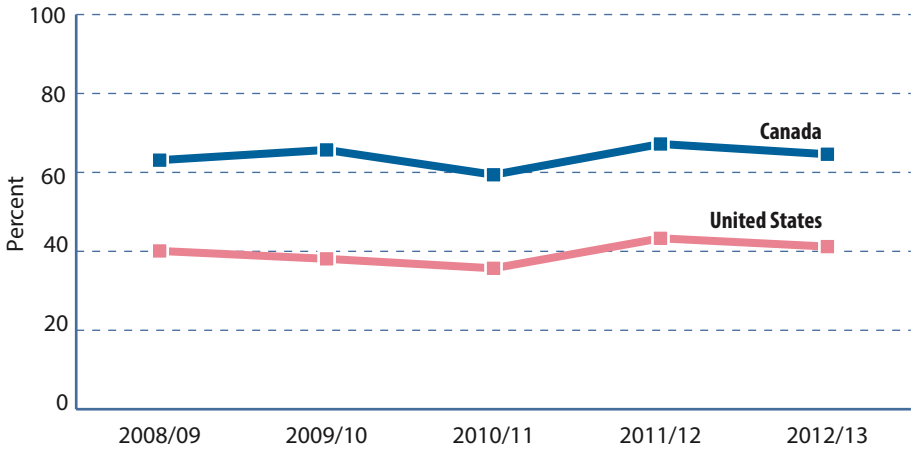
Respondents were asked to rate the 93 jurisdictions on the four factors above plus tax regime (along with other issues like price expectations, perceptions about the prevalence of corruption, best mining practices, etc.). It is not known if individual respondents actually have pursued investments in these jurisdictions so the responses can reflect personal experience or "reputation" learned by the experience of others.

Environmental regulatory regimes

Figure 1 suggests a much more favourable environmental regulatory regime in Canada than in the United States, which was anticipated above. This result is hardly surprising for a number of reasons suggested below, but generally relates to the endogenous nature of the regulatory environment where the mining industry and its workforce wield significant influence.

8. Note that only US states with significant mining activity are included in the *Fraser Institute Annual Survey of Mining Companies*. These states are primarily in the West and Midwest.

Figure 1: Favourability of Environmental Regulatory Regime



Source: calculations by author.

However, there are some additional considerations in this comparison that need comment. The first of these is that the population densities in the two countries differ dramatically. This implies that mining activity in Canada is much less likely to adversely impact populations in developed urban and suburban areas than in the US. Indeed, states like Nevada and Alaska with low population densities are the two most favourable states on this measure in the 2011/2012 survey, while more populous states like California, Colorado, Michigan, and Washington are all rated poorly. Montana, a state with a pro-environmental reputation, is also rated poorly in spite of its relatively low population density.

Another factor in the difference between the regulatory climates of Canada and the US is the locus of regulatory authority in the two federations. In the US, as noted, the federal government has sweeping regulatory power over interstate commerce and sizeable land ownership. In Canada, as noted, regulatory authority is a more collaborative effort of the federal and provincial governments.

The EPA is also unique as a regulatory agency for a number of reasons. Although it is effectively a cabinet level position it is run by an administrator rather a cabinet secretary. In addition, its agencies write regulations for non-binding public review rather than binding review by a board or commission like most federal agencies such as the National Labor Relations Board, the Securities and Exchange Commission, and Federal Communications Commission which are run by commissions or boards. These regulatory agencies tend to be more bi-partisan in that members are appointed for staggered terms so that there is overlap of appointees from different administrations.

Much the same can be said of the BLM, which is part of the Department of Interior and responsible for oversight of regulatory permitting in the US on public lands. The BLM is overseen by a director rather than a regulatory

board or commission that would tend to reduce partisan political influence over its actions. Regulatory decisions by both the EPA and BLM are, of course, subject to administrative appeals and judicial review, but this tends to be an adversarial process and is frequently used as a vehicle for harassment by opponents.

On the other hand, section 109 of the *Canadian Constitution Act* grants Canadian provinces ownership of land within their borders which carries with it regulatory competence over natural resources (Cairns, 1992). The federal government has jurisdiction over trade and inter-provincial matters such as water that forces negotiation between the levels of government on resource and environmental matters. But as the most decentralized federation to evolve from the British tradition, provinces have much more authority than US states.[9] Moreover, the intent of section 109 of the *Canadian Constitution Act* was to provide natural resource ownership as a means of providing the provinces with a source of revenues so we would expect provinces to exercise regulatory restraint. The US federal government has very little incentive of this kind except in the case of leasable minerals like oil, natural gas and coal where the federal government has retained ownership and collects royalties. Both of these observations reflect the endogenous relationship between the industry and the regulatory regimes.

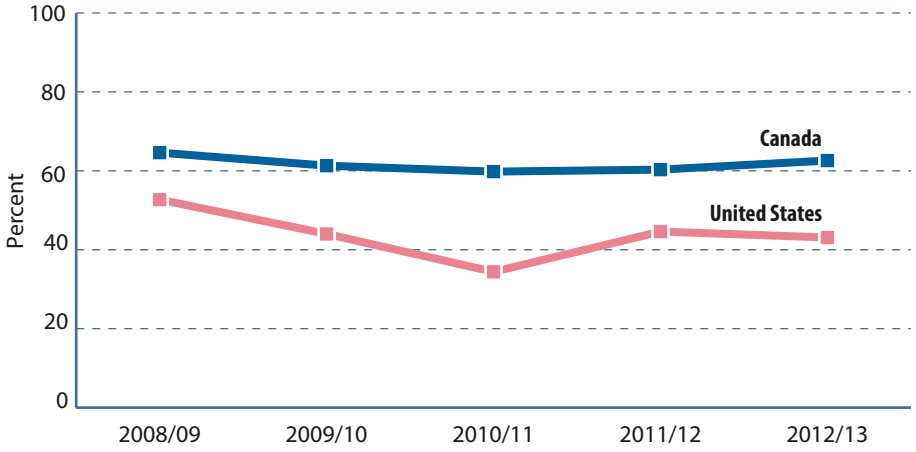
The general regulatory regime

Figure 2 shows the percentage of respondents reporting that the level of regulatory duplication and inconsistencies either encourages mineral development and investment or is not an impediment to investment. Again, the Canadian regulatory climate is rated better than the US as we have hypothesized because of the endogenous nature of regulation.

The results for Canada also suggest a relatively stable regulatory climate over the period while the results for the US show a deteriorating climate in the first years of the Obama administration. As noted above, in the US there is a larger role for the federal government in environmental and other regulations. In addition, states can strengthen regulations and in states like Montana (which has banned the use of cyanide heap leach processing for gold and silver mines) and California, Oregon, and Washington have all done so. Two states left out of the *Survey*, Oregon and Wisconsin, have adopted such stringent additions to the federal regulatory regime that mining is insignificant. Oregon, it must be noted, has a fairly minimal history of mining but that is not the case in Montana whose state motto is "oro y plata" ("gold and silver") and has a significant mining history and mineral potential.

9. See, for example, Hawke, 2002: 185–196; Cutler, 2008: 627–654.

Figure 2: Favourability of Regulatory Climate



Source: calculations by author.

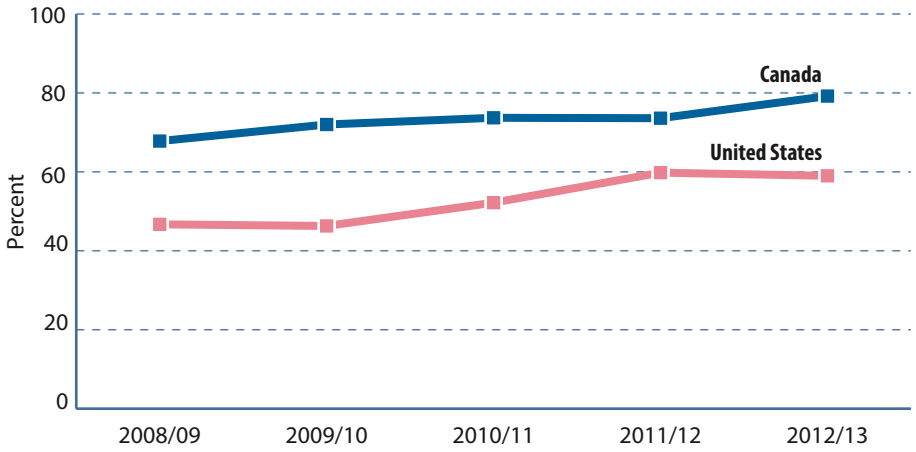
Security of property rights

On the issue of the ownership of the minerals and property rights in general, it has been hypothesized that private ownership of locatable minerals and surface rights in the US would create greater security of property rights in the US and this is suggested by survey results represented by **figure 3**. However, the issue of the security of mineral rights in the US versus Canada is more complex and strongly influenced by the status of First Nations' rights versus Native American rights (as they are called in the US).

Canadian First Nations people enjoy considerably more deference under Canadian law than do Native Americans in the US. We suspect that this reflects the much later economic development of Canada and the change in attitudes in both countries over time. In the US, Congress has complete jurisdiction in regulating Indian affairs and has granted tribes limited sovereignty. Native American tribes' ownership of minerals is limited to private property held like any other citizen and lands on reservations. In the latter case, mineral rights are held in trust by the federal government and are to be administered for the benefit of the tribe. There have been cases where Native American groups have challenged mineral development based upon the *National Historic Preservation Act* (1966) and the *Antiquities Act* (1906) claiming that mining causes irreparable harm to Native American archeological and/or religious sites, but have had limited success.

Treatment of Canadian First Nations' land claims are governed by section 91(24) of the *Constitution Act*, which gives the federal government jurisdiction over "Indians and lands reserved for Indians" and section 109 which gives jurisdiction of land to the provinces. As with environmental regulation, this dual authority creates a need for negotiation and compromise. Barton notes that native groups generally favour the economic benefits of mining but problems arise when mining activities interfere with traditional activities like hunting and fishing and/or affect water and air quality (Barton, 1993: 80–94).

Figure 3: Security of Property Rights



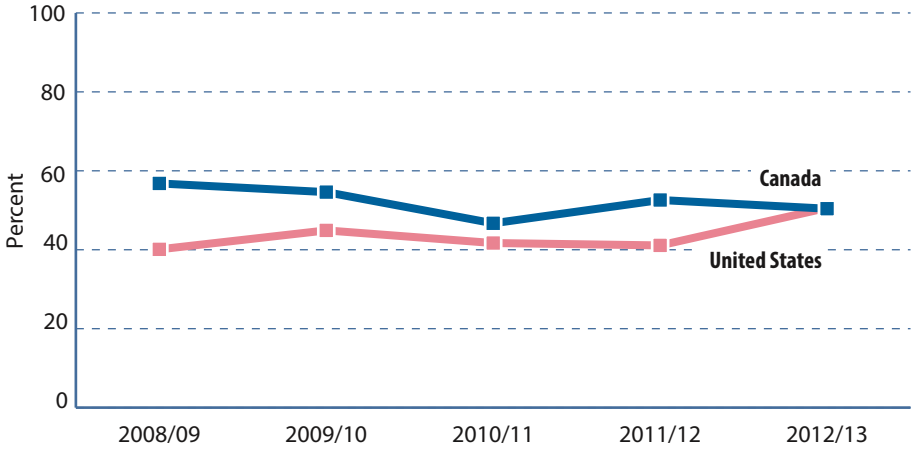
Source: calculations by author.

The ambiguity of First Nations' rights in Canada relative to the US is largely a result of the necessity of negotiating with tribes that are sometimes not well-equipped for tribal organizational or face political issues that impair their ability to negotiate. This ambiguity and uncertainty also shows up in the comparison of perceptions of the favourability of land use regulations shown in **figure 4**. Pressure for environmental protection and preservation of unique natural resources in parks, preserves, and wilderness areas exists in both countries and figure 4 shows the favourability of land use regulations in the two countries converging in the most recent surveys.

Canada's First Nations' land claims exemplifies another case where the lack of property rights creates uncertainty. The general assumption of most Americans and Canadians of European descent, if policies toward Indians or First Nations are considered, is that aboriginal peoples lack the institutional capital to achieve significant economic development and achieve higher standards of living (Anderson, 2008). Hence, policies have focused on education and providing funds and facilitating investments to help them develop the natural resources in their reserves. Another common assumption is that these peoples lack a cultural understanding of property rights because of their communal lifestyles. Or, as Winona LaDuke, a Native American and running mate of Ralph Nader in his 1996 presidential campaign put it: the "concept of private land ownership was foreign to us. We have traditionally had collective land ownership, with individual and family use rights" (Galbraith, Rodriguez and Stiles, 2006: 4).

Both of these assumptions are questionable. The more general problem than the lack of institutional capability is a lack of incentives created by the paternalistic trusteeship of government policies. With regard to "collective land ownership," this assumption is very misleading. Research on Native Americans both in Canada and the US has shown that when resources attached

Figure 4: Favourability of Land Use Regulations



Source: calculations by author.

to the land become valuable enough, Native Americans have adapted private property institutions. Demsetz cites the Montagne Indians of the Labrador Peninsula as having lax or no property rights in beaver trapping grounds until Europeans increased their value by buying beaver hides (Demsetz, 1967). With the emergence of a lucrative market for hides, the Montagne developed stricter rules regarding property rights. In contrast, the plains or prairie tribes were nomadic followers of the bison so there was no particular value to be derived from private property rights in land.

Another well documented example of Native American property rights comes from the Iroquois Confederacy. When European settlers first arrived in North America they were obviously greatly outnumbered by the indigenous tribes. Consequently, when the settlers acquired land, they did so by purchase. The concept of private property and trade were hardly novel to the Iroquois. Within the Iroquois Confederacy itself land was held by clans and, although a group right, these lands were transferrable by sale, trade, and bequest. If a clan abandoned the land it reverted back to tribe in the same way title would revert to the state if one didn't pay their property taxes.

According to Roback, prior to the American Revolution the Crown sought to monopolize land purchases from the Iroquois by prohibiting and not recognizing legitimate title to lands purchased from Indians by individuals (2008). The Crown's policy was that only it could purchase land from the tribes because it did not recognize tribal title and then it would sell the land to the settlers. One can easily imagine that, from the Indians' perspective, with ample supplies of land and low population densities; they were more than happy to sell land to the settlers and/or the Crown.

Usher makes a similar point about Inuit title in northern Canada and Alaska which are considered usufructuary, or rights to use the commons as opposed to a possessory right (1992). Possessory rights to tundra are really

not worth that much, but a possessory right to hunt and fish on a specific area of tundra is valuable and could be made alienable. If this were the case, a mining (or other) company would have a basis for bargaining with the Inuit individuals or groups (or other tribes) over the attenuation of that right.

In an age when mining can only occur under the terms of a social contract, mining companies recognize an obligation to negotiate with First Nations to obtain permission to mine. This happens all the time, for example, GoldCorp recently negotiated an agreement with the Lac Seul Obishikokaang, which is laudable, but First Nations put in this position are negotiating without possessory rights and therefore are at a disadvantage (Goldcorp, 2013).

An example of this disadvantage is chronicled by Thoms in British Columbia where James Drummond Dole, the Hawaiian pineapple magnate, formed a fishing club in the 1880s made up of "acceptable gentlemen" to purchase land, in excess of what would be allowed for an individual (hence, a club was formed), surrounding Pennask Lake near Kamloops (2002). They purchased land where aboriginal peoples had traditionally camped during seasonal runs of rainbow trout. Dole's Pennask Lake fishing club managed to extinguish the aboriginals' usufructuary rights by virtue of their possessory rights to the surface. If the aboriginals had possessory rights to fish they could have at least bargained for compensations for the taking of rights guaranteed by the Crown. Instead, they got nothing.

Efforts to create private rights for Native Americans in the US were tried in the 19th century with mixed results under the *Dawes Act* of 1887 (or the General Allotment Act)(24 Stat. 388, ch. 119, 25 U.S.C.A. 331.). This allowed Native Americans to "own" reservation land held in trust by the federal government and eventually, in fee simple title. Critics, including many Native Americans, claim that it tended to break down tribal cultures and, indeed, one of the objectives of the act was to encourage assimilation into the general society. Another criticism is that lands allotted to individual tribal members (in fee simple title after amendments in 1906) resulted in many of these allotments being sold to non-Native Americans.

While there is truth in both these claims, the source of these problems came from the "one-size-fits-all" approach of giving a head of household 160 acres (with smaller parcels for single members) (Carlson, 1992). In some areas such as the plains of the Midwest, 160 acres was not sufficient to produce a profitable farm. All one could do with such a small parcel was to lease the land to a larger operator for a modest sum. On the other hand, 160 acres of timberland or a fishing camp in the Pacific Northwest would be worth more and particularly if combined with adjacent allotments of other family members. But, over time, as the allotments became fractionalized through inheritances, they eventually would be sold off.

In the end, however, although some allotments still exist, the 1930s saw the implementation of the so called "New Deal for Indians" that turned

out to be the same old deal—no improvement in rights or incentive schemes (*The Indian Reorganization Act* of 1934). The New Deal for Indians imposed a paternalist corporate model but at least in the US Native Americans have more secure possessory rights in their reservations and minerals.

For Canada there are a number of options for giving First Nations more secure property rights and greater bargaining power while at the same time reducing uncertainty with mining companies and other potential developers impacting First Nations' usufructuary rights. One model is suggested by the discussion above concerning James Drummond Dole's fishing club at Pennask Lake in British Columbia. Another is suggested by the US Indian Gaming Regulatory Act. (US Government Printing Office, 2014; Legal Information Institute, 2014). Each of these approaches has several variations.

The model suggested by the *Indian Gaming Regulatory Act* is closer to a private property solution. Under the Act, Native Americans can operate casinos on their reservations and reacquired Indian lands. The permission to operate the casino or other gambling operations is subject to negotiating a compact with the state where the reservation or reacquired land is located concerning regulation of gaming, law enforcement and other health and safety regulations such as food inspections, etc. Numerous tribes have taken advantage of the act to develop casinos and provide employment opportunities for tribal members.

There are two aspects of this model that are of interest to the Canadian situation. The first is the notion of "reacquired" Indian lands. These are lands purchased by tribes outside of their reservation over which the tribe has sovereignty like on the reservation. The opportunity to purchase non-Indian lands and invest in casinos has attracted capital and investment from companies that operate casinos in places where it is legal like Nevada and various other states, thereby addressing one of the perceived problems that Native Americans have faced in promoting economic development.

Applying this model does not require promoting gambling, although that is a possibility, it can be used to promote other forms of tourism or commercial fishing, forestry, or mining. What is required is that provinces sell or grant tribes surface rights to the land. This would reverse the story of Dole's fishing club at Pennask Lake and is a fairly simple plan.

However, even with private mineral and surface rights in the US, mineral developers' bargaining power is still limited. A notable example of these limits is provided by the proposed New World mine near Cooke City, Montana close to the northeast entrance to Yellowstone National Park. The proposed development drew criticism from the environmental community, the federal government, and eventually the United Nations. Ultimately, development was stopped by the purchase of the land including mineral rights by an NGO—The Trust for Public Land, and the US Forest Service (Repanskak, 2010).

This market solution is also an equitable solution since mineral resource owners are compensated for the loss of the use of their property. Without secure property rights because of their reservation for the Crown, withdrawing the right to mine by fiat makes blocking mineral development an arbitrary political act with little cost to opponents of development, which is the second advantage of the US claim staking system over Canada's leasing regime.

Tax issues

The final issue compared in this analysis concerns the tax regimes in the two sets of states and provinces. State and provincial tax regimes are less a result of mining laws than the issues above, except that in US states' minerals are taxed as property although other levies such as general business taxes may also apply. The fact that state constitutions may limit property tax rates is one check on property taxes. Another check is the standard constitutional provision that all property should be taxed equally, although this is fairly easily circumvented in some cases.

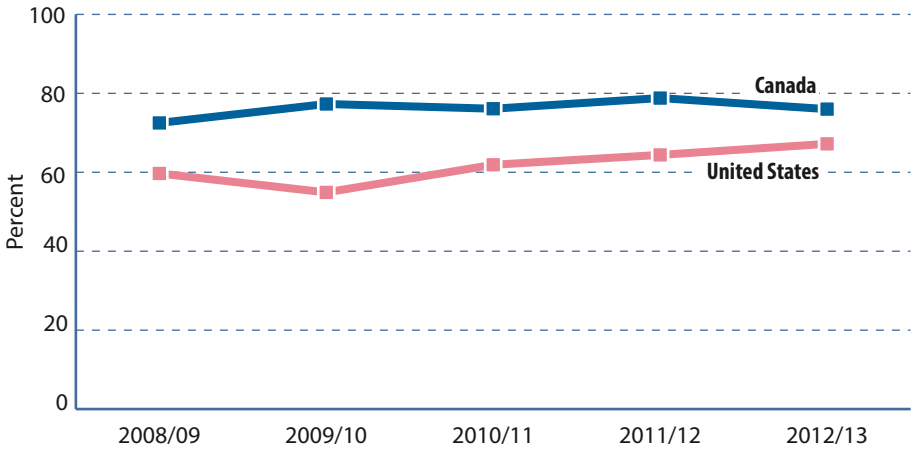
We have reported in research on state mining taxes that state mineral production taxes for gold producers in 10 western states where metal mining occurs, fall in a range of 20 to 30 percent of operating income when general business taxes are included (Dobra, 2012). Another general observation is that in all of the states examined except Alaska, revenues from mining activity accounts for a very small proportion of revenue in the states.

As a result of the relatively small size of the industry in most western states, mining taxation does not attract much attention, and mines tend to be taxed like all other businesses with some notable exceptions where certain types of mines get more or less favourable treatment. Canada, on the other hand and as noted above, has a relatively large mining sector and the industry carries considerable political clout in the provinces and Ottawa. This, we would hypothesize, would lead to the favourable tax treatment reflected in **figure 5**. One of the key points in Libecap's empirical analysis of mining legislation in Nevada in the Comstock era was the industry's ability to gain favourable tax treatment (Libecap, 1978).[10]

Chen and Mintz implicitly make a similar case about Canada by calculating the marginal effective tax and royalty rate for each province (2012). These rates range from –9 percent in British Columbia (that is, a 9-percent subsidy) to a 20.6 percent tax in Manitoba. Even at the high end in Manitoba, these rates are at the low end of those found in our previous study examining US western mining states (Dobra and Dobra, 2012). Chen and Mintz

10. Libecap notes that Comstock mine owners received "significant transfers from Nevada taxpayers" by reducing their tax burdens (1978: 358).

Figure 5: Favourability of Tax Regime



Source: calculation by author.

argue that this tax treatment distorts investment in the overall economy since tax rates for metal mining are lower than those for non-resource producing industries in all but two provinces: New Brunswick and Nova Scotia. These rates are also below those paid by oil and gas producers in all but one province: Nova Scotia.

3 Summary and policy recommendations

This paper has attempted to analyze a natural experiment tracing the evolution of Canadian and US mining laws from their common origin—British common law—to their current status. We find two key differences between the two mineral rights systems:

1. in Canada minerals are reserved by the provinces while in the United States minerals are either associated with surface ownership (primarily in the eastern US) or reserved by the federal government (primarily in the western US); and

2. in Canada mineral rights are usufructuary and retained by the Crown or the provinces while in the United States mineral rights are privately owned.

These fundamental differences in property rights yield differences in regulatory and tax regimes that are predictable based on legal and economic theories and are tested using survey results. The main conclusions are that the regulatory and tax framework in Canada are generally more favourable for mining but primarily because of the relatively greater importance of mining in Canada's economy. However, because of the private property rights in minerals that exists in the United States, land claims disputes are less of a deterrent to mining investment in the United States.

These conclusions suggest policy recommendations for the United States related to its regulatory apparatus and for Canada and its provinces related to land use decisions and its mineral rights system. Both sets of recommendations relate to the distinct federal systems in the two countries.

With respect to the US environmental regulatory apparatus, it was noted above that there are two distinct differences in its regulatory regime from Canada that survey respondents view more favourably. The first difference is that the locus of environmental regulatory authority in the United States is at the federal level while in Canada authority is more collaborative between the federal government and the provinces. Second, environmental regulation by the EPA and the BLM in the United States is more centralized and less collaborative than even most other US federal regulatory agencies.

As noted above, most US federal regulatory agencies from the Securities and Exchange Commission (SEC), to the National Labor Relations Board (NLRB), the Federal Trade Commission (FTC), are organized as commissions or boards where commissioners or board members are political appointees that must be confirmed by the Senate. Regulations promulgated by commission or board staff must be approved by the commissions or boards and regulatory actions can be appealed to the commissions or boards before being challenged in court.

A key point and beneficial aspect of this kind of regulatory structure is that the commissioners and board members serve limited staggered terms so they can be appointed by Presidents of different parties and approved by Senates with different parties in control which tends to yield at least some partisan balance. The structure of the EPA, on the other hand, is more vulnerable. For example, the current EPA administer, Gina McCarthy, has taken aggressive steps to implement regulations aimed at addressing climate change at the behest of the President, who has shown a pattern of appointing individuals with environmental activist backgrounds (Davenport, 2013). The president has also made no secret of his willingness to use executive orders and regulations to combat climate change if Congress won't act, and Congress is unlikely to act anytime soon. The result will likely be aggressive regulations on coal mining, for example, that the industry will have to fight through litigation rather than collaboration between the coal mining states and the federal government.

As an example, a lawsuit recently filed by attorney generals of 12 states against the EPA is illustrative of the partisan perception of the agency. The attorney generals allege that the EPA encourages environmental groups like the Sierra Club and Environmental Defense Fund to sue the agency over regulations and rulings and then settles the suits, usually resulting in more stringent environmental regulations. The tactic, known as "sue and settle" allegedly results in the agency paying plaintiffs' legal fees so that the agency is effectively paying to be sued (Colman, 2013). If the agency had a commission governance structure it would be insulated from these kinds of tactics. The current trend toward federalizing control over mining in the US would be expected to reduce mining attractiveness further in comparison to Canada. Decentralizing authority rather than centralizing it further should be an organizing principle in US mining regulation.

With respect to the reservation of mineral rights, this research began with an *a priori* assumption that Canada's leasing system was superior to the US claim staking system but the author has slowly become disabused of that notion. The assumption of the superiority of a leasing system was partly based on the hypotheses advanced by Leshy (that seemed reasonable) regarding administration of leaseholds as opposed to accumulating and managing the hundreds or thousands of claims required for modern mining operations

(1987). Yet, secure private rights in the mineral estate have at least two distinct advantages over a leasing system. While mining under any mineral rights regime involves a social contract between the community and the miner because of the potential externalities generated by mining, secure private rights gives the potential developer more bargaining power.

Canada's usufructuary land and mineral rights systems that lead to uncertainty are more difficult and express more deeply rooted problems. Part of the problem stems from the British tradition of reserving mineral rights in land grants and sales as opposed to the US system allowing claims staking and fee simple title. The other part of the problem is the attenuated nature of First Nations' land rights.

Mining policy does not exist in a vacuum and must, of course, be balanced with other considerations. In doing so, however, it must be remembered that mining investment is international in character. If Canadian policy makers wish to maintain or improve Canada's competitiveness in attracting this kind of investment and the jobs and economic growth it produces, there are a number of important issues that they should consider.

Recommendations for mining policy in Canada

1. Uncertainties in the regulatory regime are declining in the United States. Policymakers should work to reduce uncertainty over the promulgation and enforcement of mining regulations.

2. The biggest difference between the US and Canadian systems is the presence of strong private property rights in the United States, and Canada's Crown-based ownership of mineral rights. This poses particular challenges for developing mining opportunities in First Nations jurisdictions, which could be overcome if provincial governments and First Nations explored avenues to create, strengthen, or emulate private property right regimes on First Nations' lands.

3. Unless Canada's leasing system is reformed, it is likely become a greater deterrent to mining investment.

4. Uncertainties pertaining to Canada's environmental regulations are still seen as potential impediments to mining investment. Regulators and policymakers should strive to reduce uncertainty regarding environmental regulations.

5. Canada's overall regulatory regime is still seen as a significant impediment to mining investment by potential investors. Regulators should work to reduce uncertainties and duplication over the promulgation and enforcement of mining regulations.

6 Uncertainty pertaining to Land Rights in Canada is seen as a deterrent to investment by nearly 50 percent of respondents. Canadian policymakers should work to reduce uncertainties regarding land rights in Canada.

Recommendations for mining policy in the United States

1 The regulatory regimes affecting mining created by the EPA and BLM should create a Board or Commission framework with members or commissioners appointed for staggered terms of service. This would lend stability to policy by encouraging competing interests to reach accomodation rather than seeking to impose policy and regulation through diktat.

2 Respondents to the Fraser Institute's mining survey perceive the US tax regime to be less hospitable to investment than Canada's. Policymakers should consider measures to harmonize the tax treatment of mining in the United States with the tax regime in Canada.

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