

# Val d'Or/ Rouyn-Noranda Area Gold Endowment

<https://digiyeodata.com/area/val-dor/>

Total gold endowment for the Val d'Or/Rouyn-Noranda area reached 113.4 million ounces at the end of 2019. If current inferred resources are included, gold endowment increases to 142.6 million ounces earning a spot as one of the most prolific gold mining belts in Canada.

In addition, there is significant endowments of silver, copper, zinc and lesser quantities of lithium, nickel, cobalt, platinum, palladium, and molybdenum.

This area has a long history of metal exploration and mining. The first recorded mining production came from the Stabell mine which produced 100 ounces of gold in 1914. In the latter half of the 1920's, several mines started production including the O'Brien, Waite-Amulet and Siscoe.

At the end of 2019, there were eight mines producing gold with additional production of silver, copper, and zinc. There are an additional 74 deposits with NI 43-101 reserves and resources of various commodities and at stages from resource definition through feasibility.

This part of the Abitibi belt has been and remains today one of the most explored areas within Canada.



Photo courtesy of Wesdome

## Val d'Or/Rouyn - Noranda Metal Endowment December 31, 2019

	Gold (M ozs)	Silver (M ozs)	Copper (M lbs)	Zinc (M lbs)	Nickel (M lbs)	Lithium (M lbs Li <sub>2</sub> O)	Cobalt (M lbs)	Platinum (M ozs)	Palladium (M ozs)	Molybdenum (M lbs)
Total Production	72.88	140.34	6,535.85	6,676.05	26.45	0.00	0.00	0.00	0.00	19.43
Proven & Probable Reserves	19.31	59.02	446.59	2,140.44	6,082.00	697.14	243.00	287.00	627.00	0.00
Exclusive Measure & Indicated Resources	21.19	30.56	187.40	1,299.79	3,668.00	1,015.67	151.00	174.00	381.00	0.00
Inferred Resources	29.23	27.13	290.94	583.23	2,862.00	81.13	112.00	92.00	220.00	0.00
Total Reserves & Resources	69.73	116.71	924.93	4,023.46	12,612.00	1,793.94	506.00	553.00	1,228.00	0.00
Total Endowment Excluding Inferred	113.38	229.92	7,169.84	10,116.28	9,776.45	1,712.81	394.00	461.00	1,008.00	19.43
Total Endowment Including Inferred	142.61	257.05	7,460.78	10,699.51	12,638.45	1,793.94	506.00	553.00	1,228.00	19.43

Total production includes historical and current production.

Endowment is calculated as the sum of Total Production plus Proven and Probable Reserves plus Measured and Indicated Resources. A separate calculation is given to include Inferred Resources.

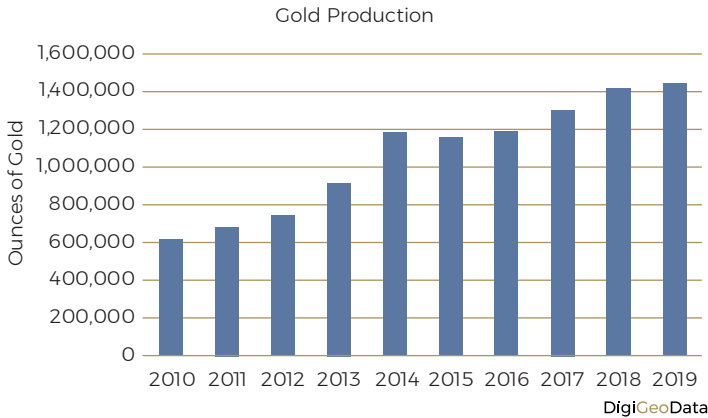
Only NI 43-101 compliant reserves and resources are used in the calculations.

# GOLD

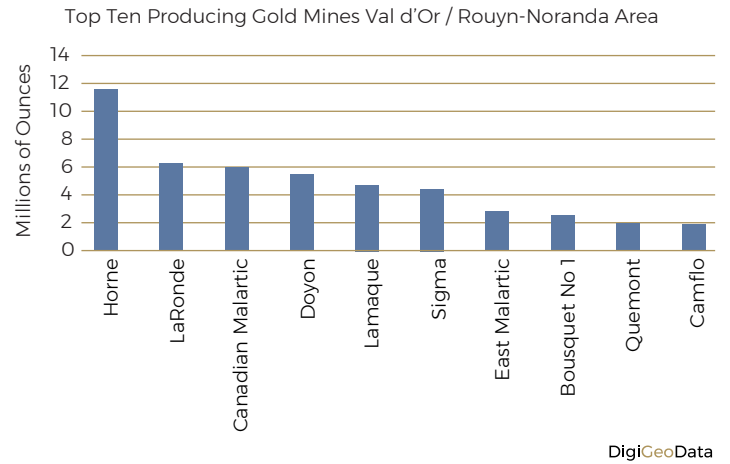
## Production

Known historic gold production from 1914 through 2015 was 66.4 million ounces. Gold production over the past ten years has more than doubled from 619 thousand ounces per year in 2010 to 1.44 million ounces per year in 2019.

Total gold production in the Val d'Or/Rouyn-Noranda area from 1926 to 2019 was 72.88 million ounces.

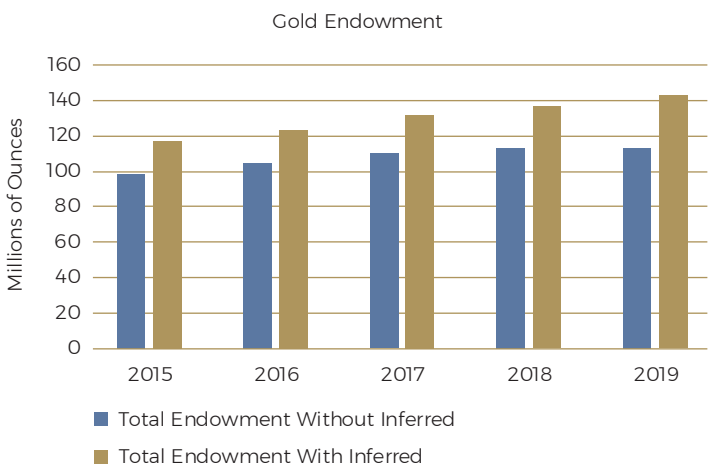


The top 10 gold producing mines have produced 47.7 million ounces (65%) of the total production to date.

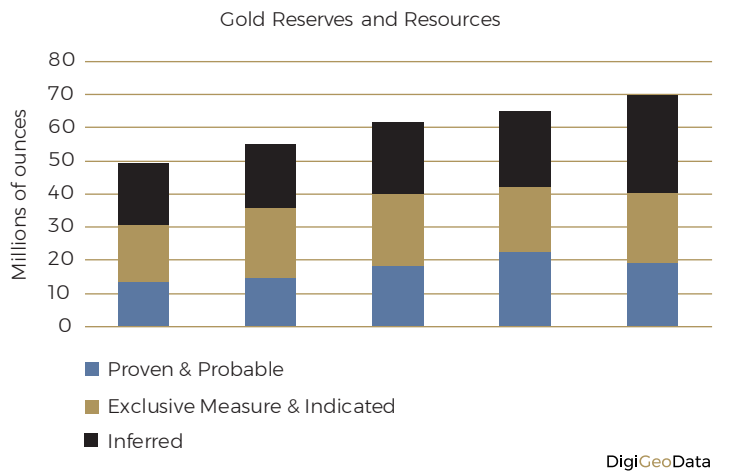


## Endowment

Total gold endowment has increased 15.3% over the past five years due not only to increased production but also to an increase in reserves and resources. Total gold endowment for the Val d'Or/Rouyn-Noranda area reached 113.4 million ounces at the end of 2019. If current inferred resources are included, gold endowment increases to 142.6 million ounces.



Inferred resources have increased the most over the past five years at 37% followed by **Proven and Probable** at 29% and **Measured and Indicated** at 19%. There are 65 projects with NI 43-101 compliant gold resource estimates.



## Companies

There are over 100 companies exploring in the Val d'Or/Rouyn-Noranda area. Some of the selected include:

**Alto Ventures (TSX-V:ATV)** are working on a new resource estimate for the DAC deposit on their Destiny gold project.

**Bonterra Resources (TSX-V:BTR)** owns the Dubuisson property that borders Wesdome's Kiena Complex property to the west.

**Cartier Resources (TSX-V:ECR)** is exploration drilling to discover new gold zones on the Chimo Mine property which produced 379,000 ounces of gold between 1964 and 1997.



*Photo courtesy of Alto Ventures*

**Falco Resources (TSX-V:FPC)** owns approximately 69,700 hectares (70%) of land in the Rouyn-Noranda camp that includes 13 former gold and base metal mines.

**Globex Mining Enterprises (TSX:GMX)** has a diversified portfolio of mid-stage exploration, development and royalty properties throughout the area.

**IAMGOLD (TSX:IMG)** is a mid-tier mining company with three gold mines on three continents. It operates the Westwood gold mine in this area that produced 91,000 ounces in 2019.

**Monarch Gold (TSX:MQR)** is an emerging gold mining company focussed on becoming a gold producer through its large portfolio of high-quality projects. Monarch also owns the Camflo and Beacon mills.



*Photo courtesy of Monarch*

*Gold production over the past ten years has more than doubled from 619 thousand ounces per year in 2010 to 1.44 million ounces per year in 2019.*

**O3Mining (TSX-V:OIII)** is the third iteration of the Osisko group of companies and is an emerging consolidator of exploration properties in this area. O3Mining controls 61,000 hectares in the Val d'Or region.

**Probe Metals (TSX-V:PRB)** is focussed on the acquisition, exploration and development of highly prospective gold properties. Its key asset is the Val d'Or East gold project which hosts several deposits.

**QMX Gold (TSX-V:QMX)** has a land package in the Val d'Or area covering 200 square kilometres. One of its key assets is the Bonnefond gold project which has an initial open pit resource estimate.

**Quebec Precious Metals (TSX-V:CJC)** main assets are in the James Bay area but it has the Somanike property in the Val d'Or area that includes the historic Marbridge nickel-copper mine.

**Wesdome Gold Mines (TSX:WDO)** has had 30 + years of continuous gold mining in Canada. It is actively exploring the Kiena Mine Complex in Val d'Or with the objective of bringing the asset into production over the next two years.

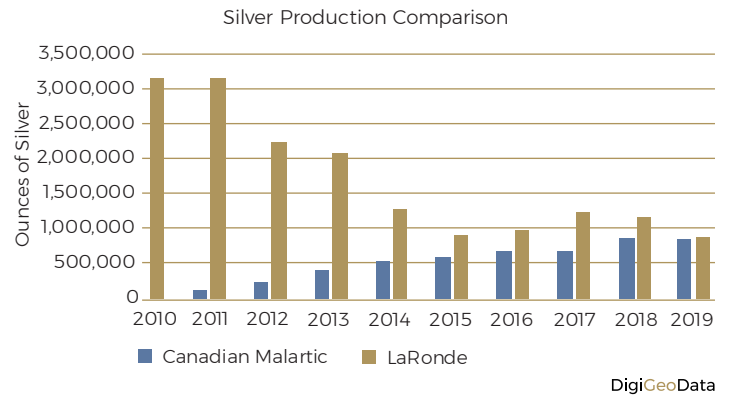


*Photo courtesy of Cartier*

# SILVER

## Production

Known historic silver production from 1927 through 2015 was 131.46 million ounces. Silver production, unlike gold, over the past ten years has declined 50% from 3.58 million ounces per year in 2010 to 1.72 million ounces per year in 2019. The LaRonde mine production declined from 3.2 million ounce per year to 883 thousand ounces per year in 2019. The Canadian Malartic mine is the opposite in that production increased from no production in 2010 to 842 thousand ounces per year in 2019.

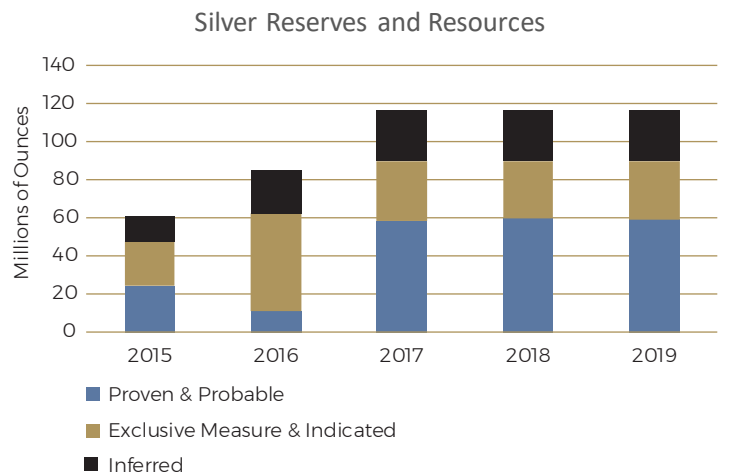
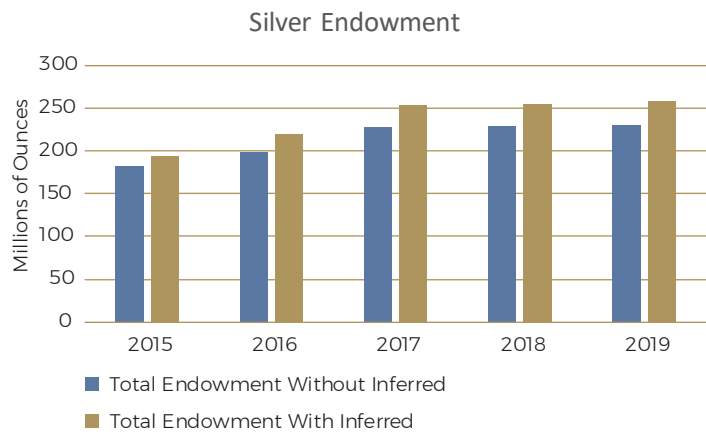


Total silver production in the Val d'Or/Rouyn-Noranda area from 1926 to 2019 was 72.88 million ounces.

## Endowment

Total silver endowment has increased 27% over the past 5 years. Yearly production has increased slightly year over year. The main increase in endowment has been largely from reserves and resources. Total Silver Endowment for the Val d'Or / Rouyn Noranda area reached 229.92 million ounces at the end of 2019. If current inferred resources are included, silver endowment increases to 257.05 million ounces. Silver endowment has leveled off in the past 3 years.

Silver reserves & resources have almost doubled from 2015 to 2019, increasing from 60.80 million ounces to 116.71 million ounces. Proven & probable and inferred resources have both more than doubled in size from 2015. There are 9 projects with NI 43-101 compliant silver resource estimates.



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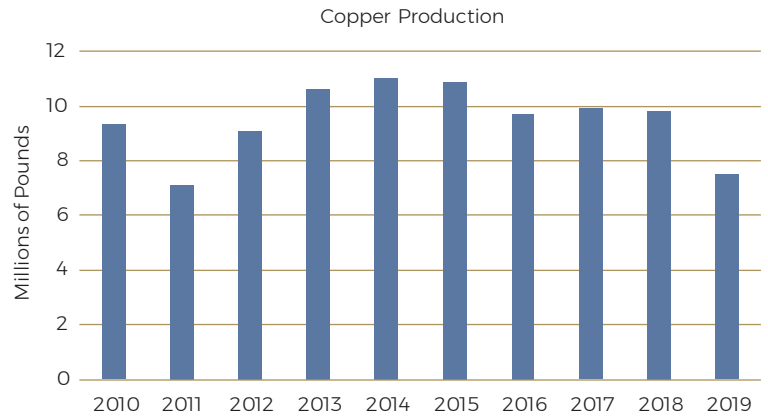
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# COPPER

## Production

Known historic copper production from 1927 through 2015 was 6.49 billion pounds. The only copper production in the last ten years has come from the LaRonde mine. Production fluctuated, peaking in 2014, then declining through 2019.

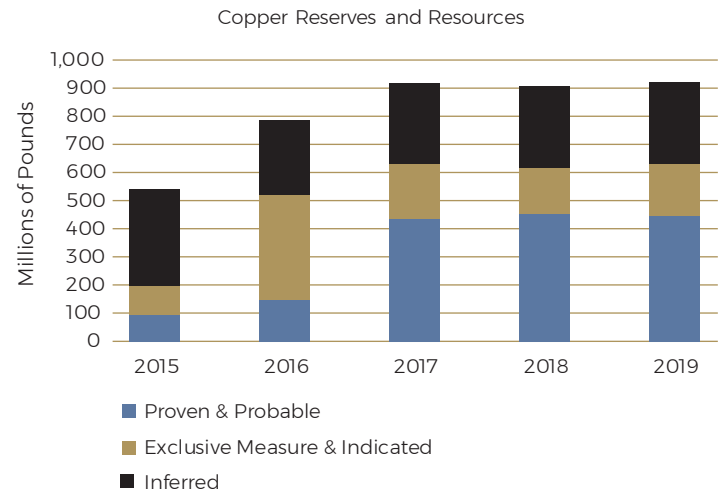
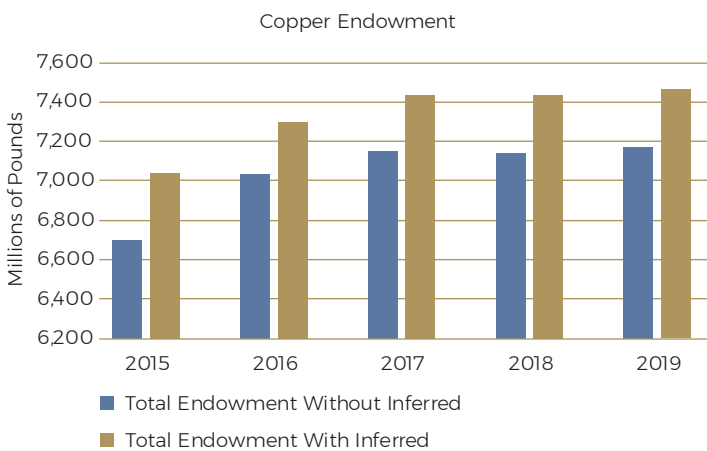
Total copper production in the Val d'Or/Rouyn-Noranda area from 1927 to 2019 was 6.54 billion pounds.



## Endowment

Total copper endowment has increased slightly by 7% over the past five years. Yearly production has declined year over year from 10.8 million pounds in 2015 to 7.49 million pounds in 2019. The main increase in endowment has been largely from reserves and resources. Total copper endowment for the Val d'Or/Rouyn Noranda area reached 7.17 billion pounds ounces at the end of 2019. If current inferred resources are included, copper endowment increases to 7.46 billion pounds.

Copper reserves and resources have almost doubled from 2015 to 2019, increasing from 541.62 million pounds to 924.93 million pounds. **Proven and Probable** and **Inferred Resources** have both more than doubled in size from 2015 with the largest increase in proven and probable. There are eight projects with NI 43-101 compliant copper resource estimates.

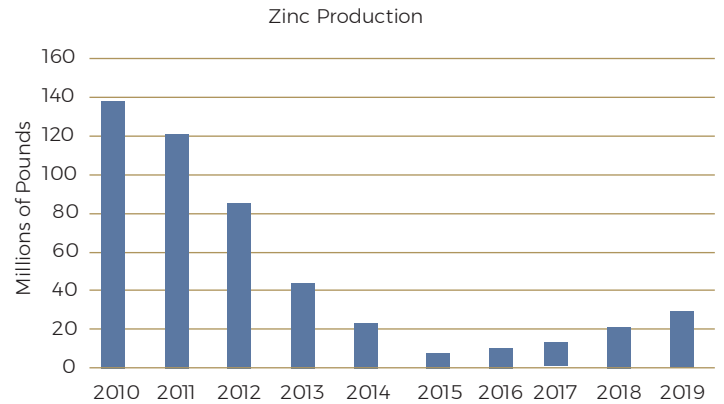


# ZINC

## Production

Known historic zinc production from 1927 through 2015 was 6.59 billion pounds. The LaRonde mine was the only zinc producer in the last 10 years. Yearly production has significantly declined since 2010.

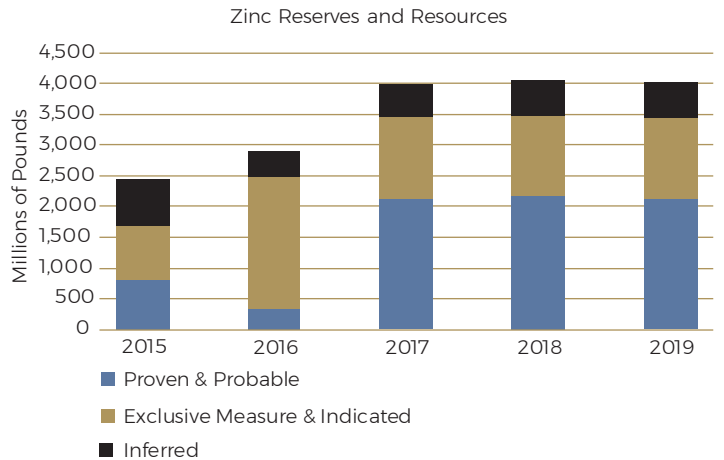
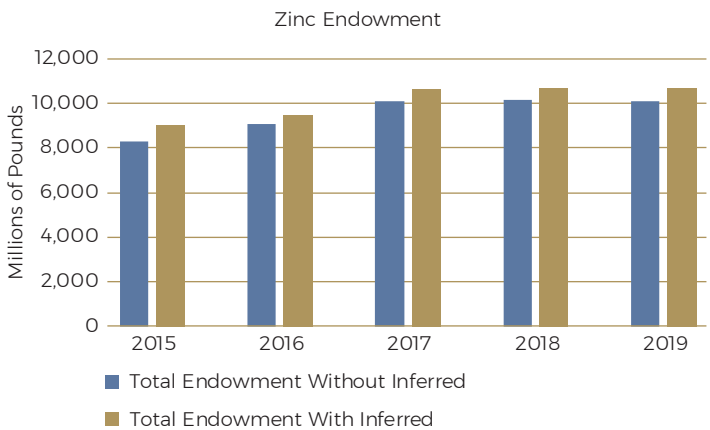
Total zinc production in the Val d'Or/Rouyn-Noranda area from 1927 to 2019 was 6.68 billion pounds.



## Endowment

Total zinc endowment has increased by 22% over the past five years. Yearly production has increased more than 400% year over year from 7.72 million pounds in 2015 to 29.01 million pounds in 2019. The main increase in endowment has been largely from reserves and resources. Total zinc endowment for the Val d'Or/Rouyn Noranda area has flattened in the last three years to 10.12 billion pounds at the end of 2019. Current inferred resources do not add significantly to endowment, increasing it only to 10.70 billion pounds..

Total zinc reserves and resources have increased 65% from 2.44 billion pound in 2015 to 4.02 billion pounds in 2019. **Proven and probable** have shown the largest increase while inferred resources have declined. There are currently seven projects in the Val d'Or/Rouyn-Noranda area with estimated zinc reserves and resources.



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# OTHER METALS

Molybdenum is the only other metal in the area with historic production. The 19.43 million pounds of molybdenum was mined from two mines between 1943 and 1971.

The Dumont nickel project is the only project accounting for estimated reserve and resources of nickel, cobalt, platinum, palladium, and magnetite.

There are two projects with lithium reserves and resources totalling 4.03 billion pounds of Li<sub>2</sub>O.