

Mining by the Numbers

March 2018

Mining investment in Québec in 2016

Background

Québec's Mining Statistics Program comprises two main components: mineral production and mining investment. It also includes a component on core drilling companies.

Mining investment includes all exploration and deposit appraisal work expenditures. It also includes expenditures on development work to bring a mine to production and to renew mineral reserves, on mine complex infrastructure construction and equipment and machinery acquisition, as well as on repair and maintenance required to maintain the value of capital assets.

The *Annual Census of Mining Investment* was carried out over the first three quarters of 2017. It aimed to collect final data for 2016 and intentions for 2017. In total, 351 questionnaires were sent to mining establishments. Among these establishments, 242 reported expenditures as project managers in 2016. Fourteen establishments that did not incur any expenditures in 2016 reported that they intended to do so in 2017. The other 95 establishments did not make any expenditures in 2016 and did not intend to do so in 2017.

Thirty-two establishments that engage in activities linked to mining also had to fill out an additional questionnaire about their assets (non-residential construction, machinery, and equipment) and their current repair and maintenance expenditures.

Preliminary data for 2017 and intentions expressed by mining companies for 2018 are currently being collected. The results of that census will be made available on the Institut's website in the first quarter of 2018.

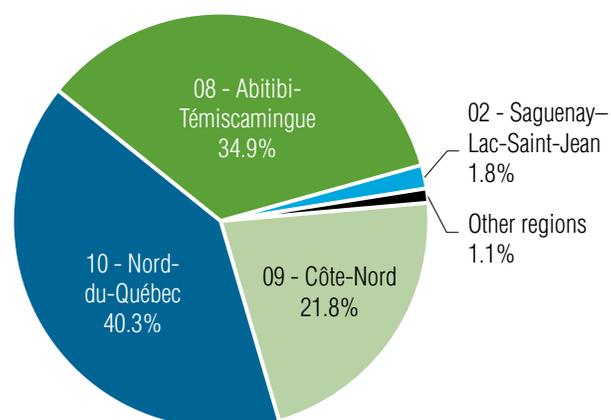
Certain definitions and explanatory notes are presented at the end of this document.

Mining investment in 2016: return to growth

Following a steep decline of mining investment in Québec between 2012 (\$5.13 billion) and 2015 (\$2.49 billion), growth prospects are improving. Data for 2016 show a 2.9% increase in mining investment compared with 2015, to \$2.57 billion. In previous years, mining investment had surged from \$2.04 billion in 2009 to \$5.13 billion in 2012.

Nord-du-Québec (\$1,035 million), Abitibi-Témiscamingue (\$895 million) and Côte-Nord (\$560 million), Québec's three main mining regions, received 97.1% of total mining investment in Québec (Figure 1). In addition, Saguenay-Lac-Saint-Jean, an emerging mining region, accounted for 1.8% of total investment in Québec in 2016.

Figure 1
Distribution of mining investment by administrative region, Québec, 2016



Source: Institut de la statistique du Québec, *Survey of Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures*.

Table 1

Distribution of mining investment by Québec administrative region, 2016

Administrative region	Exploration and deposit appraisal work		Mine complex development			Total per region
	On-mine-site	Off-mine-site	Work	Capital costs ¹	Repair and maintenance ¹	
\$ thousands						
01 Bas-Saint-Laurent	-	611	-	-	-	611
02 Saguenay–Lac-Saint-Jean	x	x	x	x	x	46,896
03 Capitale-Nationale	x	x	x	x	x	3,298
04 Mauricie	x	x	x	x	x	1,932
05 Estrie	-	262	-	-	-	262
06 Montréal	-	-	-	-	-	-
07 Outaouais	-	1,933	-	-	-	1,933
08 Abitibi-Témiscamingue	5,777	125,109	460,620	177,116	126,668	895,291
09 Côte-Nord	5	7,949	11,236	146,753	394,277	560,220
10 Nord-du-Québec	23,387	121,200	420,771	281,060	188,087	1,034,504
11 Gaspésie–Îles-de-la-Madeleine	x	x	x	x	x	12,003
12 Chaudière-Appalaches	-	425	-	-	-	425
13 Laval	-	-	-	-	-	-
14 Lanaudière	-	2,680	-	-	-	2,680
15 Laurentides	-	1,449	536	531	1,445	3,961
16 Montérégie	x	x	x	x	x	1,347
17 Centre-du-Québec	-	-	-	-	-	-
All of Québec	29,169	268,264	898,559	627,900	741,470	2,565,362

1. This category includes capital, repair and maintenance expenditures related to the exploration and deposit appraisal phases.

Source: Institut de la statistique du Québec, *Survey of Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures*.

The Abitibi-Témiscamingue region, where mining activity is mostly focused on gold, experienced a moderate investment decline of 5.6% in 2015, followed by a 25.8% increase in 2016. The Côte-Nord and Nord-du-Québec regions were both particularly affected by the drop in iron and base metal prices and saw their investments drop by 22.0% and 17.0%, respectively, in 2015. This decline continued in 2016 in both regions, though it was not as significant, reaching 14.2% in Côte-Nord and 1.2% in Nord-du-Québec.

In 2016, mining infrastructure investment rose 1.5% from 2015 to \$2.27 billion. These investments include \$899 million in general rock work expenditures for mine complex development, \$628 million in capital expenditures, as well as \$741 million in repair and maintenance expenditures for non-residential construction, machinery, and equipment. Exploration work expenditures, including deposit appraisal work costs, stood at \$297 million in 2016, up 14.6% when compared with 2015.

Table 2

Mining investment in Québec, 2011-2017¹

	2011	2012	2013	2014	2015	2016	2017	Change 2015/2011	Change 2016/2015	Change 2017/2016
	\$ millions							%		
Exploration and deposit appraisal work	834	621	382	317	259	297	539	-68.9	14.6	81.3
Off-mine-site	748	582	310	263	222	268	479	-70.4	21.1	78.4
On-mine-site	86	38	72	55	38	29	61	-55.8	-23.2	108.1
Mine complex development	3,089	4,509	4,194	2,658	2,233	2,268	2,484	-27.7	1.5	9.5
General work	506	977	985	903	919	899	679	81.4	-2.2	-24.5
Capital costs ²	2,018	2,897	2,647	1,079	653	628	1,064	-67.7	-3.8	69.4
Repair and maintenance ²	564	635	563	676	662	741	741 ³	17.4	12.0	-
Total	3,923	5,130	4,576	2,976	2,493	2,565	3,023	-36.4	2.9	17.8

1. 2011-2016: final data; 2017: intentions.

2. This category includes capital, repair and maintenance expenditures related to the exploration and deposit appraisal phases.

3. Amount not surveyed, imputed from the 2016 mining investment census.

Source: Institut de la statistique du Québec, *Survey of Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures*.

Intentions for 2017: exploration and deposit appraisal work expenditures up sharply

According to intentions expressed by companies for 2017, mining investment should rise 17.8% from 2016, reaching \$3.02 billion. Exploration and deposit appraisal work expenditures should experience a significant increase of 81.3%, to \$539 million. In the same way, mining infrastructure expenditures, which include general rock work, capital costs, and repair and maintenance, are expected to increase by 9.5% to \$2.48 billion.

Mine complex development

Mine openings and closures

The year 2016 was marked by the opening of Québec's first diamond mine. Pre-commercial production at the Renard mine (Stornoway Diamond Corporation) began in July 2016, and commercial production, in December of the same year (Stornoway Diamond Corporation, news release, December 22, 2016).

In 2015, Nottaway Resources became the owner of the Vezza gold mine, and commercial production resumed in August 2016. In November 2014, after a few months of operations, the previous owner had decided to shut down production (Maudore Minerals, news release, November 7, 2014). For its part, the Elder gold mine (Abcourt Mines) was operated on a non-commercial basis starting in 2013, and reached commercial production on January 1, 2016 (Abcourt Mines, news releases, May 21, 2013 and March 1, 2016).

Table 3

Mine openings and closures, Québec, 2016

Mine	Owner	Region	Commodity	Month
Opening(s)				
Vezza	Nottaway Resources	Nord-du-Québec	Gold	August
Renard	Stornoway Diamond Corporation	Nord-du-Québec	Diamond	July
Closure(s)				
-	-	-	-	-

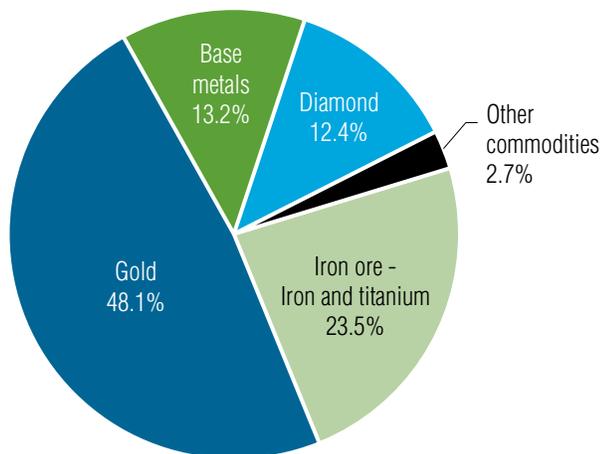
Source: Institut de la statistique du Québec, *Annual Census of Mines, Quarries and Sand Pits*.

Mineral commodities

In 2016, investment expenditures incurred for operating mines in Québec totalled \$2.23 billion. More specifically, general rock work expenditures for mine complex development stood at \$899 million; capital expenditures, at \$621 million; and repair and maintenance expenditures, at \$712 million. Mines where gold is the main commodity extracted figured prominently in Québec, accounting for 48.1% of investment expenditures by Québec mines. Iron ore extraction and processing, including ilmenite (iron and titanium) extraction, came in second place (23.5%), followed by base metal mines (13.2%), and by the diamond mine (12.4%) (Figure 2).

Figure 2

Distribution of mine complex development expenditures by type of mine, Québec, 2016



Source: Institut de la statistique du Québec, *Survey of Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures*.

Gold

In 2016, the Abitibi-Témiscamingue region had seven operating gold mines, namely the LaRonde (Agnico Eagle Mines), Westwood (IAMGOLD Corporation), Beaufor (Richmont Mines), Goldex and Lapa (Agnico Eagle Mines), and Elder (Abcourt Mines) underground mines. The Canadian Malartic open-pit mine, equally owned by Agnico Eagle Mines and Yamana Gold, is also located in the Abitibi-Témiscamingue region.

The Nord-du-Québec region had four gold mines in operation in 2016. These include the Eleonore (Goldcorp), Bachelor Lake (Metanor Resources) and Vezza (Nottaway Resources) underground mines, as well as the Casa Berardi underground mine (Hecla Mining Company), in operation since 2013, where an open pit is also in operation since 2016.

Investment expenditures incurred for these 11 gold mines totalled \$1.07 billion in 2016, up 14.5% from 2015. In Abitibi-Témiscamingue, these expenditures stood at \$755 million, up 19.6% from 2015. In Nord-du-Québec, these expenditures attained \$318 million, up 4.0% from 2015.

Iron ore – Iron-titanium

In 2016, there were three operating mines in the Côte-Nord region: the Mont-Wright iron mine and Fire Lake pit (ArcelorMittal Mines Canada), as well as the Tio Lake ilmenite mine (Rio Tinto Fer et Titane). Also located in the region are the Port-Cartier iron ore pellet plant and ArcelorMittal's port facilities, as well as the Iron Ore Company of Canada's port facilities, from where iron ore extracted in Labrador is shipped.

Early in 2016, after the liquidation of Cliffs Natural Resources' assets, the Québec government acquired its railway, storage, pelletization and transshipment equipment and rights in the Pointe-Noire sector to offer multi-user access to the Sept-Îles port (Québec Government, news release, February 2, 2016). Champion Iron Limited acquired the Bloom Lake mine near Fermont, as well as the nearby railway facilities and the Quinto iron ore deposit (Champion Iron Limited, news release, January 28, 2016). The Bloom Lake mining facilities are currently in care and maintenance mode until operations resume.

Iron ore prices fell between 2014 and 2015. The average price of iron ore per dry metric tonne decreased from \$139 (US\$135) in 2013 to \$71 (US\$55) in 2015. Since then, iron ore prices have fluctuated from a low of \$60 (US\$42) in January 2016 to a high of \$117 (US\$89) in February 2017. In 2016, iron ore was worth \$76 (US\$58) on average per dry metric tonne. In this context, investment expenditures for iron and ilmenite (iron and titanium) mines and related facilities dropped 61.2% in 2014 and 18.9% in 2015. In 2016, these expenditures declined 17.6% to \$525 million.

Base metals

In 2016, there were four base metal mines in operation in the Nord-du-Québec region, including two nickel and copper mines located in the north of the Ungava Peninsula: the Raglan mine (Glencore Canada Corporation), in operation since 1997, and the Nunavik Nickel mine (Jilin Jien Nickel Industry Co), where copper shipments began at the end of 2013 (Canadian Royalties, news release, November 5, 2013).

South of these mines are two zinc and copper mines. In the Matagami area, the Bracemac-McLeod underground mine (Glencore Canada Corporation) achieved commercial production in July 2013. The Langlois underground mine (Nystar Canada Resources), located in the Lebel-sur-Quévillon area, was operated intermittently between 1996 and 2008. Operations at the mine resumed in 2012 (Nyrstar.com; Langlois fact sheet).

Investment expenditures incurred for these four base metal mines totalled \$295 million in 2016, down 10.2% from 2015. Zinc and copper mines experienced the sharpest drop, at 16.8%. Investments in nickel and copper mines declined by 7.6%.

Other commodities

The other types of mines in operation in Québec include diamond, niobium, salt, silica, graphite, mica, and feldspar mines.

Commercial production began in December 2016 at the Renard mine (Stornoway Diamond Corporation), the first diamond mine in Québec.

The Niobec mine (Magris Resources), located in the municipality of Saint-Honoré in Saguenay–Lac-Saint-Jean, produces between 8% and 10% of the annual global volume of niobium in the form of ferroniobium.

Imerys Graphite & Carbon operates the Lac-des-Îles graphite mine located near Mont-Laurier, as well as a processing plant in Terrebonne. Imerys Mica Suzorite has been operating the Lac Letondal mine in Haute-Mauricie on an intermittent basis for nearly 50 years. The ore extracted supplies the company's processing plant in Boucherville. K+S Windsor Salt extracts salt (halite) from the Seleine mine located in the Îles-de-la-Madeleine. Near Buckingham, in the Outaouais region, Dentsply Canada sporadically extracts feldspar for dental ceramic purposes from the Othmer mine. One extraction operation usually provides enough feldspar for a few years.

In 2016, small establishments with fewer than 50 employees mined silica in several Québec regions for various purposes. In the Charlevoix municipality, high-purity silica for industrial applications is extracted from the Petit-Lac-Malbaie mine owned by Silicium Québec and Sitec Quartz. In the Laurentides region, silica is mined from the Saint-Canut (Unimin Canada) and Saint-Rémi-d'Amherst (Société minière Gerdin) quarries.

In 2016, investment expenditures for niobium, salt, silica, graphite, mica, and feldspar mines totalled \$61 million. Most of these expenditures are attributable to the niobium and salt mines.

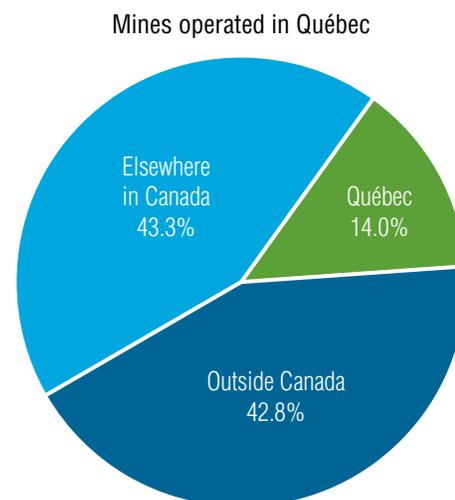
Country of control of mining companies

As part of the global mergers and acquisitions trend, the number of Québec and Canadian mining companies that invest in mine complex development in Québec declined in favour of companies headquartered abroad. Foreign-controlled mine expenditures accounted for 25.3% of these investments in 2010, a proportion that rose to 66.0% in 2011.

In 2016, 42.8% of mine complex development investments were controlled by foreign companies headquartered in countries such as the United States, Luxembourg, Switzerland, Great Britain, France, Germany, and China. These foreign investments relate to a wide variety of commodities, including iron ore, base metals, precious metals, and several industrial minerals.

Canadian mining companies accounted for 57.2% of total mine complex development investments, with Québec companies representing 14.0% of these investments (Figure 3). Canadian mining companies, mainly from Ontario and British Columbia, ranked first in terms of gold mine complex development investments in Québec, accounting for 88.9% of these investments.

Figure 3
Distribution of mine complex development expenditures by location of company head office, Québec, 2016



Source: Institut de la statistique du Québec, *Survey of Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures*.

Exploration and deposit appraisal

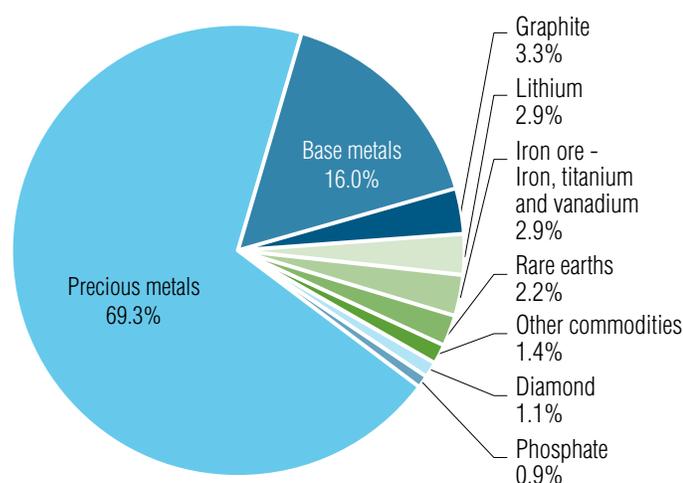
From 2011 to 2015, exploration and deposit appraisal work expenditures decreased from \$834 million to \$259 million, a period of steep decline during which expenditures dropped by 68.9%. Starting in 2016, exploration and deposit appraisal activities picked up again. In 2016, expenditures incurred for these activities totalled \$297 million, up 14.6% from 2015. According to intentions expressed by mining companies for 2017, exploration and deposit appraisal expenditures could reach \$539 million, an increase of 81.3% (Table 2).

In 2016, the Nord-du-Québec region ranked first in terms of exploration and deposit appraisal work expenditures, which stood at \$145 million, accounting for 48.6% of the Québec total. The next highest expenditures in this category were, in descending order, Abitibi-Témiscamingue with \$131 million (44.0%), Côte-Nord with \$8 million (2.7%), and Saguenay-Lac-Saint-Jean with \$3 million (0.9%).

As shown in Figure 4, precious metals, gold in particular, remained the most sought-after commodities in Québec in 2016, accounting for 69.3% of exploration and deposit appraisal expenditures, for a total of \$206 million. They were followed by base metals (16.0% for a total of \$48 million).

Although gold remained dominant in 2016, mineral exploration tends to diversify in Québec, leaving more room for other, less conventional mineral commodities. As a result, graphite, lithium and rare earths accounted for 8.4% of exploration and deposit appraisal expenditures in Québec.

Figure 4
Distribution of exploration and deposit appraisal work expenditures by commodity sought, Québec, 2016



Source: Institut de la statistique du Québec, *Survey of Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures*.

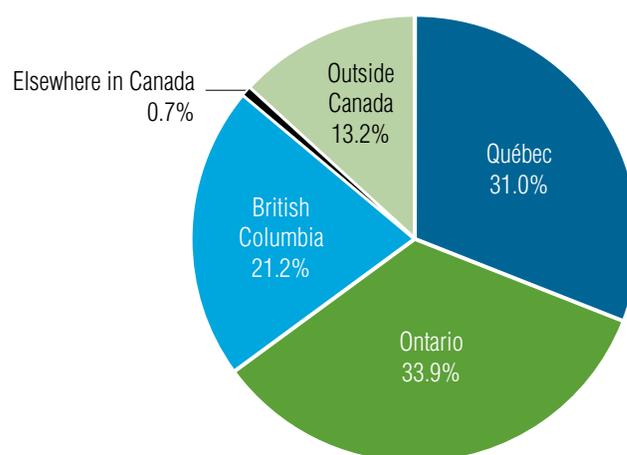
Table 4
Distribution of exploration and deposit appraisal work expenditures by type of company, Québec, 2016

	Junior	Public	Senior	Total	Change 2016/2015
	\$ millions				%
Off-mine-site	186.2	9.4	72.7	268.3	21.1
Exploration work	139.7	9.4	63.3	212.3	16.4
Deposit appraisal work	46.5	0.0	9.4	55.9	43.0
On-mine-site	–	–	29.2	29.2	–23.2
Exploration work	–	–	7.0	7.0	–38.0
Deposit appraisal work	–	–	22.1	22.1	–16.8
Total	186.2	9.4	101.8	297.4	14.6

Source: Institut de la statistique du Québec, *Survey of Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures*.

In 2016, exploration and deposit appraisal work expenditures were mostly attributable to Canadian companies—they incurred 86.8% of these investments, with Québec companies accounting for 31.0% of these expenditures (Figure 5). Junior exploration companies and senior mining companies respectively accounted for 62.6% and 34.2% of exploration and deposit appraisal work expenditures. Public companies incurred 3.1% of these expenditures.

Figure 5
Distribution of exploration and deposit appraisal work expenditures by location of company head office, Québec, 2016



Source: Institut de la statistique du Québec, *Survey of Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures*.

According to intentions expressed by mining companies, these proportions should remain about the same in 2017: 71.1% for junior exploration companies, 26.7% for senior mining companies, and 2.2% for public companies.

Core drilling campaign costs

Core drilling campaigns carried out by specialized enterprises account for a large proportion of exploration and deposit appraisal expenditures in Québec. Over the past 10 years, on average, they represented 41.7% of annual exploration and deposit appraisal work expenditures. In 2016, core drilling costs for exploration and deposit appraisal projects—i.e. drilling to define new mineral deposits—totalled \$136 million. Costs associated with drilling campaigns include expenditures incurred for personnel and drill mobilization, site preparation, drilling, moves between drill holes, required mobile and support equipment, as well as related sampling and assaying costs.

In 2016, there were 21 enterprises specialized in exploration drilling headquartered in Québec. Out of these 21 enterprises, 15 reported drilling activities in Québec.

The total number of metres drilled for on- and off-mine-site exploration and deposit appraisal projects rose from 1,468,080 metres in 2007 to a peak of 2,167,013 metres in 2011. In 2016, that number was 989,954 metres, up 15.8% from 2015, but down 54.3% from the peak recorded in 2011.

The total number of metres drilled as part of mining operations reached a high of 678,205 metres in 2014. That number held steady in 2015 with 658,787 metres drilled. In 2016, the number of metres drilled as part of mining operations totalled 554,178, down 15.9% from 2015.

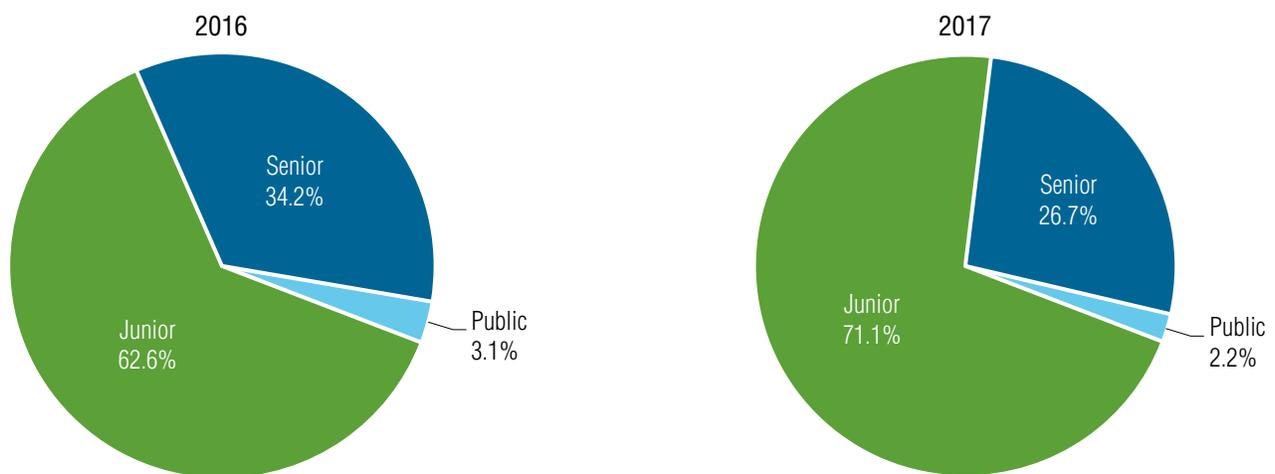
The average cost per metre for core drilling as part of exploration or deposit appraisal operations increased by 2.7% between 2015 (\$133.36) and 2016 (\$136.98). Over the 10-year period from 2007 to 2016, the cost per metre drilled was \$150.26 on average. Compared to the provincial average, core drilling costs were 91.2% higher in Côte-Nord and 12.9% higher in Nord-du-Québec.

Table 5
Distribution of the number of metres drilled, total cost and cost per metre for core drilling in Québec's main mining regions, 2016

Administrative region	Drilling cost	Number of metres drilled	Cost per metre
	\$ millions		\$/m
08 Abitibi-Témiscamingue	62.8	512,924	122.48
09 Côte-Nord	1.6	6,057	261.95
10 Nord-du-Québec	69.4	448,878	154.66
Other regions	1.8	22,095	80.07
All of Québec	135.6	989,954	136.98

Source: Institut de la statistique du Québec, *Survey of Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures*.

Figure 6
Distribution of exploration and deposit appraisal expenditures by type of company, Québec



2016: final data; 2017: intentions.

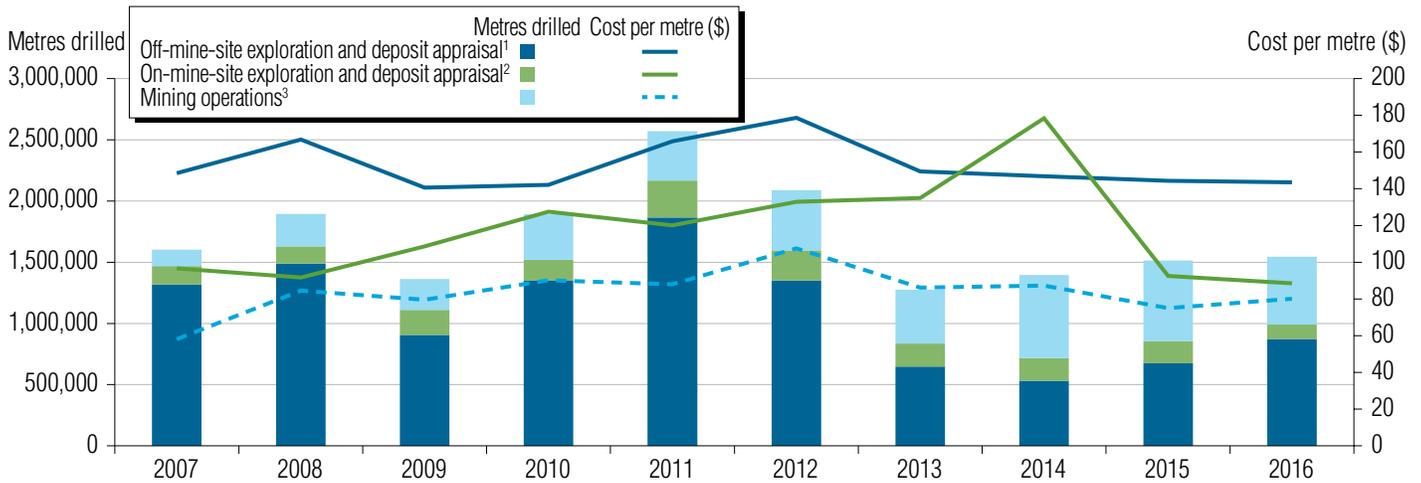
Source: Institut de la statistique du Québec, *Survey of Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures*.

Distribution of exploration and deposit appraisal work expenditures

The *Census on Mining Investment* identified 225 establishments that reported exploration and deposit appraisal work expenditures as project managers in 2016. In total, 701 projects generated \$297 million in exploration and deposit appraisal investments during the year. When taking into account projects valued at \$100,000 and over, the number of projects goes down to 219. These projects were managed by 122 establishments and generated \$287 million in expenditures, accounting for 96.6% of total expenditures in this category.

The top 25 projects in terms of budget accounted for 59.6% of total exploration and deposit appraisal work expenditures in Québec in 2016. The top 50, 100 and 200 projects respectively accounted for 75.1%, 88.0% and 96.0% of total expenditures (Figure 8).

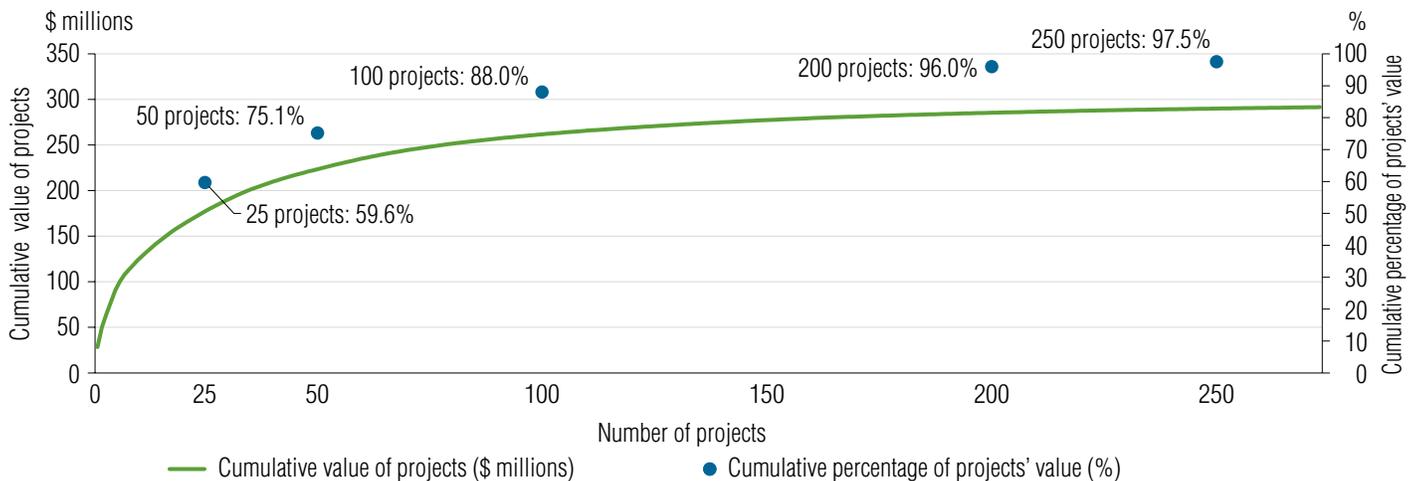
Figure 7
Change in number of metres drilled and cost per metre for core drilling, Québec, 2007-2016



1. Drilling outside a producing mine site, to define new mineral deposits.
2. Drilling on a producing mine site, to define new mineral deposits.
3. Drilling on a mine site, in the immediate vicinity of the deposit(s), to delimit and detail the ore or extend the current ore reserves.

Source: Institut de la statistique du Québec, *Annual Survey on Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures*.

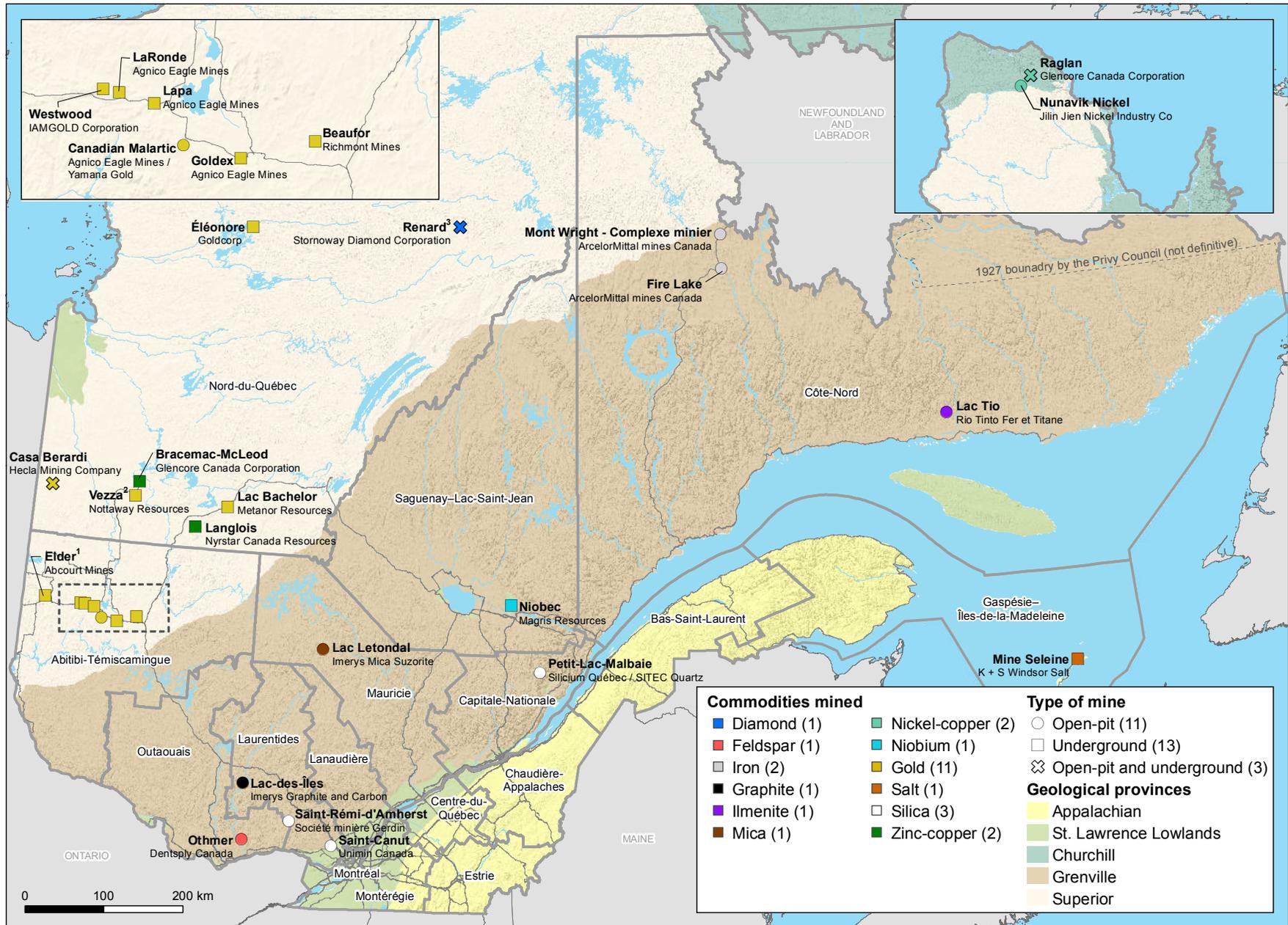
Figure 8
Cumulative value of exploration and deposit appraisal projects, Québec, 2016



Source: Institut de la statistique du Québec, *Survey of Mineral Exploration, Deposit Appraisal and Mine Complex Development Expenditures*.

Map 1

Mines in operation or under construction, Québec, 2016



¹ Commercial production started in January 2016; ² Commercial production started in August 2016; ³ Commercial production started in December 2016.
Sources: Map produced by the Institut de la statistique du Québec. Administrative divisions: SDA, MERN, January 2017. Road network: Adresses Québec, 2015.

Glossary

Types of mining stakeholders

SENIOR MINING COMPANY: Any company that carries out exploration, deposit appraisal or mine complex development work in Québec or elsewhere. This group includes producing mining companies, exploration subsidiaries of producing mining, oil or gas companies, and non-producing companies that derive significant income from royalties, investment or other similar sources and that can direct part of that income towards their mining projects.

JUNIOR EXPLORATION COMPANY: These include companies whose main activity is mineral exploration and who obtain financing for most of their activities from public and private markets. They also include prospectors.

PUBLIC COMPANY: This group includes Crown corporations, namely SOQUEM and its subsidiaries, the Société de développement de la Baie James, and the mining funds financed by the Québec government. In order to align mining investment data for Québec with those of other provinces and territories, amounts invested by the geological branch of the MERN are excluded from statistical surveys.

Mineral resource development phases

EXPLORATION EXPENDITURES include all field activities and capital, repair and maintenance expenditures conducted on- or off-mine-site to search for, discover and carry out the first delimitation of a mineral deposit in order to enhance its potential economic interest based on delimited tonnage, grade and other characteristics and justify additional, more detailed work.

DEPOSIT APPRAISAL EXPENDITURES include all field activities and capital, repair and maintenance expenditures conducted on- or off-mine-site to bring a delimited deposit to the stage of detailed knowledge required for a feasibility study that will fully justify a production decision and the investment required. This phase usually starts after a preliminary evaluation, as defined under Regulation 43-101 respecting Standards of Disclosure for Mineral Projects (CQLR, chapter V-1.1, r. 15), has been accepted by the appropriate regulatory authorities.

MINE COMPLEX DEVELOPMENT EXPENDITURES include all surface and underground work related to **MINE DEVELOPMENT** activities as well as capital, repair and maintenance expenditures conducted on a mine site that is in production or committed to production. Capital costs are diverse and include equipment, tooling and infrastructure. The latter comprise plants such as pellet plants, ore mills including tailings ponds, and ore transfer port facilities, but exclude metal smelting, refining plants and rail facilities.

MINE DEVELOPMENT includes all work carried out on a mine site to define and gain access to the ore and prepare it for production. It also includes drill programs, rock work and support activities aimed at extending the current ore reserves by exploring and appraising the immediate vicinity of the deposits.

Location of activities

ON-MINE-SITE expenditures represent all field activities and capital, repair and maintenance expenditures applied to exploration or deposit appraisal for an additional mineral deposit distinct from the current mine reserves and loaded strictly on an existing mine site in production or committed to production, as well as, by definition, all activities and expenditures applied to mine complex development, including those related to facilities and infrastructure located outside the mine site.

OFF-MINE-SITE expenditures represent all field activities and capital, repair and maintenance expenditures applied to exploration and deposit appraisal that are not located on a mine site that is in production or committed to production, including those on the site of temporarily or permanently closed mines, and advanced projects not yet committed to production.

A MINE SITE corresponds to the area covered by a mining lease or concession. It also includes specific components or infrastructure located outside the mining lease or concession, such as concentrators, iron pellet plants and tailings ponds.

For a mine site to be committed to production, all of the following criteria must be met:

1. The feasibility of developing the deposit(s) at a profit has been established by a study that meets the standards of Regulation 43-101 respecting Standards of Disclosure for Mineral Projects (CQLR, chapter V-1.1, r. 15);
2. A formal production decision has been made by the organization;
3. The necessary financing is on hand or has been arranged;
4. All required authorizations and permits have been obtained; and
5. Major pieces of production equipment have been purchased or ordered.

Suggested citation

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Standard symbols

..	Data not available	x	Confidential data
...	Not applicable	t	Metric tonne
–	Void or zero	n	Number
—	Negligible data	m	Metre
i	Intention	\$	In dollars
p	Preliminary data	%	Percent or Percentage
e	Estimate		

Note

Figures may not add up to totals due to rounding.

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