

PERMIT TIMES FOR MINING EXPLORATION IN 2016



February 2017

Permit Times for Mining Exploration in 2016

Kenneth P. Green and Taylor Jackson

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Executive Summary

Since 1997, the Fraser Institute has collected information from mining company executives, who evaluate mining policies in jurisdictions around the world. One theme that regularly appears in the comments we receive as part of that survey is a perception that permit time—the length of time it takes to get approval for mining exploration—has grown longer and applications for permits more onerous over time. In our 2016 survey, we added supplementary questions about the time and effort required to obtain exploration permits. These questions were limited to jurisdictions in Canada, the United States, Australia, and the Scandinavian countries, as mining, environmental, and other policies in these jurisdictions are broadly comparable.

In general, based on the perceptions of respondents, many of the Canadian jurisdictions, Saskatchewan in particular, appear to be performing quite well compared to their international competitors. However, there is also room for improvement across Canada: British Columbia is one province that appears to be a laggard, along with the territories. Respondents indicated that not only were they waiting longer to receive their permits in British Columbia than in competing provinces like Ontario and Quebec, the province also offered less transparency and certainty throughout the permitting process than most of the jurisdictions included in the survey. Northwest Territories and Nunavut also showed considerable room for improvement.

At the other end was Saskatchewan, which performed relatively well compared to jurisdictions both in Canada and around the world in limiting the time it takes to receive permits, as well as ensuring that the process is highly transparent. On one of the dimensions of permit times that we asked respondents to assess—how long it takes to receive the necessary permits—Saskatchewan performed well, with 91% of respondents answering that they received the necessary permits in six months or less compared to 88% of respondents in Quebec, 80% of respondents in Ontario, and only 73% in British Columbia. Canadian jurisdictions tended to perform much better on this measure than did most competing jurisdictions in Australia and Finland and Sweden.

Saskatchewan was the only jurisdiction to have no respondents to the survey indicate that permit approvals had either lengthened somewhat or lengthened considerably over the last 10 years. Yukon had the highest percentage of respondents, at 50%, who found that the time to permit approval had lengthened considerably, with an additional 20% of respondents who found that they had lengthened somewhat. British Columbia's 60% of respondents who

said that permit times had lengthened and Ontario's 55% was much larger than the 38% of Quebec respondents who noted that permit times had lengthened in that province. Again, on average fewer respondents in the Canadian jurisdictions indicated that permit times were lengthening compared to respondents in the United States, Australia and Scandinavia.

When asked whether transparency in the permitting process was either an encouragement or deterrent to investment, 91% of respondents for Saskatchewan found the level of transparency to either be encouraging investment or at least not deterring investment, compared with 65% in Ontario, 63% of respondents in Quebec, and 54% in British Columbia. This is an area where many Canadian jurisdictions performed more poorly than their counterparts in the United States and Scandinavia.

Saskatchewan was the highest-ranked Canadian province or territory for the level of confidence that mining executives had that the necessary permits would eventually be granted. Nunavut performed poorly on this measure, with 45% of the province's respondents saying that they either had low confidence or were not at all confident that they would be granted the necessary permits. Like the results for transparency, a number of the jurisdictions in the United States, Australia, and Scandinavia outperformed many of the Canadian jurisdictions for ensuring certainty in the permitting process.

Based on the evidence from the survey, we can say that, although some of the Canadian jurisdictions performed quite well compared to international competitors, the exploration permitting process can certainly be improved in many of Canada's provinces and territories. Policy reform in these areas may help Canada's provinces and territories unlock their considerable mineral potential.

Introduction

A well-developed mining sector is one that can produce considerable economic and community benefits. In Canada—home to one of the world’s largest mining sectors—mineral exports amounted to \$92.0 billion in 2015 and in the same year Canada’s mining industry spent \$14.9 billion on capital investment and contributed \$60.3 billion to nominal GDP. All this, while employing 373,000 workers and paying a yearly average of \$2.9 billion in corporate income taxes and royalties to government revenues (NRCAN, 2016b).

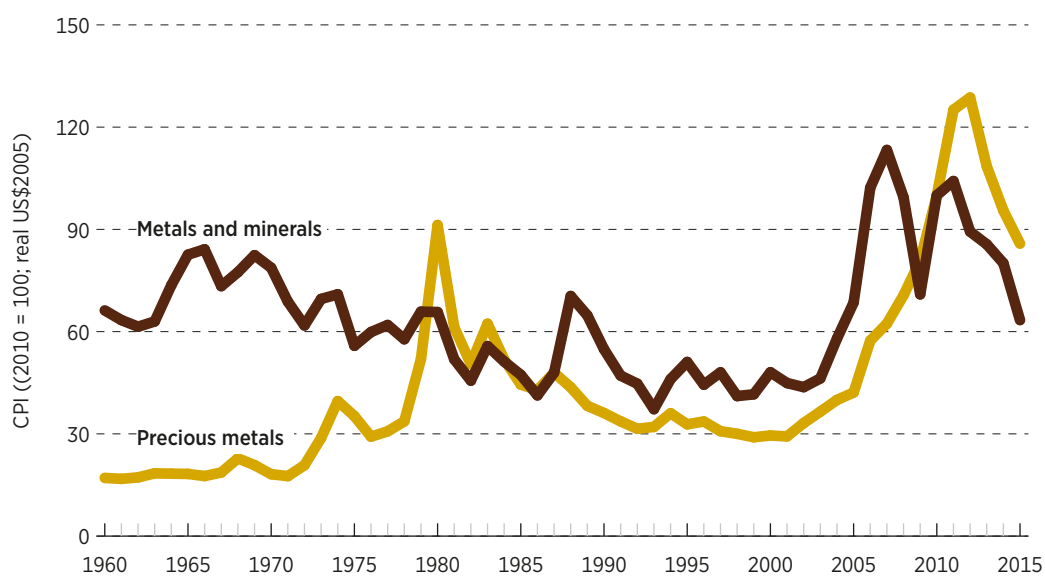
The economic benefits from mining are well known, and many jurisdictions eagerly seek to pursue policies that encourage investment. But, as with many private-sector activities, the mining sector is competitive and capital is mobile. To encourage investment in mining jurisdictions, governments need to put forth attractive and competitive policies.

This is particularly true for the exploration component of mining. Without exploration, the eventual development and extraction of minerals would not take place. Exploration is the process of gathering information and discovering deposits suitable for mining. The task is complex and can involve the use of geological studies of the area, sometimes conducted by aircraft and satellites, to search for above-ground deposits and geochemical anomalies (Rankin, 2011; Moon, Whateley, and Evans, 2006). In Canada, exploration is undertaken primarily by major mining companies (who tend to focus on “brownfields” exploration near existing mine-sites) as well as by junior exploration companies, who usually hope to sell their discoveries to larger companies that will develop and administer a producing mine.

Exploration comes with considerable risk. To put this risk into perspective, one rough evaluation holds that “[i]t sometimes ... takes 500–1,000 grassroots exploration projects to identify 100 targets for advanced exploration, which in turn lead to 10 development projects, [one] of which becomes a profitable mine” (Eggert, 2010: 4). Another general statistic is that the success rate for exploration is less than a tenth of a percent (Moon, Whateley, and Evans, 2006).

In such a risky environment, particularly when commodity prices are low and the market is uncertain, as it continues to be (**figure 1**), onerous costs and uncompetitive policies can discourage investment in exploration, thereby diminishing the chances that a viable deposit will be found and eventually developed into a producing mine. Some recent evidence suggests that the permitting processes for exploration activities may be imposing such costs and acting as a deterrent to investment. In a recent survey of 34 junior and mid-tier mining firms operating all around the world, conducted between May and August 2015, slow permit

Figure 1: Commodity Price Index (2010 = 100; real US\$2005) for precious metals and metals and minerals, 1960–2015



Source: World Bank, 2016.

approvals and unclear permit renewals were seen as being one of the greatest challenges facing firms (PDAC, 2015). In Canada, concerns have also been raised about the consistency and transparency of the permitting process for explorers and the effect this may have on the ability of jurisdictions to attract exploration investment (AME BC, 2014, 2015).

The previous edition of this survey also indicated that the permitting process for mineral exploration activities may be becoming more onerous for firms (Green and Jackson, 2016). Indeed, the previous survey found that a large percentage of respondents were waiting longer to receive the permits necessary to carry out exploration activities compared to 10 years previous. This year's report continues and extends the work of the previous year's survey. Again, it is an early contribution to assessing the exploration permitting process and its potential effects. As with the previous report, a survey of mining executives who have recently applied for exploration permits in Canada's provinces and territories, as well as in a number of jurisdictions around the world, was undertaken to get a better understanding of how timelines for permit approval, transparency, and other issues in the permit approval process differ within Canada. The results of this survey will allow for a better understanding of how provinces and territories perform in this area and will serve as a starting point for future research aimed at identifying best practices for exploration permitting. This year's survey adds further data for future research by including a number of additional jurisdictions in Australia, the United States, and Scandinavia to the report, all regions where mining, environmental, and other policies are broadly comparable to those in Canada. This will help gauge Canada's performance in comparison to a number of similar jurisdictions.

Permits, Competitiveness, and Investment

After a claim has been staked and before exploration activities can begin in Canada's provinces and territories, firms must apply for the necessary regulatory approvals like permits, licences, and notices of work.¹ These permits allow an exploration or prospecting firm to explore for mineral deposits and perhaps eventually make a discovery. The permits are also intended to ensure that activities will not pose a significant or unnecessary threat to the environment and to allow for consultation with Aboriginal communities on possible impact on their rights.

The permitting process places costs on firms, as they must invest time and resources to comply with the permit's requirements. These costs can increase if the process lacks transparency or is uncertain, adding additional risk to firms and reducing a jurisdiction's competitiveness. In an environment where capital is highly mobile, jurisdictions offering lower costs and more competitive policies would be expected to appear more attractive to investment. And policies do matter when it comes to attracting investment and developing mineral resources (David and Wright, 1997). Respondents to the *Fraser Institute Annual Survey of Mining Companies* consistently report that about 60% of their decision on whether to invest come from a jurisdiction's pure mineral potential, while the other 40% comes from policy-related factors (Jackson and Green, 2015).

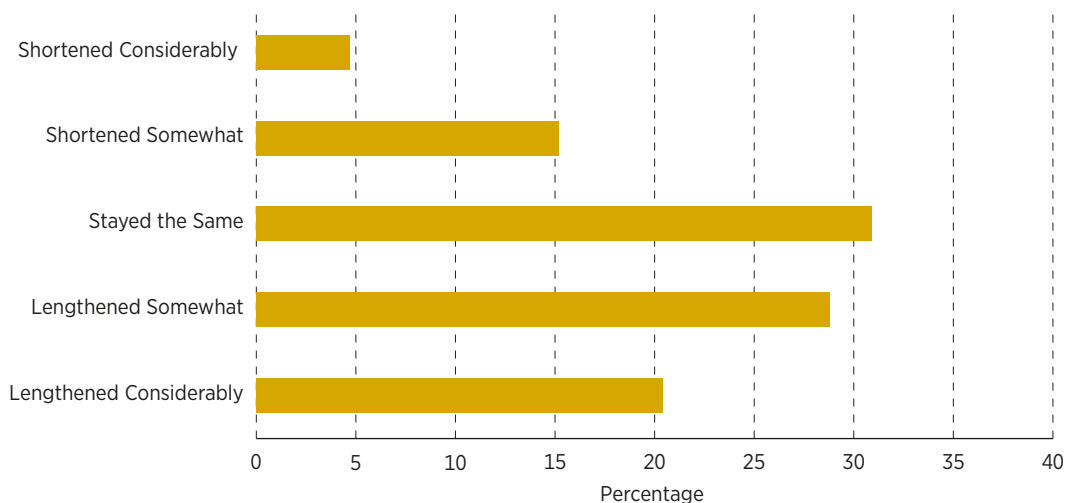
Competitive policies are those that pose low costs on firms while effectively addressing “externalities”, concerns like environmental responsibility that are not fully captured in the direct costs and benefits of a project (Tilton, 1992). When policies are unclear and uncertain they can increase the compliance costs for firms wishing to explore. Thus, jurisdictions that keep costs low give themselves a competitive advantage in attracting investment.

Permits, particularly for exploration, are an area of mining policy that has received little attention in both the policy and academic literature. One recent study noted that permits can increase the “time, costs, and risks” associated with mining, possibly leading to lower levels of investment and lost economic opportunities (Söderholm et al., 2015: 130). Another study found that, while permits can cause delays and increase uncertainty, responses to a survey by Australian and Canadian mining executives suggest that this does not always mean that they impede investment. A much larger percentage of Canadian executives noted that environmental permits and assessments acted as a deterrent to investment than did their Australian counterparts, suggesting that perhaps policies in Canada are imposing large costs on firms (Annandale and Taplin, 2003).

1. The name or type of permit needed varies greatly among the provinces and territories. “Permit” will be used in this publication as a general term for the varieties of different requirements in each province and territory.

Wilson, McMahon, and Minardi (2013) point out that regulations (*i.e.*, permits) can affect the allocation of mining investment by contributing to inconsistency in decisions and a lengthy regulatory process. The authors state that, “[w]here the process is unclear, fluctuating, or subject to change, miners may be reluctant to invest due to additional costs, regulatory requirements, or new processes that can significantly add costs and delays to projects” (2013: 23). In addition, beyond costs and delays, imprecise and confusing regulations badly administered also add additional risks to potential projects. Indeed, recent evidence suggests that permitting processes may be placing higher costs and uncertainty on the exploration industry. In the previous edition of this report, respondents around the world were asked to assess the extent to which the time it takes for a permit to be approved has changed over the last ten years. Approximately 50% of respondents indicated that the time for permit approval has increased from ten years ago and 20% indicated that the time has lengthened considerably (figure 2).

Figure 2: Changes in the time to permit approval over the last 10 years, 2015



Source: Green and Jackson, 2016.

To be clear, this section does not suggest that regulations should simply be reduced in number or softened in order to reduce the risks and costs to industry; rather it argues that regulations should be as efficient and cost effective as possible while trying to address concerns like externalities² that may result from exploration activities. Concern arises from regulations that are uncertain or lacking transparency as this is what for the most part adds the risks and costs that can deter investment. This point is underscored by recent research that found that clarity and stability in environmental regulations played a greater role than stringency when multinational corporations choose countries in which to invest (Rivera and Hoon Oh, 2013).

2. Externalities are activities of an individual or firm that affect another individual or firm but are not fully accounted for in the price of a good. For example, pollution that results from mining would be considered a negative externality.

Miners' Perceptions of Regulation in Canada

The Fraser Institute mining survey³ examines the extent to which uncertainty in three areas of regulation acts as a possible deterrent to investment in Canada:

- 1 the administration, interpretation, and enforcement of existing regulations;
- 2 environmental regulations;
- 3 regulatory duplication and inconsistency (includes federal/provincial, federal/state, inter-departmental overlap, etc.)

The answers to these three questions indicate that regulation is one of the top barriers to investment in Canada (**figure 3**).⁴ For the most part, investors have perceived these barriers to be generally increasing over the last decade, although in the past few years miners have been indicating that they are less concerned about the negative effect of uncertainty in the administration, interpretation, and enforcement of existing regulations on investment.

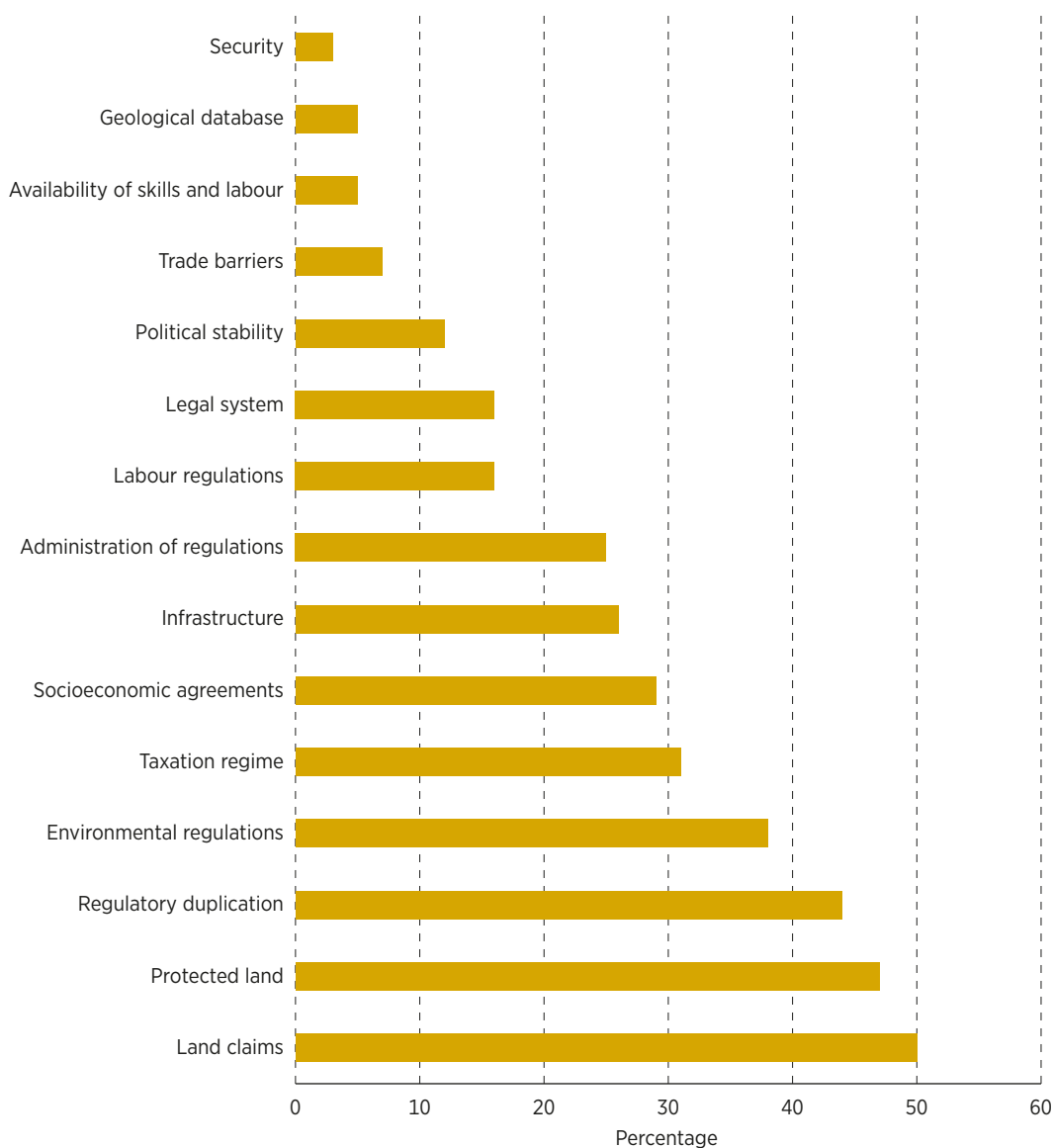
For example, as seen in **figure 4**, the median percentage of respondents who viewed uncertainty in the administration, interpretation, and enforcement of existing regulations as a deterrent to investment in Canada increased sharply from 16% in 2010 to 33% in 2014. Over the past few years, however, miners have indicated that uncertainty in this area is becoming less of a deterrent to investment: the percentage of respondents concerned about uncertainty have fallen from 33% in 2014 to 24% in 2016. While it appears that this type of regulatory uncertainty has become less of a concern in recent years, there was still a higher percentage of respondents in 2016 who indicated that uncertainty was a deterrent to investment in Canada than there was in 2010, when the percentage who thought uncertainty a deterrent was at a 10-year low.

In general, there has been an upward trend in the percentage of responses indicating that uncertainty about environmental regulations deters investment. The low point in the previous decade for this measure was in 2009, when the median percentage of Canadian

3. Respondents to the Survey of Mining Companies evaluate jurisdictions on 15 policy variables that aim to capture whether policy-related areas such as taxation, regulation, land use, security, and so on either attract or deter investment. Respondents also assess the pure mineral potential of each jurisdiction. For more on the specifics of the survey and its methodology, see Jackson and Green, 2017.

4. The Survey of Mining Companies examines nine Canadian provinces and two territories (Prince Edward Island is excluded). To analyze broader Canadian trends, the median score of the 12 jurisdictions is used.

Figure 3: Barriers to investment in Canada—median scores for deterrents to investment, 2016

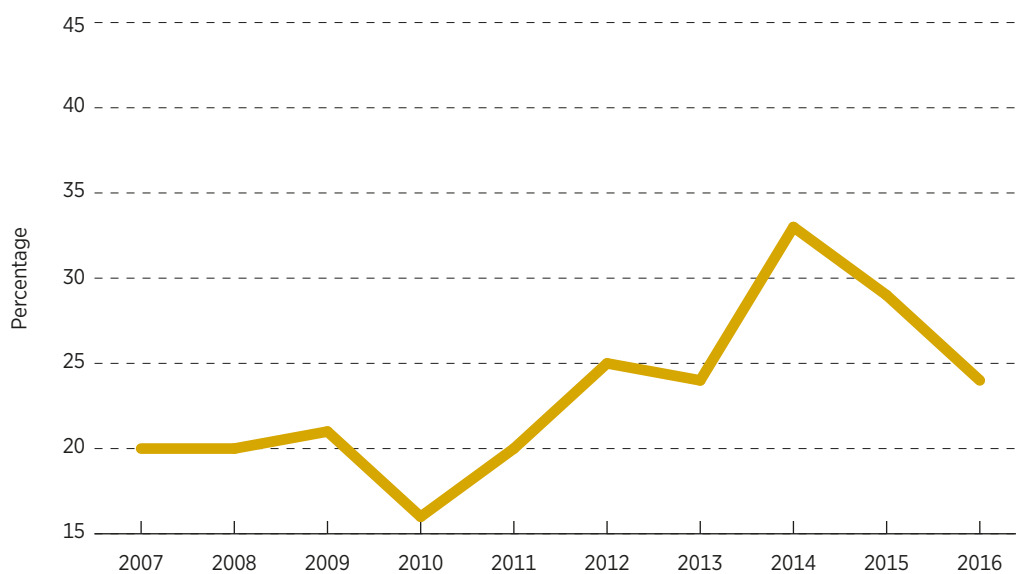


Source: Jackson and Green, 2017.

respondents who indicated that uncertainty about environmental regulations was a deterrent to investment sat at 22%. In 2016, the median percentage of respondents indicating that this measure was a deterrent to investment was 37% (**figure 5**).

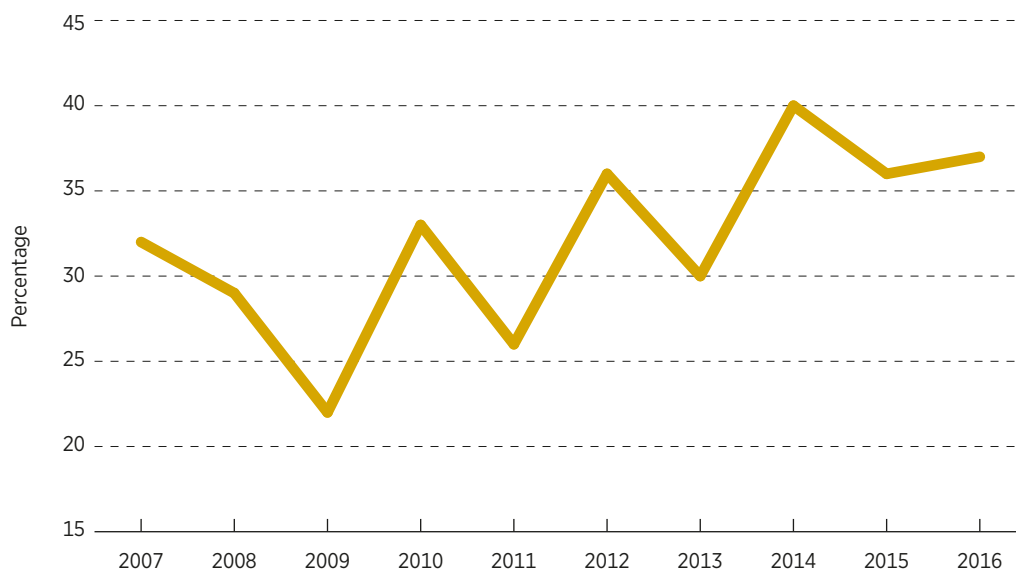
Of the three regulatory measures, regulatory duplication and inconsistency is the one that appears to be having the greatest negative effect on investment attractiveness, and the situation has been consistently deteriorating. After reaching a low in 2007 when the median Canadian response was 23% of respondents viewing regulatory duplication and inconsistency as a deterrent to investment, the percentage has risen to 44% in 2016 (**figure 6**).

Figure 4: Median percentage of Canadian respondents who indicated that uncertainty about the administration, interpretation, and enforcement of existing regulations was a deterrent to investment, 2007–2016



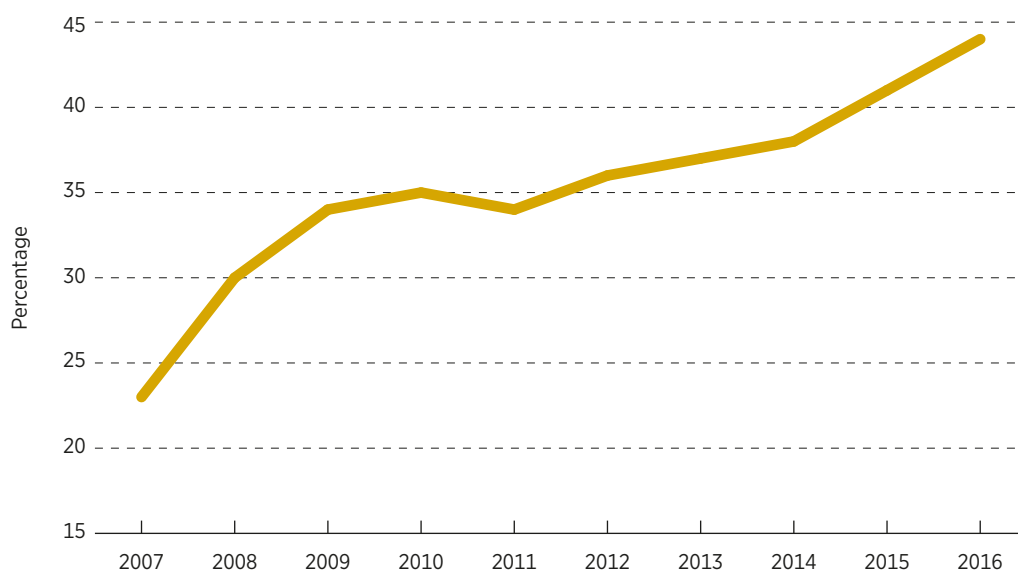
Source: Various authors, 2007/2008–2016, *Fraser Institute Annual Survey of Mining Companies*.

Figure 5: Median percentage of Canadian respondents who indicated that uncertainty about environmental regulation was a deterrent to investment, 2007–2016



Source: Various authors, 2007/2008–2016, *Fraser Institute Annual Survey of Mining Companies*.

Figure 6: Median percentage of Canadian respondents who indicated that regulatory duplication and inconsistency was a deterrent to investment, 2007–2016



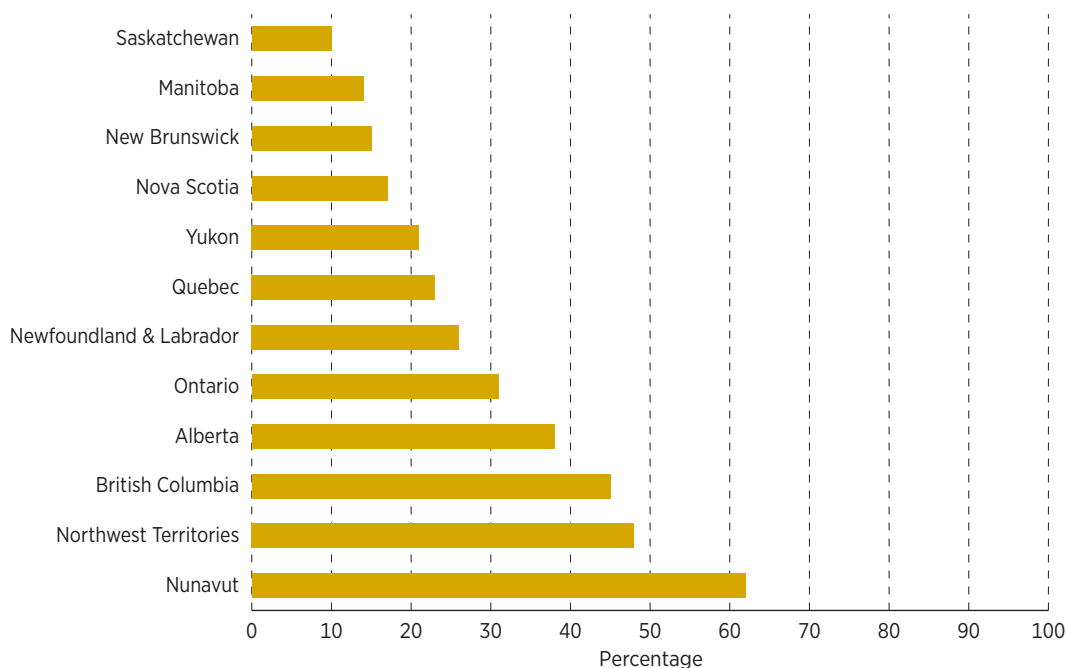
Source: Various authors, 2007/2008–2016, *Fraser Institute Annual Survey of Mining Companies*.

This concern appears to be greatest in Alberta, British Columbia, Ontario, the Northwest Territories, and Nunavut. In 2016, 62% of respondents for Nunavut, 48% of respondents in the Northwest Territories, and 45% of respondents in British Columbia viewed uncertainty concerning the administration, interpretation, and enforcement of existing regulations as presenting some form of a deterrent to investment (**figure 7**).

The deterrent on investment effect of uncertainty from environmental regulations varies considerably across Canada (**figure 8**). For example, in Nunavut, the Canadian jurisdiction where this is of greatest concern, 83% of respondents indicated that uncertainty in this area was deterring investment. This compares to only 13% of respondents in Saskatchewan indicating that uncertainty from environmental regulations was a deterrent to investment. In addition to Nunavut, investors also indicated considerable concern about this issue in British Columbia and the Northwest Territories, where over 60% of respondents indicated that uncertainty in this area was a deterrent to investment.

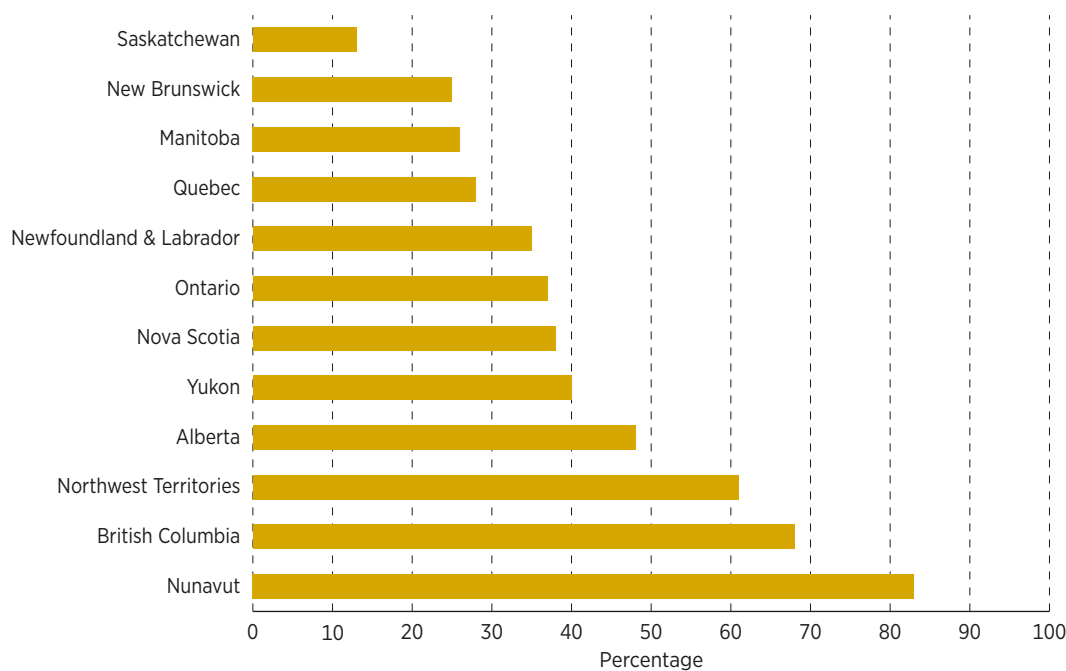
Regulatory duplication and inconsistency is an area where concern is much more widely dispersed amongst Canada's provinces and territories (**figure 9**). Again, Nunavut is the jurisdiction in Canada with the highest percentage (83%) of respondents indicating that regulatory duplication and inconsistencies was a deterrent to investment. While the gap between top and bottom in Canada is still large, the Canadian jurisdiction that performs the best in this area—New Brunswick—still has 30% of respondents indicating that this type of

Figure 7: Percentage of respondents who indicated that uncertainty about the administration, interpretation, and enforcement of existing regulations is a deterrent to investment in Canada, by province and territory, 2016



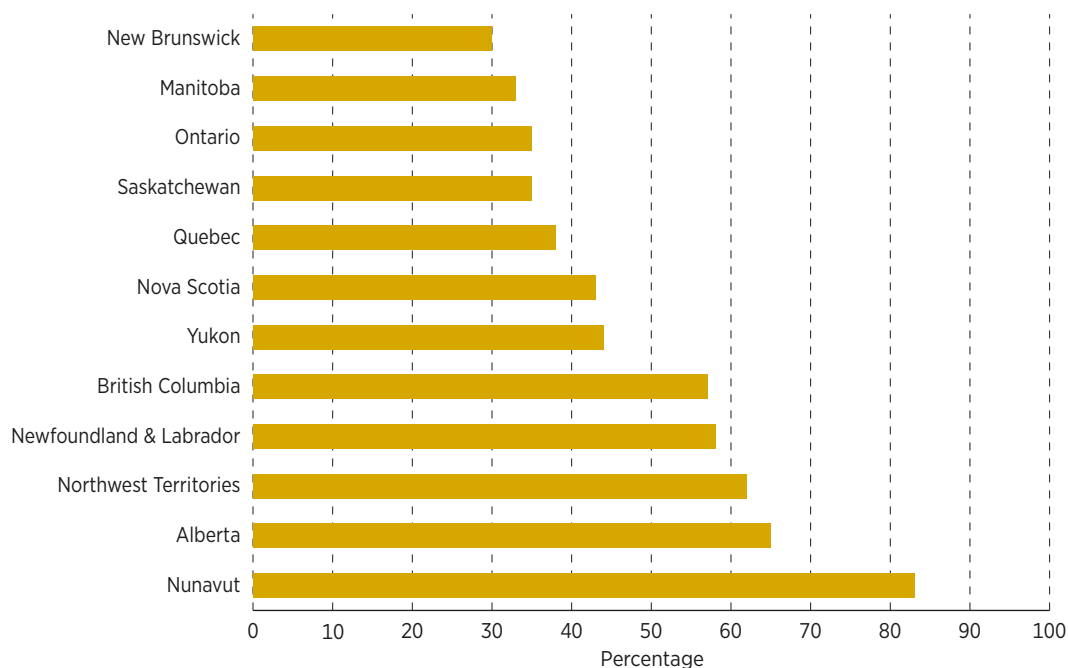
Source: Jackson and Green, 2017.

Figure 8: Percentage of respondents who indicated that uncertainty about the administration, interpretation, and enforcement of existing regulations is a deterrent to investment in Canada, by province and territory, 2016



Source: Jackson and Green, 2017.

Figure 9: Percentage of respondents who indicated that uncertainty about the administration, interpretation, and enforcement of existing regulations is a deterrent to investment in Canada, by province and territory, 2016



Source: Jackson and Green, 2017.

regulatory issue is a deterrent to investment. In addition to Nunavut, four other Canadian jurisdictions have over 50% of their respondents indicating that regulatory duplication and inconsistency are a deterrent to investment.

The growing concerns about the uncertainty posed by regulatory policies in Canada and the effect that such uncertainty and costs can have on a jurisdiction's attractiveness to investment serves as the continued impetus for trying to measure how costs and uncertainty in the permitting process varies among Canada's provinces and territories and similar jurisdictions around the world.

Survey Questionnaire

The survey is designed to capture the experiences of executives and others involved in exploration activities in selected jurisdictions around the world. This will provide valuable insights into the differences among jurisdictions in Canada, the United States, Australia, and Scandinavia in the time, cost, and uncertainty that exist in the process of granting exploration permits. Respondents were asked to answer five questions.

1. Approximately how much TIME do you expect to spend getting the permits, licences, or notices of work, etc. to conduct exploration activities in each jurisdiction? Please estimate from the time you apply at the first stage of the approval process until the initiation of exploration activities.
 - a. 2 months or less
 - b. 3 to 6 months
 - c. 7 to 10 months
 - d. 11 to 14 months
 - e. 15 to 18 months
 - f. 19 to 23 months
 - g. 24 months or more

2. Over the last 10 years, please estimate the amount that your “TIME TO PERMIT APPROVAL” has changed in each jurisdiction?
 - a. Shortened Considerably
 - b. Shortened Somewhat
 - c. Stayed the Same
 - d. Lengthened Somewhat
 - e. Lengthened Considerably

3. Prior to deciding where to explore, all other factors being equal, what level of CONFIDENCE do you have that you will eventually be granted a permit?
 - a. High Confidence
 - b. Confident
 - c. Low Confidence
 - d. Not at all Confident

4. Prior to deciding where to explore, all other factors being equal, how does the level of TRANSPARENCY in the permitting process affect exploration in each province or territory?
 - a. Encourages exploration investment
 - b. Not a deterrent to exploration investment
 - c. Is a mild deterrent to exploration investment
 - d. Is a strong deterrent to exploration investment
 - e. Would not pursue exploration investment in this province or territory due to this factor

5. Throughout the permitting process, how often did the jurisdiction meet its own established timelines/milestones for permit approval decisions?
 - a. Most of the time (80 to 100%)
 - b. Some of the time (60 to 80%)
 - c. About half the time (40 to 60%)
 - d. Less than half the time (20 to 40%)
 - e. Rarely met own timelines (0 to 20%)

Design of the Survey

To assess how the process of obtaining exploration permits differs among Canada's provinces and territories and similar jurisdictions around the world in terms of time, transparency, and (un)certainty, we added questions for mining executives about permit times as part of the broader *Fraser Institute Annual Survey of Mining Companies 2016* (Jackson and Green, 2017). The survey is designed to identify the jurisdictions that have the most attractive permitting policies, which can help to encourage and retain investment in mining exploration. Jurisdictions assessed by investors as relatively unattractive may therefore be prompted to consider reforms that could lead to their attracting more exploration investment.

The broader *Annual Survey of Mining Companies 2016*, of which the survey on exploration permits was a subsection, was sent to approximately 2,700 managers and executives around the world, in companies involved in mining exploration, development, and other related activities. To ensure that only individuals with knowledge of mining exploration in the regions included in the exploration permit survey answered the permit-time component of the *Survey*, only those individuals who provided responses for Canada, the United States, Australia, and Scandinavia in the broader survey were allowed access to the survey on exploration permits. This resulted in approximately 244 eligible respondents. However, only respondents who had applied for an exploration permit, license, notice of work, or similar document within the last two years were asked to respond to the survey to ensure that only those with recent and relevant experience were answering the questions; as a result, 160 executives and managers answered the permit-time component of the *Survey*.

Only jurisdictions that had a minimum of five responses were included in the exploration permits study. **Table 1** shows those jurisdictions that met this criteria. Jurisdictions with between 5 and 9 responses have been noted in subsequent tables to indicate that results for these jurisdictions are likely not as robust as those for jurisdictions with 10 or more responses.

Almost half (47%) of respondents to the Canadian permit-time component of the *Annual Survey of Mining Companies* were company presidents. A further 29% of respondents were either company vice-presidents or managers (**figure 10**). The majority of respondents, 61%, were from exploration companies. An additional 25% of responses came from producer companies that are also involved in exploration activities (**figure 11**).

Table 1: Jurisdictions discussed

Canada	United States	Australia	Scandinavia
<i>British Columbia</i>	<i>Alaska</i>	<i>New South Wales</i>	<i>Finland</i>
<i>Manitoba</i>	<i>Arizona</i>	<i>Northern Territory</i>	<i>Sweden</i>
<i>Newfoundland & Labrador</i>	<i>Nevada</i>	<i>Queensland</i>	
<i>Northwest Territories</i>	<i>Utah</i>	<i>South Australia</i>	
<i>Nunavut</i>		<i>Victoria</i>	
<i>Ontario</i>		<i>Western Australia</i>	
<i>Quebec</i>			
<i>Saskatchewan</i>			
<i>Yukon</i>			

Figure 10: Positions held by survey respondents

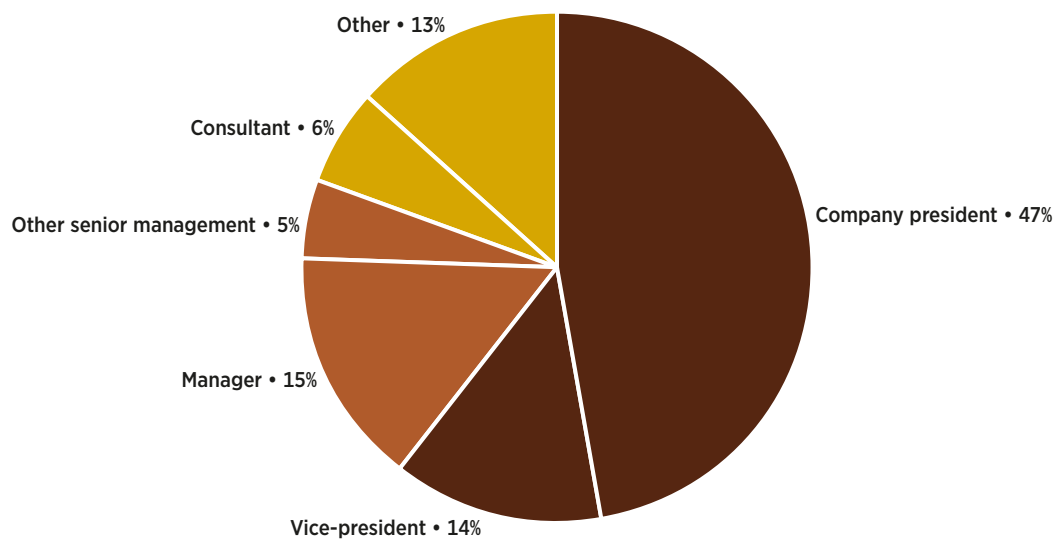
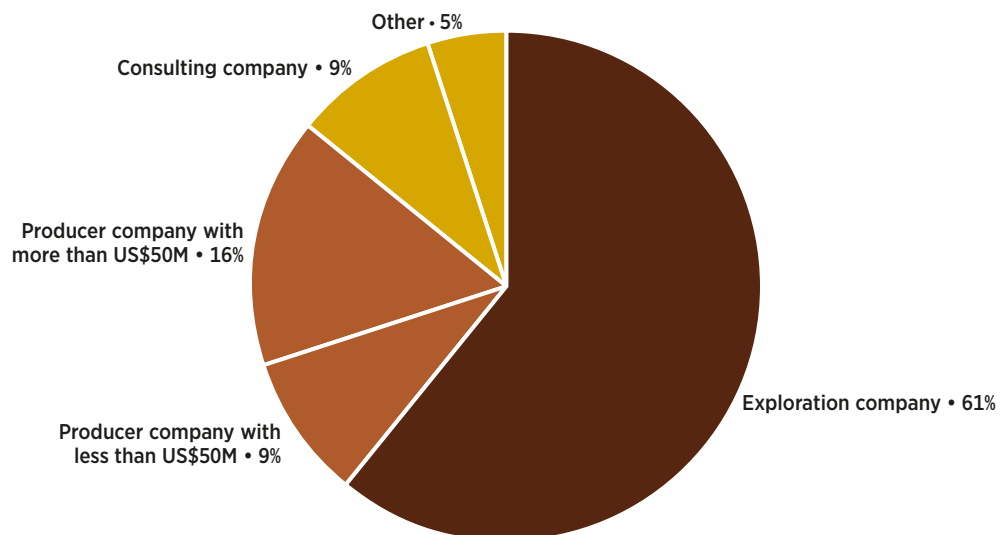


Figure 11: Focus of companies as indicated by survey respondents



Results

The results of the survey have been broken into three areas: the length of time it takes to get approved for the necessary permits, the transparency of the permitting process, and the certainty of the permitting process.⁵ Jurisdictions with fewer than five responses were dropped from the analysis and those with between five and nine responses have been noted in all the subsequent tables.

Time

Length of time to receive permits

To assess how the length of the permitting process differs among jurisdictions three questions were asked. Question 1 asked respondents to provide the amount of time that they expected to spend acquiring the necessary permits to conduct exploration activities (these are permits to explore, not to develop a mine). In all Canadian provinces and territories, the majority of respondents said they were able to acquire the necessary exploration permits within six months. However, there are some notable differences among the provinces and territories (**table 2**).

Canada

One difference is between Canada's territories and provinces. For example, in both Yukon and Nunavut, only 18% of respondents were able to acquire the necessary permits for exploration in two months or less. The Northwest Territories is the outlier up north, with 42% of respondents indicating that they were able to acquire the necessary permits for exploration in two months or less. Forty-two percent is also the pan-Canadian average for this measure. Nunavut also has the lowest percentage (55%) of respondents who acquired permits in six months or less. However, for permits acquired in less than six months, Yukon performs better than the Northwest Territories, with 73% of respondents in the Yukon indicating that they received their necessary permits in this time frame while 67% indicated that this was the case in the Northwest Territories. Overall, when it comes to granting permits in a timely manner, Canada's territories compare poorly to provinces like Ontario and Quebec, which attract exploration investment for similar types of commodities (NRCAN, 2016a). For example, 50% of respondents in both Ontario and Quebec acquired the necessary permits for exploration in two months or less.

5. When comparing the results for the Canadian jurisdictions in the 2015 report with results from this year as presented below, we found that many were quite similar.

Table 2: Length of time (months) respondents expected to spend getting permits, licences, notices of work, or other documents to conduct exploration activities

	2 months or fewer	3 – 6 months	7 – 10 months	11 – 14 months	15 – 18 months	19 – 23 months	24 months or more
Canada							
<i>British Columbia</i>	23%	50%	5%	5%	8%	3%	8%
<i>Manitoba*</i>	63%	25%	13%	0%	0%	0%	0%
<i>Newfoundland & Labrador*</i>	43%	57%	0%	0%	0%	0%	0%
<i>Northwest Territories</i>	42%	25%	17%	8%	8%	0%	0%
<i>Nunavut</i>	18%	36%	0%	27%	9%	0%	9%
<i>Ontario</i>	50%	30%	10%	5%	5%	0%	0%
<i>Quebec</i>	50%	38%	6%	0%	6%	0%	0%
<i>Saskatchewan</i>	73%	18%	0%	9%	0%	0%	0%
<i>Yukon</i>	18%	55%	9%	0%	0%	0%	18%
United States							
<i>Alaska</i>	33%	42%	17%	0%	0%	0%	8%
<i>Arizona</i>	8%	50%	8%	8%	17%	0%	8%
<i>Nevada</i>	38%	29%	24%	10%	0%	0%	0%
<i>Utah*</i>	17%	50%	0%	17%	0%	0%	17%
Australia							
<i>New South Wales</i>	0%	35%	17%	13%	13%	4%	17%
<i>Northern Territory*</i>	0%	44%	11%	22%	0%	0%	22%
<i>Queensland</i>	6%	50%	13%	13%	6%	13%	0%
<i>South Australia</i>	8%	58%	17%	8%	0%	8%	0%
<i>Victoria*</i>	0%	13%	38%	0%	25%	0%	25%
<i>Western Australia</i>	21%	32%	26%	16%	5%	0%	0%
Scandinavia							
<i>Finland*</i>	11%	11%	11%	22%	22%	11%	11%
<i>Sweden</i>	18%	27%	27%	9%	0%	0%	18%

* between 5 and 9 responses.

The results are mixed for the three provinces—British Columbia, Ontario, and Quebec—that attract the majority of Canadian exploration spending on base metals and precious metals. For example, Ontario and Quebec had much higher percentages of respondents indicating that they expected it to take two months or less to acquire the necessary exploration permits. When considering a broader time period, British Columbia continues to underperform compared to its main competitors in Canada, having the lowest percentage of respondents in the three provinces indicating that they expected to spend six months or less acquiring the necessary permits. Indeed, among British Columbia, Ontario, and Quebec, it is British Columbia's results that are the most concerning: 23% of respondents for British Columbia

indicated that they expected to spend more than 11 months to get their exploration permits, compared to 10% in Ontario and only 6% in Quebec. British Columbia also had one of the highest percentages (8%) of respondents indicating that they were expecting to spend 24 months or more acquiring their exploration permits compared to none in both Ontario and Quebec.

United States

In the United States, Nevada is the jurisdiction with the highest percentage (38%) of respondents indicating that they were able to attain their necessary permits in two months or less. This is much lower than many of the Canadian jurisdictions. However, amongst Alaska, Arizona, Nevada, and Utah, the US states included in the analysis, Alaska performed best overall of the four American jurisdictions included in the analysis, having the highest percentage (75%) of respondents who indicated that they received their necessary permits in six months or less. Again, this is lower than many of the competing Canadian jurisdiction. The poorest performing of the four American jurisdictions included in the analysis was Arizona, where only 8% of respondents received their permits in less than two months or less and only 58% received them in six months or less.

Australia

In Australia, out of the six jurisdictions included in this analysis, three—New South Wales, Northern Territory, and Victoria—had no respondents indicate that they were able to receive their permits within two months or less. In fact, of the 21 jurisdictions included in the survey, these were the only three with no respondents indicating that they received their permits in two month or less. The Australian jurisdiction that performed the best on this measure was Western Australia, where 21% of respondents indicated that they received their permits in two months or less. However, both South Australia and Queensland had a higher percentage of respondents indicating that they received their permits in six months or less than did Western Australia.

When compared to Canada and the United States, most of Australia performed relatively poorly with regard to timely permitting of exploration. Of particular concern for Australia are the sizable percentages of respondents in a few of the Australian states that indicated that it was taking 15 months or more to receive their permits. For example, in Victoria and New South Wales, 50% and 35% percent of respondents indicated that it took longer than 15 months to receive their permits.

Scandinavia

This year we received only enough responses to include Finland and Sweden in this report (Norway excluded). Based on responses to the survey, it appears that Sweden granted permits faster than Finland. In Sweden, 18% of respondents indicated that they received their permits in two months or less and 45% indicated that they received them in six months

or less. This compares to 11% and 22% in Finland. In particular, Finland has a relatively high percentage of respondents (44%) who indicated that it took 15 months or more to receive their permits.

Overall

When comparing the four regions included in the survey—Canada, the United States, Australia, and Scandinavia—Canadian jurisdictions on average have a higher percentage of respondents indicating that they receive their permits in six months or less. This average among Canadian provinces was 79%, compared to 67% among US states, 45% among Australian states, and 34% for the two Scandinavian countries.

Change over time

We also sought to assess how the times miners expected to spend attaining permit approval had changed over the last ten years. The results in general indicated that permit approval times are lengthening in Canada. In three out of the 10 provinces and territories included—British Columbia, Ontario, and Yukon—50% of respondents or more said that the time to permit approval had lengthened. In two cases—Manitoba and Northwest Territories—the majority of respondents indicated that permit approval times had shortened (**table 3**).

Saskatchewan had no respondents indicate that the time to permit approval had either lengthened somewhat or lengthened considerably. Of the three provinces—British Columbia, Ontario, and Quebec—that attract the bulk of Canada’s exploration spending, British Columbia had the highest percentage (60%) of respondents who indicated that the time to permit approval had either lengthened somewhat or lengthened considerably, compared to 38% in Quebec and 55% in Ontario. Yukon also had the highest percentage of respondents across all Canadian provinces and territories included in the study who indicated that the time to permit approval had lengthened considerably at 50%. Indeed, it appears that many of the Canadian jurisdictions included could benefit from stemming and reducing lengthening times for approving exploration permits.

United States

Two of the four US states—Alaska and Nevada—had more than 50% of respondents indicate that time to permit approval had lengthened. Indeed, Alaska saw 23% of respondents indicate that the time to permit approval had lengthened considerably.

Australia

The results for Australia indicate that the time to permits approval has been lengthening across the country. Indeed, four of six Australian jurisdictions had more than 60% of respondents indicate that the time to permit approval had either lengthened somewhat or considerably. Western Australia performed the best in the country on this measure, with only 26% of respondents indicating that the time to permit approval had lengthened in some way.

Table 3: Change reported in the length of time to permit approval over past 10 years

	Shortened considerably	Shortened somewhat	Stayed the same	Lengthened somewhat	Lengthened considerably
Canada					
<i>British Columbia</i>	8%	10%	23%	25%	35%
<i>Manitoba*</i>	38%	25%	13%	25%	0%
<i>Newfoundland & Labrador*</i>	0%	0%	71%	29%	0%
<i>Northwest Territories</i>	17%	33%	17%	17%	17%
<i>Nunavut</i>	0%	18%	36%	18%	27%
<i>Ontario</i>	0%	15%	30%	30%	25%
<i>Quebec</i>	13%	6%	44%	38%	0%
<i>Saskatchewan</i>	9%	18%	73%	0%	0%
<i>Yukon</i>	0%	10%	20%	20%	50%
United States					
<i>Alaska</i>	0%	15%	31%	31%	23%
<i>Arizona</i>	8%	0%	46%	31%	15%
<i>Nevada</i>	0%	10%	35%	50%	5%
<i>Utah*</i>	0%	17%	50%	17%	17%
Australia					
<i>New South Wales</i>	0%	8%	21%	21%	50%
<i>Northern Territory*</i>	0%	22%	44%	22%	11%
<i>Queensland</i>	6%	19%	13%	56%	6%
<i>South Australia</i>	9%	18%	9%	36%	27%
<i>Victoria*</i>	0%	0%	25%	50%	25%
<i>Western Australia</i>	0%	26%	47%	21%	5%
Scandinavia					
<i>Finland*</i>	0%	0%	11%	33%	56%
<i>Sweden</i>	0%	0%	64%	0%	36%

* between 5 and 9 responses.

Scandinavia

The results for Scandinavia vary widely. For Finland, 89% of respondents indicated that the time to permit approval had either lengthened somewhat or considerably. This compares well to only 36% of respondents from Sweden. Finland also had the highest percentage (56%) of respondents of any jurisdiction included in this analysis who indicated that time to permit approval had lengthened considerably.

Overall

Overall, Canada again appears to be performing better than the other regions included in this analysis for increases in permit approval times. The average percentage of respondents

in the Canadian jurisdictions indicating that the time to permit approval had either lengthened somewhat or considerably was 39%, compared to 47% in the United States and 55% in Australia. In Scandinavia, Sweden performed better on this measure than the Canadian average, while Finland was the worst performing for lengthening permit approval times of the jurisdictions included in this report .

Timeline certainty

It is also important to those applying for exploration permits that the permit-granting organizations adhere to advertised timelines. If the organizations do meet the expected milestones, thereby extending the time it takes to get a permit, this can place additional costs and risks on firms and act as a deterrent to investment (**table 4**).

Canada

In Canada, Nunavut (45%), British Columbia (43%), and the Northwest Territories (42%) had the highest percentages of respondents who indicated that the permitting authority met its own established timeline or milestone about half the time or less. Saskatchewan was the top performer in the country for timeline certainty, with 91% of respondents for the province indicating that timelines were met between 80% and 100% of the time.

United States

In the United States, Alaska is the only jurisdiction that had more than 54% of respondents indicate that established timelines were met 80% to 100% of the time. The poorest performer on this measure was Arizona, where only 15% of respondents indicated that the state met its own established timelines most of the time. In fact, almost 50% of respondents for Arizona indicated that the permitting authority met its own established timelines or milestones only about half the time or less.

Australia

Western Australia was the top performing state in Australia by a wide margin for meeting established timelines: only 5% of respondents for Western Australia indicated that the permitting authority met its own established timelines or milestones only about half the time or less. This is in stark comparison to Victoria where 83% of respondents indicated established timelines were met only about half the time or less and New South Wales where 67% said the same. Moreover, about 30% of respondents for both Victoria and New South Wales said that timelines were rarely met.

Scandinavia

Both Finland and Sweden perform well on timeline certainty compared to the other jurisdictions in the survey, with over 60% of respondents in the two Scandinavian jurisdictions indicating that timelines for permit approval decisions were met between 80% and 100%

Table 4: How often did the jurisdiction meet its own established timelines or milestones for permit approval decisions?

	Most of the time (80% to 100%)	Some of the time (60% to 80%)	About half the time (40% to 60%)	Less than half the time (20% to 40%)	Rarely met timelines (0% to 20%)
Canada					
<i>British Columbia</i>	25%	33%	18%	18%	8%
<i>Manitoba*</i>	50%	38%	0%	13%	0%
<i>Newfoundland & Labrador*</i>	71%	29%	0%	0%	0%
<i>Northwest Territories</i>	25%	33%	25%	8%	8%
<i>Nunavut</i>	18%	36%	9%	9%	27%
<i>Ontario</i>	35%	40%	10%	15%	0%
<i>Quebec</i>	38%	31%	19%	13%	0%
<i>Saskatchewan</i>	91%	9%	0%	0%	0%
<i>Yukon</i>	27%	45%	9%	0%	18%
United States					
<i>Alaska</i>	54%	23%	8%	15%	0%
<i>Arizona</i>	15%	38%	31%	15%	0%
<i>Nevada</i>	29%	52%	14%	5%	0%
<i>Utah*</i>	17%	67%	0%	0%	17%
Australia					
<i>New South Wales</i>	4%	29%	13%	25%	29%
<i>Northern Territory*</i>	33%	22%	44%	0%	0%
<i>Queensland</i>	13%	53%	33%	0%	0%
<i>South Australia</i>	20%	40%	30%	10%	0%
<i>Victoria*</i>	17%	0%	50%	0%	33%
<i>Western Australia</i>	47%	47%	5%	0%	0%
Scandinavia					
<i>Finland*</i>	67%	22%	11%	0%	0%
<i>Sweden</i>	64%	18%	18%	0%	0%

* between 5 and 9 responses.

of the time. Contrasting Finland's and Sweden's strong performances for timeline certainty with the previous two measures in this analysis of the permit process, it appears that, while the two Scandinavian countries offer certainty about timelines, it takes a comparatively long time to issue the necessary permits.

Transparency

Another critical issue in the granting of permits for exploration is transparency. When explorers do not understand what the rules are or how they are applied, political interference and even corruption can enter the process, with the result that investment may be deterred (**table 5**).

Table 5: How does the level of transparency in the permitting process affect investment in exploration?

	Encourages investment	Not a deterrent	Mild deterrent	Strong deterrent	Would not invest due to this factor
Canada					
<i>British Columbia</i>	18%	36%	28%	18%	0%
<i>Manitoba*</i>	43%	14%	43%	0%	0%
<i>Newfoundland & Labrador*</i>	29%	43%	29%	0%	0%
<i>Northwest Territories</i>	8%	25%	42%	17%	8%
<i>Nunavut</i>	27%	27%	0%	36%	9%
<i>Ontario</i>	5%	60%	20%	15%	0%
<i>Quebec</i>	31%	31%	31%	6%	0%
<i>Saskatchewan</i>	73%	18%	9%	0%	0%
<i>Yukon</i>	0%	45%	18%	27%	9%
United States					
<i>Alaska</i>	23%	77%	0%	0%	0%
<i>Arizona</i>	15%	46%	23%	15%	0%
<i>Nevada</i>	48%	43%	10%	0%	0%
<i>Utah*</i>	50%	33%	0%	17%	0%
Australia					
<i>New South Wales</i>	0%	38%	25%	29%	8%
<i>Northern Territory*</i>	44%	33%	22%	0%	0%
<i>Queensland</i>	25%	50%	25%	0%	0%
<i>South Australia</i>	45%	18%	36%	0%	0%
<i>Victoria*</i>	13%	25%	63%	0%	0%
<i>Western Australia</i>	47%	53%	0%	0%	0%
Scandinavia					
<i>Finland*</i>	33%	67%	0%	0%	0%
<i>Sweden</i>	55%	36%	9%	0%	0%

* between 5 and 9 responses.

Canada

In this area, Saskatchewan again performs far better than the other Canadian provinces and territories included in the study. Only 9% of respondents from Saskatchewan reported that the level of transparency in the permitting process was a deterrent to investment and in all of these cases respondents indicated that lack of transparency was a mild deterrent to investment. This is a performance unmatched by any other Canadian jurisdiction.

Out of the three territories, the Northwest Territories performed better on transparency than Yukon or Nunavut: 25% of respondents from the Northwest Territories rated transparency

as being either a strong deterrent or that they would not pursue investment due to a lack of transparency. The feedback was worse for Yukon and Nunavut. Nunavut had the highest percentage (45%) of respondents reporting that the level of transparency in the exploration permit process was a strong deterrent to investment or worse. Yukon fared better than Nunavut, although a large number of respondents, 36%, found the level of transparency to be a strong deterrent to investment or worse. The territories all together performed more poorly on transparency than all the provinces, as they were the only jurisdictions in Canada to have respondents indicate that they would not pursue investment as a result of the lack of transparency in the permitting process. This suggests that transparency is an issue where improvement is needed.

Amongst the three provinces that attract the majority of Canadian exploration spending, Ontario performed the best, with 35% of respondents indicating that the level of transparency in the exploration permitting process was a deterrent to investment while 38% of respondents from Quebec and 46% from British Columbia rated the level of transparency as a deterrent to investment.

United States

In this category Alaska was again the top performer in the United States, with no respondents indicating that the level of transparency was deterring investment. Nevada also performed well, with only 10% of respondents signalling that the level of transparency in Nevada was a mild deterrent for investment. Nevada had a greater percentage of respondents than Alaska stating that the level of transparency in the state was an encouragement to investment. Arizona performed the worst in the United States, with 38% of respondents saying that the level of transparency was acting as a deterrent to investment.

Australia

Only one jurisdiction in Australia—New South Wales—had respondents indicate that the level of transparency in the jurisdiction was either a strong deterrent to investment or that they would not pursue investment as a result of the lack of transparency. However, when all of the negative categories are summed together for New South Wales, 63% found the level of transparency to be a deterrent to investment. Only Western Australia had no respondents say that the level of transparency was a deterrent to investment.

Scandinavia

Finland and Sweden were two of the top performers in the analysis for the effect that the level of transparency in the permitting process has on deterring investment. No respondents for Finland said that a lack of transparency was deterring investment and only 9% of respondents in Sweden indicated that this was the case.

Overall

While Canada performed better than the other regions in the survey for the length of time necessary for an exploration permit to be granted, many Canadian jurisdictions performed more poorly when transparency was considered. For example, five Canadian jurisdictions had more than 40% of respondents indicate that the level of transparency in the permitting process was a deterrent to investment. Indeed, the average percentage of respondents in Canadian jurisdictions indicating that a lack of transparency was a deterrent to investment was 40%. This compares to an average of 35% in Australia, 16% in the United States, 9% in Sweden, and zero percent in Finland.

Confidence

Another area on which we sought feedback was the confidence of respondents that they would eventually be granted a permit. If firms are not confident that they will be able to acquire the necessary permits to carry out exploration activities once they have met regulatory requirements, it is less likely that they will consider investing in the given jurisdiction (table 6).

Canada

When asked how confident they were that the necessary permits would eventually be granted, respondents rated the performance of most Canadian provinces and territories quite highly, with Saskatchewan rating the best, as 64% of respondents for the province reported that they were highly confident that they would receive their permits and an additional 36% saying that they were confident. Only in British Columbia, Yukon, and Nunavut did less than 80% of respondents indicate that they were highly confident or confident that they would be granted the necessary permits. And, 27% of respondents from Nunavut were not confident at all that they would receive the necessary exploration permit.

United States

Two US jurisdictions—Alaska and Nevada—had all respondents report that they were either highly confident or confident that they would receive their necessary permits. Over 80% of respondents for Arizona and Utah also indicate that they were confident or highly confident that they would receive their necessary permits.

Australia

Most Australian jurisdictions were rated quite highly for confidence in the permitting process: 100% of respondents in three of six jurisdictions—Northern Territory, South Australia, and Western Australia—indicated that they were either highly confident or confident that they would receive their permits. New South Wales and Victoria were the only two Australian states where less than 80% of respondents fell in the two positive categories. Particularly

Table 6: How confident were respondents that they would eventually be granted the necessary permit(s)?

	High confidence	Confident	Low confidence	Not at all confident
Canada				
<i>British Columbia</i>	20%	55%	13%	13%
<i>Manitoba*</i>	50%	38%	0%	13%
<i>Newfoundland & Labrador*</i>	43%	57%	0%	0%
<i>Northwest Territories</i>	25%	58%	0%	17%
<i>Nunavut</i>	9%	45%	18%	27%
<i>Ontario</i>	35%	55%	10%	0%
<i>Quebec</i>	19%	75%	6%	0%
<i>Saskatchewan</i>	64%	36%	0%	0%
<i>Yukon</i>	18%	55%	9%	18%
United States				
<i>Alaska</i>	46%	54%	0%	0%
<i>Arizona</i>	31%	54%	15%	0%
<i>Nevada</i>	52%	48%	0%	0%
<i>Utah*</i>	67%	17%	0%	17%
Australia				
<i>New South Wales</i>	17%	50%	8%	25%
<i>Northern Territory*</i>	67%	33%	0%	0%
<i>Queensland</i>	19%	69%	13%	0%
<i>South Australia</i>	45%	55%	0%	0%
<i>Victoria*</i>	13%	25%	50%	13%
<i>Western Australia</i>	58%	42%	0%	0%
Scandinavia				
<i>Finland*</i>	56%	33%	11%	0%
<i>Sweden</i>	55%	45%	0%	0%

* between 5 and 9 responses.

concerning are the results for Victoria, where 63% of respondents said that they either had low confidence or no confidence that they would receive their permits. This result presents some serious questions about the future of exploration in Victoria.

Scandinavia

Respondents for Finland and Sweden indicate that they have a very high degree of confidence that they will receive their permits.

Regulatory Uncertainty and Permitting

How are responses to the regulation questions from the broader mining survey related to responses from the survey on permit approval times? Our analysis of this question computed correlations between each of the three regulation questions, focusing on the percentage of negative responses to each of those questions, and three measures from this year's permit study—the time necessary to receive approval of a permit, whether transparency was a deterrent to investment or not, and how certain the miners were that they would receive all necessary permits. The results of this analysis are presented in **table 7**.

Table 7: Correlations between negative perceptions of regulation and aspects of the permitting process

	Percentage of respondents receiving necessary permits in six months or less	Percentage of respondents indicating transparency encourages, or was not a deterrent to, investment	Percentage of respondents who were highly confident or confident that they would receive permits
Uncertainty concerning the administration, interpretation, and enforcement of existing regulations	-0.49	-0.66	-0.75
Uncertainty concerning environmental regulations	-0.43	-0.58	-0.72
Regulatory duplication and inconsistencies	-0.17	-0.43	-0.55

In general, all relationships were negative. This means that jurisdictions that had higher percentages of respondents indicate that the three regulatory variables were deterrents to investment, also tended to have longer wait times for permits, less transparency, and less confidence that permits would eventually be granted. In particular, there were relatively strong negative relationships between negative responses to uncertainty concerning the administration, interpretation, and enforcement of existing regulations and the evaluations from respondents about both the transparency and certainty of the permitting process. The results were similar between negative responses to uncertainty concerning environmental regulations and both transparency and confidence, meaning that, according to miners, jurisdictions with more uncertainty resulting from environmental regulations also had less transparency and certainty in the permitting process. The regulatory variable that had the strongest negative relationship with the time it takes to receive a permit was uncertainty concerning the administration, interpretation, and enforcement of existing regulations.

Conclusion

Competitive public policies for mining and exploration are those that establish appropriate goals and procedures for regulations but also place comparably low costs on firms. The permitting process for mining exploration is one area that is often overlooked in broader policy debates on mining. Yet uncompetitive policies in this area can increase the time, costs, and risks associated with exploration, and can lead to reduced investment and reduce chances that a viable deposit will be found and eventually developed into a mine.

Based on this year's survey, Canadian jurisdictions already appear to perform relatively well compared to a number of international jurisdictions. However, there is certainly room for improving the process of approving permits for mining exploration in many of Canada's provinces and territories. Policy reform in these areas may help Canada's provinces and territories unlock their considerable mineral potential (**table 8**).

Table 8: Relative ranking of provincial and territorial performance on areas of the permitting process

		Time		Transparency	Confidence
	Percentage of respondents receiving necessary permits in six months or less	Percentage of respondents indicating that time to permit approval had lengthened over the previous 10 years	Percentage of respondents indicating that timelines were met more than 60% of the time	Percentage of respondents indicating transparency encourages, or was not a deterrent, to investment	Percentage of respondents who were highly confident or confident that they would receive necessary permits
Canada					
<i>British Columbia</i>	8 th	15 th	16 th	17 th	17 th
<i>Manitoba*</i>	3 rd	2 nd	5 th	15 th	12 th
<i>Newfoundland & Labrador*</i>	1 st	4 th	2 nd	10 th	8 th
<i>Northwest Territories</i>	9 th	5 th	15 th	21 st	15 th
<i>Nunavut</i>	15 th	10 th	18 th	16 th	20 th
<i>Ontario</i>	5 th	13 th	10 th	11 th	10 th
<i>Quebec</i>	4 th	9 th	12 th	13 th	9 th
<i>Saskatchewan</i>	2 nd	1 st	1 st	4 th	2 nd
<i>Yukon</i>	7 th	18 th	11 th	18 th	18 th
United States					
<i>Alaska</i>	6 th	12 th	9 th	3 rd	6 th
<i>Arizona</i>	13 th	11 th	19 th	14 th	14 th
<i>Nevada</i>	11 th	14 th	8 th	6 th	5 th
<i>Utah*</i>	12 th	6 th	6 th	7 th	16 th
Australia					
<i>New South Wales</i>	19 th	19 th	20 th	20 th	19 th
<i>Northern Territory*</i>	18 th	7 th	17 th	8 th	1 st
<i>Queensland</i>	14 th	16 th	13 th	9 th	13 th
<i>South Australia</i>	10 th	17 th	14 th	12 th	7 th
<i>Victoria*</i>	21 st	20 th	21 st	19 th	21 st
<i>Western Australia</i>	16 th	3 rd	3 rd	1 st	3 rd
Scandinavia					
<i>Finland*</i>	20 th	21 st	4 th	2 nd	11 th
<i>Sweden</i>	17 th	8 th	7 th	5 th	4 th

* between 5 and 9 responses.

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About the Authors

Kenneth P. Green

Kenneth P. Green is Senior Director, Center for Natural Resource Studies, Fraser Institute. He received his doctorate in Environmental Science and Engineering from the University of California, Los Angeles (UCLA), an M.S. in Molecular Genetics from San Diego State University, and a B.S. Biology from UCLA. Dr. Green has studied public policy involving risk, regulation, and the environment for more than 16 years at public-policy research institutions across North America. He has an extensive publication list of policy studies, magazine articles, opinion columns, book and encyclopedia chapters, and two supplementary text books on climate change and energy policy intended for middle-school and collegiate audiences, respectively. Dr. Green's writing has appeared in major newspapers across the United States and Canada, and he is a regular presence on both Canadian and American radio and television. He has testified before several state legislatures and regulatory agencies, as well as giving testimony to a variety of committees of the US House and Senate.



Taylor Jackson

Taylor Jackson is a Senior Policy Analyst, Center for Natural Resource Studies, Fraser Institute. He holds a B.A. and an M.A. in Political Science from Simon Fraser University. Mr. Jackson is the coauthor of a number of Fraser Institute studies, including *Safety in the Transportation of Oil and Gas: Pipelines or Rail?* and the Fraser Institute's annual *Global Petroleum Survey* and *Survey of Mining Companies*. He is also the coauthor of a book chapter on the past, present, and future of Canadian-American relations with Professor Alexander Moens. Mr. Jackson's work has been covered in the media around the world and his commentaries have appeared in the *National Post*, *Financial Post*, and *Washington Times*, among other newspapers.



Acknowledgments

The authors would like to thank the anonymous reviewers for their thoughtful corrections and comments. Any remaining errors or oversights are the sole responsibility of the authors. As they have worked independently, the views and conclusions expressed in this paper do not necessarily reflect those of the Board of Directors of the Fraser Institute, the staff, or supporters.

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Date of issue

February 2017

ISBN

978-0-88975-441-6

Citation

Kenneth P. Green and Taylor Jackson (2017). *Permit Times for Mining Exploration in 2016*. Fraser Institute.

Cover design

Marie-Pier Gagné

Credits for cover

VectorPot®, Shutterstock™ (Mining industry: worker and equipment in retro style; vintage mining emblems)

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