

The Honourable Bill Morneau, P.C., M.P.  
Minister of Finance  
90 Elgin  
Ottawa, ON  
K1A 0G5  
Canada

October 12, 2016

**Re: Federal Tax Expenditure Review**

Dear Minister Morneau,

On behalf of the Prospectors & Developers Association of Canada (PDAC), please accept the following submission on the merits of the current flow-through share regime (FTS) as it pertains to the exploration and mining industry, as well as the federal Mineral Exploration Tax Credit (METC). This submission is provided to inform Finance Canada's review of federal tax expenditures.

The Prospectors & Developers Association of Canada (PDAC) is the leading voice of the mineral exploration and development community. With over 8,000 members around the world in all sectors of the mining industry, the PDAC's mission is to promote a globally responsible, vibrant and sustainable minerals industry. As the trusted representative of the sector, PDAC encourages best practices in technical, operational, environmental, safety and social performance. PDAC is known worldwide for its annual PDAC Convention, regarded as the premier international event for the mineral industry. The PDAC Convention has attracted over 25,000 people from 125 countries in recent years and will next be held March 5-8, 2017 in Toronto.

Over the last 20 years, Canada has led the world with respect to the responsible management of its mineral resources. Industry, government, civil society and Aboriginal leaders have each innovated, in their respective spheres of influence, to support the sustainable development of mineral resources in Canada and abroad. While there will always be areas in which all stakeholders and partners can improve, it is important to acknowledge the progress that has been made.

While our globally recognized excellence in the area of mineral resource management begins with our natural endowment, it does not end there. As noted in a report issued in 2013 by The Canadian Chamber of Commerce entitled *Mining Capital: How Canada has Transformed its Resource Endowment into a Global Competitive Advantage*

Other jurisdictions have also been blessed with abundant resource endowments or proximity to major markets but have not been as successful in leveraging this basic advantage in the same way Canada has done. Australia's stock exchange does not rival the TSX, while other mining giants like South Africa or Russia have not managed to replicate the global reach of Canadian junior, mid-tier and major firms... Instead Canada's success is due at least in part to the emergence of smart policies as well as innovative

private institutions [e.g. specialized brokerages, legal expertise related to mineral finance, etc.] that are tailored to the unique attributes of the mining industry.

In other words, Canada has become a global leader in the discovery and development of mineral resources due to the application of human ingenuity to its natural capital, in the form of technological innovation as well as regulatory innovation and entrepreneurship. PDAC would argue that the minerals industry represents one of the finest examples of “resourcefulness within resources”.

One area in which Canada is globally acknowledged as an innovator is with respect to fiscal policy – namely, the creation of the super flow-through shares (SFTS) incentive for mineral exploration (i.e. the combination of the FTS regime with the federal METC and its provincial equivalents). The super-flow through system is arguably the most efficient and effective market-based early stage exploration financing mechanism in the world, generating economic benefits for Canada far beyond its cost as a tax expenditure. It is perceived to be so efficient and effective that Australia, a resource-rich jurisdiction that competes with Canada for global leadership in mineral exploration, has implemented its own version of the flow-through share system to sustain greenfields exploration activity in Australia.

As a by-product of the interest in (and knowledge of) the mining industry generated through issuances of flow-through shares to thousands of Canadian investors, Canada has become *the* global hub for junior exploration companies, for mine equity financing and for exploration financing.

**Accordingly, it is our hope that your government will decide to maintain the flow-through share system and renew the Mineral Exploration Tax Credit.**

Both of these measures, which are directed to encourage mineral exploration in Canada (expenditures outside Canada are not eligible for either program), are proven and cost-effective regimes that have met their stated objectives and contributed to:

- A number of significant discoveries, some of which have gone on to become operating mines.
- An industry which is the leading private-sector employer of Aboriginal people, and recognized as being a world leader in generating economic opportunities for remote, as well as Aboriginal communities (including skills training, employment and business development).
- Canada's position as a leader in mine equity finance.

Sincerely,



Robert Schafer  
President, PDAC

**Cc:**

Minister Carr, Natural Resources Canada

Christyne Tremblay, Deputy Minister, Natural Resources Canada

Marian Campbell Jarvis, Assistant Deputy Minister, Minerals and Metals Sector

Andrew Marsland, Assistant Deputy Minister, Tax Policy, Finance Canada

Andrew Cheatle, Executive Director, PDAC

## EXECUTIVE SUMMARY

The super flow-through shares (SFTS) system is a unique Canadian fiscal policy innovation success story, helping companies to generate economic opportunities across Canada by financing their efforts to discover and develop mineral deposits. This submission will argue that the SFTS regime is fair, effective and efficient, and should be maintained.

### Fairness: Why the Government of Canada should use the tax system to support mineral exploration in Canada

First, the SFTS regime compensate for a capital markets failure that would otherwise make it challenging for individual mineral exploration companies to finance their activities, notwithstanding evidence suggesting they are more effective (as a whole) at making discoveries than the exploration teams of major mining companies. Second, support for this segment of Canada's venture economy generates a larger 'benefit footprint' than other venture industries, as the 'intellectual property' created by mineral exploration companies (knowledge of Canada's mineral resources) cannot be 'off-shored'. Finally, the mineral exploration industry, more so than any other industry, helps to achieve other important Government of Canada policy objectives such as generating economic opportunities for remote and Aboriginal communities, supporting the self-sufficiency of territorial economies and achieving important global trade goals related to diversifying Canada's economy away from the United States.

### Effectiveness: The impact of super flow-through shares

The SFTS regime achieves all of the policy objectives outlined in various Government of Canada documents, including:

- Encouraging exploration in Canada: All money raised using flow-through must be spent in Canada. Soon after its creation, Canada leaped ahead of Australia to become the world's top destination for mineral exploration investment.
- Stimulating equity-based investments in mining companies: Between 2007 and 2012 alone, \$5.4 billion worth of Canadian Exploration Expenses were renounced to investors.<sup>i</sup>
- Assisting junior exploration companies: Prior to 1986, juniors accounted for only 15% of all exploration done in Canada. Since then, juniors have accounted for between 30% and 60%, while also being responsible for finding more discoveries than major mining companies.

### Efficiency: No alternative mechanism achieves the overall policy goals as efficiently

The super flow-through system is implemented through the day-to-day decisions of thousands of market agents – investors, issuers and intermediaries. The allocation of risk-tolerant capital, as a result, is far more efficient than alternatives (e.g. a grant program administered by government officials). All transaction costs are covered by the market agents themselves, as opposed to the public.

The SFTS regime also has a built-in market mechanism that creates strong incentives for industry compliance. If a CRA audit determines that claimed expenses are ineligible, meaning that flow-through funds should not have been used to cover them, the company must go back to its investors and ask them to adjust their tax claims, costing their investors time and money. No company wants to be put in that situation, as it would make it difficult to return to those investors at a later date to ask for additional financing.

## PREAMBLE

Mines in Canada create significant economic benefits for the country, as well as for the residents of many remote and Aboriginal communities. These mines, and the benefits they generate, would not have been possible without decades of mineral exploration behind them.

The bulk of mineral exploration in Canada is undertaken either by prospectors, the exploration divisions of major mining companies (a.k.a. “seniors”) or by small, dynamic mineral exploration companies, known as “juniors”. Between them, these different exploration agents undertake three types of exploration: greenfields (in areas with little or no historic information available); brownfields (exploration in established mining camps with information from previous exploration activity, and access to infrastructure); and mine-site exploration (exploration close to existing mines, usually to extend the life of the mine as ore is depleted).

Industry experts agree that, despite being the most difficult type of exploration to undertake, “only greenfields exploration can result in the [discovery of] new world-class districts required to underpin the future viability of the mineral industry.”<sup>ii</sup> Over the last 30 years, juniors have taken on the bulk of higher-risk early-stage, greenfields (ESG) exploration, both in Canada and globally – and been the most successful (see below). ESG exploration by juniors is thus a critically important part of the discovery ecosystem in Canada.

Recognizing the importance of sustaining ESG exploration, particularly by juniors, the Government of Canada created unique “made-in-Canada” fiscal policy innovations: flow-through shares (FTS) and the mineral exploration tax credit (METC). As described in a 1994 Finance Canada report:

Flow-through shares help to stimulate high-risk exploration by, in essence, allowing mining and petroleum companies to transfer otherwise unusable or unused tax deductions relating to these investments to investors in exchange for a premium over the market price of the company’s common shares (Finance Canada, 1994: 3, 17).

As announced in the 2016 Federal Budget, the Government of Canada is doing a review of all tax expenditures, including a review of both FTS and the METC. The Prospectors & Developers Association of Canada (PDAC) is submitting this brief to inform this review and provide a mineral exploration industry perspective on why FTS and METC are fair, effective and efficient.

## INDUSTRY CONTEXT

This submission is being made in the context of one of the worst-ever downturns for mineral exploration. At one point in late 2015, the bear market on the Toronto Venture Exchange (a proxy for the health of the global mineral exploration industry) passed 1,000 days, meaning it had already lasted longer than all other downturns of the last 15 years *combined* (see Figure 1).

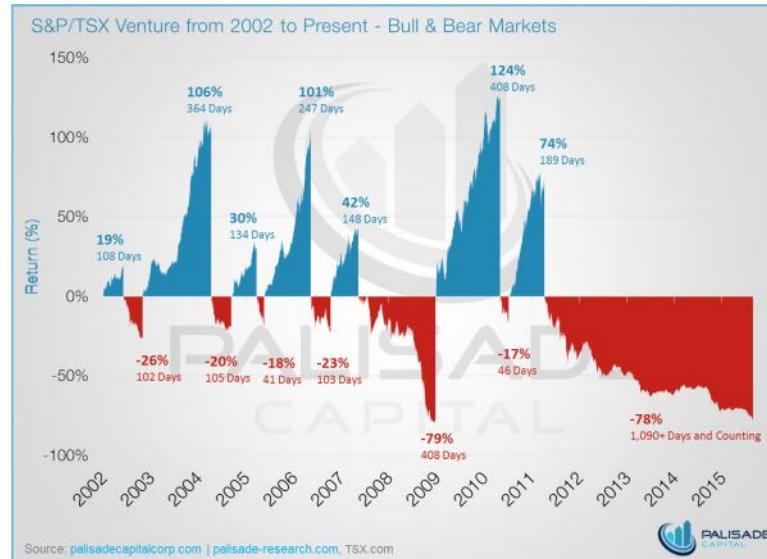


Figure 1: Bull & Bear Markets on S&P/TSXV from 2002 to Sept 2015

Although stock markets and some commodity prices (primarily precious metals) appear to be recovering in 2016 (see below) it remains challenging for companies with early-stage exploration projects to attract capital (see below).

### Downturn in mineral exploration finance

According to SNL Metals & Mining (Figure 2), financing raised globally for the purposes of mineral exploration fell almost 70% between 2012 (\$17.81 billion) and 2015 (\$5.68 billion), with Canada's share of global financing showing significant volatility.<sup>iii</sup>

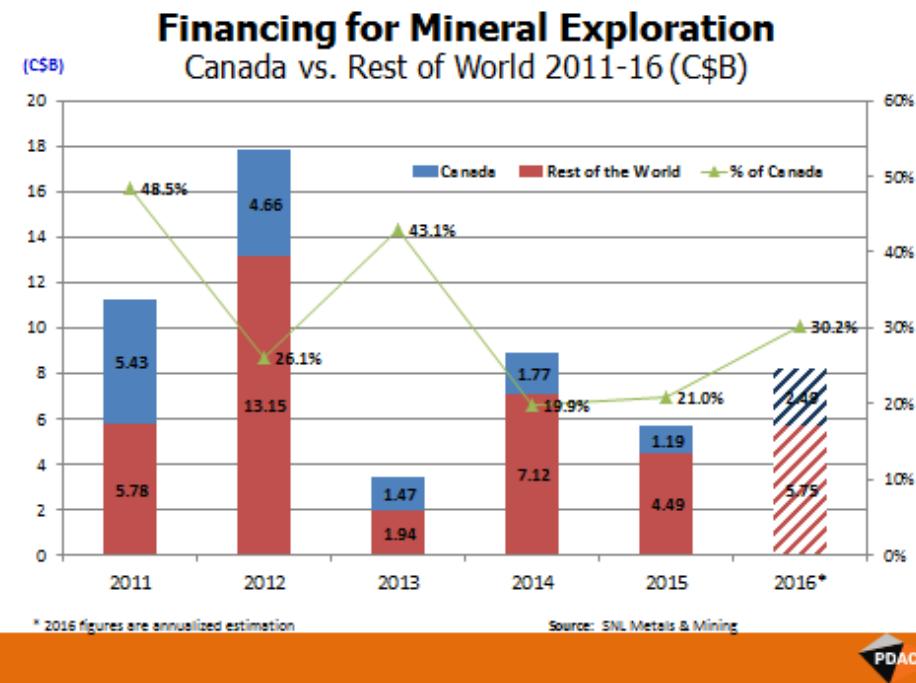


Figure 2: Financing for mineral exploration (all exchanges, globally)

Data from the Toronto Venture Stock Exchange (TSXV) reveals that in addition to the value of financing declining, the number of financings also fell, from a high of 2,110 in 2010 to a low of 932 in 2015. The average capital raised in each financing also fell by more than 50%, from a high of \$2.5 million per financing to \$1.2 million in 2015. While some companies secured enough funds to continue exploration activities on their projects, many other companies have been raising money simply to keep the lights on.

As a result, not surprisingly, many junior exploration companies are in dire straits. As shown in Figure 3, the percentage of companies on the TSXV (a proxy for the mineral exploration industry) with working capital less than \$200,000 has increased from nearly 60% in 2013 to nearly 70% in 2016.

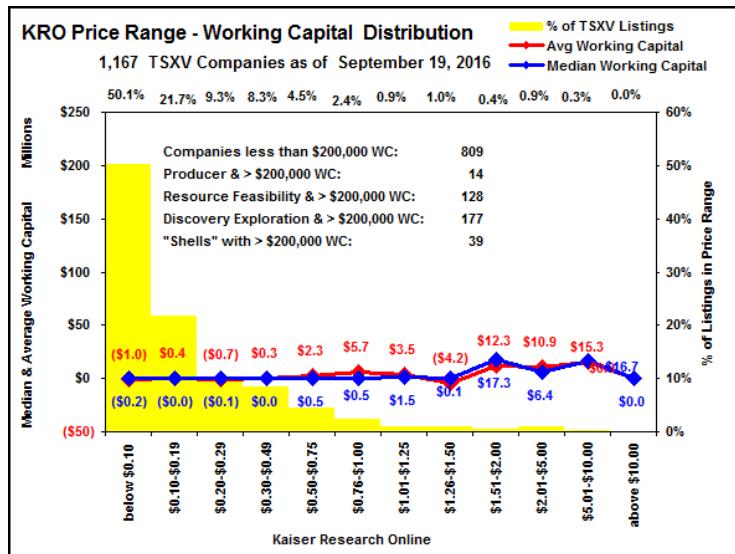
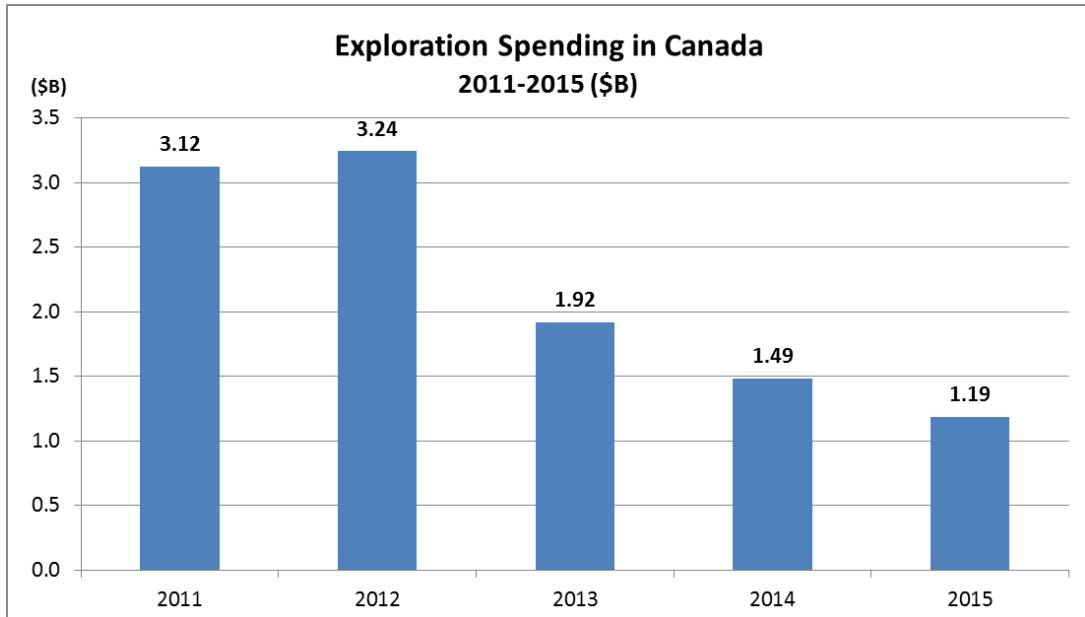


Figure 3: Working capital distribution, TSXV listed companies

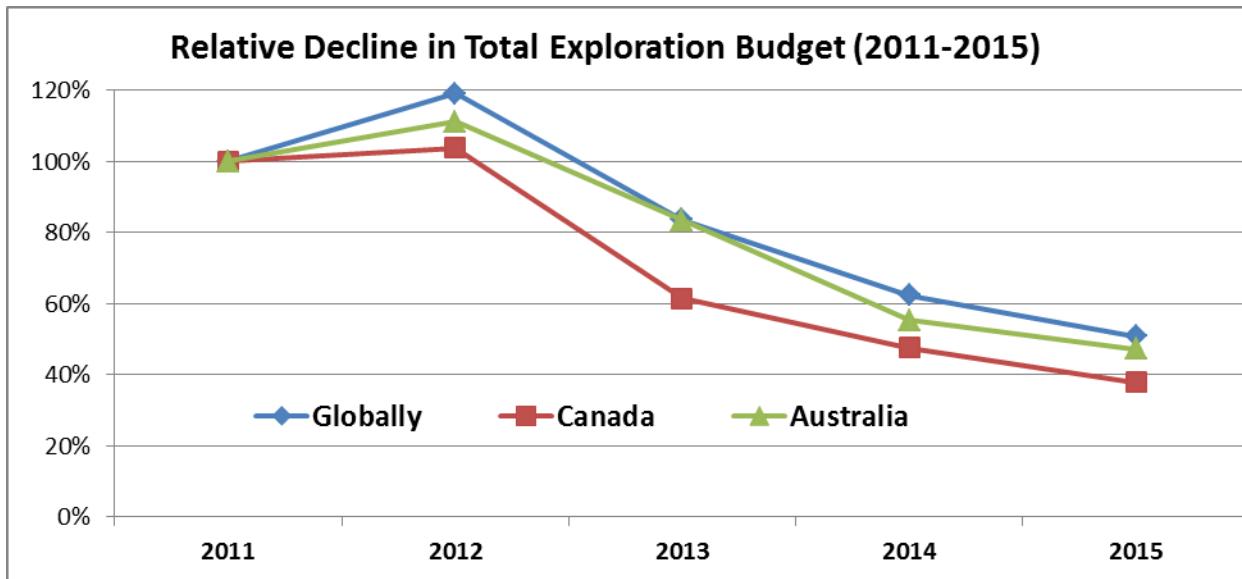
### Declining exploration activity globally and in Canada

The capital crisis experienced over the last few years has had a profound impact on global exploration budgets, according to SNL Metals & Mining, with global expenditures dropping from \$20.5 billion to \$8.7 billion (58%) between 2012 and 2015. In Canada, exploration expenditures dropped even more precipitously, falling 63% in the same period (see Figure 4).



*Figure 4: Decline in exploration expenditures in Canada (SNL Metals & Mining)*

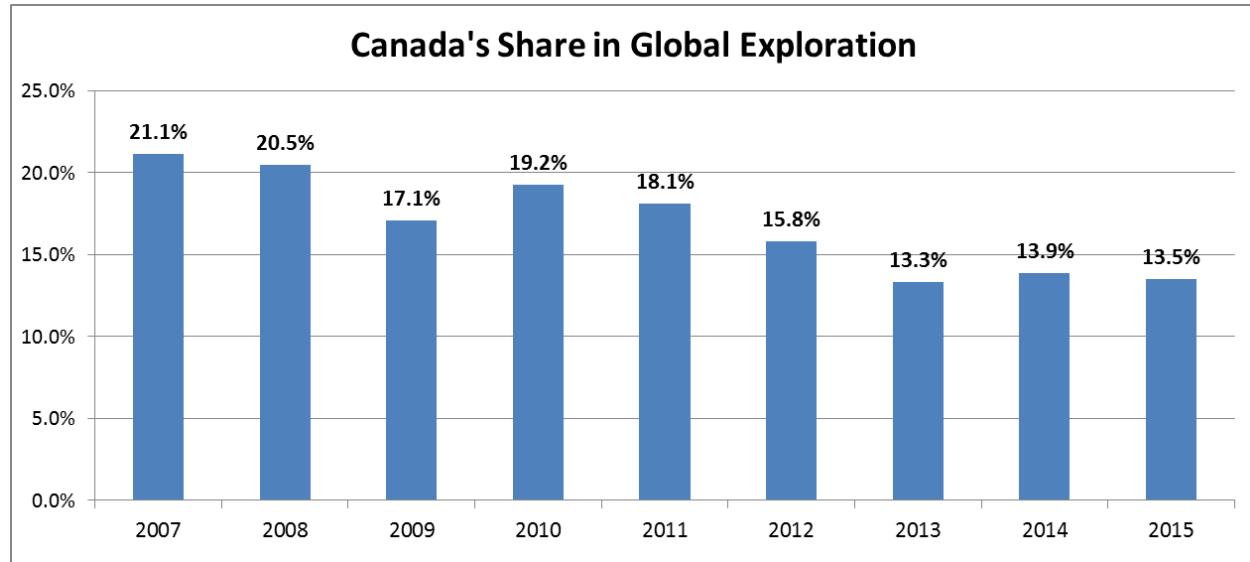
The decline in exploration expenditures was significantly worse for Canada than it was globally, and worse than it was for our closest competitor, Australia (see Figure 5).



*Figure 5: Comparative decreases (in absolute terms) in exploration expenditures (SNL Metals & Mining)*

While in absolute terms, the decline in exploration spending in Canada was greater than it was globally and in Australia, Canada has also been faring poorly in relative terms, attracting ever-smaller shares of global exploration budgets according to SNL Metals & Mining (see Figure 6). SNL Metals & Mining also

officially acknowledged in their March 2016 report that Canada slipped to second place behind Australia in 2015, after more than a decade in first place.<sup>iv</sup>



*Figure 6: Canada's share of non-ferrous global exploration budgets (SNL Metals & Mining)*

During this time, all three exploration agents (prospectors, juniors and seniors) have found it challenging to raise/allocate the money required to sustain early-stage, greenfields (ESG) exploration.

Major mining companies (seniors) have largely cut their greenfields exploration expenditures, focusing their exploration expenditures around existing minesites (to extend mine-life) or in existing mining camps, near established infrastructure (brownfields exploration). One PDAC corporate member revealed that their greenfields exploration team had been cut from over 120 people to two people during the downturn, as the company shifted its exploration strategy. Given the impact of the capital-drought on the cash balances of juniors (as shown in Figure 3), it is not surprising that early-stage exploration by juniors has also dropped significantly.

### The importance of sustaining exploration in Canada

Exploration leads to discoveries, which lead ultimately to new mines. A key indicator for assessing the long-term viability of a country's mining industry, and the economic opportunities it generates, is the trend-line for the reserves of key minerals and metals produced domestically. Compared to 1975, (notwithstanding a recent uptick in copper reserves), Canadian reserves are down for zinc, copper, lead, and nickel (see Figure 7).

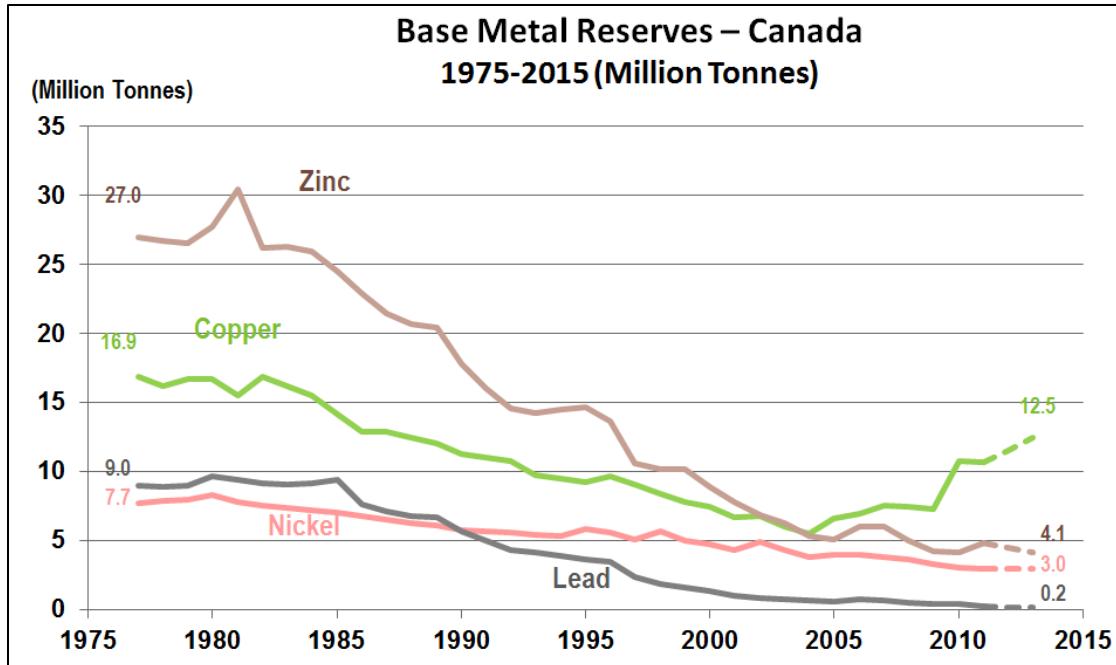


Figure 7: Canadian reserves for select base metals (Source: Richard Schodde using data from NRCan)

In other words, known deposits of these metals have been extracted at a faster rate than new deposits have been discovered and developed. There is a significant risk that (without sustained exploration activity to both discover new deposits and improve knowledge of existing deposits) existing mines will close before new mines are ready to open. The urgent need to replace domestic reserves of key commodities, to sustain production and economic development, points to the importance of sustaining and enhancing exploration activity in Canada. As outlined above, however, exploration expenditure trends are moving in the other direction.

### A shaky upturn in 2016

By some metrics, the state of the industry seems to have improved during the first half of 2016. The total aggregate market capitalization of TSXV-listed mining issuers, for example, was \$17 billion in Q2 2016 - the highest value since the end of 2012. Eighty-four per cent (84%) of the companies that were listed at the end of Q4 2015 (and still listed at the end of Q2 2016) showed an increase in market capitalization. Eighty-seven per cent (87%) of the companies with a market cap of less than \$1 million in Q4 2015 increased in value by the end of Q2 2016. As a result, only 34% of TSXV-listed companies were trading at or below 5 cents per share at the end of Q2 2016, as opposed to 62% at the end of Q4 2015. This data suggests that the improvement in market value has benefitted even the smaller companies on the exchange.<sup>v</sup>

It is important to note, however, that these “signs of life” should be taken with some caution, as they do not necessarily reflect a broad market turnaround (whereby most companies are better off) or a big improvement in a smaller sample of issuers. The percentage breakdown of market cap across issuers shows that the distribution remains skewed, and effectively unchanged since the end of 2015, with the top 10% of producers capturing more than two-thirds of the value and the bottom 50% capturing 4-5% of the overall value.

When looking at Canadian financing data for exploration in Canada (as a proxy for the health of the Canadian junior industry) on a commodity-by-commodity basis, it also appears that the market up-tick this year has primarily benefited companies focused on gold exploration (see Figure 8).<sup>vi</sup>

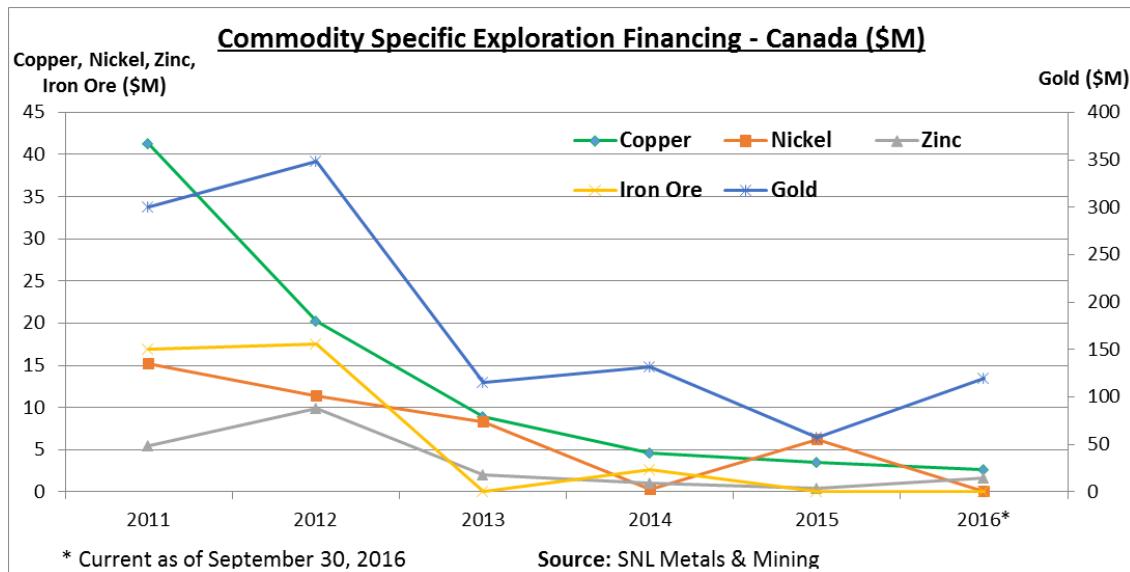


Figure 8: Commodity-specific financing data (SNL Metals & Mining)

While gold accounts for approximately 50% of all exploration undertaken in Canada, the gold price is highly volatile, and the uptick this year is similarly vulnerable to retraction should the price recovery weaken.

There are also a range of structural changes affecting the capital-raising environment faced by juniors that suggest that an up-tick in commodity prices may not be enough for capital to flow back to early-stage, greenfields exploration.

### Structural challenges affecting access to capital

#### Reduced investor risk tolerance (shrinking pools of available capital)

Over the last 15 years, the risk tolerance of investors has dropped dramatically.<sup>vii</sup> While this is in part a rational response to ongoing market turbulence in the wake of the global financial crisis, it is also in part an over-reaction to that turbulence. As investor risk tolerance drops, the pool of capital available for all high-risk investments, including mineral exploration companies, shrinks.

Metal prices have also been falling over this time period, which have negatively affected returns for producing mining companies and dampened investor interest in mineral exploration. The IMF metals commodity price index, which hit a high of almost 230 in 2011, fell to a low of 103.7 in January 2016, almost back to 2005 price levels (2005 = 100).<sup>viii</sup> In some ways this can be seen as a rational response to a downturn in prices and returns, but if it was purely rational there would have been a corresponding spike in investor interest in junior stocks now that the index has risen more than 17% since January, hitting 121.7 in August 2016.

With high-risk sectors like mineral exploration, investor behaviour tends not to reflect the behaviour predicted by proponents of efficient market hypothesis. As the IMF notes “investors can suddenly move away from what they perceive to be riskier bets, including stocks and commodities. This so-called “risk off” behaviour has at times put downward pressure on prices of both oil and metals.”<sup>ix</sup> As a result, the Chief of the IMF Commodities Unit notes “there is a risk that investment will continue to falter and lead to a sharp increase in prices down the road.”<sup>x</sup>

### Demographic shifts

The retail investors that are familiar with the junior exploration space are aging – and younger investors are much more likely to be familiar with technology companies than exploration companies.<sup>xi</sup>

### Loss of distribution channels linking companies to capital pools

The distribution channels that used to link companies to capital are deteriorating, making it more challenging for exploration companies to access capital. Two-thirds of the independent dealers that specialized in promoting mineral exploration companies have disappeared (primarily through acquisition by the major banks) or gone under in the last five years according to Thomas Caldwell of Caldwell Securities, in a speech given at Mines & Money Americas in Toronto on September 28.

Bank-owned brokerages are not actively promoting mineral exploration companies, according to experts in the field, and millennials are, to a large extent, bypassing traditional channels in favour of robo-advisors and independent research.

### **Government responses**

Over the last four years, PDAC as well as other members of the Canadian Mineral Industry Federation have highlighted the severity of the downturn and its impacts on financing for juniors and early-stage exploration in Canada. In response, the importance of sustaining exploration by juniors has been acknowledged as a priority issue by mining-related ministers from across Canada, at the conclusion of several recent annual meetings.

In addition, numerous jurisdictions have deployed the limited tools at their disposal, from enhanced exploration assistance programs to allowing explorers to gain additional assessment credits when exploring in their jurisdiction (which allows companies to hold on to their claims more easily, notwithstanding having fewer resources).<sup>xii</sup>

A longer-term effort to support capital-raising in Canada writ large, not just by exploration companies, is also underway through the emergent Capital Markets Regulatory Authority, which (when in place) should help to reduce capital raising costs in Canada. PDAC has actively supported this initiative for many years, contingent upon the new regulatory regime contributing to cost-effective capital-raising while enabling companies to access wider pools of capital, while also allocating additional rules to enforcement to maintain public confidence.<sup>xiii</sup>

## Industry responses

In response to the shrinking pool of capital available from public markets, PDAC has actively worked to strengthen linkages between private capital pools and junior explorers (e.g. private equity, state-owned enterprises and sovereign wealth funds, etc.). The primary mechanism through which this has occurred has been the annual PDAC Convention, which is where the world's mineral industry meets. In 2017, PDAC will introduce a 1-1 match-making service to facilitate direct connections between capital-seekers (companies) and capital providers.

The retail investor community, however, is one of the greatest unsung assets of the Canadian mining industry. Tens of thousands of individuals are familiar enough with the industry to deploy their risk capital into the exploration space. In addition to providing a deep and wide pool of capital upon which companies can draw, the retail investor community is actively involved in monitoring and trading stocks, contributing to liquidity in a way that no other country can come close to emulating. The super flow-through system has helped to build this retail community – and this is why Canada is the top mine equity finance jurisdiction in the world.

Accordingly, in addition to engaging private/institutional capital, PDAC has actively advocated for reforms to the regulations governing capital-raising in Canada. This has included several years of advocacy to securities regulators across Canada to facilitate access to a broader base of investors, to deepen and widen the pools of capital that companies can tap into. Some of these efforts have succeeded, manifesting in the wave of prospectus exemptions that were adopted in 2015.<sup>xiv</sup>

This is also why the PDAC has long been a champion for the super flow-through shares system, currently under review. As instructed by the Department of Finance, this submission will contribute a mineral exploration industry perspective to the three criteria against which the regime is being assessed: fairness, effectiveness and efficiency.

## FAIRNESS

This section will put forward three arguments for why the mineral exploration industry (i.e. juniors) is worthy of preferential treatment in the income tax system:

- Correcting a market failure: Without incentives, capital markets would not allocate enough capital to finance the exploration necessary to sustain domestic production in Canada.
- Generating a greater “benefit footprint”: In contrast to other industries that depend on risk capital, the “intellectual property” generated by the mineral industry (i.e. enhanced knowledge of Canada’s mineral endowment) by definition remains in Canada.
- An effective instrument for government priorities: Mineral exploration and mining align more strongly than other industries with a broad range of Government of Canada policy objectives.

## Sustaining exploration and production in Canada

There are two challenges associated with ensuring that investors allocate capital to help finance mineral exploration in Canada. The first is the inherent risk profile of mineral exploration, which makes it difficult to attract investor interest when risk tolerances drop. The second is the fact that mineral exploration investment is highly mobile, and jurisdictions around the world compete to attract explorers, particularly juniors. Both are discussed below. In our view, the super flow-through regime addresses

each of these issues, helping to raise capital for exploration and simultaneously ensuring this capital is deployed in Canada.

### Attracting risk-tolerant capital

Mineral exploration is a difficult, complex and challenging exercise. Companies are attempting to “look” into the Earth’s crust and assess two probabilities: first, the probability that a mineral deposit exists, and second, the probability that the nature and quality of the deposit would be technically feasible and economically viable to mine. Early stage exploration activities wrestle with the first challenge, using a vast and ever-changing array of tools, techniques and technologies to analyze geospatial information, identify potential exploration targets, and then assess the quality of those targets in three-dimensions.

The success rate for early-stage (grassroots) exploration is, not surprisingly, fairly low, in particular when an individual or company is looking at a given piece of land that has little publicly available geoscience information available (which is known as “greenfields” exploration). This type of exploration is very high-risk, which not surprisingly makes most retail investors reluctant to deploy capital to the industry for this purpose. The cumulative effect of these rational decisions, however, is a market failure.

As an expert from Australia’s Centre for Exploration Targeting noted that, “at a success rate of below 1%, greenfields projects are much riskier investments than brownfields, causing investors to shy away.”<sup>xxv</sup> Another industry expert noted that despite the important role they play in generating the discoveries required to replenish the pipeline of projects capable of being moved into production, “greenfields exploration firms have always been seen by investors as a risky proposition.”<sup>xxvi</sup>

While some institutional investors will invest in early exploration projects, most capital pools have publicly stated that they prefer to invest in later stage projects that have been “de-risked” in multiple ways, namely:

- Technically – the project has had sufficient exploration undertaken that there is a high level of confidence that a mineral deposit is actually present, and could be viably extracted with existing technologies (i.e. has an NI-43 101 compliant resource).
- Politically – has secured all or most of the necessary regulatory / permitting approvals.
- Socially – has the support of local communities, particularly Aboriginal communities.

This risk assessment of individual juniors (or their early-stage projects), while rational when the frame of reference is an individual company, is irrational when viewed from the perspective of the junior sector as a whole. Research by Richard Schodde suggests that juniors have in fact been the most effective exploration agent in the Canadian context, discovering 30% more economic value (per dollar expended) than seniors between 2005 and 2014.<sup>xvii</sup> Sean Boyd, CEO of Agnico Eagle Mining, echoes Mr. Schodde’s analysis in this quote from a 2016 report by SNL Metals & Mining, saying “Greenfields is tough. I think the general consensus amongst gold producers is that the real greenfields is [sic] best left to the juniors.”<sup>xviii</sup>

Flow-through investors are willing to finance exploration on projects that have not been de-risked. As one PDAC member said during an interview, super flow-through financing “is accessible even in difficult capital-raising environments.” Another interviewee commented that the super flow-through regime “helps to raise money in tougher times due to investor demand” due to its “near-constant availability.” A PDAC member also commented that they would not have been able to raise subsequent non-flow-through investment dollars without the positive news derived from the exploration program they

undertook using flow-through funds, while yet another noted that “flow-through is a key motivator for non-flow-through capital, and often work[s] hand-in-hand.” Interviewees used the funds to confirm resources, and undertake critical mapping, sampling and drilling that helped them to better understand the geological structure of their deposits and maintain ownership of their mineral claims.

In addition to interviews, PDAC distributed a questionnaire to its members to learn more about their experiences with flow-through.<sup>xix</sup> One hundred per cent (100%) of the respondents agreed that the super flow-through regime was either important or very important, 90% of the respondents used flow-through funds to finance exploration programs that helped them to generate additional data on potential deposits, helping to move existing discoveries in Canada closer to production.

The volume of money being raised by juniors, including via flow-through, leads to discoveries – and that’s ultimately what exploration is all about. Two-thirds of the companies interviewed said that the flow-through funds they raised helped them to make discoveries, with sixty percent of those responding to the questionnaire also noting that flow-through funds led directly to a new discovery.

So while the “discovery ecosystem” that has developed over the last 30 years appears to be working, there is a disconnect between its overall success rate and the incentive for any given investor to invest in any one given company. Despite juniors being more effective explorers, prior to 1986 (when amendments to the flow-through share system eliminated liability concerns for flow-through investors), the bulk of exploration in Canada (85%) was done by the exploration teams of major mining companies. In other words, capital markets were not willing to finance early-stage exploration by juniors, allocating capital to the more inefficient seniors instead. This is how “rational” capital markets were working – or not working – prior to the use of fiscal policy to support early-stage exploration in Canada.

The first policy innovation generated in response to this market failure was the mining exploration depletion allowance, or MEDA, which was put in place in 1983. Introduced at a very low point in the cycle, MEDA doubled exploration by juniors, highlighting the significant impact fiscal policy could have on exploration in Canada. In 1986, the flow-through system was further modified so that a flow-through investor did not have to “incur” the Canadian Exploration Expenses – instead, the renounced expenses were deemed to have been incurred by the investor. Shareholders were thereby protected from potential liability. As a result of these changes, plus the emergence of flow-through share limited partnerships, exploration in Canada undertaken by juniors rose from 15% in 1983 to over 50% in 1987.<sup>xx</sup> Between 1987 and 1991, flow through shares accounted for 60% of all exploration spending in Canada, at a time when the world economy was in recession and financing was even more difficult to access.<sup>xxi</sup>

In recognition of the significant and effective role fiscal policy was playing to support early-stage exploration in Canada, in 1996, the Government of Canada explicitly acknowledged the need to “afford the minerals and metals industry fiscal treatment that recognizes exploration risk, ore reserve risk, and other specific risks unique to the sector” when it adopted the *Minerals & Metals Policy* of the Government of Canada.<sup>xxii</sup>

When the original version of the METC was introduced in 2000 during another low point in the commodity cycle, creating the “super flow-through” system, the stage was set for another increase in exploration finance. The super flow-through system proved its worth immediately, attracting enough investors (whose capital had to be spent in Canada) to propel Canada ahead of Australia into first place in terms of the jurisdiction in which the most exploration activity was taking place.

Super flow-through has proved itself once again during the recent downturn. PDAC analysis of data from GAMAH International's MECO database suggests that flow-through accounted for almost 80% of all exploration-focused financing done on Canadian exchanges in 2014, one of the most challenging capital-raising years.

This data suggests that FTS and the METC have compensated for a capital markets failure rooted in the risk profile of junior exploration, and helped increase the allocation of exploration-focused capital to Canada. By doing so, the two incentives have helped improve discovery rates in Canada, and sustain an industry that generates significant economic opportunities for Canadians.

Policymakers have understood the benefits derived by all Canadians of having a strong mining industry and the need to ensure that our depleting Canadian reserves are replenished. Acknowledging that ESG exploration is more risky, policy makers through the METC (which is specifically defined to address only the riskiest component of ESG exploration in Canada) have accepted a greater share of the exploration risk on behalf of all taxpayers, thereby reducing the after-tax risk to an individual investor in FTS to encourage the flow of capital to finance such ESG exploration programs.

### **Competing for capital: How super flow-through sustains exploration in Canada**

As noted above, Canada is attracting ever-smaller shares of total non-ferrous global exploration budgets, and has fallen to second place (behind Australia) in terms of attracting the largest share of total global exploration budgets. There are a number of factors affecting the relative attractiveness of Canada as a jurisdiction in which to explore, including:

- The increasing cost profile of exploration as more companies explore at depth or under cover, or in more remote areas (due to Canada's infrastructure deficit).
- The costs and delays associated with the Crown's implementation of its Duty to Consult, which is not always managed in a clear, consistent and timely manner.
- Existing or proposed withdrawals of prospective land.
- Regulatory delays and costs.

The super flow-through shares (SFTS) system helps to offset company perceptions of these challenges, as when companies raise flow-through the money has to be spent domestically. When investment dollars are difficult to come by, as they are now, the capital pools made available by the super-flow-through system are often the only sources of financing available – and they will only flow to projects in Canada. This gives Canada a tremendous advantage globally, as capital continues to flow into the industry counter-cyclically, helping to sustain not only exploration activity in remote areas but also the entire ecosystem upon which the industry's success hinges. During financing downturns, flow-through is sometimes the only financing that is available, providing companies exploring in Canada with a unique and vital source of capital.

**"Without flow-through, we would never have discovered Ekati - and there would be no diamond industry in Canada today."**

- Chuck Fipke, discoverer of Ekati

According to a questionnaire PDAC distributed to its members in 2016, almost 90% of respondents indicated that flow-through helped their companies to continue to explore and "de-risk" projects during

a downturn, so they could advance them towards production. More than 80% found that flow-through financing both sustained the interest of their existing investors, and attracted the interest of other investors. Sixty per cent (60%) of them said that the exploration work undertaken using flow-through financing ultimately led to a mine.<sup>xxiii</sup>

Flow-through shares can also help companies finance exploration for unpopular commodities that are having difficulty attracting attention even during a boom period. After the Fukushima incident in 2011, for example, one of our members explained that literally no investors had an interest in uranium exploration, notwithstanding the long-term positive fundamentals underpinning demand. Thanks to flow-through, however, two companies were able to continue exploring in Canada and were able to make significant discoveries, including the award-winning PLS deposit discovered by Fission.<sup>xxiv</sup>

The use of flow-through to sustain exploration in Canada through its inherent design is well-understood. What may be less understood, however, is the role it plays in sustaining exploration in Canada in a dynamic policy context, where other countries are also competing for exploration investment.

In 2014, for example, Australia implemented its own version of the SFTS system, known as the *Exploration Development Incentive* “to support... greenfields minerals exploration... in Australia.”<sup>xxv</sup> While the initiative is very different from the Canadian SFTS system, it reflects a recognition on the part of our closest competitor that fiscal policy has an important role to play in supporting the flow of capital to the riskiest type of exploration, in order to discover the mines of tomorrow, as noted by Simon Bennison (CEO of the Australian Association of Mining and Exploration Companies).<sup>xxvi</sup> South Africa has also recently approached Natural Resources Canada and PDAC to discuss how to attract juniors to come and explore in their jurisdiction, as have other jurisdictions such as Sweden and Chile. These conversations have included discussions about the merits of using fiscal policy to attract exploration by juniors, in particular, to their jurisdiction.

In other words, this tax review should not simply compare how fair this incentive is in comparison to the supports requested from other industries; it must also compare the implications of removing this investment in the context of the global competition for exploration capital.

### **Support for this industry, unlike others, will automatically strengthen the Canadian economy**

While exploration investment is highly mobile, the “intellectual property” that it generates (enhanced knowledge of the land-mass and the mineral endowment in a given jurisdiction) is not. Unlike other industries that depend on risk-capital, the intellectual property of the exploration industry cannot move. Even if a foreign company acquires ownership of a Canadian property/deposit, the economic benefits that arise from exploring for and mining a mineral deposit largely stay in Canada.

The same cannot be said of the intellectual property arising from the tax incentives provided to the tech sector. A foreign acquisition of a domestic tech company would be far more likely to have a negative impact on the domestic benefit footprint. Similarly, government supports for aerospace, defence, health care, life sciences and manufacturing can only guarantee economic returns to Canada in the short run (e.g. by encouraging a company to maintain employment at its facilities for one more year, or until the funds run out). A high-tech job can move, but a mine cannot.

Support for mineral exploration, even if initially unsuccessful, generates additional, publicly available knowledge of Canada’s mineral endowment that contributes to the success of future mineral

exploration programs. Successful discoveries, and mines, are thus the product of decades of “unsuccessful” exploration activity, with the knowledge of each generation accumulating over time to allow the next generation to explore more efficiently and effectively.

### Supporting Government of Canada policy

Unlike many other industries in Canada, mineral exploration and mining strongly align with a broad range of Government of Canada policy objectives. The government made helping the middle class a centrepiece of its 2015 platform<sup>xxvii</sup> – the mining and oil and gas industries offer the highest average weekly wage of any industry in Canada.<sup>xxviii</sup> A key priority is to promote economic development for Aboriginal people and communities<sup>xxix</sup> as the industry is the largest private sector employer of Aboriginal people in Canada, and has generated significant economic opportunities that are often codified in agreements, such as ‘impact-and-benefit agreements.’<sup>xxx</sup>

The Liberal Government wants to diversify Canada’s trading partners and promote investment with fast-growing markets around the world.<sup>xxxi</sup> The Canadian exploration and mining industry has arguably done a better job at diversifying its investment flows than any other Canadian industry, with Canadian mining assets abroad (CMAA) counting for two-thirds of the value of total Canadian mining assets, and with only 15% of those assets being held in the United States.<sup>xxxii</sup> Finally, the government has publicly stated its interest in promoting industry clusters.<sup>xxxiii</sup> The minerals industry constitutes one of Canada’s most complex and geographically diverse clusters.<sup>xxxiv</sup>

Stimulating economic activity in remote communities was actually explicitly stated as an objective of the precursor to the Mineral Exploration Tax Credit (the Investment Tax Credit for Exploration) when it was first introduced in Budget 2000, an objective that has arguably very much been achieved, given the number of projects in remote areas that are financed using flow-through.<sup>xxxv</sup>

### EFFECTIVENESS – Are the policy goals of the incentives being met?

A review of various government documents suggest that both FTS and the METC were established to achieve the following policy goals<sup>xxxvi</sup>

- Encouraging exploration in Canada
- Encouraging risk-taking and stimulating equity-based investments in mining and petroleum companies
- Assisting junior exploration companies

The 1994 review of FTS by Finance Canada suggested that the mechanism was successful in achieving government priorities<sup>xxxvii</sup>, concluding that “over the period 1983 to 1991, flow-through shares were generally relevant, effective and cost-effective in meeting the federal government’s policy objectives.”<sup>xxxviii</sup>

### Encouraging exploration

The 1994 Finance Canada report notes that the FTS system “stimulated \$3 in exploration for every \$1 in foregone tax revenue”<sup>xxxix</sup> and “accounted for a large share of all funding for mining exploration (averaging 60 per cent for the period 1987 to 1991).”<sup>xl</sup> The introduction of the METC in 2000 also contributed to stimulating exploration in Canada. Between 1999 and 2007, Canada’s share of global

exploration budgets rose from 12.2% to 21.2% of worldwide exploration, while Australia's share fell from 19.3% to 12.4%.

Observers have also noted the increased importance of flow-through shares during a cyclical market downturn:

When prices are low and decreasing (as was the case from 2000 to 2001), incentives help mitigate the fall in exploration spending by allowing FTS funds to partly replace other sources of financing. This suggests that exploration incentives may be most relevant when prices are at the bottom of the cycle and are starting to recover (as was the case from 2001 to 2003).<sup>xli</sup>

The amount of money raised in Canada, for the purposes of exploring in Canada, dropped by almost 70% between 2011 and 2013, peaking and bottoming out ahead of global trends. The importance of flow-through shares at sustaining exploration in Canada during a downturn, however, clearly shown in Figure 9, with flow-through shares accounting for more than 60% of all Canadian-focused exploration financing done in Canada in 4 of the last six years.<sup>xlii</sup>

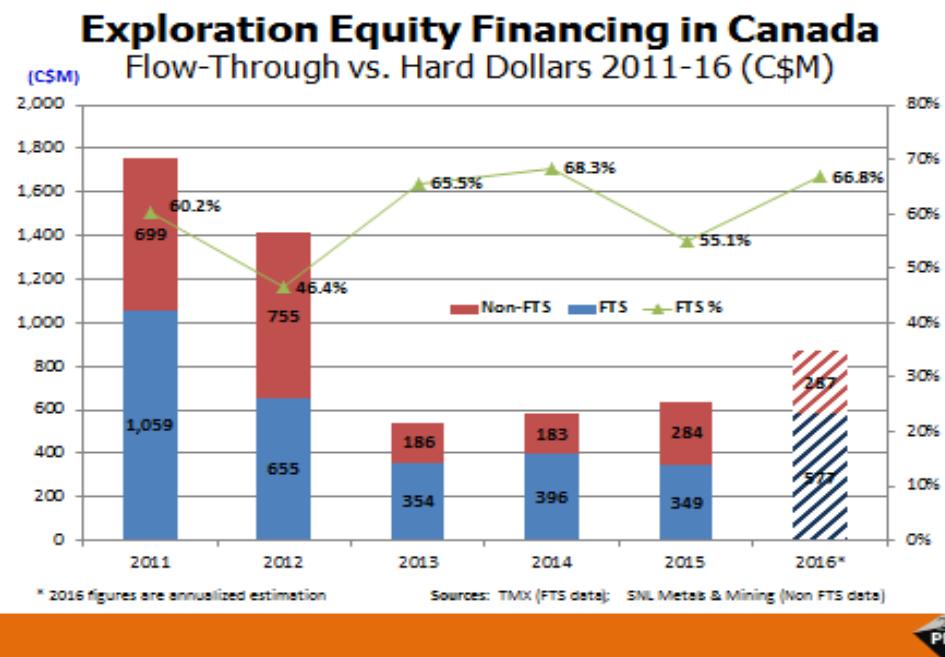


Figure 9: Financing for mineral exploration in Canada (Canadian exchanges)

### Stimulating equity investments in junior exploration companies

With respect to stimulating equity investments in high-risk extractive companies, the 1994 Finance Canada report notes that: "Junior companies benefitted significantly from flow-through shares. Their share of mining exploration more than tripled from 15 per cent in 1983 to over 51 per cent in 1987... [with] the bulk of this exploration spending was financed by flow-through shares".<sup>xliii</sup>

The 2013 Finance Canada review of FTS and METC also noted that “junior companies rely more on flow-through shares for equity financing than larger companies.”<sup>xliv</sup>

It is the juniors who made the most use of the flow-through mechanism in 1987, accounting for approximately two-thirds of the total amount raised by flow-through shares in 1987.<sup>xlv</sup>

## EFFICIENCY

The FTS and METC regimes have been around for a number of years and such programs are fairly well understood by both the mining and investment community, leading to relatively high compliance rates. In our view, such positive compliance rates are not only attributable to the various measures contained within the legislation for non-compliance (e.g. financial penalties), they are also due to the efforts by Finance, the Canada Revenue Agency and Natural Resources Canada to work in partnership with the PDAC to ensure the industry understands the rules. This collaborative approach is demonstrated in the jointly developed 2007 guidelines, and current conversations underway with respect to how to update this guidance to reflect the commitments made in Budget 2016 to expand the scope of Canadian Exploration Expenses to include important costs related to certain environmental studies and Aboriginal engagement activities. We are strong believers in this collaborative approach and believe that through the combined efforts each of the parties has played a role in Canada being considered one of the top global destinations for exploration spending.

Another key factor leading to high compliance rates is the desire by mining companies to avoid the risk of upsetting their investor base, and future access to equity capital, through amendments to renunciations. When speaking with members, we have found that most companies take an ultra-conservative approach in ensuring that expenditures renounced are clearly qualifying expenditures. This is a built-in incentive for compliance that is rooted in the fact that the super flow-through shares system is a market-based incentive, as opposed to a program of grants and subsidies delivered through a government program. The market-oriented nature of the regime also contributes to its efficiency, with market actors making decisions on how to allocate capital to support exploration that leads to the discovery and development of Canadian mineral deposits.

One further comment we have in respect to the efficiency of the super flow-through system relates to one of the principal assumptions that has been used in deriving the estimated costs to the Treasury in respect of METC and FTS regimes: that the issuing corporation would never have been able to deduct the transferred expenses. Finance Canada reports rightfully acknowledge that such an assumption results in the estimate being in the upper-bound of the cost. Finance also acknowledges that once an exploitable resource is found, the resource is likely to be sold to a larger corporation or group with more experience developing and operating extraction projects (although some juniors do attempt to become intermediate producers, such as Sabina or Agnico-Eagle Mines). It should be noted that there are measures contained within the Act where a mining company can flow its available resource deductions to a purchaser if such purchaser acquires all or substantially all of the Canadian resource properties owned by the vendor.

Similarly if a purchaser acquires control of a junior mining company through the acquisition of shares, provisions within the Income Tax Act (Canada) permit available resource deductions to be carried over for use against income derived from production or from sale of the Canadian mineral properties owned by the target at the time control was acquired. In summary, there are a number of circumstances where

such deductions would otherwise have value to the issuer and thus part of the cost to the Treasury is a timing cost as opposed to a permanent cost as reflected in Finance Canada reports. Finally, as acknowledged by Finance Canada, the estimates and projections do not take into account the potential impact of a particular tax expenditure on the overall level of economic activity, and thus on aggregate tax revenues. Elimination of the FTS and METC regimes would likely cause a significant decline in ESG exploration, of which the pre-dominant expenditures often relate to exploration drilling, which could negatively impact the amount of tax revenue collected from such service companies.

## ALTERNATIVES

Some economists have raised various alternatives to the SFTS system and some in fact have argued for its elimination. The minerals industry welcomes such proposals, as they require us to constantly re-evaluate the effectiveness of current measures and consider potential improvements that could enhance compliance. Critical dialogue can also generate a deeper understanding among all stakeholders in the Canadian mining industry about the perspectives of other stakeholders. For example, concerns were raised about earlier iterations of the SFTS system that the short window in which exploration could be undertaken was driving up the cost of exploration, as mining companies rushed to ensure they met their qualifying expenditure commitments. In response to this concern, the various parties modified the system and extended the 60-day limit for the look-back rule to a full year, to the benefit of all stakeholders.

When looking at alternatives, PDAC assess them using the following questions:

- Does the proposal increase the potential for the junior mining industry to access capital to fund their Canadian exploration efforts, versus the current system?
- Will the proposal provide the opportunity for a junior mining company to expand its investor base?
- Does the alternative reduce the cost of compliance (i.e. enhance efficiency)?

As suggested by some economists, we have considered the direct corporate refundability of exploration expenses through the above lenses and rejected it on all three counts. We also considered the Australian measures introduce to encourage greenfields exploration and found it wanting on the first two counts. We considered the merits of a cash-flow tax, as recommended by some economists, that would permit companies to carry forward deductions with interest and claim refunds when they wind down. Such an approach would clearly fail the first two counts as it would provide no access to capital for junior mining companies.

We reviewed the results of Professor Jog's study, *Rates of Return on Flow-through Shares: Investors and Governments Beware*, which provides some interesting data on flow-through share investors. If taken at face value Dr. Jog's study implies that a number of parties – including Finance Canada and (implicitly) the Finance Ministries in B.C., Saskatchewan, Manitoba and Ontario, as well as accredited investors – have continually facilitated/invested in a fiscal regime which offers unreasonable returns. We believe that Professor's Jog's computations of returns were negatively impacted by the assumption used when estimating the proceeds received for the disposition of such shares.<sup>xlv</sup>

Another argument that has often been raised is that exploration should be left to major mining companies (seniors) who should fund such exploration from their own cash resources, without the need for fiscal incentives. There are several flaws with this argument. First, with the consolidation that

occurred in the early 2000s within the mining industry, there are far fewer seniors and a dearth of mid-tier mining entities than in the past (e.g. Canadian entities such as Inco, Noranda and Falconbridge have been acquired by larger foreign entities). The larger the mining entity, the greater the size of a discovery is required to replenish its depleting resources. This distorts the reserve replacement strategies of the seniors, who are increasingly relying on acquisitions of discoveries made by more effective juniors as opposed to undertaking grassroots exploration themselves (as outlined earlier in this submission).

Second, large mining entities have global reserve replacement strategies, with Canada being just one other country vying for an allocation of exploration investment. Often such entities have a series of properties that are under development. New discoveries will be subject to internal rate of return studies and may be pushed down the pecking order in terms of future capital deployment. Junior mining companies, by contrast, are more focused and the size of discovery required to become a viable mining entity is not on the same scale as for the larger entities, allowing them to advance a wider range of projects towards production, to the benefit of local communities and host jurisdictions.

One pertinent example that illustrates the risks of relying on majors to discover and develop Canadian mineral deposits is provided by Newmont Mining Corporation's decision to vend its interest in the Hope Bay Project in Nunavut to a newly formed Canadian junior, TMAC Resources Inc. (TMAC). Newmont had other properties it wished to focus its attention on, whereas for TMAC Hope Bay would be its only project. TMAC was subsequently able to raise funds on the TSX to proceed with the development and expansion of the Hope Bay Project. A portion of the funds raised were derived through issuances of super flow-through shares, the proceeds of which were used for further exploration on surrounding deposits to enhance the viability of the project.

TMAC has been one of the TSX's bright lights over the past year. The current plan is to bring the property into commercial production in early 2017, bringing employment opportunities and potentially generating significant revenue for Nunavut Tunngavik Incorporated. NTI, pursuant to a Mineral Exploration Agreement entered into with TMAC, received (as compensation for granting various subsurface rights to TMAC) a royalty interest in respect of certain mineral leases on the project. In addition, the Kitikmeot Inuit Association acquired a 1% NSR on production from certain mineral leases for granting TMAC surface access to all Inuit Owned Lands at Hope Bay as part of a Framework Agreement.

## CONCLUSION

As noted throughout this document, exploration activity financed by super flow-through shares have been used to help discover significant mineral deposits in Canada (e.g. the potentially world-class deposits in the Ring of Fire) and to help advance knowledge of many deposits to the point where they have become mines (e.g. Meadowbank, Ekati, Eleonore, Mt. Milligan, Hemlo).

Ultimately, the question before the Government of Canada is this: is Canada worse off for having supported the discovery and development of these deposits through the tax incentives offered? Professor Jog's study would lead you to believe the answer is yes – we respectfully disagree.

Although not perfect we remain convinced that the current FTS and METC regimes are the best alternative to achieve the government's goal of encouraging investment in mineral exploration in

Canada. It is difficult to think of any significant mining venture in Canada that did not at some point in its history look to funding through flow-through shares to prove up its potential.

Such investments have led to the creation of major mining centres across Canada such as Rouyn-Noranda, Val d'Or, Sudbury, Timmins, Thompson, Kamloops, Yellowknife, Whitehorse, Schefferville, Sept-Iles, etc. The genesis of Canada's diamond industry owes its origins to funding through flow-through share investments, as (at least in part) do so many existing mines.

**Accordingly, it is our hope that the government will decide to maintain the flow-through share system and renew the METC.**

## ENDNOTES

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- <sup>i</sup> Finance Canada. 2013. *Tax Expenditures and Evaluations 2013: Flow-through Shares – A Statistical Perspective*.
- <sup>ii</sup> Groves, David and Trench, Allan. 2014. *A Looming Crisis for the Mineral Exploration Industry: A Geological Perspective*. Accessed from <https://www.segweb.org/pdf/views/2014/07/SEG-Newsletter-Views-David-Groves-Allan-Trench.pdf>. Industry veteran M. Fulp concurs, noting “giant ore deposits are found by field geologists in greenfields exploration programs.” Michael Fulp. 2009. *Exploration in Emerging Environments*. Accessed from <http://www.goldgeologist.com/documents/LEADERPAGE.pdf>. Similarly, industry experts echo the importance of greenfields exploration, noting that the “rising need for high quality deposits to meet global demands... requires the industry to detect and develop new greenfields deposits.” Zlotnikov, Dan. 2012. *Balancing the risk and rewards in greenfields exploration*. Accessed from [http://www.earthexplorer.com/2012/issue1/Risky\\_business\\_Balancing\\_the\\_risk\\_and\\_rewards\\_in\\_greenfields\\_exploration.asp](http://www.earthexplorer.com/2012/issue1/Risky_business_Balancing_the_risk_and_rewards_in_greenfields_exploration.asp).
- <sup>iii</sup> For charts referencing SNL for 2016, data was taken as at September 30, 2016 and annualized by multiplying by 4/3. The term “exploration financing” encompasses all financing deals that include the word “exploration” in “use of proceeds”, as tracked by SNL Metals & Mining. The term “rest of world” includes all mineral exploration financing done outside of Canada, for use anywhere (including Canada). The term “Canada” includes financing for mineral exploration raised *in Canada*, also for use *anywhere* in the world (including Canada). Data from SNL was converted from USD to CAD by using nominal averages from the Bank of Canada: <http://www.bankofcanada.ca/rates/exchange/annual-average-exchange-rates/>.
- <sup>iv</sup> SNL Metals & Mining. *World Exploration Trends 2016*. Subscription-only access.
- <sup>v</sup> Doggett, Michael. 2016. *Capital Crisis Statistical Update*. Internal prepared for PDAC using TMX data.
- <sup>vi</sup> Figure 8 captures money raised on Canadian stock exchanges for the purposes of exploring in Canada, where financings were commodity-specific (i.e. if a financing was to explore for a combination of commodities, it was not included).
- <sup>vii</sup> The State Street global Investor Confidence Index, which hit 140 in late 1999, was at 89.7 in August 2016. Accessed from <http://www.statestreet.com/ideas/investor-confidence-index.html>. See also: Froot, Kenneth and Connell, Paul. 2003. *The risk tolerance of international investors*. Working Paper 10157. U.S. National Bureau of Economic Research. Accessed from <http://www.nber.org/papers/w10157.pdf>.
- <sup>viii</sup> <http://www.imf.org/external/np/res/commod/Table1a.pdf>
- <sup>ix</sup> <https://blog-imfdirect.imf.org/2015/09/14/metals-and-oil-a-tale-of-two-commodities/>
- <sup>x</sup> *ibid.*
- <sup>xi</sup> Jacobsen, Jax. March 8, 2016. *Demographic shifts mean fewer retail investors for mining space*. SNL Metals & Mining. Accessed from [https://www2.snl.com/Cache/snlpdf\\_9db75f94-3ec7-4cce-82d4-e39801d9c8ed.pdf](https://www2.snl.com/Cache/snlpdf_9db75f94-3ec7-4cce-82d4-e39801d9c8ed.pdf).
- <sup>xii</sup> A PDAC-compiled inventory of incentives, and a summary of changes since the capital downturn began, is available here: <http://www.pdac.ca/policy/finance-taxation/policy/2016/07/25/supporting-mineral-exploration-in-canada>
- <sup>xiii</sup> [http://www.pdac.ca/policy/securities/policy/2015/12/24/capital-markets-regulatory-\(cmr\)](http://www.pdac.ca/policy/securities/policy/2015/12/24/capital-markets-regulatory-(cmr))
- <sup>xiv</sup> <http://www.pdac.ca/policy/securities/policy/2014/06/23/pdac-comments-on-all-of-the-exempt-market-proposals-from-provincial-securities-regulators>
- <sup>xv</sup> McCuaig, Campbell, cited in Zlotnikov, Dan. 2012. *Redefining the search space for minerals*. Accessed from [http://www.earthexplorer.com/2012/issue1/Redefining\\_the\\_search\\_space\\_for\\_minerals.asp](http://www.earthexplorer.com/2012/issue1/Redefining_the_search_space_for_minerals.asp).
- <sup>xvi</sup> Zlotnikov, Dan. cf. note i.
- <sup>xvii</sup> Schodde, Richard. 2015. *Canada's Discovery Performance and Outlook*. Accessed from <http://www.minexconsulting.com/publications/R%20Schodde%20PDAC%20Conf%20March%202015%20FINAL.pdf>
- <sup>xviii</sup> Anders, Robert. September 1, 2016. *Top gold producers foregoing early-stage exploration*. Accessed from [www.snl.com](http://www.snl.com) (subscription only). The report is summarized by Reuters at <http://www.arabnews.com/node/986291/saudiarabia>.
- <sup>xix</sup> <http://www.pdac.ca/policy/flow-through-shares>
- <sup>xx</sup> Government of Canada Department of Finance. 1994. *Flow-Through Shares an Evaluation Report*. Page 12.
- <sup>xxi</sup> *Ibid*, 1.
- <sup>xxii</sup> Government of Canada. 1996. *The Minerals & Metals Policy of the Government of Canada: Partnerships for Sustainable Development*. Accessible at <https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/mineralsmetals/pdf/mms-smm/poli-pol/pdf/mmp-eng.pdf>.
- <sup>xxiii</sup> <http://www.pdac.ca/policy/flow-through-shares>
- <sup>xxiv</sup> <http://www.miningmarkets.ca/news/fission-uranium-ceo-talks-pls-athabasca-and-rumours-of-another-takeover/>
- <sup>xxv</sup> [http://www.treasury.gov.au/~media/Treasury/Consultations%20and%20Reviews/Consultations/2014/Exploration%20Development%20Incentive/Key%20Documents/PDF/EDI\\_explanatory\\_material.ashx](http://www.treasury.gov.au/~media/Treasury/Consultations%20and%20Reviews/Consultations/2014/Exploration%20Development%20Incentive/Key%20Documents/PDF/EDI_explanatory_material.ashx)
- <sup>xxvi</sup> <http://www.mining.com/web/thousands-of-australian-shareholders-to-benefit-in-exploration-tax-offsets/>
- <sup>xxvii</sup> <https://www.liberal.ca/realchange/>

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<sup>xxviii</sup> The extractive industry had the highest weekly average earnings of any industry in Canada in June 2016, 20% higher than the next highest industry (utilities).

<sup>xxix</sup> <http://pm.gc.ca/eng/minister-indigenous-and-northern-affairs-mandate-letter>

<sup>xxx</sup> <http://www.lop.parl.gc.ca/content/lop/ResearchPublications/2015-29-e.html>

<sup>xxxi</sup> <https://openparliament.ca/debates/2016/6/9/christie-freeland-1/>

<sup>xxxii</sup> <http://www.nrcan.gc.ca/mining-materials/publications/17965>

<sup>xxxiii</sup> <http://pm.gc.ca/eng/news/2016/06/29/economic-prosperity-trade-and-competitiveness>

<sup>xxxiv</sup> <http://www.chamber.ca/download.aspx?t=0&pid=e9c0b24c-9bae-e211-8bd8-000c291b8abf>

<sup>xxxv</sup> Public documents released for federal budget 2000 noted: “rural communities across Canada that depend on mining have been hard hit. To promote mineral exploration activity, several rural communities along with some provincial governments and industry associations have requested that a temporary additional tax incentive be provided for certain flow-through share investments. This incentive would be focused on those exploration activities most likely to find new deposits in Canada.” Source – private archives of Robert Clark, former Director, Tax Policy, Minerals and Metals Sector, Natural Resources Canada. The case Meadowbank case study prepared by the PDAC provides just one example of how the super flow-through system has helped generate economic opportunities in remote Canada (<http://www.pdac.ca/policy/flow-through-shares>).

<sup>xxxvi</sup> Government of Canada Department of Finance. 1994. *Flow-Through Shares an Evaluation Report*. Pages 1,7.

<sup>xxxvii</sup> Ibid, 7.

<sup>xxxviii</sup> Ibid,1.

<sup>xxxix</sup> Ibid, 3.

<sup>xl</sup> Ibid, 1.

<sup>xli</sup> Energy and Mines Ministers Conference. 2009. *Taxation Issues for the Mining Industry 2009 Update*. Pages 6-7.

<sup>xlii</sup> The data points for this chart were taken from both TMX and SNL databases. TMX data was used to calculate value of FTS raised in Canada. Data points from TMX include deals made both on TSX and TSX-V. Non FTS financing data was taken from SNL, where “use of proceeds” includes exploration, the offering was in CAD, and proceeds were used only in Canada. Two different data sources were used because the TMX database doesn’t provide details as to which deals are for exploration specifically. Data from TMX was given in \$CAD. Data from SNL was converted from USD to CAD, by using the nominal averages presented by the Bank of Canada, as calculated here: <http://www.bankofcanada.ca/rates/exchange/annual-average-exchange-rates/>. For TMX FTS data, data was available to June 30, 2016. In the charts, this data was annualized by multiplying by two.

<sup>xliii</sup> Government of Canada Department of Finance. 1994. *Flow-Through Shares an Evaluation Report*. Page 2.

<sup>xliv</sup> Government of Canada Department of Finance. 2013. *Archived – Tax Expenditures and Evaluations 2013*. Page 7.

<sup>xlv</sup> Energy, Mines and Resources Canada. 1988. *Flow-Through Share Financing of Exploration*. Quebec City, Quebec: Mines Ministers’ Conference. 7.

<sup>xlii</sup> Jog, Vijay. 2016. *Rates of return on flow-through shares: investors and governments beware*. University of Calgary - School of Public Policy SPP Research Papers. 9: 1.