



# Precious Metals Report 2020

Everything you need to know about gold, silver, platinum and palladium!



# Disclaimer

Dear reader,

Please read the complete disclaimer in the following pages carefully before you start reading this Swiss Resource Capital Publication. By using this Swiss Resource Capital Publication you agree that you have completely understood the following disclaimer and you agree completely with this disclaimer. If at least one of these point does not agree with you than reading and use of this publication is not allowed.

We point out the following:

Swiss Resource Capital AG and the authors of the Swiss Resource Capital AG directly own and/or indirectly own shares of following Companies which are described in this publication: Amex Exploration, Barrian Mining, Caledonia Mining, Cardinal Resources, Discovery Metals, Endeavour Silver, First Majestic Silver, GoldMining, MAG Silver, Osino Resources, TerraX Minerals.

Swiss Resource Capital AG has closed IR consultant contracts with the following companies which are mentioned in this publication: Caledonia Mining, Discovery Metals, Endeavour Silver, GoldMining, MAG Silver und TerraX Minerals.

Swiss Resource Capital AG receives compensation expenses from the following companies mentioned in this publication: Amex Exploration, Barrian Mining, Caledonia Mining, Cardinal Resources, Discovery Metals, Endeavour Silver, First Majestic Silver, GoldMining, MAG Silver, Osino Resources, TerraX Minerals. Therefore, all mentioned companies are sponsors of this publication.

## Risk Disclosure and Liability

Swiss Resource Capital AG is not a securities service provider according to WpHG (Germany) and BörseG (Austria) as well as Art. 620 to 771 obligations law (Switzerland) and is not a finance company according to § 1 Abs. 3 Nr. 6 KWG. All publications of the Swiss Resource Capital AG are explicitly (including all the publications published on the website <http://www.resource-capital.ch> and all sub-websites (like <http://www.resource-capital.ch/de>) and the website <http://www.resource-capital.ch> itself and its sub-websites) neither financial analysis nor are they equal to a professional financial analysis. Instead, all publications of Swiss Resource Capital AG are exclusively for information purposes only and are expressively not trading recommendations regarding the buying or selling of securities. All publica-

tions of Swiss Resource Capital AG represent only the opinion of the respective author. They are neither explicitly nor implicitly to be understood as guarantee of a particular price development of the mentioned financial instruments or as a trading invitation. Every investment in securities mentioned in publications of Swiss Resource Capital AG involve risks which could lead to total a loss of the invested capital and - depending on the investment – to further obligations for example additional payment liabilities. In general, purchase and sell orders should always be limited for your own protection.

This applies especially to all second-line-stocks in the small and micro cap sector and especially to exploration and resource companies which are discussed in the publications of Swiss Resource Capital AG and are exclusively suitable for speculative and risk aware investors. But it applies to all other securities as well. Every exchange participant trades at his own risk. The information in the publications of Swiss Resource Capital AG do not replace an on individual needs geared professional investment advice. In spite of careful research, neither the respective author nor Swiss Resource Capital AG will neither guarantee nor assume liability for actuality, correctness, mistakes, accuracy, completeness, adequacy or quality of the presented information. For pecuniary losses resulting from investments in securities for which information was available in all publications of Swiss Resource Capital AG liability will be assumed neither by Swiss Capital Resource AG nor by the respective author neither explicitly nor implicitly.

Any investment in securities involves risks. Political, economical or other changes can lead to significant stock price losses and in the worst case to a total loss of the invested capital and - depending on the investment – to further obligations for example additional payment liabilities. Especially investments in (foreign) second-line-stocks, in the small and micro cap sector, and especially in the exploration and resource companies are all, in general, associated with an outstandingly high risk. This market segment is characterized by a high volatility and harbours danger of a total loss of the invested capital and - depending on the investment – to further obligations for example additional payment liabilities. As well, small and micro caps are often very illiquid and every order should be strictly limited and, due to an often better pricing at the respective domestic exchange, should be traded there. An investment in securities with low liquidity and small market cap is extremely speculative as well as a high risk and can lead to, in the worst case, a total loss of the invested capital and - depending on the investment – to further obligations for example additional payment liabilities. Engagements in the publications of the shares

and products presented in all publications of Swiss Resource Capital AG have in part foreign exchange risks. The deposit portion of single shares of small and micro cap companies and low capitalized securities like derivatives and leveraged products should only be as high that, in case of a possible total loss, the deposit will only marginally lose in value.

All publications of Swiss Resource Capital AG are exclusively for information purposes only. All information and data in all publications of Swiss Resource Capital AG are obtained from sources which are deemed reliable and trustworthy by Swiss Resource Capital AG and the respective authors at the time of preparation. Swiss Resource Capital AG and all Swiss Resource Capital AG employed or engaged persons have worked for the preparation of all of the published contents with the greatest possible diligence to guarantee that the used and underlying data as well as facts are complete and accurate and the used estimates and made forecasts are realistic. Therefore, liability is categorically precluded for pecuniary losses which could potentially result from use of the information for one's own investment decision.

All information published in publications of Swiss Resource Capital AG reflects the opinion of the respective author or third parties at the time of preparation of the publication. Neither Swiss Resource Capital AG nor the respective authors can be held responsible for any resulting pecuniary losses. All information is subject to change. Swiss Resource Capital AG as well as the respective authors assures that only sources which are deemed reliable and trustworthy by Swiss Resource Capital AG and the respective authors at the time of preparation are used. Although the assessments and statements in all publications of Swiss Resource Capital AG were prepared with due diligence, neither Swiss Resource Capital AG nor the respective authors take any responsibility or liability for the actuality, correctness, mistakes, accuracy, completeness, adequacy or quality of the presented facts or for omissions or incorrect information. The same shall apply for all presentations, numbers, designs and assessments expressed in interviews and videos.

Swiss Resource Capital AG and the respective authors are not obliged to update information in publications. Swiss Resource Capital AG and the respective authors explicitly point out that changes in the used and underlying data, facts, as well as in the estimates could have an impact on the forecasted share price development or the overall estimate of the discussed security. The statements and opinions of Swiss Capital Resource AG as well as the respective author are not recommendations to buy or sell a security.

Neither by subscription nor by use of any publication of Swiss Resource Capital AG or by expressed recommendations or reproduced opinions in such a publication will result in an investment advice contract or investment brokerage contract between Swiss Resource Capital AG or the respective author and the subscriber of this publication.

Investments in securities with low liquidity and small market cap are extremely speculative as well as a high risk. Due to the speculative nature of the presented companies their securities or other financial products it is quite possible that investments can lead to a capital reduction or to a total loss and - depending on the investment – to further obligations for example additional payment liabilities. Any investment in warrants, leveraged certificates or other financial products bears an extremely high risk. Due to political, economical or other changes significant stock price losses can arise and in the worst case a total loss of the invested capital and - depending on the investment – to further obligations for example additional payment liabilities. Any liability claim for foreign share recommendations, derivatives and fund recommendations are in principle ruled out by Swiss Resource Capital AG and the respective authors. Between the readers as well as the subscribers and the authors as well as Swiss Resource Capital AG no consultancy agreement is closed by subscription of a publication of Swiss Resource Capital AG because all information contained in such a publication refer to the respective company but not to the investment decision. Publications of Swiss Resource Capital AG are neither, direct or indirect an offer to buy or for the sale of the discussed security (securities), nor an invitation for the purchase or sale of securities in general. An investment decision regarding any security should not be based on any publication of Swiss Resource Capital AG.

Publications of Swiss Resource Capital AG must not, either in whole or in part be used as a base for a binding contract of all kinds or used as reliable in such a context. Swiss Resource Capital AG is not responsible for consequences especially losses, which arise or could arise by the use or the failure of the application of the views and conclusions in the publications. Swiss Resource Capital AG and the respective authors do not guarantee that the expected profits or mentioned share prices will be achieved.

The reader is strongly encouraged to examine all assertions him/herself. An investment, presented by Swiss Resource Capital AG and the respective authors in partly very speculative shares and financial products should not be made without reading the most current balance sheets as well as assets and liabilities reports of the companies at the Secu-

rities and Exchange Commission (SEC) under [www.sec.gov](http://www.sec.gov) or other regulatory authorities or carrying out other company evaluations. Neither Swiss Resource Capital AG nor the respective authors will guarantee that the expected profits or mentioned share prices will be achieved. Neither Swiss Resource Capital AG nor the respective authors are professional investment or financial advisors. The reader should take advice (e. g. from the principle bank or a trusted advisor) before any investment decision. To reduce risk investors should largely diversify their investments.

In addition, Swiss Resource Capital AG welcomes and supports the journalistic principles of conduct and recommendations of the German press council for the economic and financial market reporting and within the scope of its responsibility will look out that these principles and recommendations are respected by employees, authors and editors.

## Forward-looking Information

Information and statements in all publications of Swiss Resource Capital AG especially in (translated) press releases that are not historical facts are forward-looking information within the meaning of applicable securities laws. They contain risks and uncertainties but not limited to current expectations of the company concerned, the stock concerned or the respective security as well as intentions, plans and opinions. Forward-looking information can often contain words like “expect”, “believe”, “assume”, “goal”, “plan”, “objective”, “intent”, “estimate”, “can”, “should”, “may” and “will” or the negative forms of these expressions or similar words suggesting future events or expectations, ideas, plans, objectives, intentions or statements of future events or performances. Examples for forward-looking information in all publications of Swiss Resource Capital AG include: production guidelines, estimates of future/targeted production rates as well as plans and timing regarding further exploration, drill and development activities. This forward-looking information is based in part on assumption and factors that can change or turn out to be incorrect and therefore may cause actual results, performances or successes to differ materially from those stated or postulated in such forward-looking statements. Such factors and assumption include but are not limited to: failure of preparation of resource and reserve estimates, grade, ore recovery that differs from the estimates, the success of future exploration and drill programs, the reliability of the drill, sample and analytical data, the assumptions regarding the accuracy of the representativeness of the mineralization, the success of the planned metallurgical test work, the significant deviation of capital

and operating costs from the estimates, failure to receive necessary government approval and environmental permits or other project permits, changes of foreign exchange rates, fluctuations of commodity prices, delays by project developments and other factors.

Potential shareholders and prospective investors should be aware that these statements are subject to known and unknown risks, uncertainties and other factors that could cause actual events to differ materially from those indicated in the forward-looking statements. Such factors include but are not limited to the following: risks regarding the inaccuracy of the mineral reserve and mineral resource estimates, fluctuations of the gold price, risks and dangers in connection with mineral exploration, development and mining, risks regarding the creditworthiness or the financial situation of the supplier, the refineries and other parties that are doing business with the company; the insufficient insurance coverage or the failure to receive insurance coverage to cover these risks and dangers, the relationship with employees; relationships with and the demands from the local communities and the indigenous population; political risks; the availability and rising costs in connection with the mining contributions and workforce; the speculative nature of mineral exploration and development including risks of receiving and maintaining the necessary licences and permits, the decreasing quantities and grades of mineral reserves during mining; the global financial situation, current results of the current exploration activities, changes in the final results of the economic assessments and changes of the project parameter to include unexpected economic factors and other factors, risks of increased capital and operating costs, environmental, security and authority risks, expropriation, the tenure of the company to properties including their ownership, increase in competition in the mining industry for properties, equipment, qualified personal and its costs, risks regarding the uncertainty of the timing of events including the increase of the targeted production rates and fluctuations in foreign exchange rates. The shareholders are cautioned not to place undue reliance on forward-looking information. By its nature, forward-looking information involves numerous assumptions, inherent risks and uncertainties both general and specific that contribute to the possibility that the predictions, forecasts, projections and various future events will not occur. Neither Swiss Resource Capital AG nor the referred to company, referred to stock or referred to security undertake no obligation to update publicly otherwise revise any forward-looking information whether as a result of new information, future events or other such factors which affect this information, except as required by law.



**48f Abs. 5 BörseG (Austria) and Art. 620 to 771 obligations law (Switzerland)**

Swiss Resource Capital AG as well as the respective authors of all publications of Swiss Resource Capital AG could have been hired and compensated by the respective company or related third party for the preparation, the electronic distribution and publication of the respective publication and for other services. Therefore the possibility exists for a conflict of interests.

At any time Swiss Resource Capital AG as well as the respective authors of all publications of Swiss Resource Capital AG could hold long and short positions in the described securities and options, futures and other derivatives based on theses securities. Furthermore Swiss Resource Capital AG as well as the respective authors of all publications of Swiss Resource Capital AG reserve the right to buy or sell at any time presented securities and options, futures and other derivatives based on theses securities. Therefore the possibility exists for a conflict of interests.

Single statements to financial instruments made by publications of Swiss Resource Capital AG and the respective authors within the scope of the respective offered charts are not trading recommendations and are not equivalent to a financial analysis.

A disclosure of the security holdings of Swiss Resource Capital AG as well as the respective authors and/or compensations of Swiss Resource Capital AG as well as the respective authors by the company or third parties related to the respective publication will be properly declared in the publication or in the appendix.

The share prices of the discussed financial instruments in the respective publications are, if not clarified, the closing prices of the preceding trading day or more recent prices before the respective publication.

It cannot be ruled out that the interviews and estimates published in all publications of Swiss Resource Capital AG were commissioned and paid for by the respective company or related third parties. Swiss Resource Capital AG as well as the respective authors are receiving from the discussed companies and related third parties directly or indirectly expense allowances for the preparation and the electronic distribution of the publication as well as for other services.

**Exploitation and distribution rights**

Publications of Swiss Resource Capital AG may neither directly or indirectly be transmitted to Great

Britain, Japan, USA or Canada or to an US citizen or a person with place of residence in the USA, Japan, Canada or Great Britain nor brought or distributed in their territory. The publications and their contained information can only be distributed or published in such states where it is legal by applicable law. US citizens are subject to regulation S of the U.S. Securities Act of 1933 and cannot have access. In Great Britain the publications can only be accessible to a person who in terms of the Financial Services Act 1986 is authorized or exempt. If these restrictions are not respected this can be perceived as a violation against the respective state laws of the mentioned countries and possibly of non mentioned countries. Possible resulting legal and liability claims shall be incumbent upon that person, but not Swiss Resource Capital, who has published the publications of Swiss Resource Capital AG in the mentioned countries and regions or has made available the publications of Swiss Resource Capital AG to persons from these countries and regions.

The use of any publication of Swiss Resource Capital AG is intended for private use only. Swiss Resource Capital AG shall be notified in advance or asked for permission if the publications will be used professionally which will be charged.

All information from third parties especially the estimates provided by external user does not reflect the opinion of Swiss Resource Capital AG. Consequently, Swiss Resource Capital AG does not guarantee the actuality, correctness, mistakes, accuracy, completeness, adequacy or quality of the information.

**Note to symmetrical information and opinion generation**

Swiss Resource Capital AG can not rule out that other market letters, media or research companies are discussing concurrently the shares, companies and financial products which are presented in all publications of Swiss Resource Capital AG. This can lead to symmetrical information and opinion generation during that time period.

**No guarantee for share price forecasts**

In all critical diligence regarding the compilation and review of the sources used by Swiss Resource Capital AG like SEC Filings, official company news or interview statements of the respective management neither Swiss Resource Capital AG nor the respective authors can guarantee the correctness, accuracy and completeness of the facts presented in the sources. Neither Swiss Resource Capital AG nor the respective authors will guarantee or be liable for that all assumed share price and profit develop-

ments of the respective companies and financial products respectively in all publications of Swiss Resource Capital AG will be achieved.

**No guarantee for share price data**

No guarantee is given for the accuracy of charts and data to the commodity, currency and stock markets presented in all publications of Swiss Resource Capital AG.

**Copyright**

The copyrights of the single articles are with the respective author. Reprint and/or commercial dissemination and the entry in commercial databases is only permitted with the explicit approval of the respective author or Swiss Resource Capital AG.

All contents published by Swiss Resource Capital AG or under <http://www.resource-capital.ch> – website and relevant sub-websites or within <http://www.resource-capital.ch> – newsletters and by Swiss Resource Capital AG in other media (e.g. Twitter, Facebook, RSS-Feed) are subject to German, Austrian and Swiss copyright and ancillary copyright. Any use which is not approved by German, Austrian and Swiss copyright and ancillary copyright needs first the written consent of the provider or the respective rights owner. This applies especially for reproduction, processing, translation, saving, processing and reproduction of contents in databases or other electronic media or systems. Contents and rights of third parties are marked as such. The unauthorised reproduction or dissemination of single contents and complete pages is not permitted and punishable. Only copies and downloads for personal, private and non commercial use is permitted.

Links to the website of the provider are always welcome and don't need the approval from the website provider. The presentation of this website in external frames is permitted with authorization only. In case of an infringement regarding copyrights Swiss Resource Capital AG will initiate criminal procedure.

**Information from the Federal Financial Supervisory Authority (BaFin)**

You can find further information on how to protect yourself against dubious offers in BaFin brochures directly on the website of the authority at [www.bafin.de](http://www.bafin.de).

**Liability limitation for links**

The <http://www.resource-capital.ch> – website and all sub-websites and the <http://www.resource-capital.ch> – newsletter and all publications of Swiss Resource Capital AG contain links to websites of third parties (“external links”). These websites are subject to liability of the respective operator. Swiss Resource Capital AG has reviewed the foreign contents at the initial linking with the external links if any statutory violations were present. At that time no statutory violations were evident. Swiss Resource Capital AG has no influence on the current and future design and the contents of the linked websites. The placement of external links does not mean that Swiss Resource Capital AG takes ownership of the contents behind the reference or the link. A constant control of these links is not reasonable for Swiss Resource Capital AG without concrete indication of statutory violations. In case of known statutory violations such links will be immediately deleted from the websites of Swiss Resource Capital AG. If you encounter a website of which the content violates applicable law (in any manner) or the content (topics) insults or discriminates individuals or groups of individuals, please contact us immediately.

In its judgement of May 12th, 1998 the Landgericht (district court) Hamburg has ruled that by placing a link one is responsible for the contents of the linked websites. This can only be prevented by explicit dissociation of this content. For all links on the homepage <http://www.resource-capital.ch> and its sub-websites and in all publications of Swiss Resource Capital AG applies: Swiss Resource Capital AG is dissociating itself explicitly from all contents of all linked websites on <http://www.resource-capital.ch> – website and its sub-websites and in the <http://www.resource-capital.ch> – newsletter as well as all publications of Swiss Resource Capital AG and will not take ownership of these contents.”

**Liability limitation for contents of this website**

The contents of the website <http://www.resource-capital.ch> and its sub-websites are compiled with utmost diligence. Swiss Resource Capital AG however does not guarantee the accuracy, completeness and actuality of the provided contents. The use of the contents of website <http://www.resource-capital.ch> and its sub-websites is at the user's risk. Specially marked articles reflect the opinion of the respective author but not always the opinion of Swiss Resource Capital AG.

**Liability limitation for availability of website**

Swiss Resource Capital AG will endeavour to offer the service as uninterrupted as possible. Even with due care downtimes can not be excluded. Swiss Resource Capital AG reserves the right to change or discontinue its service any time.

**Liability limitation for advertisements**

The respective author and the advertiser are exclusively responsible for the content of advertisements in <http://www.resource-capital.ch> – website and its sub-websites or in the <http://www.resource-capital.ch> – newsletter as well as in all publications of Swiss Resource Capital AG and also for the content of the advertised website and the advertised products and services. The presentation of the advertisement does not constitute the acceptance by Swiss Resource Capital AG.

**No contractual relationship**

Use of the website [www.resource-capital.ch](http://www.resource-capital.ch) and its sub-websites and [www.resource-capital.ch](http://www.resource-capital.ch) – newsletter as well as in all publications of Swiss Resource Capital AG no contractual relationship is entered between the user and Swiss Resource Capital AG. In this respect there are no contractual or quasi-contractual claims against Swiss Resource Capital AG.

**Protection of personal data**

The personalized data (e.g. mail address of contact) will only be used by Swiss Resource Capital AG or from the respective company for news and information transmission in general or used for the respective company.

**Data protection**

If within the internet there exists the possibility for entry of personal or business data (email addresses, names, addresses), this data will be disclosed only if the user explicitly volunteers. The use and payment for all offered services is permitted – if technical possible and reasonable – without disclosure of these data or by entry of anonymized data or pseudonyms. Swiss Resource Capital AG points out that the data transmission in the internet (e.g. communication by email) can have security breaches. A complete data protection from unauthorized third party access is not possible. Accordingly no liability is assumed for the unintentional transmission of data.

The use of contact data like postal addresses, telephone and fax numbers as well as email addresses published in the imprint or similar information by third parties for transmission of not explicitly requested information is not permitted. Legal action against the senders of spam mails are expressly reserved by infringement of this prohibition.

By registering in <http://www.resource-capital.ch> – website and its sub-websites or in the <http://www.resource-capital.ch> – newsletter you give us permission to contact you by email. Swiss Resource Capital AG receives and stores automatically via server logs information from your browser including cookie information, IP address and the accessed websites. Reading and accepting our terms of use and privacy statement are a prerequisite for permission to read, use and interact with our website(s).





# Commodity-TV

## The whole world of commodities in one App!

Download  
our unique App  
for free!



Watch Management & Expert Interviews, Site-Visit-Videos,  
News Shows and receive top and up to date  
Mining Information on your mobile device worldwide!

### Amazing features:

- Company Facts
- Global Mining News
- Push Notofications
- Commodity-TV, Rohstoff-TV and Dukascopy-TV
- Live Charts
- JRB-Rohstoffblog



## Table of Contents

Disclaimer	02
Table of Contents   Imprint	07
Preface	09

<b>Gold, silver and palladium mark a turnaround in precious metals – platinum in a luring state</b>	10
---	----

<b>Guest Article by Prof. Dr. Torsten Dennin</b> Global debt and the increasing loss of confidence in the stability of the financial system: Why investors should consider precious metals in their long-term asset strategy.	22
--	----

<b>Interview with Prof. Dr. Torsten Dennin</b> Founder and CEO of Lynkeus Capital LLC	25
--	----

### Company profiles

Amex Exploration	30
Barrian Mining	34
Caledonia Mining	38
Cardinal Resources	42
Discovery Metals	46
Endeavour Silver	50
First Majestic Silver	54
GoldMining	58
MAG Silver	62
Osino Resources	66
TerraX Minerals	70

## Imprint

Editor  
Swiss Resource Capital AG  
Poststr. 1  
9100 Herisau, Schweiz  
Tel : +41 71 354 8501  
Fax : +41 71 560 4271  
info@resource-capital.ch  
www.resource-capital.ch

Editorial staff  
Jochen Staiger  
Tim Rödel

Layout/Design  
Frauke Deutsch

All rights reserved. Reprinting  
material by copying in electronic  
form is not permitted.

Editorial Deadline: 10/01/2019

All images and graphics are, unless  
otherwise stated, by the companies.

Cover: ©coriafra/shutterstock.com

Back  
1: Osisko Mining  
2: fotolia/shutterstock.com  
3: © Elionora Hentzel  
4: fotolia/shutterstock.com

Charts: 10./8/2019  
JS Charts by amCharts





**Commodity-TV and Rohstoff-TV get  
your company the awareness it deserves!**



## Vorwort

Dear Readers,

now in its fourth year of publication, we are delighted to present our special report on precious metals, which follows on from our successful Battery Metals and Uranium Reports. Precious metals are now indispensable for one's own (crisis) provision and asset preservation. Not to be forgotten is the unconditional use of precious metals as a store of value and money substitute, as well as to protect against extremely bad times. The money-printing orgies of the central banks can no longer be stopped and with Christine Lagarde as Mario Draghi's successor, things are getting worse rather than better. Whether there will be a financial collapse is, as always, questionable and controversial. However, the omens condense to storm. Nobody knows when this one breaks loose. However, I strongly recommend watching the movie „The big short“, because it clearly shows the last financial crisis and explains its origin. We are already on the same way there again, because the banks are not learning anything new and after 10 years of upswing, they think they are in an everlasting party. With gold and/or silver ounces you can survive many storms in order to provide yourself and your family with the most necessary food. But we do not want to assume the worst, but physical precious metals reassure me of the possible coming distortions. The price of gold finally broke out on 25 June 2019, leaving behind the final resistance of US\$ 1,385 per ounce that we propagated. As we had already written, the first target we see is around 1,600 US\$ per ounce, then the old highs at 1,900 US\$ per ounce and then our Point & Figure Chart already shows 2,150-2,300 US\$ per ounce. We look positively into the future and take gold as a store of value and inflation protection. Mining companies are still very cheap. Especially producers with dividends are now first choice as well as prospective precious metal producers have an enormous leverage on the respective metal price and are excellently suited as investments. In this precious metal report, we present some interesting companies that are suitable for speculation on rising precious metal prices. We also

want to give you the necessary basic knowledge by means of our general part, so that you can make your own decisions. Our guest interview is also very interesting and should definitely be read.

Swiss Resource Capital AG has set itself the task of providing commodity investors, interested parties and those who would like to become investors with up-to-date and comprehensive information on a wide variety of commodities and mining companies. On our website [www.resource-capital.ch](http://www.resource-capital.ch) you will find about 20 companies and a lot of information and articles about raw materials.

We would like to give you the necessary insights through our special reports and provide you with comprehensive information. In addition, our two raw material IP-TV channels [www.Commodity-TV.net](http://www.Commodity-TV.net) & [www.Rohstoff-TV.net](http://www.Rohstoff-TV.net) are always available to you free of charge at any time. If you are on the go, we recommend our new Commodity TV App for iPhone and Android, which provides you with real-time charts, prices and the latest videos. My team and I hope you enjoy reading the Special Report on Precious Metals and that we can provide you with lots of new information, impressions and ideas. Only those who inform themselves in many ways and take their investment matters into their own hands will be able to win and preserve their assets in these difficult times. Precious metals have existed for thousands of years and will continue to do so.

Yours, Jochen Staiger



Jochen Staiger is founder and CEO of Swiss Resource Capital AG, located in Herisau, Switzerland. As chief-editor and founder of the first two resource IP-TV-channels Commodity-TV and its German counterpart Rohstoff-TV, he reports about companies, experts, fund managers and various themes around the international mining business and the correspondent metals.



Tim Roedel is chief-editorial- and chief-communications-manager at SRC AG. He has been active in the commodity sector since 2007 and held several editor- and chief-editor-positions, e.g. at the publications Rohstoff-Spiegel, Rohstoff-Woche, Rohstoffraketen, Wahrer Wohlstand and First Mover. He owns an enormous commodity expertise and a wide-spread network within the whole resource sector.



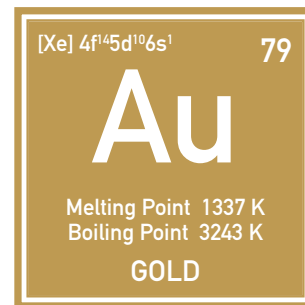
# Gold, silver and palladium mark a turnaround in precious metals – platinum in a luring state

Precious metal investors can breathe a sigh of relief, precious metals are finally back on the trigger! In the case of palladium, a trend reversal has been underway for some time now, with the price of palladium hitting US\$ 1,670 per ounce from US\$ 470 in January 2016. Gold saw its latest low in October 2018 and has since risen from US\$ 1,180 to - at its peak - just under US\$ 1,550 per ounce. In June 2019 there was even a breakout from a downward trend channel that had lasted for years. In many currencies, the yellow metal is even trading at or close to all-time highs. Silver was also able to break through upwards in June 2019 and quickly climb from just under US\$ 14 to - at its peak - US\$ 19.30 per ounce. While the recent rises in silver and palladium have been driven primarily by economic and speculative factors, gold has been driven more by fiscal and geopolitical distortions. Only a continued extremely strong US\$ (still) prevents a new dollar all-time high in the gold price.

ous metals, including copper. A third group consists of the so-called short-lived radioactive precious metals, which play virtually no role in practice. In the following, this report will deal exclusively with the four most common precious metals gold, silver, platinum and palladium.

## Gold: Everyone loves it, everyone wants it!

Gold is a chemical element with the element symbol Au and the atomic number 79. It can be machined very well (moderate melting temperature) and does not corrode. Not only is it rare, but it is also heavy, and its yellow shine is resistant, which is why it is regarded as imperishable and is therefore used to a large extent for jewellery or in the form of coins or bars to preserve its value. Gold is also considered easy to alloy, which makes it very attractive as a material.



### Most important characteristics: Appearance, corrosion resistance, good workability, good contact

Not only in the form of jewellery or coins, but also in medical applications, gold scores particularly highly with its yellow appearance and corrosion resistance. For example, in dental prosthetics, where additional precious metals such as platinum are added due to the relatively

high softness of gold. In industry, gold is used mainly in the construction of circuits as an additive (gold plating) to wires, printed circuit boards, switching contacts and connectors.

## Deposits and extraction

Gold is very rare in nature. The earth's crust contains an average of only 4 grams of gold per 1,000 tons of rock. In addition, it occurs on earth predominantly dignified, i.e. in elementary, metallic form. It is found in primary raw material deposits as gold-bearing rock (gold ore) as well as in secondary deposits, including soap deposits. Up to 20% of the gold mined annually is extracted as by-product, mainly from copper, nickel or other precious metal mines.

## Supply situation

In 2018, a total of 3,500.8 tonnes of gold were extracted from mines and 1,167.5 tonnes from recycling. This means that the total gold supply rose by around 65 tonnes compared with 2017 but was some 12 tonnes below the gold supply of 2016.

The main gold mining areas are currently China, Australia, Russia, the USA and Canada, which together account for almost half of the total annual production. The former, until 2007 absolute leader in gold production, South Africa was in 2018 only in ninth place. Other important gold producing nations are Peru, Indonesia, Ghana and Mexico, where gold is mined mainly as a by-product from silver mines.

### Gold production rises only marginally – Gold peak reached?!

Since the turn of the millennium, gold production has risen every year until 2018, but this has recently weakened



more and more. While around 2,429 tonnes of the yellow metal were extracted from the earth worldwide in 2008, the figure was 2,857 tonnes in 2011 and 3,290 tonnes in 2015. Since then, production has risen only marginally to 3,398 tonnes in 2016 and 3,446 tonnes in 2017. Contrary to all forecasts, gold production rose again slightly in 2018 to 3,500.8 tonnes. Even though 2018 represented another record year in gold production, it can be assumed that the gold peak, i.e. the annual gold production, has reached its peak for the time being.

### The reasons for a decline in gold production are manifold

Several factors contribute to this. First, more and more deposits are reaching the end of their lifetime. Those that are not yet fully exploited must be removed more and more elaborately in order to obtain further gold-bearing material. Some mines already reach depths of 4,000 meters and more.

The gold content continues to fall steadily. Currently, gold deposits are still exploited at an average of just over 1 gram of gold per tonne of rock (g/t). However, there are already indications that this mark will drop to below 0.9g/t in a few years' time for deposits that have not yet been developed.

A third point is the (lack of) discovery of new deposits. While more than a billion ounces of gold were discovered in the 1990s, from 2000 to 2014 the figure was

*Gold is money and has been used for thousands of years to preserve value and protect against inflation.  
(Source: fotolia/shutterstock.com)*



Goldprice US\$/oz  
(Source: JS by amChart)

## What are precious metals?

In purely chemical terms, precious metals are metals that are resistant to corrosion, i.e. that are permanently chemically stable in a natural environment under the influence of air and water. The group of precious metals primarily includes gold and silver, as well as the so-called platinum metals platinum, palladium, ruthenium, rhodium, osmium and iridium. Mercury is also a precious metal. There are also a number of so-called semi-precious





Gold supply (green) and -demand (yellow)  
(Source: own representation)

just over 600 million ounces. Since then, the new discoveries have again really collapsed. This is mainly due to the fact that gold producers have concentrated primarily on reducing mining prices in recent years due to the continuing bear market in gold prices. Particular savings were made on exploration, which meant that virtually no major deposits were discovered in recent years.

This means nothing other than that, as a result of the above points, there is a high probability that production will decline in the coming years.

## Demand situation

### Central banks buy like crazy

The central banks are „exacerbating“ the situation, albeit only marginally at present. After decades of gold sales, they have been back on the buying side since 2010 and have recently even recorded record purchases. A total of 23 central banks increased their gold reserves in 2018. Russia (which has officially overtaken China in the meantime), but also Turkey, India, Poland, Egypt, Brazil and Kazakhstan bought gold in 2018. Central banks increased their gold stocks by 656.3 tonnes in 2018. This was 73% more than in 2017, which meant that a large amount of supply was taken off the market by the central banks alone, which once again appeared on the demand side and not on the supply side.

### Demand from jewellery sector and investment sector stable – technology sector growing steadily

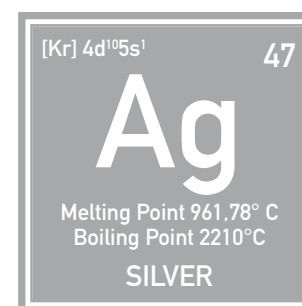
In 2018, there was demand for around 4,396 tonnes of gold worldwide. The lion's share was accounted for by the jewellery sector, which consumed 2,241 tonnes. In second place was the investment sector, which demanded about 1,164 tonnes. Demand from the technology sector was strong, reaching 334.8 metric tons in 2018. This showed that gold is being used more and more not only in smartphones and game consoles, but also in the field of electromobility. This is a circumstance which, in view of the beginning electric (mobility) revolution, is likely to lead to continued strong growth in demand from the technology sector in the future.

### Conclusion: Everything depends on the investment sector

Although the technology sector in particular is likely to generate the highest percentage growth in demand for gold in the coming years, everything depends on the investment sector. Assuming that the jewellery industry is likely to remain at the same level in terms of demand as in previous years, it is precisely the inflows into gold-deposited ETFs that have recently been at a rather weak level, but which have recovered since the end of 2018 and therefore have the greatest demand growth potential. From June to August 2019 alone, the global ETFs recorded a gold inflow of over 300 tonnes! It will be exciting on the supply side. A lack of replenishment in the form of high-grade new discoveries as well as an increasingly cost-intensive supply, as more difficult mining is likely not only to lead to a future supply deficit, but also to the necessity of a higher gold price so that demand can be met at all in a cost-covering manner.

## Silver: The little brother of gold could become the new star in regenerative energies!

Silver is a chemical element with the element symbol Ag and the atomic number 47 and belongs to the so-called transition metals. It is a soft, easily deformable heavy metal with the highest electrical conductivity of all elements and the highest thermal conductivity of all metals. It is precisely these properties that make it an indispensable metal for industrial applications.



But silver is much more than that: unlike gold, it is consumed, and the sheer number of possible applications is constantly increasing with technical progress. In addition to being an industrial metal, silver is also a precious metal. Like gold it is in principle money and serves to maintain value. It can also be seen as a kind of hedge against progressive inflation.

## Supply situation

### Mexico, Peru and China are leading producer nations

In 2015, global silver production reached an all-time high of 893.7 million ounces. In 2016, production fell for the first time in many years. In 2016, 893.4 million ounces of silver were extracted from the

earth's crust. In 2017 there was even a real slump to only 876.9 million ounces! In 2018, this trend continued: worldwide production amounted to only 855.7 million ounces! With an annual production of 180 million ounces (about 20% of total world production), Mexico ranks first among the producing nations, followed by Peru and China. Together, these three countries account for about half of global silver production.

### Silver is above all a by-product!

Only about 30% of the annual production comes from pure silver mines or from mines in which silver is the primary raw material. The vast majority (70%), on the other hand, comes from mines in which silver is only a by-product, i.e. mainly from zinc/lead mines, but also from copper and gold mines.

### Weak base metal prices cause silver production to stagnate and supply to fall overall

This high dependency primarily on base metals such as lead, zinc and copper means that weakening base metal prices and the associated closure of mines or at least a reduction in the corresponding base metal production also have a negative impact on the production of the by-product silver. Thus, price declines - above all for copper, but also for lead - in recent years have ensured that silver production only rose marginally and has even been in decline since 2016. Stagnating silver production is to be expected in the coming years, as the output of new mines will only be able to compensate for the loss of zinc/lead mines with difficulty. From today's perspective, silver production is even expected to decline again from 2019 onwards, as is the overall silver supply (including recycling). This is primarily due to the expected closure of several medium-sized to large zinc/lead mines



and further to an enormous investment backlog which has accumulated in recent years due to the weak silver price development. Corresponding silver projects were put on hold and developed only inadequately. The consequence of this is that these projects will only be put into production after a long delay. In addition, recycling has been declining since 2011 and in 2018 was only about 151 million ounces compared to 261 million ounces in 2011.



Silverprice US\$/oz  
(Source: JS by amChart)

**Silver companies set priorities on cost savings**

The development of the mine pipeline has stalled in recent years with weak silver prices, partly because the silver companies had to deal primarily with getting their cost structure under control. The high silver prices, mainly in the years 2010 to 2012, ensured that mines with all-in costs of over US\$ 20 per ounce were also put into operation. These quickly became unprofitable after 2012. But instead of closing them, the companies have been trying to reduce costs ever since. There was little time and even less money left for elaborate exploration and development programs. In the meantime, the vast majority of companies have been able to reduce their costs to an acceptable and largely profitable level.

**Recycling and central bank sales should not contribute to an increase in supply**

A further decline in the supply of silver recycling can also be expected. Sales by central banks have hardly played a role since 2011 and are unlikely to lead to a significant increase in silver supply in the coming years.

**Demand situation**

**Silver with hermaphroditic function**

While gold is mainly used as an investment, to preserve value and in the form of jewellery (only about 9% of annual demand comes from industry), silver has a kind of hermaphroditic function. This means that recently about 56% of the total silver demand came from industry, while the rest was mainly demanded by investors in the form of bars and coins as well as by the jewellery industry.

**Main applications: Electronics, Alloys, Photography, Photovoltaics**

Its peak values for important properties (highest electrical conductivity of all metals, high thermal conductivity and pronounced optical reflectivity) make silver indispensable above all in the fields of electrics, electronics and optics or photography. These sectors also account for a good half of the total industrial demand of about 580 million ounces. In addition, there are applications as silver alloys (with copper, zinc, tin, nickel, indium), which are used in electrical engineering and soldering technology as solder alloys (so-called brazing), contact materials (especially in relays) and conductive materials (such as capacitor coatings). Since 2011, the photovoltaic sector has also played an important role in silver de-

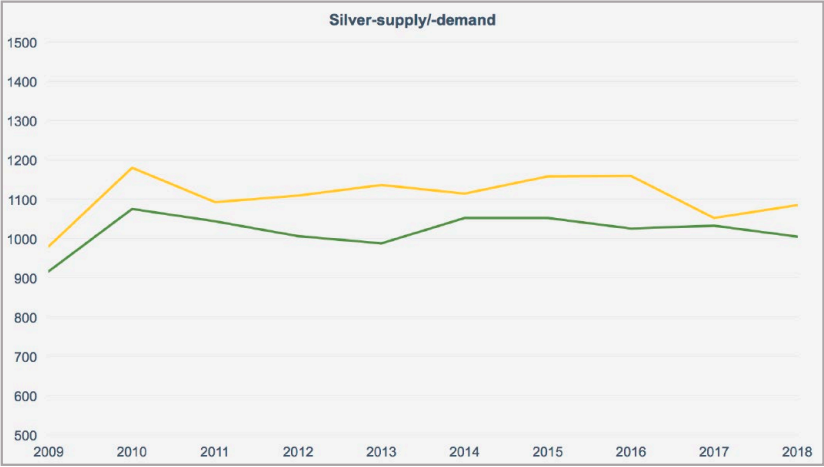
mand. China, in particular, wants to significantly increase the share of photovoltaic capacity. By 2020 alone, the Middle Kingdom wants to achieve 110 gigawatts of cumulative photovoltaic output. This means that more and more silver is bound in corresponding solar modules for at least 20 years!

**Physical demand recently higher again**

Physical silver demand reached a record high of approximately 1.162 billion ounces in 2015 and dropped from an extremely high level to approximately 1.030 billion ounces in 2016 and 998 million ounces in 2017. In 2018, silver demand rose sharply again to 1.033 billion ounces, mainly due to a revived investment sector. The demand for coins and bars rose by 30.8 million ounces from 2017 to 2018 to 181.2 million ounces. The demand from the jewelry sector increased by 8 million ounces, the demand for other silverware by 3.5 million ounces. It is noticeable that industrial demand fell by about 7 million ounces and thus to just under 56% of total demand.

**Conclusion: Continuing supply deficit**

The silver sector has been running a supply deficit for 10 years. Since 2009, a total of around 860 million ounces of silver,



Silversupply (green) and  
Silverdemand (yellow)  
(Source: own representation)

i.e. virtually the entire production of 2018, have been demanded more than could be produced. All in all, global silver demand is expected to rise again in the coming years. In addition to expected rising ETF inflows and further physical demand, the Asian jewellery industry and several industrial sectors such as photovoltaics, touchscreens and displays in particular are expected to see some drastic increases in demand. On the supply side, the same applies as for gold: most primary silver producers have concentrated in recent years primarily on reducing mining prices due to a sustained slump in silver prices. Particular savings were made on exploration, which meant that virtually no major deposits were discovered in recent years. Price weaknesses in several base metals also caused the development of mines producing silver as a by-product to be postponed for the time being.

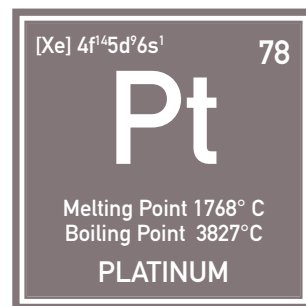


Like gold, silver is in principle money and serves to maintain value and protect against inflation.  
(Source: shutterstock.com)



## Platinum: Irreplaceable in industry, but increasingly replaced by palladium!

Platinum is considered by investors to be an absolute rarity and at the same time extremely mysterious. Platinum is a chemical element with the element symbol Pt and the atomic number 78.



### Main properties: Forgeable, ductile, corrosion resistant

It has an extremely high density and is at the same time very easy to forge and stretch. Its grey-white colour has always fascinated people, probably also because platinum has a remarkable resistance to corrosion and therefore does not tarnish. Due to its high durability, tarnish resistance and rarity, platinum is particularly suitable for the production of high-quality jewellery.

### Almost infinite possibilities of use

Platinum finds its way into a whole range of different applications. By far the most common use of platinum is in the automotive industry, where it is used in the form of automotive catalysts. In addition to the classic diesel oxidation catalysts, platinum is also finding increasing use in catalysts in fuel cells, which could be an

enormous demand driver in the future. The second major field of application in industry is the chemical sector. Platinum is also used in alloys, for glass production (crucibles), in electrical resistors and for medical applications and apparatus. Another large field of application is the jewellery industry, where platinum is often alloyed with other metals, mainly gold. The fourth major area is the investment sector.

### Deposits and extraction

Platinum comes in a dignified form, i.e. in elementary form in nature. Metallic platinum (platinum soaps) is practically no longer mined today. Although a large part of the platinum mined in a few places comes from primary deposits, production as a by-product in the production of non-ferrous metals (copper and nickel) is becoming increasingly important. There the platinum group metals are produced as a by-product of nickel refining.



Platinum Nugget (Source: Rob Lavinsky, CC, 3.0 US)

### Supply situation

#### South Africa, Zimbabwe, the USA and Russia are the leading producer nations

Only the South African Bushveld Complex, the Stillwater Complex in Montana/USA and Russia have extensive and noteworthy primary platinum mining. Over 73% of the world's platinum mined in

2018 came from South African mines. Russia followed with about 10.8%, Zimbabwe with 7% and North America with 6%. Overall, platinum mining is a relatively small sector, with only about 6.11 million ounces produced in 2018, for example.

### High recycling rate

Although a certain amount of gold and silver is recycled back into the cycle, platinum is recycled to a very high percentage. In 2018, about 2.10 million ounces were recovered from recycling. Recycling thus accounted for 25.6% of the total platinum supply for the year.

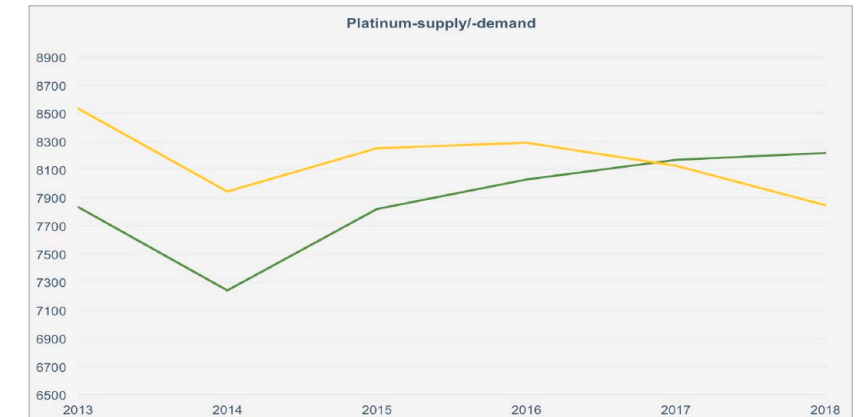
### Supply stagnates

Overall, the global platinum supply has stagnated in recent years. While in 2013 about 7.8 million ounces of platinum were available (of which about 5.8 million ounces from mining and nearly 2 million ounces from recycling), in 2018 about 8.2 million ounces of platinum reached the free market (mining: 6.1 million ounces, recycling: 2.1 million ounces). An increase in platinum production, on the other hand, is not in sight, as in South Africa in particular platinum extraction is becoming ever deeper and therefore more expensive.

### Demand situation

#### Platinum has a hybrid function

Like silver, platinum has a kind of hybrid function. This means that about two thirds of total platinum demand come from industry, while the rest comes mainly from the jewellery industry and from investors in the form of bars and coins.



### Main customers: automotive industry and jewellery production

Expressed in figures, it is the automotive sector that had the highest demand for platinum in 2018. 3.05 million ounces were mainly used for catalyst construction. In second place was the jewellery industry, which demanded 2.27 million ounces of supply (including recycling). This was followed by demand from the rest of the industry with 2.46 million ounces. The investment sector collapsed from 361,000 ounces in 2017 to only 67,000 ounces in 2018.

### Hydrogen storage technologies as future demand drivers

Innovative hydrogen storage technologies are already being researched in South Africa. Power generation with platinum catalysts is the big issue here. Low-cost hydrogen storage systems for fuel cell vehicles and portable applications are still dreams of the future, but China alone plans to produce two million hydrogen fuel cell vehicles by 2030. Germany has just commissioned the world's first hydrogen fuel cell train. A large platinum company is already investing together with Shell Technology in the development of hydrogen compression technology. As the name suggests, these so-called platinum electric vehicles need platinum as the basic raw material.

Platinum supply (green) and  
Platinum demand (yellow)  
(Source: own representation)



## Industry demand increases, jewellery demand decreases, investment demand collapses – current supply surplus

Four things are particularly striking in the platinum sector.

- ▶ Demand from industry is increasing more and more. While demand from the automotive and industrial sectors was still at 4.827 million ounces in 2014, this figure rose to 5.51 million ounces by 2018.
- ▶ Secondly, the trend in the jewellery sector, on the other hand, is contrary. In 2014, 2.839 million ounces of platinum were still in demand from jewellery manufacturers. By 2018, however, it was only 2.269 million ounces.
- ▶ Third: Demand from the investment sector, i.e. in the form of bars and coins for investment purposes, is highly volatile, but is declining overall. By 2014, 277,000 ounces were in demand for investment purposes. By 2015 it was 451,000 ounces, by 2016 it was 620,000 ounces. From 2017, the big slump occurred when only 361,000 ounces were still in demand and in 2018 only 67,000 ounces were left.
- ▶ Fourth, while there was still a supply deficit of just under 262,000 ounces by 2016, including recycling, this

turned into a surplus supply of 44,000 ounces in 2017. In 2018, even 372,000 ounces more platinum was offered than was in demand. The pure platinum production of 6.113 million ounces in 2018 cannot keep up with the demand of 7.846 million ounces.

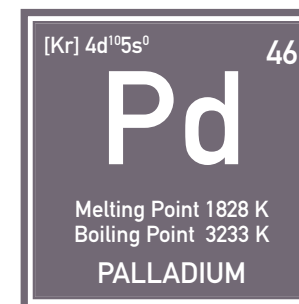
## Conclusion: The key lies in recycling, investment demand and car manufacturers – investment sector with significantly better prospects

The demand for platinum can therefore only be met because of the very large share of platinum recycling in the total supply. The recycling rate has recently risen again slightly and could accelerate again in view of the millions of diesel vehicles that have been scrapped. If the fuel cell becomes established in automotive engineering alongside the purely electric car, an increase in demand can be expected from there. Much also stands and falls with the investment sector, which is likely to return to its former strength, partly due to the current low platinum price. Johnson Matthey's experts even expect investment demand for platinum to reach 850,000 ounces in 2019. An end to the excess supply is therefore expected as early as 2019.



## Palladium: not just a platinum substitute!

Palladium is primarily a chemical element with the element symbol Pd and the atomic number 46. Many experts regard it as a substitute for platinum in several applications, mainly in the production of catalysts, because it is very similar to platinum in chemical behavior.



## Most important characteristics: Low melting point, reactive, absorbent

Palladium has the lowest melting point among platinum metals and is also the most reactive. At room temperature it does not react with oxygen. It retains its metallic shine in the air and does not tarnish, which makes it interesting for the jewelry sector and to a lesser extent for the investment sector. The low melting point makes it easier to process than platinum. Palladium also has the highest absorption capacity of all elements for hydrogen. At room temperature it can bind up to 3,000 times its own volume.

## Most important applications: Exhaust catalysts, alloys, electrode materials

Finely dispersed, palladium is an excellent catalyst for accelerating chemical reactions, especially for the addition and elimination of hydrogen and for cracking hydrocarbons. By far the most important application for palladium is thus in the

field of catalytic converters for gasoline engines. About 83% of the palladium demanded in 2017 was needed for the construction of catalytic converters. Palladium is also frequently used for alloys in jewellery, especially in combination with gold, from which so-called white gold is produced. Palladium removes the golden-yellow colour from the entire alloy. Palladium is also used as an electrode material for fuel cells and as a contact material for relays.

## Deposits and extraction

Metallic palladium and palladium-containing alloys are found mainly in river sediments as geological soaps but are largely exploited. Most of it is now extracted as a by-product from nickel and copper mines.

## Supply situation

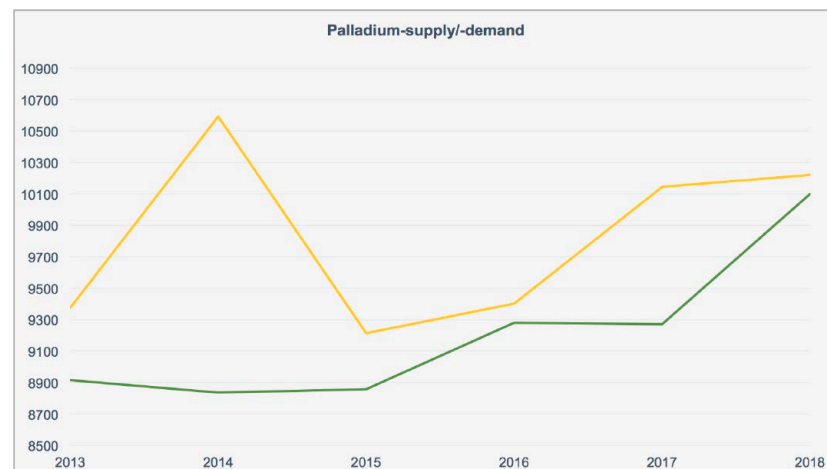
### South Africa and Russia dominate palladium production

In recent years, South Africa and Russia have emerged as the clearly dominant palladium producing nations. In 2018 Russia contributed 42.6% of the total production. South Africa followed closely with 36.4%. The remaining palladium production was largely split between the USA and Canada. Only 8% of the world's palladium came from other countries. Overall, platinum mining is a relatively small sector with only about 6.9 million ounces produced per year.

## High recycling rate

Similar to platinum, palladium's high recycling rate contributes to (almost) meeting demand. In 2018, a total of 3.12 million ounces of palladium were recycled. This represented 30.9% of the total palladium supply.





Palladium supply (green) and  
Palladium demand (yellow)  
(Source: own representation)

### Supply stagnating to increasing

The palladium supply showed stagnating to rising tendencies over the past three years, which was mainly due to two decisive factors.

Firstly, increasing recycling. This increased by approximately 89,000 ounces from 2015 to 2016 and by an impressive 371,000 ounces from 2016 to 2017 to 2.86 million ounces. In 2018, over 3 million ounces were recycled for the first time, exactly 3.124 million ounces.

Secondly, the high returns from the investment sector, mainly from corresponding palladium-backed ETFs. In 2015, 659,000 ounces of palladium returned to the free market, in 2016 646,000 ounces, in 2017 386,000 ounces and in 2018 about 574,000 ounces.

As a result, the total palladium supply increased from 9.214 million ounces in 2015 to 10.222 million ounces in 2018.

As with platinum, palladium is also expected to increase its recycling rate in recent years, but at the same time production will tend to decline.

## Demand situation

### Supply deficit in 2018

In contrast to platinum, however, the palladium market has been suffering from a clear supply deficit for years, which amounted to around 121,000 ounces in 2018.

### Car manufacturers demand more and more palladium – investment sector remains weak

The main reason for this is the strong increase in demand in the automotive sector. Whereas in 2015 there was still demand for 7.7 million ounces of palladium, mainly for use in catalytic converters, by 2016 there were already 7.98 million ounces, by 2017 even 8.53 million ounces and by 2018 8.72 million ounces. The extent to which this trend will continue remains to be seen, although automobile manufacturers are increasingly using pal-



Sibanye-Stillwaters Rustenburg Gold  
and Platinum Mine  
(Source: Sibanye-Stillwater)

ladium as a substitute for platinum. Johnson Matthey's experts expect the automotive sector to demand up to 9.5 million ounces of platinum by 2019. However, if demand for gasoline engines falls, palladium demand will also fall. This can possibly be compensated for by the use of fuel cell vehicles, but these are still a dream of the future. The second major customer, the industry, has recently remained at a stable level of around 1.92 million ounces with its demand. The jewellery industry hardly plays a role with a demand of around 157,000 ounces per year. The investment sector has recently remained weak and is likely to remain a supplier in 2019 rather than a consumer of palladium, albeit not to the same extent as in 2018.

vertheless, there is still a small supply deficit. The extent to which this will continue or dissolve in the coming years depends not only on the price of palladium but also on how the petrol (combustion) engine will continue to perform. Palladium's dependence on the automotive industry is unmistakably high, making it a riskier investment than silver, for example.

## The best precious metal shares promise multiplication potential!

Especially gold and silver, but also palladium have managed to reverse the trend and are riding the wave of success. Corresponding share values, on the other hand, are still heavily undervalued compared to the large (standard) indices. There is a supply deficit for palladium that will not disappear in the coming years. We have taken this as an opportunity to present some promising precious metal companies to you below. We are concentrating primarily on development companies with extremely promising projects and on mining companies already producing with established and profitable deposits.

### Conclusion: Much depends on the price

However, this is mainly because the palladium price has recently risen sharply. This almost quadrupled within three years from the beginning of 2016. As a result of the higher palladium price, many investors reduced or liquidated their ETF holdings and realised gains. At the same time, palladium is also becoming increasingly unattractive as a substitute for platinum, which is now much cheaper. Ne-



Palladium price US\$/oz  
(Source: JS by amChart)



# Global debt and the increasing loss of confidence in the stability of the financial system: Why investors should consider precious metals in their long-term asset strategy.



Guest Article by  
Prof. Dr. Torsten Dennin

**The global debt of states, companies and households grows more per quarter, than the entire physical gold market is worth. Central bank balance sheets continue to grow and the delicate upward trend in international interest rates has been stifled – an explosive mix for the global financial system in the long term. In this environment, investors should continue to rely on precious metals such as gold, silver, platinum and palladium in their strategic asset allocation.**

## It's been almost 50 years.

The collapse of the Bretton Woods system in 1971 initiated one of the largest economic experiments in world history: Currencies that were no longer tied to a leading currency or material values such as gold or silver – the system of flexible exchange rates was born and the principle of incurring debt without consequences became viable.

## Debt is rising faster than the economy is growing. Money devalues.

From 1970 to the present day, global economic power, measured by global GDP (the value of all products and services manufactured in a year), has risen to over \$85 trillion. Over the same period, however, the debts of private individuals, companies and states have grown disproportionately: together they reach almost 260 trillion US dollars, which corresponds to a global debt ratio of more than 300%. The International Monetary Fund (IMF) already warned in 2018 that the mountain of debt is greater today than it was at the height of the financial

crisis in 2007, despite the debt brake, fiscal pact and American debt ceiling. In January 2019, the national debt of the USA alone will scratch the 22 trillion US dollar mark – and the trend is rising, as the debt limitation was suspended without further ado. This poses new risks to the global financial system. Looking back on the last few years, this also means that not only was ever weaker growth financed with ever more debt, but all currencies suffered massive losses in purchasing power. Even the mighty US dollar today has only a fraction of its original purchasing power of 1971 – we are talking about a depreciation of 80%! More precisely: 100 US dollars in 1971 had roughly the same purchasing power as 620 US dollars today. During the same period, the Deutschmark and then the euro lost slightly more than 60% of their value <sup>1</sup>.

## Debts are rising, thanks to zero interest rate policy.

Despite a historically low level of interest rates, even Germany, Europe's schoolmaster, has only managed to implement a black zero in its budgetary policy. This means that no new debts are taken on, but also no debts are reduced. The calls to even extend the debt in order to finance more education or to save the climate, on the other hand, are constantly getting louder. In the USA, on the other hand, the tax reform and the current budget are likely to increase the already gigantic debt in the next three years by a further trillion US dollars a year.

## What happens when...? Negative effects from rising interest rates.

What happens now in an environment of rising interest rates? The first consequence is an increase in debt service. Public spending is falling, i.e. less money is available for public investment and social services. Companies limit their investments, which has negative effects on the economy and employment. Households have to spend more money on, for example, credit card debt, car lease payments and real estate loans, and consequently limit their consumption. As you can see at first glance, this is not a pleasant scenario. On the other hand, the massive rise in debt levels is a guarantee that interest rates cannot be reduced to a „normal“, i.e. historically average level. The American FED has made this clear this year with its first rate cut since the financial crisis. And in Europe, the ECB is following suit and is even launching a new bond purchase programme.

## Central Bank Balances and Target Balances. The risks are rising.

The global economic and financial crisis from 2007 and the sovereign debt crisis in Europe from 2010 have cost much confidence in the financial system and government institutions. The fight against the crisis has taken the policy of cheap money with negative interest rates to the extreme in Europe. The unconventional monetary policy of the central banks has inflated the central bank balance sheets of the largest economic areas like balloons – FED, ECB, BoJ, PboC, BoE or SNB. In Europe, the balance sheet number of the European Central Bank now exceeds the total economic strength of Germany. In addition, the target balances in the Euro system have taken on an unprecedented size: the balance sheet requirement of the

Deutsche Bundesbank against the Euro system, for example, rose to 976 billion euros in the summer of 2018, and the one trillion euro mark is within reach. For example, if Italy leaves the euro area, half of this amount is at risk.

## Can precious metals protect your assets?

In this context, investment advisors often refer to precious metals in strategic asset allocation to hedge risks. The gold market is by far the largest precious metals market, followed by silver and the platinum group metals platinum, palladium, rhodium, ruthenium, osmium and iridium, of which only platinum and palladium are suitable for investment.<sup>2</sup>

Gold has proven its worth as a store of value for 5,000 years, and gold and silver in the form of coins have been used as means of payment for more than 2,500 years. Since 1970, gold and other precious metals have been in a much better position to preserve purchasing power than the US dollar and the Deutsche mark or the euro. At present, however, it is not the fear of inflation but the concern for the financial system that makes gold interesting. However, after several lean years, inflation can quickly become an issue again, if the central bank's target of 2% is exceeded in Europe, an overshooting is likely.

What is the fundamental value of a troy ounce of gold or silver? Does an intrinsic value exist that is oriented, for example, to the funding costs? It is undisputed in industry circles that the costs of promotion mark a lower limit of price development at least in the medium to long term. How attractive it is to own precious me-

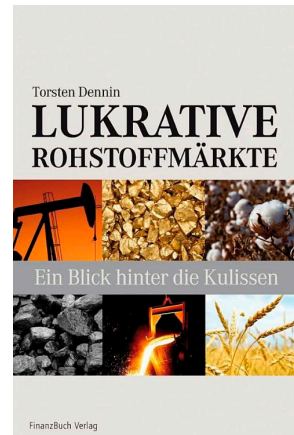
Dr. Torsten Dennin has over 15 years of professional investment experience. He is head of asset management at Asset Management Switzerland AG and founder and managing director of Lynkeus Capital, a Swiss investment company specialising in commodities.

Dr. Dennin is Professor of Economics at EBC University, Düsseldorf, and a full member of the Berlin Institute of Finance, Innovation and Digitalization. He also lectures regularly at the Dualen-Hochschule Baden-Württemberg (DHBW) in Germany. He is the author of the books "Secured Commodity Forward Contracts in Asset Management", "Lukrative Rohstoffmärkte - Ein Blick hinter die Kulissen" and "Afrika - Kontinent der Chancen" as well as numerous other publications in professional journals. His new book, "From Tulips to Bitcoins" is already after a few weeks an Amazon bestseller in Germany and the USA in the categories financial market, commodities and digital currencies.

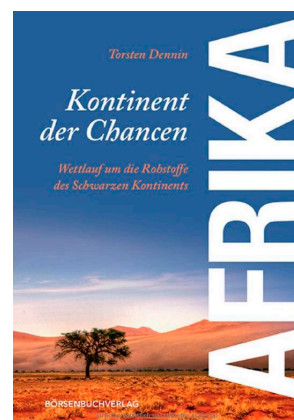
<sup>1</sup> See FED and ECB data, [www.federalreserve.gov](http://www.federalreserve.gov), [www.ecb.europa.eu](http://www.ecb.europa.eu), accessed 09/18/2019.

<sup>2</sup> Federal Institute for Geosciences and Natural Resources (BGR), [www.deutsche-rohstoffagentur.de](http://www.deutsche-rohstoffagentur.de), accessed 18.02.2019

## Interview with Prof. Dr. Torsten Dennin – Founder and CEO of Lynkeus Capital LLC



Torsten Dennin  
Lukrative Rohstoffmärkte: Ein Blick  
hinter die Kulissen  
FinanzBuch Verlag, 2. Auflage,  
Oktober 2011  
ISBN 3898795993



Torsten Dennin  
Afrika – Kontinent der Chancen:  
Wettlauf um die Rohstoffe des  
schwarzen Kontinents  
Börsenbuchverlag,  
April 2013  
ISBN 3864701007

tals, on the other hand, can be assessed on the basis of the following factors:

- ▶ monetary policy
- ▶ inflation
- ▶ currency development
- ▶ economic data
- ▶ Supply and demand
- ▶ insecurity

The monetary policy of the central banks, in particular of the FED and the ECB, influences the interest rate level and thus the „opportunity costs“ of gold. If the savings book offers attractive interest rates, this has a negative effect on the demand for gold. Precious metals should play to their strengths above all in times of rising and high inflation, when the rate of cash devaluation rises. If real interest rates, i.e. nominal interest rates minus the inflation rate, stagnate or fall, this is good for precious metals. The development of the US dollar is also a decisive influencing factor: if the US dollar weakens, this is a positive factor for precious metals. Important economic data provide clarity as to whether the economy is running „smoothly“: if the economy is booming and unemployment figures are falling, this is the bad omen for precious metals. We are currently in the longest stock market boom since the golden 1920s, so a certain degree of caution is advisable <sup>3</sup>.

Uncertainty includes geopolitical crises, terrorist attacks and a financial system that is going through the cracks. Finally, it plays a role whether fundamental trends in supply or demand are shifting in the gold or silver market, for example. The most important buyer of physical gold, for example, is India. The most important owners of gold are the central banks. Central banks worldwide hold around

33,800 tons of gold. The largest holdings are held by the central banks of the USA, Germany and the International Monetary Fund IMF. In recent years, China, Russia and Turkey in particular have been buyers of gold. In 2018 and 2019, central banks around the world significantly increased their gold holdings. China has also built up its gold reserves massively in recent years, but due to enormously high foreign exchange reserves, the Middle Kingdom only achieves a gold cover ratio of its currency of 2.5%. By way of comparison, the USA and many European countries cover between two thirds and three quarters of their foreign exchange reserves with gold.

There are currently almost 200,000 tons of gold <sup>4</sup> worldwide. This is the estimated amount of gold that has been mined throughout human history. The value of this quantity of gold adds up to almost 9 trillion US dollars. This alone corresponds to the increase in global debt in one quarter. Gold stocks are therefore not suitable for debt repayment.

### Conclusion

The markets for most assets have become accustomed to the policy of cheap money. Despite high valuations, equities seem to have no alternative. The stock markets are trading close to their all-time highs, Germany can still borrow virtually free of charge, and real estate prices are also rising. In the USA, the turnaround in interest rates was halted. And in Europe, Quantitative Easing has become hopeful again in 2019. Gold and other precious metals may not be suitable for repaying debt, but they can be used as crisis and inflation protection for private investments.

*Prof. Dr. Dennin, this summer „From Tulips to Bitcoins“, your new book, was published by the American Greenleaf publishing company and the German Finanzbuchverlag. A Russian edition has also been announced for the end of the year. What is it about, and what is particularly interesting for precious metal investors? Can you give us a little foretaste?*

The tulip madness in Holland in the 17th century was considered almost 400 years as the largest bubble of the financial markets. „From tulips to bitcoins“ describes how this bubble was replaced by bitcoins in 2017/2018. A fabulous performance of a few cents to over 20,000 US dollars, followed by a crash in which investors lost over 80% of their capital. In 42 chapters I show how cyclical the commodity and crypto markets can be, what investors should always keep in mind! In the precious metals sector, I show the consequences of the end of the gold standard, the use of rare metals for energy storage and electromobility, and the cycles of gold, silver, platinum and palladium.

*Also, in your books „Lukrative Rohstoffmärkte – Ein Blick hinter die Kulissen“ and „Afrika – Kontinent der Chancen“, you will repeatedly pick up on the topic of raw materials. What fascinates you so much about the commodity markets?*

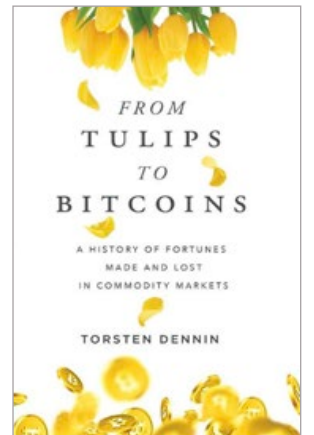
My first book focuses entirely on the commodity markets – crude oil, natural gas, copper, gold and silver: all fascinating markets with their own dynamics. In „Afrika – Kontinent der Chancen“ I show the attractive development opportunities of raw material projects, including gold, silver and gemstones. Africa is a continent that most investors are still unfairly ignoring – unfairly! On the commodity markets, I'm thrilled

by the strength of my hands! You can touch a ton of copper, as well as a barrel of crude oil or a gold bar. In times of high share valuations and a zero-interest rate environment, the reliability of tangible assets increases to a degree.

*But haven't the stock markets, especially the technology sector, performed much better in recent years?*

Admittedly, the performance of the stock market and in particular of Apple, Alphabet (Google) and Amazon in recent years has been impressive. But don't you think it's unhealthy that the stock market value of Google, for example, alone exceeds the value of all mining companies in the MSCI World Metals & Mining Index, which includes around 100 companies including mining giants such as BHP Billiton, Rio Tinto, Glencore and ArcelorMittal? This reminds me rather of the times of the „New Economy“. The same applies to the argument that „equities are not so expensive compared to bonds“, which refers to the even higher prices of debt securities. What are the arguments in favour of raw materials? First, unlike the stock market, commodities have a five-year bear market behind them, which bottomed out in spring 2016. Raw materials are therefore relatively „cheap“. Second, commodities are good performers in the late cycle of economic development. We are in the longest share boom since the golden 1920s, so caution is advised. And thirdly, despite all the enthusiasm for technology, people often forget: without lithium, cobalt, copper and nickel there is no electric car and no iPhone running!

*In addition to your function as Head of Asset Management Switzerland AG, you are also founder and Managing Director of Lynkeus Capital, an invest-*



Torsten Dennin  
From Tulips To Bitcoins  
River Grove Books  
May 2019  
ISBN 9781632992277



**ment company specializing in commodity markets. What do you do differently from your competitors? What strategy or investment objective are you pursuing?**

Lynkeus Capital's approach is to analyze the commodity markets and the companies operating in them holistically. With the Lynkeus Commodity Strategy, I have developed a concept that invests asset classes across the board in commodities. An investment can be represented either directly via the commodity or via shares or bonds of commodity producers. Depending on what pays off more for the investor. An example: In the current positive market environment for gold and silver, shares in gold and silver mines often show a significantly more positive investment performance, as rising prices are often reflected as a „multiplier“ in the company's earnings and value. For example, in addition to direct investments in gold and silver, the portfolio also includes equities and bonds from gold and silver mines. For the selection, the strategy relies on a stringent quantitative investment process in combination with a qualitative fundamental market analysis.

**An interesting and innovative concept, but what has the strategy brought to the investor so far? And what are the risks?**

The Lynkeus Commodity Strategy has been active on the commodity markets since March 2016 but has been on paper since June 2013. Over the last 5 years, an average annual performance of +22% was achieved (CAGR). This year the performance in the first 9 months even exceeds 100%! Such a result is, of course, also associated with a corresponding fluctuation in value. Accordingly, investors must always take setbacks into account.

**What do you pay particular attention to when assessing the attractiveness of an investment in a gold and silver mine?**

As with real estate („location, location, location“), for me the location, quality and potential of an asset as well as the competence and reliability of the management are decisive factors in qualitative fundamental analysis for a gold or silver mine. This applies to precious metals as well as to the mining and energy segment. Prior to this, all companies go through a quantitative filter („screening“). Diversification is another important point that should not be neglected.

**How do you assess the development of the stock and commodity markets with a view to next year, 2020? What will be the big value drivers and the big value destroyers in the commodities market?**

For the stock markets, I see a volatile and therefore riskier environment in 2020 than in 2019: the western industrial nations are at odds with the US's claim to leadership, growth in China is fragile, the US is becoming more and more closed off, world trade is suffering from a rising tariff level, and Europe is struggling with its own integrity in the post-Brexit era. Common sense suggests that rising debt combined with rising interest rates cannot be good for consumers, businesses or handsome investments. The central banks are also aware of this and are therefore trying to keep money cheap – with all the associated side effects. Despite the volatility, equities will therefore continue to have no alternative in 2020. Both in the US and in Germany, stock markets are trading below their highs, but valuations are still high and (more importantly) the outlook is clouded. In this late capital market cycle, commodities as a whole should outperform. At the same time, the Bloomberg Commodity

Index, as an indicator of the commodity markets, is trading just +10% above its absolute lows of 2016. Investors have therefore not missed a thing.

The prices of core raw materials such as crude oil and copper reflect the state of the economy and growth – they are therefore quite favourable. Here I see little potential for setbacks, but many opportunities. Because neither crude oil nor copper will be dispensable in the next few years!

Precious metals have finally made investors happy again in 2019. I expect the positive price trend to continue in 2020.

**Investors in gold, silver and platinum have had to hold their breath in recent years. In the current market phase, what are the reasons why precious metal prices should continue to rise?**

Indeed, gold and silver have not made it easy for investors. On several occasions it seemed that prices were breaking out upwards, but for many they were always back again. Until this year the gold price finally broke through the level of 1,360/1,380 US dollars and quickly reached the levels of 1,400 and 1,500 US dollars. I primarily see the strong US dollar as a negative factor for precious metals in recent months. The strong hands, the central banks, had been on the buying side for some time, while demand for Gold Exchange Traded Funds (ETFs) did not pick up again until early 2019. Precious metals in 2020 are favoured by a continuation of the policy of cheap money, the end of the outstanding strength of the US dollar, as well as geopolitical and economic risk factors.

One risk factor here is the worldwide escalating indebtedness as a result of the low level of interest rates. According to data from the Global Debt Monitor, international debt continues to rise faster than economic power, and the IMF warns

of a debt level that is now higher than before the financial crisis. The increased level of debt is a guarantee that interest rates cannot be reduced to a „normal“ level. The 10-year interest rates in the USA and Germany have even fallen significantly again recently, instead of rising. Real interest rates, i.e. interest rates minus the inflation rate, have returned to negative territory – bad for bond buyers, good for gold and silver.

**Does this apply to all precious metals to the same extent? Specifically asked for the investor: what is the difference between gold, silver, platinum and palladium? What should you invest in?**

An important factor is market size and related factors such as tradability, liquidity and volatility. The classic investment metals are gold and silver. Both metals long served as the basis for currency systems (keyword: „gold and silver standard“). Based on current prices, the value of annual mine production for gold is around 120 billion US dollars, for silver it is slightly more than 12 billion US dollars – i.e. much smaller and thus more volatile than the gold market. Platinum, palladium and rhodium taken together do not even reach the size of the silver market. Investors must be aware of this. The growth in electrically powered vehicles (EVs) is passing by the so-called platinum group metals, because their main application is in the area of catalytic converter technology. As a result of the diesel scandal, palladium developed significantly better than the other precious metals. Only in the case of platinum is the jewelry industry an important influencing factor.

Note: demand from industry is highest in platinum group metals, is still an important factor in silver, but plays hardly any role in gold. The jewellery industry dominates here, followed by investment de-

Lynkeus Capital, founded at the beginning of 2016, specialises in cross-asset class investments in international commodity markets with a focus on energy and metals. The focus is on identifying exceptional investment opportunities in commodities and commodity producers, as well as achieving convincing, positive value growth in every market phase ("absolute return"). Lynkeus is a member of the Association for Quality Assurance in Financial Services (VQF), a self-regulatory organisation for asset managers in Zug recognised by FINMA.

Prof. Dr. Torsten Dennin is head of asset management at Asset Management Switzerland AG, which specializes in discretionary asset management for companies and private individuals. He is also the founder and Managing Director of Lynkeus Capital, a Swiss investment boutique specialising in commodities. Since 2003 Prof. Dr. Dennin has been analysing the international commodity markets with a focus on energy as well as the global equity sectors Oil&Gas and Metals&Mining. Until mid-2017, Dr. Dennin was Head of Strategy and Research at Tiberius Asset Management AG. Prior to that, Dr. Dennin worked as Co-Head Natural Resources for VCH Vermögensverwaltung (2010-2013) and from 2003 to 2010 as Portfolio Manager for Deutsche Bank AG in Frankfurt am Main. During this time, he was responsible for the investment decisions of several commodity funds. Dr. Dennin studied economics at the University of Cologne, Germany, and at Pennsylvania State University, USA. He earned his doctorate on the subject of commodity markets at the Schumpeter School of Business and Economics. Dr. Dennin holds a professorship in economics at EBC University, Düsseldorf, and is a full member of the Berlin Institute of Finance, Innovation and Digitalization. Dr. Dennin is married and lives with his wife in Switzerland.

mand in the form of ETFs, coins and bars. If the purpose of an investment in precious metals is to protect assets against inflation and instability of the financial and monetary system, gold is still of the greatest importance. We recommend silver in admixtures. The gold-silver ratio has proven to be an important indicator. The ratio indicates the ratio between the price of gold and the price of silver. A high figure means: Relative to the historical average, silver is currently undervalued compared to gold. So, silver would be cheap compared to gold. Over the past 30 years, the gold/silver ratio has averaged 66, which means it took 66 ounces of silver to buy one ounce of gold. Currently the ratio is 85, and thus close to the historical highs. An admixture of silver can therefore make sense.

***Gold and silver mines are showing some impressive performance this year. What's the next step here?***

Investors in gold and silver mines are showing positive value growth of **just under 50%** in the first nine months of 2019. This more than wipes out the rift of the last quarter of 2018, when not only gold and silver but also the shares of mining companies came under pressure. Gold at just under 1,200 US dollars and silver below 15 US dollars per troy ounce did not sound very encouraging to investors. But now the prices are over 1,500 US dollars, respectively more than 18 US dollars! Let us look at the index funds of VanEck of large and small gold and silver mines (GDX and GDXJ), despite the recent rise, we are still trading at attractive levels, of which we can still more than double without exceeding the old highs. Large mine values such as BHP, Rio and Glencore, on the other hand, are even cheaper. I am convinced that at the current level I have still identified an attractive buying

level for both precious metals and gold and silver mines. A doubling of the current price level cannot be ruled out here if the prices of gold and silver continue to rise. And in the current environment, I think it is quite possible that next year we will see gold prices in the range of 1,600 to 1,800 US dollars.

***What is the situation with regard to the production rate? Which are the largest producer countries, and which are the leading companies?***

The decline in exploration spending by companies since the peak before the 2007 financial crisis suggests that this will soon be reflected in declining production figures. Gold mining, however, has surprised us in recent years with slight increases. The World Gold Council reported a slight increase in mine production to 3,350 tonnes in 2018. A „Peak Gold“ scenario of production is thus a long time coming. Silver production peaked at 26,800 tonnes in 2014 and has since declined slightly but steadily to around 25,000 tonnes in 2018. The production of platinum and palladium, on the other hand, amounts to just 500 tonnes. Gold and silver are mined almost everywhere in the world. The leading countries in gold mining are China, Australia, Russia, USA and Canada. In silver mining, Mexico, Peru and China lead. In the case of platinum, on the other hand, South Africa dominates production, while in the case of palladium the country on the Cape shares this rank with Russia. A higher concentration of support can also contribute to a higher fluctuation in value. The largest gold mine operators experienced a wave of consolidation this year due to the low prices of recent years. In recent months, two elephant weddings have surprised us: Barrick Gold and Randgold merged and Newmont Mining

followed suit with the acquisition of Goldcorp. The largest „pure“ silver producer is Fresnillo. However, KGHM Polska Miedź and BHP Billiton produce more ounces per year, but silver accounts for only a fraction of their total turnover. For both gold and silver, it is not so much the large companies that deserve investors' attention as interesting development projects in the small and medium-sized business sector. Through an aggressive acquisition policy, the South African company Sibanye-Stillwater, for example, moved into the top 10 global gold producers and into the top 3 global producers of platinum and palladium. In the latter category, Anglo American Platinum, a subsidiary of South African Anglo American, and Russian Norilsk Nickel are the leaders.

***Bitcoins and other crypto currencies are an exciting topic. How do you interpret current developments? Isn't this a competition for gold and silver?***

Bitcoins managed to break a 400-year-old record in 2018: Finally there's a bubble bigger than the Dutch tulip mania! In 2019, the prices of many crypto currencies recovered from their lows. Here, too, reality seems to have finally arrived. But apart from that: Bitcoins and other crypto currencies, like gold, offer a hedge against the risks of the traditional financial system. One problem, however, is the high volatility in this area. For example, crypto currencies covered with gold or other forms of digitisation that are actually backed by physical gold offer a way out. This is where the latest technical standards and a millennia-old investment medium come together. It almost seems as if the gold standard is resurgent through private initiatives. The combination of new technological standards such as the blockchain with gold opens up new investor circles and promotes the

acceptance of gold and silver. Therefore, I do not see competition in this development, but a meaningful solidarity.

***How do you assess the future development of gold and silver? What's more promising? Gold and silver mines, or a direct investment in gold and silver?***

Physical gold forms the basis of any long-term asset strategy. A strong US dollar is a short-term negative factor. Internationally, however, debt is rising faster than economic power, so that a future rise in interest rates seems limited. Otherwise, the negative consequences would be a slowdown in economic growth and a reluctance to consume and invest - negative factors for the stock market, but positive for the development of the gold price. Falling real interest rates, i.e. inflation is rising faster than interest rates, are also a positive sign for the gold price. Rising debt and an increase in debt service also limit the strength of the US dollar. In sum, precious metals help to build up a counterweight against inflation and financial crises. In view of the current US economic policy, the stability of the European Union after the Brexit and the fragile state of economic growth in China, an „insurance“ would still seem advisable. In a positive environment for gold, silver should clearly outperform. This is also supported by the comparatively high gold-silver ratio. A „normalisation“ of the price ratio of gold to silver to a ratio of 60-65 implies an outperformance of silver to gold of approximately 25%. This can confidently be described as „brilliant“ prospects! By the way, both are good news for mining companies: if the prices rise, the company earns more, and the value of the company increases! Even in an otherwise weak equity environment, gold and silver mines should therefore perform well.



# Amex Exploration

## High-grade gold project and Star Investor Sprott on board



Victor Cantore, CEO:

Amex Exploration is a Canadian mining development company specializing in the exploration and development of gold projects in the Canadian province of Quebec. The Company has the majority interest in four such projects, at least one of which has the potential for a true world class deposit as demonstrated by recent drilling.

### Flagship Gold Project Perron – Infrastructure and Location

This project is called Perron and is ideally located in terms of infrastructure, about one hour north of Rouyn-Noranda (110 kilometres away), on a year-round road, 10 minutes from an airport and just outside the town of Normetal (8 kilometres away). In addition, the project is in close proximity to the Normetal Mine which hosts a resource of approximately 10 million tonnes of rock averaging 2.2% copper, 5.4% zinc, 0.5g/t gold and 44.5g/t silver. Within a radius of only 100 kilometres there are also important large deposits such as Timmins (71 million ounces gold), Kirkland Lake (24 million ounces gold), Val d'Or (20 million ounces gold) and Detour Lake (16 million ounces gold).

The project consists of 116 adjacent claims totaling 4517.88 hectares and is 100% owned by Amex Exploration. It is also located in the Archean Greenstone Belt of the structural province of Lac Supérieur.

### Flagship Gold Project Perron – Exploration Successes

Amex Exploration has already identified several high-profile gold zones. These include primarily the Eastern Gold Zone, the Central Polymetallic Zone, the Gratién Gold Zone and the Grey Cat Zone.

### Eastern Gold Zone

The Eastern Gold Zone was discovered in late 2017. Two near surface mineralization zones, the High Grade Zone and the Denise Zone, returned values of 12.22g/t gold over 4.66 metres and 0.81g/t gold over 76.5 metres. In 2018, 269.23g/t gold over 1.35 metres and 0.74g/t gold over 20.75 metres followed, among others. An exploration drilling program started in the first quarter of 2019 returned spectacular results, including 393.33g/t gold over 1.7 metres, 39.58g/t gold over 0.8 metres, 214.71g/t gold over 0.7 metres, 56g/t gold over 8.50 metres and 30.98g/t gold over 8.50 metres.

The High Grade Zone has been delineated to date to only 475 metres in a vertical direction with a lateral extent of up to 130 metres, which is still open to depth and multiple sides. Recent drilling has intersected a total of 26 holes of gold mineralization in excess of 10g/t gold over variable widths.

The Denise Zone has turned out to be actually two gold mineralizations. A new high-quality intersection in the Denise Zone has several crossing points with the High Grade Zone.

### Gratién Gold Zone

The Gratién Gold Zone was discovered by Falconbridge in the 1990s. In June 2019, Amex launched a drill campaign using the same targeting method used to identify Bonanza grades in the Eastern Gold Zone. The first hole drilled in 2019, PEG-19-65, intersected 67.52g/t gold over 1.45 metres and 14.39g/t gold over 2.05 metres. Further drilling has returned values including 16.77g/t gold over 26.90 metres and 16.48g/t gold over 14.60 metres.

The strike length of the Gratién Gold Zone has so far been extended to 350

metres on a newly defined high-grade lens. Overall, the zone has a large number of vertically dipping lenses with high gold mineralization. The company is currently working to verify the continuity of these lenses along the approximately one-kilometre long corridor of gold mineralization. Amex management believes that the ridge gold zone has potential for both low-grade bulk tonnage mineralization and narrow, high-grade selective type mineralization.

### Grey Cat Zone

The Grey Cat Zone is located approximately 650 metres from the Gratién Gold Zone and lies between the Eastern Gold Zone and the Gratién Gold Zone, just north of the regional Perron Fault. It is a shallow zone containing high grade gold mineralization within a broad panel of disseminated gold mineralization with intercepts of up to 26.90 metres grading 3.42 g/t gold including 134.16 g/t gold over 0.50 metres and 1.26 g/t gold over 28.0 metres. Reported gold grades were found from approximately 14 metres below surface to a depth of approximately 225 metres. The near surface mineralization is over 20 metres wide with potential for open pit mining.

### Gold Project Lebel-sur-Quévillon

In addition to the Perron gold project, Amex has several other highly interesting gold projects: This includes the 100% owned Lebel-sur-Quévillon gold project, which is located in the northwest of the Canadian province, near the village of Lebel-sur-Quévillon of the same name. The project consists of the four adjacent properties Cameron (13 claims over 731 hectares), the Madeleine West property (30 claims over 1,682 hectares),

the Madeleine East property (74 claims over 4,150 hectares) and the Pusticamica property (146 claims over 8,180 hectares). Pusticamica is surrounded by some spectacular gold finds, including the Osisko Windfall Gold Project (75 kilometres south), Cartier Resources' Benoist Gold Property (5 kilometres south) and the Metanor Bachelor Gold Mine (20 kilometres northeast). The Madeleine West and East properties are located approximately 15 kilometers northeast of Cameron. The Company has already demonstrated significant gold grades including 1.7g/t gold over 7.0 metres, 11.2g/t gold over 0.3 metres, 2.0g/t gold over 2.5 metres and 4.1g/t gold over 0.3 metres. Madeleine West and East comprise the deformation zone over a strike length of approximately 25 kilometres that is part of the Casa Beradi deformation gold structure. In this structure is the producing gold mine Casa Beradi of Helca Mines.

### Eastmain River Gold Project

The 100% owned Eastmain River Gold Project consists of 135 claims covering 7,102 hectares and is located in the Eeyou Istchee Territory, James Bay, Quebec, approximately 350 kilometres north of the city of Chibougamau in the Plan North region. The claims are accessible from Chibougamau via the new 243-kilometre year round road to Stornoway's Renard Diamond Mine. With the construction of Route 167, the area experienced an explosive surge in exploration, as it provided access to an area that had previously been underdeveloped due to limited infrastructure and access. Today the area is being actively explored by a number of companies including Eastmain Resources, Osisko Mining and Soquem. To date, Amex has flown two of the four blocks (Eastmain River North and South) to perform



high-resolution, helicopter-assisted, magnetic and time-domain electromagnetic measurements. Neighboring Eastmain Resources has demonstrated 24.8g/t gold, 25.7g/t gold and 1.1% copper over 9.3 metres as part of a drilling campaign immediately south of the Eastmain River South block.

### Gowan Project

Amex Resources also has an option agreement to acquire a 100% interest in the Gowan polymetallic project consisting of 16 claims over 256 hectares near the Kidd Creek Mine. Gowan has historic drill hole intercepts with significant copper, zinc, gold and silver grades. Geophysical surveys are being conducted to evaluate the potential of the property at depth and to further investigate the extent of the known mineralization. A follow-on drilling program will be prepared based on the interpretation of geophysics. In addition to the optional claims, Amex has a 100% block claim of 128 hectares adjacent to the optional property.

## Exclusive interview with Victor Cantore, CEO of Amex Exploration

*What have you and your company achieved in the past 12 months?*

Amex Exploration has made significant gold discoveries in the mining friendly jurisdiction of Quebec. The project is well serviced by existing infrastructure being located about an hour north of Rouyn-No-

### Star investor Sprott on board

In February 2019, Amex Resources was able to announce that no less than the precious metal star investor Eric Sprott had invested 3 million CA\$ in Amex. In total, the Company raised approximately CA\$ 5.4 million from this financing to finance further exploration programs.

### Summary: Continuous Newsflow and Resource Estimation Ahead

Amex Exploration has already proven that its flagship Perron project is a true high carat. After all, one occupies over 10 kilometres of strike length along one of the most top-class, but at the same time least explored areas of Quebec, even Canada, the Abitibi Greenstone Belt. Not only proven gold grades of up to 677g/t, but above all the prospect of several ore deposits of various kinds in a relatively small area made Amex interesting for larger addresses such as Sprott or Commodity Capital. Two drilling rigs are currently turning on Perron, which should ensure a continuous news flow. The aim is to prepare an initial sound resource estimate in which a revaluation of the Amex share cannot be ruled out.

randa (~110 km), on a year-round road, 10 minutes from an airport and next to the town of Normetal (~8 km). In addition, the project is in close proximity to a number of major gold producers' milling operations. To date, we have hit very high grade and visible gold in three different zones (Eastern Gold, Gratien Gold

Zone and Grey Cat Gold Zone) across the project over a 2.4 KM corridor of gold mineralization. Additional wild cat targets have also been identified on the property.

### What are the most important company catalysts for the next 6 to 12 months?

Amex currently has two drills operating on multiple gold targets on the Perron Property. The Company is well financed to continue its year-round drill program for 2019 having recently completed a CDN 5M financing that brought on two large investors, Eric Sprott and Commodity Capital. Drilling should be steady throughout the year allowing for a steady flow of news. Amex Exploration recently completed its 25,000 m drill program and added another fully funded 15,000 m of drilling on Perron. The goal of the program will be to better define all three gold zones through exploration drilling to depth and along strike to define tonnes and ounces. In addition, Amex will conduct a regional, exploration program to

test several targets on the 45 km<sup>2</sup> property using our geological model which has been highly effective to date.

### How do you see the current situation on the market for precious metals?

Amex is exploring for gold and should be leveraged to the exciting breakout in the price of gold. This gold rally seems to have come during a seasonal slow period and has not been properly reflected in the junior gold market. We believe that macro for a strong gold price is firmly in place.

**ISIN:** CA03114B1022  
**WKN:** A2DJY1  
**FRA:** MX0  
**TSXV:** AMX

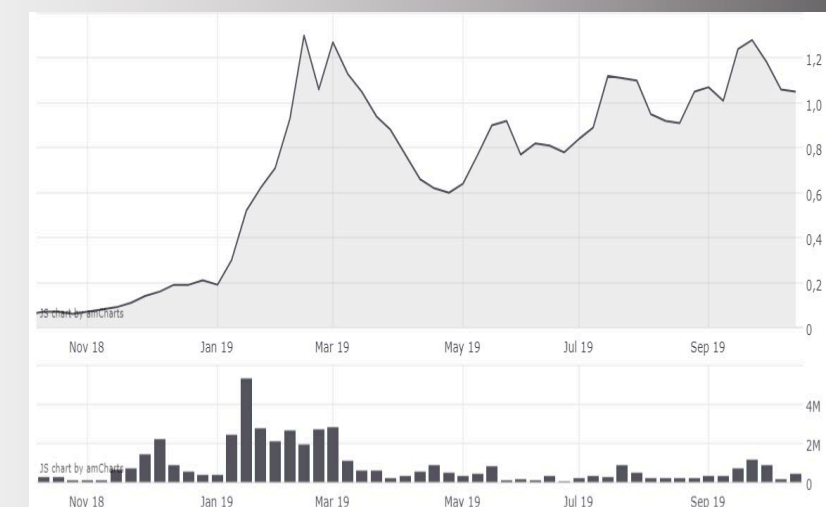
Outstanding shares: 55.6 million  
Options: 4.9 million  
Warrants: 9.8 million  
Fully diluted: 70.3 million  
(as of 09/24/2019)

**Contact:**  
Amex Exploration Inc.  
410 St-Nicolas, suite 236  
Montréal, QC H2Y 2P5, Canada

phone: +1-514-866-8209

info@amexexploration.com  
www.amexexploration.com

## Amex Exploration Inc.





# Barrian Mining

## Top projects in probably the best gold destination in the world



Maximilian Sali, CEO:

Barrian Mining is a recently listed Canadian mining development company focused on prospective gold projects in Nevada and New Mexico. The highly successful and experienced management team focuses primarily on near-surface deposits.

### Bolo Gold Project - Acquisition

Barrian Mining's current flagship project, called Bolo, covers 3,332 hectares and is located 90 kilometres east of Tonopah in Nevada. It is accessible throughout the year and already has an exploration history. The Company may, under an agreement with Allegiant Gold, earn a 75% interest in Bolo by incurring pre-defined exploration expenditures. The company must invest at least US\$4 million in the development of the project up to and including 2022 in order to acquire a 50.01% stake and control of Bolo. To earn a 75%



Bolo covers 3,332 hectares and is located 90 kilometers east of Tonopah in Nevada.  
(Source: Barrian Mining)

interest, Barrian Mining will have to incur a further US\$2 million in exploration expenditures in 2023 and 2024, respectively. The expenses can also be incurred more quickly in order to accelerate the acquisition of the project.

### Bolo Gold Project - Exploration Activities and Successes to Date

Prior to the acquisition of Bolo, previous licensees had already invested more than US\$ 3.3 million in the development of the project. Among other things, mapping work and sampling were carried out. In addition, more than 12,200 meters have already been drilled. It has been shown that Bolo is a Carlin-like gold mineralization similar to that on the known Pinson, Lone Tree/Stonehouse, and Turquoise Ridge/Getchell projects. The widespread gold mineralization on the surface, along two parallel north-south faults, has already exposed up to 8.6 grams of gold per tonne of rock (g/t) (mine fault) and up to 4.7 g/t gold (east fault). Drilling has also identified several high carat gold and silver bearing intercepts. These include 133 metres at 1.28g/t gold from surface, including 30.5 metres at 3.24g/t gold, 90 metres at 1.0g/t gold from surface, 52 metres at 1.27g/t gold from surface and 58 metres at 41.13g/t silver from surface (including 7.6 metres at 220g/t silver).

### Bolo Gold Project – Exploration Potential

To date, drilling has only taken place to depths of about 45 metres, which means that there is a high exploration potential, especially for the area below. In addition, the area has not yet been investigated using modern geophysical methods. At the same time, however, the license area

hosts a large number of large area anomalies within which the presence of gold and silver has already been detected by sampling. The seven known gold zones also hold further potential in all directions, as none of these have yet been fully delineated. Accordingly, the target of 2 to 6 million ounces of gold set by the Barrian management is high caliber.

### Bolo Gold Project - Planned Exploration Activities

In April 2019, Barrian Mining started a 500,000 CA\$ field program. Among other things, drone flights including image analyses and magnetic geophysical measurements were carried out. In September 2019, the Company began drilling its first own holes designed to establish the depth extension and continuity of the gold-silver mineralization between the Uncle Sam, South Mine Fault and Northern Extension zones. The 1,838-metre program was focused on the highest priority drill targets. In a second phase, further drilling is planned for 2020 to connect the three zones. Based on the pending results of the 2019 programs, the Company will commence an aggressive zone reclassification in the Main Zone in 2020 and initiate a new target drill program for exploration of the Northern Areas. A NI43-101 compliant resource estimate is planned for 2021.

### Troy Canyon Gold/Silver Project

In September 2019, Barrian Mining signed an option agreement to acquire the Troy Canyon Gold/Silver Project in Nye County, Nevada. The project has historic underground rock trenching samples with a concentration of 576 g/t gold and more than 100 g/t silver. Troy is located only about 70 kilometers east of Bolo,



In April 2019 Barrian Mining started with a 500,000 CA\$ field program. Among other things, drone flights including image analysis and magnetic geophysical measurements were carried out on the Bolo gold project.  
(Source: Barrian Mining)

near Tonopah, Nevada and covers about 158 acres. Barrian Mining expects Troy Canyon to generate synergies with Bolo and plans to explore the project using new exploratory methods and expand the known mineralization.

### Sleeper Gold/Silver Project

Barrian Mining's second flagship project is called Sleeper and is located in New Mexico. It is an area with historical mining activities. A total of 15.7 million ounces of silver and approximately 327,000 ounces of gold have already been mined there. Sleeper is basically a large epithermal vein field with silver-gold bearings. Dozens of mineralized and potentially mineralized veins that have never been drilled offer potential for greater discovery. The total strike length is 72 kilometres, of which only 4.8 kilometres (3 miles) have been developed and explored.



In 2010, drilling was carried out on the consolidated project which intersected 10 metres averaging 219g/t silver and 4.4g/t gold. A historical, non-NI43-101 compliant resource estimate returned 845,000 tonnes of rock averaging 320g/t silver and 5.1g/t gold for 8.9 million ounces silver and 138,400 ounces gold.

### Strong Shareholder Structure

Barrian Mining has a very solid shareholder structure. Approximately 15% of the outstanding shares are held by management and insiders. A further 40% are in the hands of investors who are closely associated with the management.

### Top Management Team

Barrian Mining has a highly experienced and successful management team. CEO Max Sali is President of Baccarat Investments Inc, a private company that provides investment, advisory and ma-

nagement services to public companies. Sali is also CEO, Director and Founder of Defense Metals Corp. Most recently, he worked for Advantage Lithium, a company that has evolved from a shell to a positive PEA and has raised \$42 million to date.

Director Jordan Trimble is currently CEO of Skyharbour Resources and Rockridge Resources. He has worked in various roles in the resource industry for numerous TSX Venture listed companies specializing in corporate finance and strategy, shareholder communications, marketing, deal structuring and capital raising. Previously, he led corporate development for Bayfield Ventures, a gold company with projects in Ontario acquired by New Gold in 2010.

Jim Greig is currently President of Benchmark Metals Inc, a high-grade gold and silver explorer in the Golden Triangle, Canada. He recently joined Keegan Resources Inc. as part of the mine development team driving the 5 million-ounce Esaase gold project in West Africa. With 20 years in the commodities

sector, he brings extensive experience in exploration, development and mineral production. Selected resource engagements include the Hunter-Dickinson Group, Kennecott Canada, Breakwater Resources Ltd, McIntosh Engineering and Stantec Engineering.

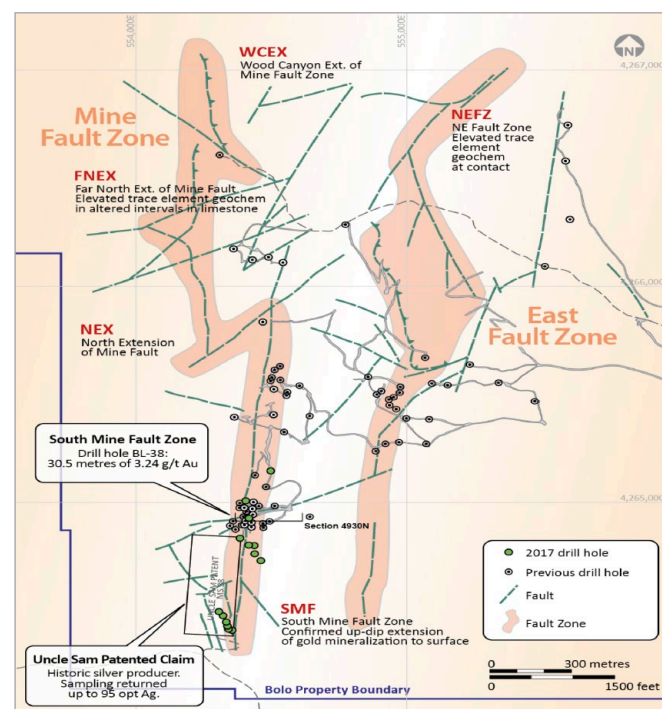
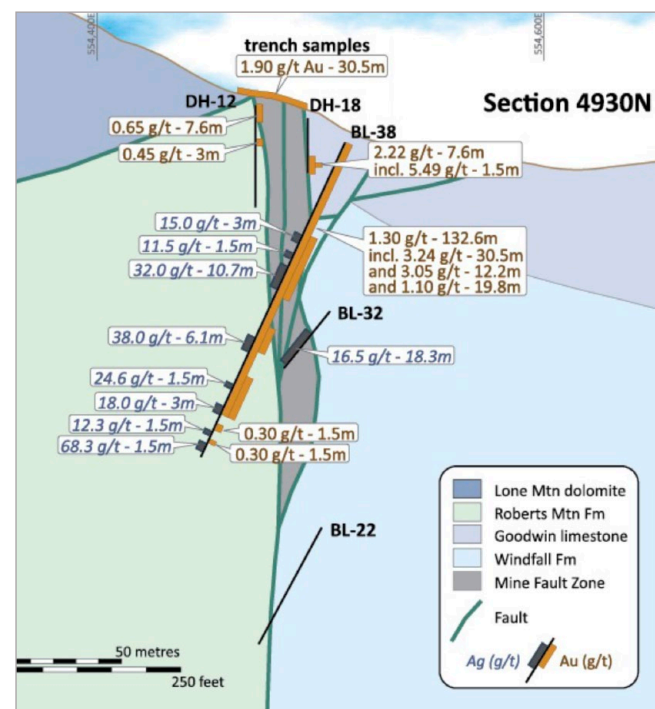
Director Toby Pierce is a natural resources manager with more than 19 years of extensive transaction and valuation experience in deal sizes ranging from several million to \$1.3 billion.

### Summary: Top Assets Meet Aggressive Management

With Bolo, Barrian Mining seems to have secured a real top asset in one of the best mining areas in the world. The fact that there are larger quantities of gold and silver there and are waiting for their uplift seems certain, it is now only a question of the quantity. A self-imposed exploration target of 2 to 6 million ounces of gold appears ambitious but should be

feasible for the highly successful and experienced management. After all, in the past this has been able to prove several times that larger deposits can be discovered and that financing for exploration and beyond can be organised. Kris Raffle, an absolute Nevada gold specialist, is also part of the team and has already developed several top deposits in Nevada with his geological consulting company APEX Geoscience. Barrian Mining is an early-stage opportunity that offers an excellent base as a starting point.

Historical results of drilling programs on Bolo (Fig. left) and growth targets for Bolo (Fig. right)  
(Source: Barrian Mining)



ISIN: CA06851X1042  
WKN: A2PH6W  
FRA: BM5  
TSX-V: BARI

Outstanding shares: 43.5 million  
Options: -  
Warrants: -  
Fully diluted: 43.5 million  
(as of 07/01/2019)

### Contact:

Barrian Mining Corp.  
605 – 815 Hornby Street  
Vancouver, BC V6Z 2E6, Canada  
phone: +1-604-620-8406

msali@barrianminingcorp.com  
www.barrianmining.com

## Barrian Mining Corp.





# Caledonia Mining

## Production increase of 45% by 2022



Mark Learmonth, CFO

Caledonia Mining is a mining, exploration and development company with a clear focus on Southern Africa. Main asset is a 49% stake in the Blanket gold mine in Zimbabwe. There, the Company mined 24,660 ounces of gold in the first half of 2019. By 2021, the company plans to increase its annual production to up to 80,000 ounces of gold, and in the long term to up to 250,000 ounces. The central shaft is currently being massively expanded for this purpose. The company pays an attractive quarterly dividend.

### Blanket Gold Mine – Expansion of stake to 64% planned

Caledonia Mining currently holds 49% of the Blanket gold mine. Other shareholders are the government (16%), local partners (15%), surrounding communities and the workforce (10% each). In the course of the dismissal of former President Mugabe and the associated change of government, it became possible to take over corresponding shares of the partners. In August 2018, Caledonia Mining announced that it had reached an agreement with local partners to take over their 15% stake. This would increase Caledonia's stake in the Blanket gold mine to 64%. The company will continue to try to increase its share even further.

### Blanket Gold Mine – Strong production and financial indicators

Caledonia Mining was able to present strong production figures for the first half of the year. In the first 6 months of 2019, 24,660 ounces of gold were mined at all-in-sustaining costs of only US\$ 797 per ounce. This puts the Blanket Mine in the lower quarter of all-in costs. Gross profit was \$11.3 million and net income was

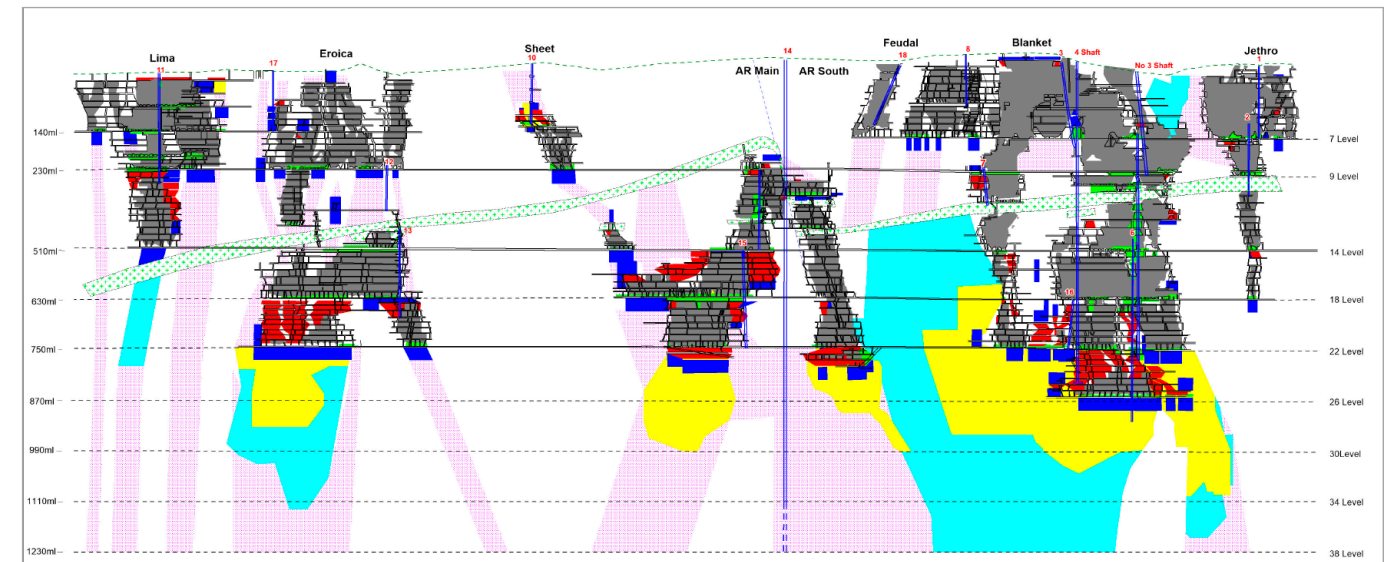
\$32.6 million due to foreign exchange gains and the sale of a subsidiary. At the end of the second quarter, Caledonia had US\$7.875 million in cash and cash equivalents.

### Blanket Gold Mine – Historical Production

The Blanket gold mine consists of several gold mineralizations that have been exploited since 1904. In 1965 Falconbridge acquired the project and increased gold production to an average of approximately 45 kilograms per month. In 1993 Kinross took over the project and built an extended carbon-in-leach plant with a capacity of approx. 3,800 tons per day. Gold production from 1995 to 2007 reached a level of 110 kilograms per month. In 2006, a wholly owned subsidiary of Caledonia Mining completed the purchase of the Blanket Mine from Kinross. In September 2010, the expansion project No. 4 was commissioned, which increased the lifting capacity of Blanket from shaft No. 4 from 500 tons per day to 3,000 tons per day.

### Blanket Gold Mine – Current Production Status

The current Blanket Mine has eight ore shoots. Most of the mine production is currently sourced from the AR Main and AR South ore bodies, with the Blanket, Eroica and Lima shoots contributing less. AR Main and AR South are massive ore bodies with a width of up to 30 metres and are ideal for open pit long hole mining. Double shaft no. 4 is Blanket's main shaft for lifting ore from the loading stations at a depth of 510 metres and 789 metres and has a proven lifting capacity of 110 tonnes per hour from 789 metres. The Jethro and Eroica shafts and the Winzes No. 5 and No. 6 shafts are used



*The Blanket Mine has a variety of other resources in depth and between wells.  
(Source: Caledonia Mining)*

to transport people and materials underground, while the No. 2 and Lima shafts are also used to lift ore to the surface.

### Blanket Gold Mine – Massive expansion of production capacity

Although these areas still host significant amounts of gold ounces, the company decided about 5 years ago to land the large litter and expand, modernize and advance the central shaft (between AR Main and AR South) to a depth of over 1,200 metres in order to develop not only the immediate area below the current lowest mining level of about 850 metres, but in principle all known occurrences below but also above this level. The company has already been able to demonstrate further significant resources to a depth of around 1,100 metres. The new 6-metre-diameter, very impressive shaft, which was driven to a depth of more than 1,200 metres, would make it possible on the one hand to significantly increase production - after all, three new production levels have been reached - and on the other hand could be used for underg-

round drilling, which would save a great deal of money and time. Caledonia Mining has already invested more than 60 million US\$ in the expansion of the central shaft and is currently working on its equipment.

### Blanket Gold Mine – new central shaft in operation as of 2020

The central shaft is to be commissioned in 2020 and will then provide for a significant increase in production, while at the same time reducing all-in costs to around US\$ 700 per ounce. Management expects this to result in a significant increase in free cash flow. Recently Caledonia Mining also announced the successful installation and commissioning of a new oxygen plant in the Blanket Mine. It is therefore expected that the new oxygen plant will improve metallurgical recovery and reduce cyanide consumption at Blanket. Based on the testing work performed, the plant is expected to improve the overall metallurgical yield at Blanket to approximately 94 percent.

### Blanket Gold Mine – Continuous expansion of resources and high exploration potential

Despite constant support, the company has managed to increase its resource base in recent years. In February 2018, the Blanket Mine held a total of 1.768 million ounces of gold (of which 380,000 ounces of gold in reserves, 425,000 ounces of gold in the indicated category and a further 963,000 ounces of gold inferred). The Blanket Mine itself provides additional confirmed resources in the areas below the current mining level of approximately 800 metres, as previously mentioned. In addition, the Lima, Eroica, Sheet and Feudal ore bodies have so far only been exploited at depths between 150 and 750 metres. In the case of Eroica, there is even a gap between a depth of 230 to about 470 metres, within which further resources are also suspected. In particular, the Feudal, Jethro and Blanket areas could host a coherent ore structure that has not yet been delineated. Starting next year, the new central shaft will offer excellent access to all newly developed areas.

The entire property also has several potential satellite projects. Five of them have priority 1 status and are successfully drilled for further occurrences. In addition, there are other areas that are still completely without modern exploration programs.

## Exclusive interview with Mark Learmonth, CFO of Caledonia Mining

### What have you and your company achieved in the past 12 months?

Caledonia have completed the sinking of the central shaft, a project that we have been engaged in for the past 5 years in-

### Dividend distribution since 2012 - 4% dividend yield

Caledonia Mining has been distributing a regular dividend without interruption since 2012. Currently, the dividend is US\$0.06875 per quarter, representing an annual dividend of US\$0.275. The dividend yield is thus currently around 4%.

### Summary: Four Top Investment Advantages

Caledonia Mining is an interesting investment for gold investors from four points of view. First, management is working to significantly increase the company's stake in the mine from 49% to 64%. Secondly, the company is less than a year away from commissioning the new, central shaft, which will not only significantly increase production, but will also reach new mining levels at which significant resources have already been demonstrated, but which - point three - above all have a much higher resource potential. Just like possible satellite deposits on which exploration is just as active. Fourth, in the highly probable event of a significant increase in free cash flow, management plans to distribute part of this cash flow to shareholders in the form of additional dividends. All in all, the outlook is very good, allowing investors to benefit from the coming gold boom, and Caledonia Mining also has high margins and thus high leverage on the gold price.

duction in 2020. We have achieved all of this through funding the project from operating cash flow and continuing to pay shareholders a dividend of approximately 4%.

### What are the most important company catalysts for the next 6 to 12 months?

Caledonia is now less than a year away from commissioning the central shaft which opens up significant resources at depth and enables a 45% increase in production from approximately 55,000 ounces in 2019 to 75,000 ounces in 2020 and 80,000 ounces by 2022. As Caledonia completes the central shaft project, we expect EBITDA and operating cash flow to increase in line with production and capital investment to decline substantially leading to a significant increase in free cash flow. The board intend to distribute some of this cash to shareholders in the form of increased dividends and redeploy a portion of the cash in the pursuit of new investment opportunities in Zimbabwe.

**ISIN:** JE00BF0XVB15  
**WKN:** A2DY13  
**FRA:** 9CD1  
**TSX:** CAL  
**NYSE/LON:** CMCL

Outstanding shares: 10.8 million  
 Options: -  
 Warrants: -  
 Fully diluted: 10.8 million (as of 07/17/19)

### Contact:

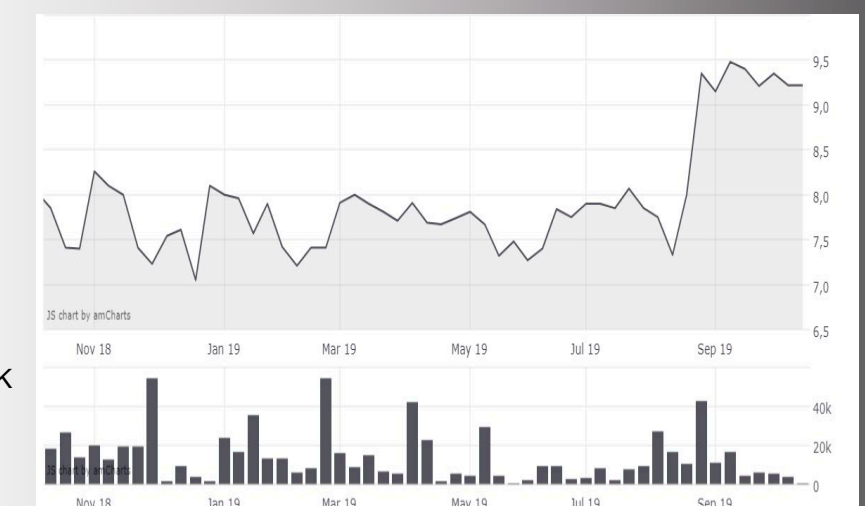
Caledonia Mining Corporation plc  
 3rd Floor Weighbridge House  
 Weighbridge, St Helier, Jersey JE2 3NF, UK

phone: +44-1534-679800  
 marklearmonth@caledoniamining.com  
 www.caledoniamining.com

### How do you see the current situation on the market for precious metals?

With forecast All In Sustaining Costs of below \$800, Caledonia is well protected in the event of a weaker gold price. However, our view is that over the medium to long term the outlook for gold is positive. It appears clear that global monetary policy makers have shifted from tightening to easing and have done so at a lower interest rate than at any time in world history. US interest rates peaked at just 2.5% in the last rate hike cycle. The era of almost a decade of zero interest rates and unprecedented monetisation of government debt in the global economy is unlikely to be without consequence. If history is any guide, global monetary policy makers will find themselves surprised once more by the unintended consequences of their policies. These consequences are likely to be bullish for gold.

## Caledonia Mining Corp.





# Cardinal Resources

## Over 5.1 million ounces of gold reserves and a near completion feasibility study



Archie Koimtsidis, CEO

Cardinal Resources is an Australian mining development company focused on prospective gold projects in West Africa. In politically stable Ghana, the company has two advanced projects and already has a reserve of 5.1 million ounces of gold.

### Flagship project Bolgatanga

Cardinal Resources' flagship project is called Bolgatanga and is located within a Palaeoproterozoic granite greenstone belt in northeastern Ghana near the border with Burkina Faso. Bolgatanga covers approximately 660 square kilometres and consists of the four individual concessions Namdini, Bongo, Ndongo and Kungongo. Compared to the south of Ghana, the north is still largely undeexplored.

### Namdini – Reserves and resources

By far the most advanced of Bolgatanga subprojects is called Namdini. It already has very substantial reserves of

138.6 million tonnes of rock with an average of 1.13 grams of gold per tonne (g/t). As a result, the Namdini deposit currently has 5.1 million ounces of gold reserves. Total resources (including reserves) amount to 182 million tonnes of rock averaging 1.12g/t gold for 6.53 million ounces of gold in the measured and indicated categories and a further 12 million tonnes averaging 1.2g/t gold for 460,000 ounces of gold in the inferred category. This means that 80% of the measured and indicated resources could already be classified as reserves.

### Namdini – Deposit

The Namdini deposit extends to surface or shallow over approximately 1,150 by 350 metres with the particularly high-grade areas very close to surface. A possible starter pit contains approximately 1.06 million ounces of gold with average grades of 1.31g/t. This would extend to a depth of about 150 meters. A possible enlarged pit would be about 1,000 by 500 meters in size and about 400 meters deep. The great advantage: With the current mine design, the strip ratio, i.e. the ratio of deaf rock with no or only uneconomical gold content to gold-bearing rock, is only 1.4 to 1, for the starter pit even only 0.5 to 1. Below this area, the company was able to demonstrate further, partly high-grade gold mineralization, which has not yet been delineated in depth and thus represents an additional resource potential. In July 2019, Cardinal Resources released new drill results from the Starter Pit area. Among other things, 83 metres with an average of 3.5g/t gold and 78 metres with an average of 4.1g/t gold were found.

### Namdini – Prefeasibility Study

Cardinal Resources published a positive pre-feasibility study for Namdini in September 2018. Based on an annual pro-

cessing of 9.5 million tonnes of rock and a gold price of US\$1,250, the starter pit will have an annual production of 361,000 ounces at an all-in-sustaining cost of only US\$599 per ounce. Including the ramp-up phase, the starter pit would provide material for 2.5 years. The US\$ 414 million that would be incurred as capital costs for the construction of the mine would, however, already be repaid after 1.8 years. All-in-sustaining costs of US\$ 769 per ounce of gold could be calculated for the total mine life of about 14 years (average annual production of 294,000 ounces). Profitability (IRR) is 38% after tax and the discounted net asset value (NPV) of 5% is US\$ 586 million. For a slightly higher gold price of US\$1,350, this results in an IRR of 46% after tax and an NPV of US\$758 million. Namdini already has a 15-year mining license that can be renewed. The environmental impact analysis has been commissioned.

### Bolgatanga – Resource potential

Namdini is by far the smallest of the Bolgatanga licenses. Corresponding resource potential exists in the three other concession areas. The company is currently working on several exploration initiatives to find what it is looking for there.

### Ndongo

Six large area targets have already been identified on Ndongo with the initial focus close to large regional shear zones. Recent exploration activities have identified a discovery at Ndongo East. In July 2018, for example, an average of 9 metres of 23.3 g/t gold, including a 3-metre section of 59.2 g/t gold from a depth of 60 metres, was detected. In August 2018, 12.6 g/t gold over 6 metres was encountered directly below surface from a depth of 2 metres. In November 2018,

the company was able to demonstrate a 3-metre-long 29.3g/t gold intercept at a depth of only 45 metres in November 2018. In 2019, a large number of top mineralizations were also encountered. So about 42.2g/t gold over 2 meters, 11.3g/t gold over 8.3 meters, 13.9g/t gold over 5.3 meters.

A total of several gold-bearing intervals have already been encountered over a strike length of 1.2 kilometres.

### Bongo/Kungongo

Well drilling is planned for the Bongo license. Geophysical targets will be evaluated.

On the Kungongo license, 4.5 kilometers of strike length are currently being evaluated. The First Pass drilling campaign has also produced positive investigation results. A 3,000-metre drill program was started in the fourth quarter of 2018.

### Subranum Gold Project

The Subranum project is located in the southwestern part of Ghana, also in a Palaeoproterozoic granite-greenstone belt. It covers about 69 square kilometers and touches the so-called Sefwi Gold Belt. Previous exploration by Newmont (soil sampling, trenching and drilling) discovered a gold mineralized zone over 5 kilometres to a depth of only 50 metres. As drilling has taken place on irregular, widely spaced drill areas, Cardinal plans to systematically drill this initial target area to better define and expand gold mineralization along strike and at depth.

### Coming Catalysts

Upon completion of the pre-feasibility study, the Company initiated the preparation of a Definitive Feasibility Study. This will be published shortly. In addition,

Bolgatanga comprises about 660 square kilometers and consists of the four individual concession areas Namdini, Bongo, Ndongo and Kungongo.  
(Source: Cardinal Resources)



exploration campaigns are being carried out in several licence areas, which should deliver a variety of results.

### Strong shareholder structure – Sufficient cash

More than 50% of all outstanding shares are held by institutional investors and management. In addition, Cardinal Resources is funded with over AU\$ 30 million in cash over months. In September 2019 alone, around AU\$ 17.6 million was generated through the exercise of options.

### Superior management

Cardinal Resources has an outstanding management team with many years of experience in mining and Ghana. CEO and Managing Director Archie Koimtsidis has been involved in all aspects of gold exploration, discovery, production and refining in West Africa and South America for 20 years. His most recent appointment before joining Cardinal Resources was as Deputy Country Manager Ghana for PMI Gold (now Asanko Gold). During this time, he was responsible for all field operations including the coordination of exploration, drilling and personnel management related to the Company's projects in Ghana. Non-Executive Director Trevor Schultz has more than 45 years experience in the mining industry with experience in project development, construction and operations. Between 2008 and 2018, he was Executive and Non Executive Director at Centamin Egypt and responsible for the construction of the 12Mtpa processing plant, which has a similar flowchart to that proposed by Cardinal. Prior to that, he was Chief Operating Officer of Ashanti Goldfields (now Anglo Gold Ashanti) and lived in Ghana for 6 years. In addition,

on, he worked for BHP in Australia and America and for Anglo American Corporation in South Africa.

In September 2019, David (Dave) Anthony was introduced as the new COO. Anthony is a graduate mining engineer from Queens University in Canada. He has more than 30 years experience in mining and mineral processing and has served at senior management and senior level in the design, construction and operation of gold processing plants and mines worldwide. He was responsible for the planning and supply of mines with investment costs of up to US\$ 3.8 billion and a total material turnover of up to 40 million tonnes per year.

### Summary: Giant project, giant potential, feasibility study ahead

Cardinal Resources can probably be described as one of the few, largely undiscovered pearls in the gold sector. 5.1 million ounces of gold reserves are a real house number for a junior developer. In addition, current resources for one of four flagship concessions alone are 7 million ounces of gold. The second Ndongo concession already indicates the Blue Sky potential that the Bolgatanga project has. The latest drilling successes speak for themselves. All Bolgatanga licences lie within a radius of only 30 kilometres and could be exploited one after the other or jointly. The final feasibility study is still pending. If it turns out to be at least as good as the pre-feasibility study at hand, potential donors, partners and/or takeover bidders should be able to hand over the clinic to each other. It is not without reason that analysts from leading investment houses see the Cardinal share averaging over AU\$ 1.

## Exclusive interview with Chairman Kevin Tomlinson of Cardinal Resources

### What have you and your company achieved in the past 12 months?

We have increased our gold resource at Namdini to 7moz and outlined a reserve of 5.1moz. We will be announcing a Feasibility Study before the end of October which should be along the lines of what was outlined in the PFS. Further, we have been drilling on our large tenement package and have released some very good shallow gold intercepts which we are now following up as potential higher-grade feed for the Namdini mill.

### What are the most important company catalysts for the next 6 to 12 months?

The most important catalysts for Cardinal in the next 12 months are completion of the Feasibility Study, continued optimisation of the project, exploration of our significant regional targets, financing of the project for production and initial site earthworks.



Kevin Tomlinson, Chairman

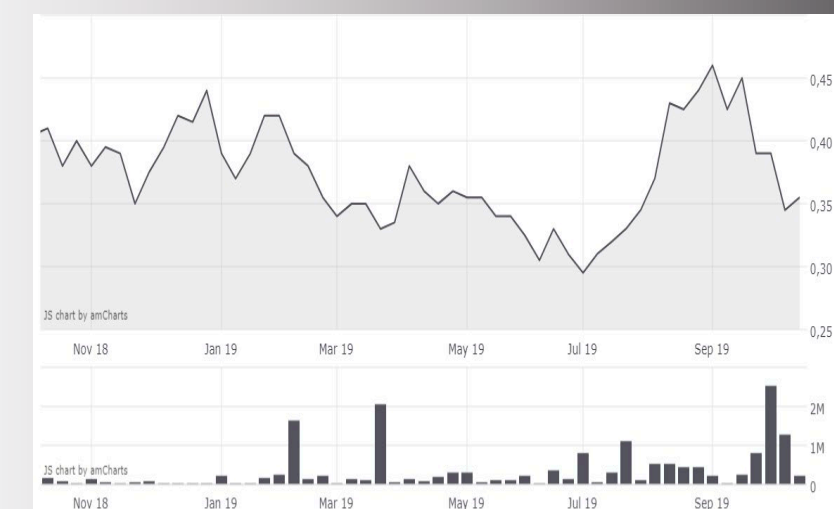
**ISIN:** AU000000CDV9  
**WKN:** A1KBC9  
**FRA:** C3L  
**TSX:** CDV  
**ASX:** CDV

Shares outstanding: 493.7 million  
Options: 33.7 million  
Fully diluted: 527.4 million

**Contact:**  
Cardinal Resources Limited  
Suite 1, 28 Ord Street,  
West Perth, WA, 6005  
PO Box 829, West Perth, WA, 6872,  
Australia

phone: +61-8-6558-0573  
info@cardinalresources.com.au  
www.cardinalresources.com.au

## Cardinal Resources Limited





Discovery Metals
One of the largest silver deposits in the world and
star investor Sprott on board



Taj Singh, CEO

Discovery Metals (“Discovery”), is a Canadian mining development company focused on district scale silver and silver-zinc-lead projects in northern Mexico and has one of the largest unexploited silver deposits on the planet. The Company has demonstrated a silver resource of 595 million ounces within a few years on the flagship Cordero project alone, plus significant gold, zinc and lead resources as by-products. In total, Discovery Metals comes to over 1.5 billion ounces of silver equivalent!

Flagship Project Cordero – Resource

The Cordero Silver Project is located on the eastern edge of the Sierra Madre Occidental mountains within the northern extent of the Central Mexican Silver Belt. The Project is also located in one of Mexico’s premier porphyry and carbonate replacement deposit districts and is similar to well-known nearby bulk-tonnage precious metal operating mines (e.g. Newmont Goldcorp Corporation’s Peñasquito Mine) and projects (e.g. Orla Mining Ltd’s Camino Rojo project). The bulk-tonnage potential of the Cordero deposit was first recognized in 2009 by Levon Resources Ltd (“Levon”), whom Discovery acquired in August 2019, and in total the resource area was tested with 132,000m of drilling in 292 holes. The resource estimate for the Project, as currently stated, captures a massive inventory of silver-zinc-lead-gold, making it one of the largest undeveloped silver deposits in the world and thus providing

exceptional leverage in a rising silver market. Within this extraordinary in-situ resource, Discovery has identified a compelling opportunity to delineate and expand areas of higher-grade silver that occur through the deposit. In Table 1 is a sensitivity analysis showing the mineral resource, with additional information on grade and tonnage for higher cut-off grades. This table shows that a significant portion of the resource remains even at significantly higher cut-off grades.

Flagship Project Cordero – A New Higher-Grade Approach

Within the Cordero drill database, there are 285 individual intervals with AgEq values above 500 g/t and 1,416 individual intervals with AgE values above 200 g/t. A selection of examples of high-grade intervals and the longest natural intervals with grades over 200 g/t AgEq at Cordero are shown in the Table 2 and Table 3 respectively. These two tables illustrate both the high-grade selective (underground) and high-grade bulk-tonnage (open-pit) potential of the Project.

Flagship Cordero Project – Upcoming exploration plans

Despite the already huge resource, Cordero has another resource potential that will be explored in more detail in the coming months. The fact that the current resource has not yet been fully delineated to the south, north, northwest and depth

has led Discovery Metals to recently begin planning several exploration campaigns. For the fourth quarter of 2019, a new scan of the previous wells is planned, which will also be used to create a new geological model. In addition, a 5,000-metre program of exploration drilling is planned to define resources, particularly in the Cordero Main area. In the Cordero Main Zone, another 10,000-meter campaign is planned to commence in the first quarter, as well as sampling the extensive area of the remaining project area. Later in 2020, the Company will continue to drill at least 15,000 metres for the Cordero Main resource definition and 10,000 metres for resource expansion throughout the project area.

Discovery’s focus over 2019 and 2020 can be split into two key areas: Cordero deposit and Property-wide. The current plan calls for approximately 20,000-25,000m drilling at the Cordero deposit and 10,000m Property-wide for a total estimated budget of C\$7-8M. On the Property-wide exploration, Discovery intends to follow up on numerous exploration targets that have been defined outside of the resource area, and to carry out reconnaissance programs to define new targets on the remainder of the property. Prior to Levon’s exploration program for bulk tonnage silver-zinc-lead-gold deposits, exploration focused on:

- ▶ Narrow, high-grade underground vein and intrusive contact deposits;
- ▶ Bulk tonnage porphyry copper and molybdenum potential;
- ▶ Gold skarn and porphyry gold deposits.

Currently there are six regional targets outside of the Cordero deposit that require follow-up work and drill testing. A conceptual plan view map of the Cordero property and various target areas is shown in Figure 1.2 of the 2018 PEA. Historical mine workings and prospects at Cordero date back to the 17th century. There are about 40 shallow, vertical shafts with associated open stopes at Cordero,

Table with 9 columns: Hole, From (m), To (m), Length (m), Ag g/t, Zn%, Pb%, Au g/t, AgEq' (g/t). It contains 15 rows of drill data.

Table with 9 columns: Hole, From (m), To (m), Length (m), Ag g/t, Zn%, Pb%, Au g/t, AgEq' g/t. It contains 15 rows of drill data.

Table 2 (above): Cordero project – Selection of historic high-grade intervals

Table 3 (below): Cordero project – Selection of longest natural intervals > 200 g/t AgEq

Three advanced projects in adjacent state of Coahuila

In addition to the flagship Cordero project, Discovery Metals owns a 150,000-hectare land package in a large and historic mining area in the state of Coahuila, Mexico. The portfolio of three large, drill-ready projects and a variety of early-stage opportunities, all with shallow, high-grade silver-zinc-lead mineralization, is located in a world-class CRD belt extending from southeast Arizona to central Mexico. The land holdings contain hundreds of historic pits with several kilometres of underground development, with no modern exploration drilling having ever been carried out on the proper-

Table 1: Cordero resource summary – Cutoff grade sensitivity

Table with 10 columns: AgEq (g/t) Cutoff, Class, Tonnes x1000, AgEq' g/t, Ag g/t, Zn %, Pb %, Au g/t, Total Contained Ag Mozs, Total Contained AgEq' Moz. It shows resource data for cutoffs of 15, 25, and 50 g/t.

ties before Discovery Metals acquired them.

Recent sampling confirmed that these projects can be very high-calibre projects, with high-grades and extensive at/near surface mineralization. For example, underground sampling at the Minerva project encountered grades of up to 8,880g/t silver, up to 37.8% zinc, up to 43.2% lead and up to 2.3% copper and close to 100 more other channels with grades over 400 g/t silver equivalent. At the Monclova Project in 2019, up to 2,645g/t silver equivalent was encountered directly on the surface and there were many channel samples of 500-1,000 g/t silver equivalent. In the area of the Puerto Rico Project, a historic mining district which produced more than 1 million tonnes of ore grading an average of 40% zinc (+200-400 g/t silver), more than 8km of untested and strike has been identified and mapped. For all of these projects, no drilling has ever been carried out – only artisanal mining.

### Solid cash position – investor legend Eric Sprott on board

At the end of August 2019, Discovery Metals had a cash position of around CA\$ 11 million, which can easily be used to finance the extensive exploration work of 2019 and 2020. The main reason for

the high cash position is a financing of CA\$ 9 million, which was concluded in July 2019. Investor legend Eric Sprott, who secured 19.9% of all outstanding shares and is thus the largest single shareholder, contributed CA\$ 7.7 million alone. In October 2019, Discovery received another CA\$17 million through the issuance of common shares whereby CA\$5 million came from Eric Sprott.

### Summary: One of the largest silver deposits in the world offers giant levers

Discovery Metals has one of the world's largest silver deposits. Especially for investors who expect a rising silver price, the share seems to be very interesting, as a rise of only US\$ 1 in the silver price for Discovery Metals means a change in the value of the silver in the ground of about US\$ 600 million. The leverage offered by Discovery Metals is therefore enormous and the project offers many more opportunities and potential for resource expansion. Discovery Metals shares offers a very good risk/reward ratio, especially for investors who expect a significantly higher silver price in the medium term. In addition, the upcoming exploration and, above all, drilling campaigns should ensure a steady flow of news.

## Exclusive interview with Taj Singh, CEO of Discovery Metals

### What have you and your company achieved in the past 12 months?

Discovery has grown and transformed over the past year. Our primary focus in 2019 was the acquisition of Levon Resources and their flagship Cordero silver project, in Mexico, currently ranked as one of the world's largest silver resources in terms of both undeveloped and opera-

ting mines. After announcing this acquisition, we were able to carry out a C\$9M private placement led by Mr. Eric Sprott. In mid-September we announced a 35,000-meter drill program at Cordero. We are now well funded and well positioned to aggressively explore a world-class silver asset in a rising precious metals price environment.

### What are the most important company catalysts for the next 6 to 12 months?

Our near-term focus will be on Cordero, our base value. We think we can drastically improve the economics of Cordero by optimizing it for the current metals price environment through drilling, resource modelling and engineering. Within the +1B tonne open-pit project, we believe there is a substantial high-grade core which can form the basis for a very robust project at \$17-18/oz silver. This high-grade project could be a stand-alone but could also be starter to an expanded, much larger, project as silver prices increase.

In addition, we will also be focusing on testing our drill-ready projects in Coahuila State, none of which have been drilled before but all of which have extraordinary potential in a market still enamored by drill hole stories. A batch of strong drill intercepts from these projects would be a positive catalyst for Discovery. We think Coahuila offers the possibility for multiple high-grade, near-surface discoveries in 2020.

ISIN: CA25471U1003  
WKN: A2DW38  
FRA: 1CU  
TSX-V: DSV

Outstanding shares: 168.3 million  
Options: 15.1 million  
Warrants: 33.7 million  
Fully diluted: 217.1 million (as of 08/30/19)

**Contact:**  
Discovery Metals Corp.  
#701 - 55 University Ave  
Toronto, ON, M5J 2H7, Canada

phone: +44-1534-679800

info@dsvmetals.com  
www.dsvmetals.com

### How do you see the current situation on the market for precious metals?

We are bullish on the near and mid-term prospects for precious metals, in particular silver as a safe haven in the current macro regime. Silver, similar to gold, should continue to enjoy positive investment flows in this fragile macro environment where global economic growth is slowing down and investors become increasingly concerned about a potential recession and its negative implications on their portfolios.

We believe silver will most likely outperform gold given its historical performance in a bull market and because the silver-to-gold ratio is lagging behind historic average levels. A silver-to-gold ratio of 60:1 at the current \$1,500 /oz gold implies a \$25 /oz silver price. Solid investment demand for silver should tighten the supply/demand balance of the market which would drive silver spot prices higher.

## Discovery Metals Corp.





# Endeavour Silver

## Fourth mine in production, fifth in planning



Bradford Cooke, CEO

Endeavour Silver is one of the largest silver producers in North America with listings in New York, Toronto and Frankfurt. The Company mined a total of approximately 2.13 million ounces of silver and 19,613 ounces of gold from its four Mexican mines during the first half of 2019. Endeavour Silver reached commercial production for its fourth mine in 2019 and plans to build a fifth mine in 2020.

### Silver Mine Guanaceví

Endeavour Silver's first Guanaceví plant, commissioned in 2004, consists of two mines, Milache and Santa Cruz South. The processing capacity on Guanaceví is 1,200 tons of rock per day (tpd). In total, Endeavour Silver mined 995,110 ounces of silver and 2,505 ounces of gold there in the first half of 2019. At the end of 2018, reserves were 8.22 million ounces silver equivalent and resources (excluding lead and zinc) were 21.27 million ounces silver equivalent. In June 2019 Endeavour Silver released high profile drill results from the Porvenir Centro, Porvenir Norte and Santa Cruz veins. The Company encountered up to 1,831g/t silver equivalent in the Porvenir Norte area, up to 1,181g/t silver equivalent in the Porvenir Centro area and up to 3,903g/t silver equivalent within the Santa Cruz vein. In July 2019, the Company also announced the acquisition of exploration and usage rights to two properties adjacent to the Guanaceví mine. Both objects include possible extensions of Endeavour orebody. The 15 hectare El Porvenir property is adjacent to the operated Porvenir Norte mine and includes the upward extension of the Porvenir Norte ore body. The 40 hectare El Curso property is adjacent to the now closed Porvenir Cuatro mine and includes any possible northwest extension of the Porvenir Cuatro orebody. Porvenir Cuatro was previously the highest-grade Endeavour mine in the county. Mining at Porvenir Cuatro ended in 2018 at the border of the El Curso property. The current access ramp from Porvenir Cuatro to Milache crosses the entire El Curso property, providing En-

deavour with existing underground access and infrastructure to facilitate El Curso exploration and development.

### Silver Mine Bolañitos

Endeavour Silver Bolañitos was commissioned in 2007. The processing capacity on Bolañitos is 1,600 tpd. In total, Endeavour Silver mined 367,901 ounces of silver and 7,465 ounces of gold there in the first half of 2019. At the end of 2018, reserves were 2.75 million ounces silver equivalent and resources were 14.51 million ounces silver equivalent. In May 2019 Endeavour Silver released spectacular drill results from the two Plateros and San Miguel ore veins. The company encountered up to 1,903g/t silver equivalent in the Plateros area and up to 6,497g/t silver equivalent in the San Miguel area. This indicates that Bolañitos has a high-calibre Blue Sky potential, which will be investigated further in the coming months.

### Silver Mine El Cubo

El Cubo was acquired in 2012 and has a processing capacity of 1,500 tpd. In total, Endeavour Silver mined 740,441 ounces of silver and 7,063 ounces of gold there in the first half of 2019. At the end of 2018, reserves were 2.23 million ounces silver equivalent and resources 11.90 million ounces silver equivalent.

### Mine Project El Compas

In 2016, Endeavour Silver acquired the El Compas Mining Project for only US\$6.7 million in shares. In addition to the acquisition of the actual El Compas gold-silver mining operation, the nearby La Plata ore processing plant was leased with an initial processing capacity of 250 tpd (expandable to 500 tpd). El Compas currently consists of the two El Compas and El Orito veins and over ten other exploration targets. Drilling to date has included 4.70 metres of 239.55g/t gold and 1,333g/t silver. In total, Endeavour Silver mined 27,225 ounces of silver and 2,580 ounces of gold

there in the first half of 2019. At the end of 2018, El Compas had approximately 900,000 ounces of silver equivalent reserves and 4.59 million ounces of silver equivalent resources (including reserves) at its disposal.

Endeavour Silver commissioned the mine in 2018 and reached commercial production status in mid-March 2019.

In June 2017, Endeavour Silver acquired two further projects with a total area of 227 hectares in the immediate vicinity of the El Compas Mine in order to extend the mine life. These contain several veins with proven degrees of up to 1,300g/t.

### Terronera – Reserves/Resources

On the San Sebastian project acquired in 2010, Endeavour Silver quickly discovered a high-grade silver-gold mineralization called Terronera, which now also gives the project its name. The existing at least four large gold vein systems there are each over three kilometers long. In 2017 Endeavour Silver was able to report further results from the La Luz Vein area. It encountered sensationally high-grade areas such as 1,180 grams silver equivalent per tonne of rock over 1.7 metres, 1,485 grams silver equivalent per tonne of rock over 1.3 metres and 3,335 grams silver equivalent per tonne of rock over 0.2 metres. The highest concentration was an amazing 11,245 grams of silver equivalent per ton of rock! In June 2018, 861g/t silver equivalent was found on a 21.2-metre-long intercept. In total, Terronera had 66.46 million ounces of silver equivalent reserves plus 13.56 million ounces of silver equivalent resources at the end of 2018. Continuing infill drilling has shown grades of up to 18,000 grams of silver equivalent per tonne.

### Terronera – Prefeasibility Study

In August 2018, Endeavour Silver released a renewed pre-feasibility study (PFS) for Terronera. This is based on an initial production capacity of 750 tpd, which is to be increased to 1,500 tpd in the third

year. The initial cost of capital was estimated at US\$ 75.8 million. The planned expansion would cost a further estimated US\$39.2 million. Over the initial estimated 9.5-year mine life, an average of 5.1 million ounces of silver equivalent will be produced annually. For the underlying prices of US\$ 17 per ounce of silver and US\$ 1,275 per ounce of gold, a strong after-tax IRR of 23.5% was calculated.

### Terronera – Mine Plans

The construction time for the mine could only be 12 to 16 months.

A mine construction within 12 to 16 months would therefore be so quickly feasible, as Endeavour Silver has its „own“ construction and planning team. This team is made up of the same project manager, the same Canadian engineering consultants and the same Mexican construction company that has been used since 2010 for the expansion of Bolañitos and the commissioning of El Cubo, among other things.

In June 2019 Endeavour Silver announced that it had received final approval for Terronera. Endeavour Silver plans to make a production decision for Terronera in 2019, secure financing and begin construction of the facilities. Terronera could go into production by mid 2021 and become Endeavour Silver's fifth and largest mine.

### Development Project Parral

In 2016 Endeavour Silver acquired the Parral project for only US\$ 6 million in treasury shares. There are several large veins that extend over a length of eight kilometres and are up to 40 metres thick. Parral had a total of 32.20 million ounces of silver equivalent resources (excluding lead and zinc) at the end of 2018. There is also excellent potential for the discovery of new high-grade resources. Several high-grade drill results were reported in 2017. Among them was also a 0.6-metre-long section with fabulous 13,117g/t silver! Another high-profile drill success was reported by Endeavour Silver in May

2018 where up to 1,660g/t silver, 0.72g/t gold, 6.52% lead and 14.45% zinc over 2.3 metres were encountered in the San Patricio mineralization area. In 2019, up to 3,770g/t silver was encountered in the Sierra Plata Mine area.

### Expansion of exploration in Zacatecas Province

In September 2017, Endeavour Silver announced that it had secured the right to explore and mine precious metals on Capstone Mining's 181-hectare Toro del Cobre concessions, located above 2,000 metres above sea level, at Toro del Cobre. Capstone's concessions are adjacent to the 75-hectare Calicanto concessions in Zacatecas (Mexico) owned by Endeavour Silver. The company is thus attempting to consolidate another project and make it fit for future funding.

Speaking of Calicanto, Endeavour Silver delivered absolute high-grade drill results for the core project in December 2017. Among other things, they came across 0.5 metres with a fabulous 16,350g/t silver equivalent! In July 2018, recent drilling

intersected 3,450g/t silver equivalent over 0.2 metres, among others.

### New projects in Chile

In early 2019 Endeavour Silver announced that it had secured a portfolio of potentially high-profile exploration projects in Chile. The three projects Aida, Paloma and Cerro Marquez are located in northern Chile and are scheduled to be drilled in 2019. Initially, 5,500 metres are planned, with the option of a further 2,500 metres.

### Summary: Terronera becomes the absolute Company Changer

Endeavour Silver has already been able to build a new commercial mine, El Compas, in 2019. Terronera could follow by 2021, which would then be by far the company's largest mine. With the new El Compas and Terronera mine, it will be possible to drastically reduce all-in sustaining costs at the same time. The new projects in Chile, which provide additional exploration and resource potential, will be exciting.

## Exclusive interview with Bradford Cooke, CEO of Endeavour Silver

### What have you and your company achieved in the past 12 months?

Endeavour Silver delivered on a number of catalysts over the past year:

- ▶ Achieved commercial production at our fourth and newest mine, El Compas in Zacatecas, Mexico on time and budget at the end of Q1, 2019
- ▶ Developed two new orebodies at Guanacevi to turn around that operation from mining deep, narrow, low grade, higher cost ores to shallower, wider, higher grade, lower cost ores
- ▶ Secured final government permits and completed an updated reserve

estimate and pre-feasibility study to support building our next and fifth mine at Terronera in Jalisco, Mexico

- ▶ Expanded the silver resources at Parral in Chihuahua, Mexico which has the potential to become our sixth mine and acquired new highly prospective properties at Guanacevi

However, after recording significant operating losses early this year, we recognized the need to make sweeping changes in our mining operations in order to return to profitability. Management initiated multiple measures in Q2 and Q3, 2019 and the operating and financial results are now improving as a result.

### What are the most important company catalysts for the next 6 to 12 months?

We anticipate several catalysts to create shareholder value over the next few months, including:

- ▶ Higher production and lower costs at our Guanacevi and Bolanitos mines as they complete their turn arounds to profitability
- ▶ Extending the mine lives at the four operating mines by successful brown-fields exploration
- ▶ Securing the project financing, completing a final PFS to refine the operating and financial performance and commencing the 18-month construction program to build what will become our largest, lowest cost, longest life mine at Terronera
- ▶ Expanding resources again at Parral and completing a preliminary economic assessment for this project to assess the potential to generate near term, small scale production and become a core asset in the longer term
- ▶ Acquiring new mining properties to expand our development pipeline

### How do you see the current situation on the market for precious metals?

The precious metals have clearly entered into a new cycle, with the prices bottoming in late 2015 and again in 2018 and the silver/gold ratio bottoming in June 2019. The main reasons gold and to a lesser extent (for now) silver are attracting new investors are simple. After a prolonged 10-year bull market in equities, economic recovery and rising interest rates, each of these global trends reversed in 2019 to falling interest rates, slowing economic growth and a broad equity top at risk of a major correction. In times of financial distress, investors seek the safety of gold as a hedge against other assets in decline and as a store of value when currencies are debased. Silver has not really joined the party yet but wherever gold goes, silver typically follows. The fundamentals for silver are much more compelling than for gold. With silver supply falling and industrial demand rising, the only component needed for outperformance in silver relative to gold is investment demand, and now it is starting to rise. We are bullish!

ISIN: CA29258Y1034  
WKN: A0DJ0N  
FRA: EJD  
TSX: EDR  
NYSE: EXK

Outstanding shares: 135.4 million  
Options/PSUs: 8.3 million  
Warrants: -  
Fully diluted: 143.7 million

**Contact:**  
Endeavour Silver Corp.  
Suite 301-700 West Pender Street  
Vancouver, BC, V6C 1G8, Canada

phone: +1-604-685-9775  
fax: +1-604-685-9744

gmeleger@edrsilver.com  
www.edrsilver.com

## Endeavour Silver Corp.





# First Majestic Silver

## 25 million ounces of silver equivalent from 6 mines on full course in 2019



Keith Neumeyer, CEO

First Majestic Silver is a Canadian mining company with a clear focus on silver. The company's motto is „One Metal, One Country“, which clearly shows that they are fully committed to the mining of silver from Mexican mines. Accordingly, First Majestic Silver is aggressively pursuing the development of its six current mines and exploration projects. During the first half of 2019, the Company mined 6.52 million ounces of silver and 12.68 million ounces of silver equivalent (including all by-products) from the San Dimas, La Parrilla, San Martin, La Encantada, Del Toro and Santa Elena mines.

### San Dimas Silver/Gold Mine

The San Dimas silver/gold mine is First Majestic Silvers by far largest mine. It has a daily processing capacity of 2,000 tons. A total of approximately 6.81 million ounces of silver equivalent were mined there in the first half of 2019. For the full year 2019, the Company is seeking to recover 13.5 to 14.4 million ounces of silver equivalent at all-in costs of less than US\$7.52 per ounce for San Dimas. San Dimas had a Measured and Indicated resource of 130.1 million ounces silver equivalent (including 100.4 million ounces silver equivalent reserves) and Inferred resource of 112.6 million ounces silver equivalent at the end of 2018. The company is currently working on an extensive modernization program, which will primarily involve the mill, filtration equipment, smelters and mines. Since the takeover of the mine at the beginning of 2018, production costs have already been reduced by 30%.

### Santa Elena Silver Mine

The Santa Elena Silver Mine has a daily processing capacity of 3,000 tons. A total of approximately 2.86 million ounces of silver equivalent were mined there in the

first half of 2019. For the full year 2019, the Company is targeting Santa Elena production of 5.6 to 6.1 million ounces silver equivalent at all-in cost of less than US\$7.53 per ounce. Santa Elena had 43.4 million ounces of silver equivalent measured and indicated resources (including 24.1 million ounces of silver equivalent inferred resources) at the end of 2018. First Majestic is currently installing a total of three High Intensity Grinding (HIG) mills on Santa Elena using rotating grinding discs with ceramic balls to grind ore down to 20 microns, which has been shown to significantly increase the extraction rate. HIG mills are characterized by low energy consumption and low maintenance compared to standard ball mills. Two 3,000 tpd units will be delivered in 2019, a third unit has been ordered for 2020. The company is also working on the development of the Ermitano project, which is located just 4 kilometres from the Santa Elena plant. Ermitano is already fully approved and has approximately 57 million ounces of silver in the indicated and inferred categories.

### La Encantada Silver Mine

La Encantada, an almost 100% silver mine, has a daily processing capacity of 3,000 tonnes. A total of approximately 1.22 million ounces of silver equivalent were mined there in the first half of 2019. For the full year 2019, the Company is targeting production of 2.4 to 2.5 million ounces of silver equivalent at all-in cost of less than US\$16.81 per ounce for La Encantada. La Encantada had 34.8 million ounces of silver equivalent measured and indicated resources at the end of 2018 (including 27.7 million ounces of silver equivalent reserves) and 11.2 million ounces of silver equivalent inferred resources. First Majestic Silver is currently working on a modification to the roasting

cycle to reprocess tailings, which is expected to generate 1.5 million ounces of silver per year in additional production.

### La Parrilla Silver Mine

The La Parrilla silver mine has a daily processing capacity of 750 tons. A total of 861,000 ounces of silver equivalent were mined there in the first half of 2019. For the full year 2019, the Company is seeking to recover 1.1 million ounces of silver equivalent at all-in costs of less than US\$30.72 per ounce for La Parrilla. La Parrilla had Measured and Indicated resources of 11.4 million ounces silver equivalent (including 3.6 million ounces silver equivalent reserves) and Inferred resources of 12.5 million ounces silver equivalent at the end of 2018. First Majestic installed microbubble flotation columns in the second quarter of 2019 to improve silver, lead and zinc recovery. The 69,478-hectare concession area with several old mines offers ample opportunities for additional resources.

### Del Toro Silver Mine

The Del Toro silver mine has a daily processing capacity of 350 tons. A total of approximately 235,000 ounces of silver equivalent were mined there in the first half of 2019. For the full year 2019, the Company is seeking to recover 0.7 million ounces of silver equivalent at all-in costs of less than US\$26.85 per ounce for Del Toro. Del Toro had Measured and Indicated resources of 14.5 million ounces silver equivalent (including 9.1 million ounces silver equivalent reserves) and Inferred resources of 6.8 million ounces silver equivalent at the end of 2018. A silver-lead concentrate is currently being produced on Del Toro.



First Majestic owns six producing mines in Mexico  
(Source: First Majestic)

### San Martin Silver Mine

The San Martin silver mine has a daily processing capacity of 900 tons. In the first half of 2019, a total of 783,000 ounces of silver equivalent were mined there. For the full year 2019, the Company is targeting a San Martin production of 1.1 to 1.2 million ounces silver equivalent at all-in cost of less than US\$17.04 per ounce. San Martin had a Measured and Indicated resource of 17.0 million ounces silver equivalent (including 6.1 million ounces silver equivalent reserves) and Inferred resource of 13.4 million ounces silver equivalent at the end of 2018. San Martin has around 38,500 hectares and thus further exploration potential.

### La Guitarra Silver Mine

The La Guitarra silver mine has a daily processing capacity of 400 tons and is currently in maintenance mode. The La Guitarra claims cover an area of more than 39,000 hectares.

## Advanced development projects

In addition to the profitable mines, First Majestic also has several development projects, two of which are particularly advanced.

The La Luz project, located in the Mexican state of San Luis Potosí, covers 6,300 hectares and hosts historic resources totaling 32.8 million ounces of silver.

The Plomosas project, located in the Mexican state of Sinaloa, covers approximately 8,500 hectares and hosts historic resources of approximately 10 million ounces of silver equivalent.

## Mastermind Keith Neumeyer

Behind the rapid development of First Majestic Silver is its CEO Keith Neumeyer. Neumeyer's successes are legendary. He led First Quantum Minerals from the bottom up to a market capitalization of several billion US\$. At its peak, the First Quantum share reached a price of just under US\$ 30, which, with an initial price of US\$ 0.50, represents a huge price gain. The issue price of the First Majestic Silver share was once 0.16 CA\$. The high was only recently around 24 CA\$. Calculate what profit the investors of the first hour

were able to make with it. Neumeyer's third creation is First Mining Gold, a holding company specialising in commodity projects, whose main business is the acquisition of high-value assets, particularly in the Americas. This started in 2014 and was able to bring in almost 200% profit at its peak.

## Summary: 25-million-ounce silver equivalent target clearly in focus

First Majestic Silver has a clear goal of producing 25 million ounces of silver by 2019. The company is working hard on modernization measures in all mines, which focus not only on increasing production, but above all on reducing operating costs, but also on the use of environmentally friendly energy generation. All in all, First Majestic Silver is very well positioned. By mid-2019, the Company had approximately US\$94.5 million in cash and cash-like investments. First Majestic Silver remains the number one mid-tier silver producer in Mexico and even strengthened its position with the San Dimas acquisition.

think acquisition of the San Dimas is still worth mentioning. The transaction was announced in January of 2018 and First Majestic took over the mine in May of 2018. The accretive acquisition doubled the size of First Majestic.

## What are the most important company catalysts for the next 6 to 12 months?

Major catalyst for First majestic over the coming months include –

- ▶ The San Dimas mine optimization program which is essentially a complete overhaul of the existing mine. At the mine to date production costs have dropped by over 30% to \$110/tonne. These costs will continue to drop as continued improvements to the mill are made.
- ▶ Anticipated re-start of the roaster at La Encantada mine.
- ▶ On going exploration at the Ermitaño project with four active drill rigs on site the company is working on completing over 32,000 metres of infill and step out drilling. In the coming months, the company will begin work

on the mine portal to start underground development activities with mining operations expected to commence in early 2021.

- ▶ Conversion from diesel power to liquid natural gas at the Santa Elena mine by the end of 2019.
- ▶ Continued recovery improvements with the HIG mill at Santa Elena.
- ▶ Reserve growth with over 225,000 metres of exploration drilling planned for 2019.

## How do you see the current situation on the market for precious metals?

With Central Banks around the world dropping rates and the uncertainty of the ongoing US China trade war. On top of the uncertainty of a Brexit deal the ongoing possible impeachment of Donald Trump. Not to mention the global tensions between the US and Iran, North Korea, and Venezuela.

With all of these uncertainties and a possible global recession the environment is right for investors to take a stake in the precious metals space.

## Exclusive interview with Keith Neumeyer, CEO of First Majestic Silver

### What have you and your company achieved in the past 12 months?

Within the last twelve months the company has continued to focus on driving costs down with the implementation of innovative technologies. These technologies include automated lime feed, mill and grind optimization, as well as micro-bubbles and fine grinding to name a few. An example of this is the installation of the high intensity grinding mill (HIG mill)

at the Santa Elena mine. A HIG mill is a tall cylindrical unit that stands vertically as opposed to a traditional horizontal ball mill. Within the housing of the mill there are a series of disks that spin at high-speed much like how a typical household blender works. This movement combined with ceramic beads helps grind ore to sub-50 micros, or smaller than a human hair, and improves recoveries on average by 5% to 10%.

Though over twelve months ago we still

ISIN: CA32076V1031  
WKN: A0LHKJ  
FRA: FMV  
TSX: FR  
NYSE: AG  
Shares outstanding: 204.7 million  
Options: 8.0 million  
RSUs: 0.1 million  
Fully diluted: 212.9 million  
(as of 09/30/2019)

### Contact:

First Majestic Silver Corp.  
1805 - 925 West Georgia Street  
Vancouver, BC, V6C3L2 Canada  
phone: +1-604-688-3033  
fax: +1-604-639-8873

info@firstmajestic.com  
www.firstmajestic.com

## First Majestic Silver Corp.





# GoldMining

## Excellent prepared for the next gold rally



Garnet Dawson, CEO

GoldMining is a Canadian mining development company focused on prospective gold projects in North and South America. As a so-called mineral bank, the business model consists of buying up top-class projects at the best possible conditions during bear markets and reselling them at the highest possible price during bull markets or generating development partners for them.

### Almost 23 million ounces of gold on the credit side

GoldMining has made a number of high-profile acquisitions in recent years and now has a resource base of nearly 23 million ounces of gold. Including all other commodities, namely silver and copper, GoldMining's projects have more than 28.3 million ounces of gold equivalent. The most important projects are presented below.

### Para State Projects – Brazil

7 projects are located within or just outside the Brazilian state of Para State. 4 of these already have a combined resource base of 2.41 million ounces of gold. With 715,000 ounces of gold in the indicated category and 1.035 million ounces in the inferred category, Sao Jorge is the leading Para State Project. It is an open pit project with an average indicated grade of 1.54 grams gold per tonne of rock (g/t). Although 145 diamond holes have been drilled to date, approximately 80% of the property has not yet been tested for resources. Cachoeira has 692,000 ounces in the indicated category and 538,000 ounces in the inferred category and a total of three separate deposits in the western licensing area. However, the eastern part of the shear zone has not yet been sufficiently investigated. The 285 holes drilled

to date have averaged up to 100 metres in length. This results in a high exploration potential for Cachoeira in depth. The other 5 projects have only been sporadically explored for gold occurrences to date, with no resource estimate at all yet available for three of them. Para State has an excellent infrastructure. In addition, the state has a very low corporate tax rate of only 15.25%. By comparison, most other Brazilian states charge 34%. This provides a very good environment for interested development companies.

### Titiribi Gold Project – Colombia

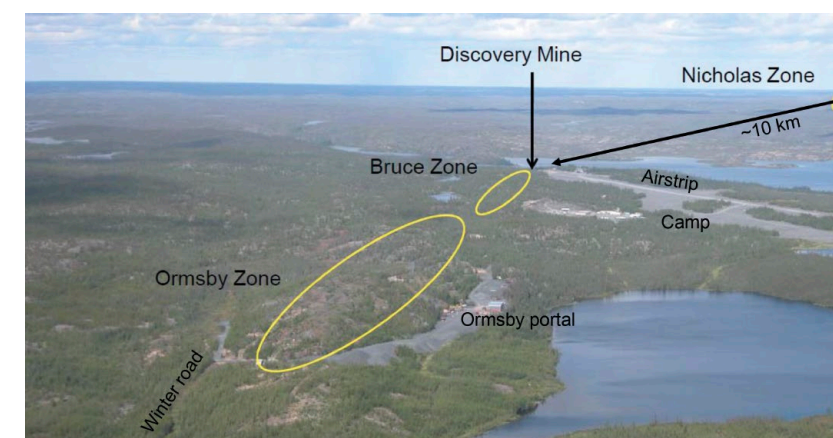
The so-called Mid-Cauca Belt runs from north to south through Colombia. This is regarded as one of the most perspective gold belts in the world and in the past 10 years alone has produced finds of about 100 million ounces of gold. The entire gold belt is nevertheless considered under-explored compared to other regions of South America. Most recently, major gold companies made several investments in corresponding projects of the Mid-Cauca Belt. Like Newmont, who invested \$100 million in Buritica. The two gold-copper porphyries and epithermal gold deposits Titiribi and La Mina are located approximately 100 kilometers southwest of Medellin and are 100% owned by GoldMining. They are connected to an excellent infrastructure and already accommodate offices, drill core storage and a power supply. The two deposits together contain 5.3 million ounces of gold, 1.6 million ounces of silver and 800 million pounds of copper in the Measured and Indicated category and 3.5 million ounces of gold, nearly 700,000 ounces of silver and 151 million pounds of copper in the inferred category. Several drill areas have been identified but have not yet been further investigated for corresponding occurrences.

### Crucero Project – Peru

The Crucero Project is located throughout southeastern Peru within the Orogenic Gold Belt and comprises three mining and five exploration licenses over 4,600 hectares. The A1 deposit hosts at least 993,000 ounces of gold in the indicated category and 1.147 million ounces in the inferred category. In addition, the project has high exploration potential as several other targets have not yet been explored by drilling.

### Yellowknife Gold Project – Northwest Territories, Canada

The Yellowknife Gold Project consists of several properties (Nicholas Lake, Ormsby, Goodwin Lake, Clan Lake and Big Sky) covering parts of the Yellowknife Greenstone Belt from 17 to 100 kilometres north of the city of Yellowknife. The Yellowknife Greenstone Belt is said to have mined over 15 million ounces of gold from the Con, Giant and Discovery mines in the past. The Discovery Mine, located on the Ormsby property, operated from 1950 to 1969 and is reported to have mined 1 million ounces of gold at an average grade of 28 g/t gold in the past. Over \$60 million has been invested in exploration, underground development and camps on GoldMining's project areas in the past. Directly next to the Discovery Mine are the two high-grade target areas Ormsby and Bruce, about 10 kilometres away the target area Nicholas. In March 2019, GoldMining presented its first resource estimate for Yellowknife. Accordingly, the project has at least 14.1 million tonnes of rock averaging 2.33 g/t gold (equivalent to 1.059 million ounces) in the indicated category and 9.3 million tonnes averaging 2.47 g/t gold (equivalent to 739,000 ounces) in the inferred category. In April 2019, GoldMining received a five-year Type B Water Licence and Type



On the Yellowknife Gold Project, several high-grade deposits are located directly adjacent to each other.  
(Source: GoldMining)

A Land Use Permit for the Nicholas Lake-Ormsby Property. These will allow the Company to carry out advanced exploration work including core drilling, underground development and operation of the existing camp, runway and winter road. In addition, two land use permits on the Goodwin Lake and Clan Lake properties have been extended for two years.

### Whistler Project – Alaska, USA

The Whistler Project is located approximately 150 kilometers northwest of Anchorage and has a runway and access to the Donlin Gas Pipeline. The project is district in character with an area of 170 square kilometres and hosts several near surface porphyry deposits. Currently, Whistler's resource base consists of 1.77 million ounces of gold and 343 million pounds of copper in the indicated category and 4.63 million ounces of gold and 713 million pounds of copper in the inferred category. There is also significant potential for high grade epithermal mineralization. Although 70,000 meters have already been drilled, some areas are still little investigated. Several areas need to be explored in greater detail, including an area that has intersected 435.2 metres averaging 0.72g/t gold and 0.12 copper from previous drilling.

## Rea Uranium Project – Alberta, Canada

Another possible trump card is the Rea Uranium Project in the western part of the Athabasca Basin, the current hottest uranium hot spot in the world. With its 125,000 hectares, it has district potential. It encloses Oranos (ex-AREVA) high-grade Maybelle deposit which has produced 17.7%  $U_3O_8$  over 5 metres, among others. Orano is actively exploring the Maybelle Project there. GoldMining owns 75% of Rea, while Orano owns the remaining 25%.

## Low free float, sufficient cash

Most of the outstanding GoldMining shares are held by insiders or institutional investors. Thus, insiders, management, etc. hold about 20% of all shares. Large institutions and companies such as KCR Fund, Sprott, IAMGOLD, BRASILINVEST, Extract Capital, Marin Katusa and Ruffer Gold hold a further 36% of the shares. This means that only about 40% of all shares are directly tradable. Thanks to clever financing, GoldMining has recently been able to accumulate a considerable cash sum of over CA\$ 9 million, which means that important development work can be financed over months.

## Summary: High leverage on the gold price

Since its inception in May 2011, GoldMining has assembled a significant portfolio of projects that together add up to over 28.3 million ounces of gold equivalent. The projects are not even completely explored in the slightest, the deposits are partly in several directions and in depth not yet delimited. GoldMining's successful management team is also working on other acquisition opportunities that should be achievable with a cash position of over CA\$9 million. With the price of gold continuing to rise, GoldMining should also be able to sell projects or find development partners for them. The Rea Uranium Project could prove to be a special trump card up the sleeve, as it encloses one of the most promising uranium projects of the uranium giant Orano and has not even been investigated for its own uranium deposits. In the event of a further increase in the price of uranium, it may be spun off into a separate company and thus become a kind of dividend for the shareholders. Speaking of shareholders: around 60% of the outstanding shares are in firm, institutional hands, which secures the share at the bottom.

Yellowknife Project. GoldMinings global gold resource totals 10.5 million ounces in the measured and indicated categories and 12.4 million ounces in the inferred category. Global gold equivalent resource reflecting a large copper by-product credit in several of our deposits, totals 13.4 million ounces in the measured and indicated categories and 14.9 million ounces in the inferred category.

## What are the most important company catalysts for the next 6 to 12 months?

- ▶ Announce the potential acquisition of one or more resource-stage gold or gold-copper projects.
- ▶ Receive terms of reference for environmental permitting at Sao Jorge and Boa Vista projects from the regulatory authorities in Brazil.
- ▶ Receive Preliminary Environmental License from regulatory authorities in Brazil for the Cachoeira project.

## How do you see the current situation on the market for precious metals?

Gold saw a sharp price increase in May from \$1,275 to the recent peak of \$1,557 on September 4th and is up roughly 17% from the start of 2019. GoldMining stock is up roughly 50% year-to-date. We believe this increase is largely a function of easing monetary policy and the move towards real negative interest rates, continued trade wars between China and USA, uncertainty associated with BREXIT and a slowing world economy. As a result, some investors are withdrawing from the stock market and seeking safe haven in gold bullion and equities. Coupled with unprecedented buying by central banks and the lack of investment in exploration over the last six-year bull market, we are optimistic that gold will maintain or increase in price over the next year.

## Exclusive interview with Garnet Dawson, CEO of GoldMining

### What have you and your company achieved in the past 12 months?

GoldMining continues to review resource-stage projects to expand our already large, diversified portfolio of gold and copper projects located across five countries in the Americas. In early 2019, we announced a near surface resource

estimate for the Yellowknife Gold project of 1,059,000 ounces grading 2.33 g/t gold in the measured and indicated categories and 739,000 ounces grading 2.47 g/t gold in the inferred category. Environmental permitting was completed on a number of projects with five-year Type A Land Use Permit and Type B Water Licence („WL“) received for the

**ISIN:** CA38149E1016  
**WKN:** A2DHz0  
**FRA:** BSR  
**TSX:** GOLD

Outstanding shares: 138.1 million  
 Options: 10.1 million  
 Warrants: 6.7 million  
 Fully diluted: 155.0 million

**Contact:**  
 GoldMining Inc.  
 1030 W. Georgia Street, Suite 1830  
 Vancouver, BC V6E 2Y3, Canada

phone: +1-855-630-1001  
 fax: +1-604-682-3591

bnicholson@goldmining.com  
 www.goldmining.com

## GoldMining Inc.





# MAG Silver

## Production from 2020 on fully in view



George Paspalas, CEO

MAG Silver is a Canadian development company with a clear focus on silver in Mexico. The company is preparing to bring its Juanicipio project into production together with its mega partner Fresnillo in the second half of 2020. Constant new discoveries only give an idea of the extent of the further silver potential.

### Silver Project Juanicipio – Proportions of Shares + Infrastructure

The Juanicipio project is owned by 44% MAG Silver and 56% Fresnillo, one of the world's largest silver producers, which operates several other mega-projects directly adjacent to Juanicipio. Furthermore, within the Fresnillo Silver trend, Juanicipio is virtually surrounded by high profile mining projects that have produced more than four billion ounces of silver to date, representing over 10% of total silver production worldwide. Due to its proximity to the town of Fresnillo of the same name, Juanicipio is directly integrated into a very well-developed infrastructure.

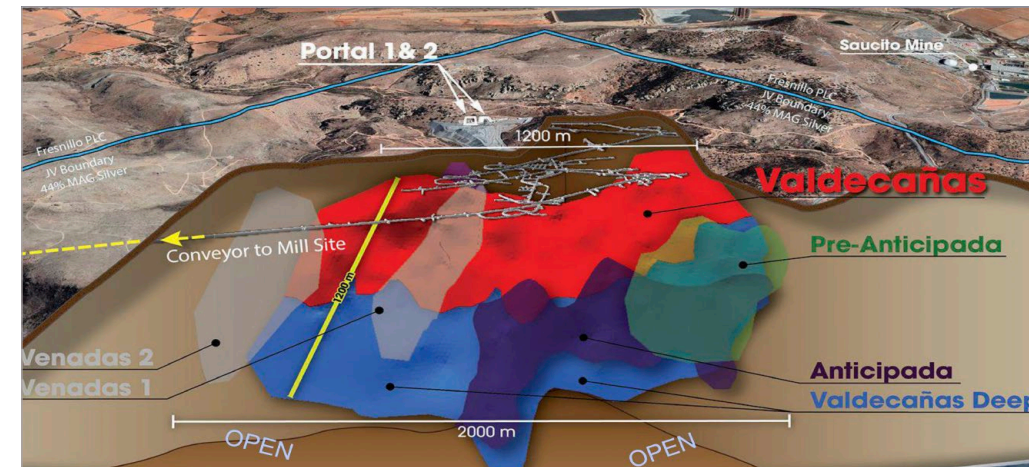
### Juanicipio Silver Project – Resource

The project, which consists primarily of the so-called Valdecana Vein, hosts within the Bonanza Zone current resources of approximately 8.17 million tonnes of ore at 550g/t silver for 145 million ounces silver in the category indicated and 1.98 million tonnes of ore at 648g/t silver for 41 million ounces silver in the category inferred. In addition, about 848 million pounds of zinc and lead are in the category indicated. The Deep Zone has 4.66 million tonnes of ore at 209g/t silver for 31 million ounces of silver in the category indicated and 10.14 million tonnes of ore at 151g/t silver for 49 million ounces of

silver in the category inferred. In addition, another 790 million pounds of zinc and lead are reported in the indicated category and 1.73 billion pounds of zinc and lead are in the inferred category. Juanicipio also contains over 1.5 million ounces of gold homogeneously distributed in the mineralized system. A true monster resource, yet the known resource is still open in several directions, so it is far from completely delimited.

### Silver Project Juanicipio – Positive Profitability Study

The very high grades are also the main reason why Juanicipio will become a low-cost mine. According to the most recent November 2017 PEA, based on a silver price of US\$17.90 per ounce, a gold price of US\$1,250 per ounce, a zinc price of US\$1.00 per pound and a lead price of US\$0.95 per pound, a daily production of 4,000 tonnes and a 19-year mine life, all-in-sustaining cash costs of US\$5.02 per ounce silver equivalent result. The payback period for this scenario is 1.8 years, the after-tax NPV is US\$ 1.138 billion and the after-tax IRR is a very strong 44%. Even for much worse underlyings of US\$ 14.50 per ounce of silver, US\$ 1,000 per ounce of gold and US\$ 0.75 per pound of zinc and lead, Juanicipio still has very good economic ratios. The payback period for this scenario is 2.6 years, the post-tax net present value is US\$635 million, and the post-tax profitability is 30%. The initial capital costs for MAG Silver itself amount to only US\$ 158.4 million and have already been fully procured. Higher prices of US\$23 per ounce of silver, US\$1,450 per ounce of gold, US\$1.15 per pound of lead and US\$1.20 per pound of zinc result in a payback period of 1.2 years, an after-tax NPV of US\$1.729 billion and an after-tax IRR of 61%.



The Juanicipio Project is home to a large number of rich veins, many of which have not yet been completely delineated.  
(Source: MAG Silver)

### Silver Project Juanicipio – Expansion Progress + Offtake Agreements

The Juanicipio Mine is an underground mine, so Fresnillo is currently working on three ramps measuring 5 by 5 metres to develop the first silver deposits. To date, more than 22 kilometres of ramps and tunnels have been driven into the rock. Furthermore, the above groundwork was started. Long-term plant components were ordered, which are to be delivered at the end of 2019 or beginning of 2020 and installed accordingly. In addition, an operator agreement was concluded during the project approval process, which will come into force at the start of commercial production. In addition, both lead and zinc offtake agreements have been entered into by the parties under which both concentrates of Met-Mex Peñoles, S.A. De C.V., in Torreón, Mexico, are traded on market terms.

### Silver Project Juanicipio – Exploration and Production Expansion Potential!

Juanicipio has a previously unimagined exploration potential, which is why the currently planned 4,000 tons processing

capacity per day could be increased even further. If you take a look at the immediate surroundings of the joint venture area, you can quickly see that Fresnillo has identified several more veins to the east of it. These run parallel to the Valdecana and Juanicipio mineralization and are expected to extend into the joint venture area.

### Juanicipio Silver Project – Recent Drilling Successes

Since 2017, the Company has reported on several occasions that significant silver/gold mineralization has been encountered in drilling to expand Valdecana Deep Zone West.

The best results were as follows:

- ▶ DEEP ZONE WEST: 11.6 metres of 783g/t silver, 2.57g/t gold, 6.52% lead, 9.46% zinc, 0.32% copper.
- ▶ DEEP ZONE EAST: 5.20 metres with 333g/t silver, 16.87g/t gold, 4.47% lead, 3.77% zinc, 1.04% copper, including 1.44 metres with 854g/t silver, 54.67g/t gold, 3.21% lead, 2.72% zinc, 2.28% copper
- ▶ ANTICIPADA VEIN: 5.60 metres of 177g/t silver, 7.36g/t gold, 2.39% lead,



6.31% zinc, 0.12% copper, including 3.15 metres of 283g/t silver, 12.62g/t gold, 3.62% lead, 8.42% zinc, 0.17% copper.

MAG Silver was able to demonstrate higher grades of gold and a shift from silver to high grade copper, lead and zinc areas. In addition, a parallel mineralization called Pre-Anticipada was detected. It contained up to 3.2 metres of 472g/t silver, 0.31g/t gold, 0.39% lead, 0.43% zinc and 0.03% copper.

In March 2019, the discovery of Venadas Vein was announced. This is the first mineralized vein in Fresnillo District that is oriented at a high angle (northeast) to the historically mined northwest oriented veins. Drilling returned up to 1,485g/t silver and up to 25.10g/t gold.

#### Financial resources more than sufficient, mine launch planned for 2020

At the end of June 2019, the Company had approximately US\$ 114 million in cash. If construction work continues as quickly as before, mine is expected to start in the second half of 2020.

#### Strong shareholder structure, low free float!

The very strong and committed shareholders should ensure that this will also succeed. In total, over 89% of all MAG Silver shares are held by institutions or institutional investors. The 17 largest individual investors hold 66% of all shares. At the same time, this means that only about 11% of all outstanding shares are in the hands of private investors as free float. Over the past five years, this has brought the share a degree of relative strength that could only be observed in very few precious metal stocks. The large institutions in particular should continue to provide MAG Silver with sufficient fresh capital - if necessary, at all.

#### Experienced and successful management team

MAG Silver has a very successful management team.

President & CEO George Paspalas was among others CEO & President of Placer Dome and several other companies, where he developed very complex surface and underground mines on four continents.

Chief Exploration Officer Dr. Peter Megaw was in charge of a number of new discoveries in Mexico. He is also called the Silver Pope of Mexico.

CFO Larry Taddei led, among others, West Timmins Mining Inc. to a 420-million-dollar acquisition by Lake Shore Gold Corp.

#### Summary: Everything is going according to plan

MAG Silver owns Juanicipio, one of the world's highest-grade silver deposits. Mine construction is already well advanced and full silver production can begin as planned in the second half of 2020. The partner Fresnillo is already operating a mega-project right next door and can make a valuable contribution to the rapid commissioning of the Juanicipio project both in terms of infrastructure and mining expertise. MAG Silver has now eliminated almost all project risks. High grades, fully financed, minimal political and development risks, very good metallurgy and access to sufficient energy and water and connection to the existing infrastructure near Fresnillo leave little room for downside potential. On the other hand, the upside potential with the possibility of further parallel mineralisation trends and expansion possibilities in depth is all the higher. An additional plus point, which should ensure further price highs, is the relatively low free float of only 11% of all outstanding shares.

## Exclusive interview with George Paspalas, CEO of MAG Silver

*What have you and your company achieved in the past 12 months?*

Firstly was the March 2019 announcement of the discovery of the North-East trending Venadas veins on the Juanicipio joint venture property. These are the first veins found in this prolific area with this orientation, and we are confident of additional North-East structures being discovered in the area. Importantly, these structures run through the Valdecana veins, exactly where we will be mining for the next +20 years, hence they represent very high value discoveries to MAG. Secondly was the April 2019 joint announcement with our Juanicipio partner Fresnillo PLC that the joint venture had made the final approval decision to commence the construction of the process facility and bring the Juanicipio project on-stream at the end of 2020.

*What are the most important company catalysts for the next 6 to 12 months?*

Ongoing exploration success at the Juanicipio joint venture property, and construction progress on the Juanicipio process facility.

*How do you see the current situation on the market for precious metals?*

Very positive regarding the short, medium- and long-term price for precious metals. Given multiple points of global economic uncertainty, I do believe gold will benefit from this - silver will follow. Additionally, due to shrinking silver metal supply, amid increasing new industrial uses for silver, I do believe the silver price has the potential to outperform gold in the medium term.

ISIN: CA55903Q1046  
WKN: 460241  
FRA: MQ8  
TSX: MAG  
NYSE MKT: MAG

Shares outstanding: 86.4 million  
Options: 2.2 million  
Fully diluted: 88.6 million

**Contact:**  
MAG Silver Corp  
Suite 770, 800 West Pender  
Vancouver, BC, V6C 2V6, Canada

phone: +1 604-630-1399  
fax: +1 604-681-0894

info@magsilver.com  
www.magsilver.com

## MAG Silver Corp.





# Osino Resources

## Successful management meets top gold projects



Heye Daun, CEO

Osino Resources is a Canadian mining development company focused on the acquisition and development of gold projects in Namibia. The Company holds approximately 6,700 square kilometres of licenses located in the central and northern zones of the Damara Gold Belt in Namibia. There, the successful management team, which has already played a decisive role in 4 high-calibre takeovers and mergers, has already recorded a very promising find.

### Namibia – top infrastructure, excellent jurisdiction

Namibia has two producing gold mines, the Navachab Gold Mine (QKR Namibia), with an annual production of approximately 80,000 ounces of gold and the Otjikoto Gold Mine (B2 Gold Corp.), with an annual production of approximately 150,000 ounces of gold. Osino Resources' core projects are located 130 kilometers northwest of the Namibian capital Windhoek, to a large extent in the immediate vicinity of the two Namibian gold mines. Thanks to its excellent location, Osino Resources projects benefit considerably from Namibia's well-developed infrastructure with asphalted motorways, railways, electricity and water in the immediate vicinity. Namibia is extremely mining friendly and is considered one of the most politically and socially stable jurisdictions on the continent.

### Most important projects

Osino Resources has three particularly advanced projects, which are presented below.

#### Flagship Project 1 – Karibib

Flagship project number 1 is Karibib, which comprises 11 licenses with a total area of approximately 2,115 square kilometers. The project area encircles the Navachab Gold Mine at the northeast, the north and the northwest. Much of this area has never been systematically ex-

plored as it is covered with limestone and/or windblown sand. Regional mapping and reinterpretation of the aeromagnetic data identified a large, previously unmapped, deep regional structure - called Karibib Fault - that can be traced back over 70 kilometers.

#### Twin Hills – The first big hit!

Osino's exploration activities since 2017 have focused on the area north of the Navachab Mine, where significant mineralization was soon encountered on the Twin Hills target. These included 189 metres at an average of 0.69 grams gold per tonne of rock (g/t), 104 metres at 0.70 g/t gold, 78 metres at 0.64 g/t gold and 65 metres at 1.37 g/t gold (including 31 metres at 2.2 g/t gold). Recent drill results from September 2019 showed 5 different mineralizations at varying depths within a single drill hole which peaked at 15.2g/t gold. This zone, called Twin Hills Central, has recently been extended to a strike length of 800 metres. Outside Twin Hills Central there are several other potentially gold-bearing zones such as Twin Hills West (up to 2.69g/t gold detected to date), Clouds, Barking Dog (basement mineralization 400 metres wide, open to the east and west) and Twin Hills East (1 kilometre long mineralization including 12 metres to 1g/t gold).

Twin Hills extends over at least 11 kilometres of strike length, with potential for expansion in both size and gold grades. In 2019, Osino Resources completed or is completing an extensive drilling program on the three Twin Hills West, Twin Hills Central and Barking Dog zones totaling approximately 10,000 metres of diamond & RC drilling.

#### Flagship Project 2 – Goldkuppe

Osino Resources' second flagship Goldkuppe project is located approximately 20 kilometres northeast of the flagship Karibib/Twin Hills project. Goldkuppe is an advanced exploration project that has been explored since the 1980s by four

different licensees, including approximately 30,000 metres of historical & recent Osino drilling. One of the former licensees discovered 22 metres of 3.4g/t gold, 27 metres of 1.8g/t gold and 6 metres of 2.7g/t gold. The Osino team began exploring the Gold Kuppe Project at the end of 2016 and has since completed detailed mapping, structural interpretation, detailed aeromag survey, soil and rock chip sampling to the south of the Goldkuppe Hill and has completed three drill programs.

#### Oasis and Wedge

This work led to the discovery in 2018 of the Wedge and Oasis gold zones, located southwest of the Goldkuppe core area. On Oasis, Osino Resources intersected 10 metres of 1.6g/t gold, 11 metres of 1.1g/t gold and 48 metres of 0.75g/t gold, among others. This confirmed the results of former licensee Anglo American, who encountered 3.4 metres of 3.3g/t gold and 5 metres of 1.3g/t gold, among others. At Wedge, Osino Resources encountered 10 metres of 2g/t gold, among others. Rock chip samples returned up to 5.48g/t gold.

#### Flagship Project 3 – Otjikoto East

The Otjikoto East project consists of 5 exploration licenses with a total area of 1,844 square kilometres. The bulk of the project consists of three contiguous licenses covering the eastern strike extension of the Otjikoto gold mine over a length of approximately 110 kilometers. Although the licenses are adjacent to a world-class gold mine, the area has never been systematically explored.

Osino Resources started initial exploratory work in October 2017, which included regolith mapping and regional magnetic data recovery to support lithology mapping under the limestone cover. Based on this, high priority areas were selected and a campaign to sample li-

mestone and termite mounds was initiated. This method has enabled quite rapid extraordinary progress to be made and by the end of March 2019 approximately 70% of the 110 kilometres of projected strike length had been sampled. To date, the sampling program has identified a total of 8 gold anomalies that are currently being followed up. The three most advanced targets Fairview, Platform and Okumukanti, which are currently the target of a Phase 1 bedrock RAB drilling campaign, appear to be particularly promising. If successful, Osino Resources will be able to establish a completely new mining district here.

### Successful management with track record of value creation

The success of any raw material development company depends on its management. And at Osino Resources this consists of a real cracker team that has already played a decisive role in 4 high-calibre takeovers and mergers, including the neighboring Otjikoto gold mine.

CEO and co-founder Heye Daun has more than 20 years of experience with world-class mining companies and financial groups. As former President and CEO of Ecuador Gold & Copper Corp. („EGX“), he was instrumental in the creation of Lumina Gold Corp. through the \$200 million merger of EGX and Odin Mining. He is a co-founder of Aurix Gold Corp. and led Aurix from IPO, capital raising and project development to the 180 million CA\$ sale to B2 Gold Corp. The central project of this deal was today's Otjikoto Gold Mine. He was also involved in the founding of Eland Platinum. Through the acquisition of Anglo American's PGM projects and the raising of over \$100 million in capital, the company was ultimately sold to Xstrata for \$1 billion. He also worked for Nedbank Capital and Old Mutual Investment Group. He spent the first ten years of his career with Rio Tinto, AngloGold-Ashanti and Gold Fields.

President and co-founder Alan Friedman is a lawyer and entrepreneur trained in South Africa. He has been active in the North American public markets for over 15 years and has played a key role in acquisitions, financings and go-public transactions for many commodity companies on TSX and AIM. Friedman was one of the co-founders of Auryx Gold, which was sold for 180 million dollars to B2 Gold. He was also co-responsible at AfriOre Limited for the acquisition of the Akanani Platinum Project and ultimately for the sale of AfriOre to Lonmin for \$450 million. Friedman is also co-founder and director of TSX-V-listed Eco (Atlantic) Oil and Gas Ltd. and director of the Canadian-South African Chamber of Commerce.

#### **Summary: Star investor on board, increased newsflow ahead**

Osino Resources combines two key factors: first, three highly prospective gold projects, some of which are in close proximity to existing gold mines, and a management team that has been directly involved in 4 major commodity deals totaling approximately \$1.8 billion.

The main focus is currently on the further development of the flagship projects Karibib/Twin Hills, Goldkuppe and Otjikoto East. Several drilling campaigns are currently underway on Karibib and Otjiwarongo, the fourth promising project.

The founders of Osino are experienced mining professionals with a solid track record in exploration, mine development, investment and sponsorship and have excellent relationships with local suppliers and governments, particularly in Africa and Namibia.

Osino Resources' vision is to find Namibia's next major gold deposit, which seems realistic given the success to date and the promising project portfolio.

With a strong shareholder structure (70% of all shares are in firm hands, the largest shareholder is investor legend Ross Beauty) and a good cash cushion, the current drilling programs should be easy to execute. An increased news flow is expected in the coming months.

## **Exclusive interview with Heye Daun, CEO of Osino Resources**

#### **What have you and your company achieved in the past 12 months?**

We took the company public, raised ~CAD8m in equity in a dead market for Canadian juniors, executed a large-scale & ongoing exploration campaign across our licenses in Namibia, made a large-scale gold discovery that transformed our company from greenfields exploration to development, and put the

company on the capitals markets "map" by delivering a significant re-rating in the form of tripling the share price. This we achieved through a combination of drive, innovation & experience, which is testament to the quality of our team, from corporate to exploration.

#### **What are the most important company catalysts for the next 6 to 12 months?**

Our aim is to discover & develop Namibia's next large-scale gold mine, to make additional discoveries, and thereby to create shareholder value through discovery, resource definition & ultimate share price re-rating by advancing the company up the value curve.

This we will achieve through being well-funded and competently staffed to deliver on an ongoing, quality exploration program that is geared towards discovery. One of Osino's key differentiators is our large & diversified asset base & active exploration program with multiple discoveries, targets and prospects, across our ~6,400km<sup>2</sup> land package in Namibia. Our key upcoming catalysts are therefore all linked to exploration progression, i.e. drill results, further gold discoveries, ongoing consolidation of ground and the delineation of significant gold resources, hopefully in the scale of multi-million ounces, i.e. similar to our Namibian gold mining analogy's, Otjikoto (B2 Gold Corp.) and Navachab (ex AngloGold) gold mines.

After the recent, large-scale Twin Hills gold discovery, Osino is rapidly transfor-

ming from an explorer to a developer, by advancing the Twin Hills discovery to the resource evaluation stage.

#### **How do you see the current situation on the market for precious metals?**

As a mining engineer, as opposed to being an economist, I tend to focus on what I can control, which are the technical and corporate fundamentals of our company. Nonetheless, we are all dependent on investor sentiment and I therefore pay attention to the market, primarily the strength of the US dollar, which has a strong, inverse correlation to the gold price. The apparently deteriorating US economic & fiscal outlook, political pressure on the US Fed and a likely decreasing US interest rate trajectory are all US dollar negative, and by extension gold price positive. I am therefore very bullish on the US dollar gold price for the near to medium term, and I believe that a strong re-rating in the prices for junior gold explorers & developers is on the cards.

**ISIN:** CA68828L1004  
**WKN:** A2NB4J  
**FRA:** RSR1  
**TSXV:** OSI

Shares outstanding: 67.4 million  
Options: 5.5 million  
Warrants: 5.1 million  
Fully diluted: 78.0 million  
(as of 08/30/19)

**Contact:**  
Osino Resources Corp.  
Suite 810 – 789 West Pender Street  
Vancouver, B.C. V6C 1H2, Canada

phone: +1-604-785-0850

jbecker@osinoresources.com  
www.osinoresources.com

## **Osino Resources Corp.**





# TerraX Minerals

## High resource potential in under-explored gold district



David Suda, CEO

TerraX Minerals is a Canadian mining development company focused on gold projects in Canada. The company was able to gain control of much of the high-grade Yellowknife City Gold District. Countless gold occurrences and recent high-quality drill results demonstrate the district's potential as a prime gold district. The Yellowknife City Gold District is one of only 7 true gold districts in Canada - the northernmost and least explored.

### Yellowknife City Gold Project - Location and Infrastructure

The Yellowknife City Gold Project comprises approximately 783 square kilometers of contiguous land immediately north, south and east of the city of Yellowknife City, which has approximately 20,000 inhabitants and is the capital of Canada's Northwest Territories. The project is located on the productive Yellowknife Greenstone Belt and includes 67 kilometres of strike length on the southern and northern extensions of the shear system, which also includes the high grade Con and Giant gold mines (not part of the project area) that have to date unearthed over 14 million ounces of gold averaging 16.0 grams gold per tonne (g/t) of rock. The heart of the project is

10 kilometres from Yellowknife and is close to vital infrastructure, including year-round roads, an airport, trained miners and good service providers.

### Yellowknife City Gold Project - Exploration Areas

The Yellowknife City Gold Project essentially consists of four parts. The Southbelt, the Eastbelt, the Northbelt and the northernmost area Quyt-Bell, with the majority of exploration activities to date concentrated on the Northbelt and the Eastbelt. In total, the project has more than 50 exploration targets, over 10 of which are already drilled or ready to drill.

#### NORTH BELT

##### Barney Deformation Corridor

The Barney Deformation Corridor is a 5-kilometre-long structure with associated high-grade gold mineralization within a broad shear package in the Northbelt. There is an intersection with both the Crestaurum trend and the Con-Giant-Trend. Within the Barney Deformation Corridor, TerraX Minerals intersected 11 metres averaging 7.55g/t gold within the so-called Hebert-Brent Zone, plus 22.4 metres with 6.35g/t gold and 27.0 metres with 1.90g/t gold, among others. The current focus is on confirming the nature of the gold mineralization and expanding the known deposit in all directions.

##### Sam Otto

Sam Otto is also located in the Northbelt and consists of the sections Sam Otto, Sam Otto West and Sam Otto South. These are one or more individual occurrences of high tonnage. Drilling encountered 11.5 metres of 2.42g/t gold, 27.7 metres of 1.64g/t gold, 27.16 metres of 2.16g/t gold, 123.50 metres of 0.59g/t

gold, 129.40 metres of 0.5g/t gold and, as a special highlight, 8 metres of 60.6g/t gold in the Mispickel Zone.

Sam Otto South is a new discovery made by a step-out well about 1.5 kilometers south of Sam Otto.

In September 2019, TerraX Minerals announced the extension of gold mineralization at Sam Otto by an additional 600 metres of strike length. The Sam Otto southern zones now extend over 1.2 kilometres and remain open in all directions. The gold mineralization of the Sam Otto trend was defined for at least 2.5 kilometers along the 5-kilometer Sam Otto structural corridor. The first 6 holes of the 2019 program intersected 7 metres of 2.93g/t gold (0.6g/t gold over a wider interval of 40 metres), 14 metres of 1.36 g/t gold (0.64g/t gold over a wider interval of 34 metres), 11 metres of 1.24g/t gold and 9 metres of 1.2g/t gold over a wider interval of 40 metres.

##### Crestaurum

Crestaurum is a very high grade 1.3-kilometre-long mineralized zone that represents the northern extension of the Giant/Con system. Crestaurum is divided into the zones Crestaurum Main (Shear), Crestaurum North and Hangingwall Structures. Crestaurum North has 2 parallel undrilled structures with further potential for new discoveries.

To date, TerraX Minerals has been able to demonstrate 7 metres of 10.2g/t gold, 5 metres of 20.7g/t gold and 5 metres of 62.9g/t gold, among others.

The current focus is on expanding the high grade Crestaurum Main Zone and drilling in the Crestaurum North area.

##### Homer

Homer is located to the north of the Northbelt and covers a mineralized area of approximately 2,000 by 750 meters. Homer is home to gold as well as silver, lead and zinc.

Homer has strong mineralization on the surface, which is in a shear zone. The Company has demonstrated 15.91 metres of 1.78g/t gold, 5.99 metres of 3.31g/t gold and 20.9g/t silver and 3.42 metres of 3.41g/t gold, 69.3g/t silver, 3.67% lead and 3.17% zinc.

The current focus is on surface work, with particular emphasis on geophysics and geochemistry to define additional shear zone targets. Additional drilling is expected to result in the expansion of recent discoveries.

### Evaluation of historical drill cores

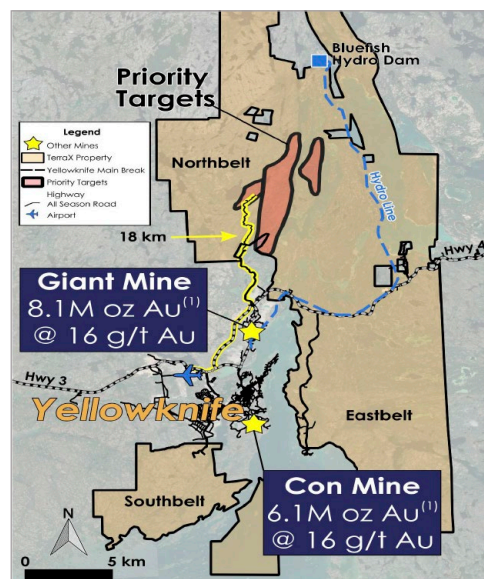
Since January 2019, TerraX Minerals has been evaluating a total of 16,000 metres of historical drill cores. These originate mainly from an area between the Giant Mine and Crestaurum or the Barney Deformation Corridor in the Northbelt. Geologists have already identified several visible gold mineralizations and are now working to locate the targets. In March 2019, this data analysis confirmed that gold structures hosting one of the highest grade former Canadian mines (Giant) extend into the Barney Deformation Corridor area.

#### EAST BELT

Within the Eastbelt, Duck Lake is one of the most interesting zones. There are high-grade, flat layered veins within granite rock. Sampling returned up to 35.4g/t gold. The Eastbelt is also home to several historical mines. These included the Burwash Mine, which had average grades of 466g/t gold. Several high-calibre results were reported for sampling in the Burwash Trend area. Including 201g/t gold and 4.910g/t silver. The Eastbelt also includes the areas of the Ptarmigan and Tom Mines, which produced gold at an average grade of 9.26 g/t. Sampling there showed up to 226g/t gold. Excavations in the trenches yielded 5.50 metres of 24.72g/t gold.

The Yellowknife City gold project is located near the former Giant and Con Mines, with extensions of mineralization there extending to the TerraX Minerals project area.

(Source: TerraX Minerals)



## SOUTH BELT

The Southbelt, located southwest of the city of Yellowknife, is an extension of the Con Mine. The shear zone extends about 5 kilometers southwest of the Con Mine to far into TerraX Minerals' license area. The Campbell Shear Zone and Campbell Footwall are classified by TerraX Minerals as drilling areas with the highest priority. Sampling returned up to 94.9g/t gold.

## 2019 drill program

The Barney Deformation Corridor, Crestaurum and Sam Otto are the three main targets of the drill program started in July 2019. Homer has also been tested as a new high potential target and will be the focus of confirmation drilling. All four destinations in the Northbelt are within a radius of only 5 kilometres. In February 2019, TerraX Minerals received the land use permit to drill. In March 2019, the Company also received a Type B water license from the Mackenzie Valley Land and Water Board approving TerraX's comprehensive exploration plan for all land holdings of the Yellowknife City Gold Project.

## 2-year drilling plan

TerraX Minerals is in the middle of a 2-year drilling plan. Phase 1 consists of expanding deposits of high-priority drill targets and surface working on so-called BlueSky targets to prepare them for drilling. In the second phase these BlueSky goals will be drilled and developed further.

## Acquisition of Gold Matter

In September 2019, the company announced that it was acquiring Gold Matter Corporation. Gold Matter has an option to acquire a 100% interest in the Muligan Project in New Brunswick Province,

which consists of 13 claims and an area of 5,600 hectares. The project hosts recent gold discoveries in a surface trench of 5.7g/t over 16 metres.

## Strong shareholder structure

TerraX Minerals has a strong shareholder structure. Approximately 60% of all outstanding shares are held by institutional and strategic investors and management.

## Summary: High BlueSky potential in the midst of the best infrastructure

The Yellowknife City gold project continues to develop into a major global exploration target due to its size, infrastructure and proximity to the historic Con and Giant gold producers. The targeting program launched in 2018, including a consolidation of the Yellowknife City Gold District, provided the context for previous gold discoveries on and below the surface and focused on new, previously undrilled targets. The aim of the company is to develop and operate one or more multi-generation mines. The exploration potential of the entire project, some of which has not yet been investigated at all using modern methods, seems almost gigantic. An excellent infrastructure and equally good management round off the positive impression of the company. In addition, the Company completed an oversubscribed financing program in June 2019 that generated a total of CA\$ 3.138 million to fund future drilling campaigns.

# Exclusive interview with David Suda, CEO of TerraX Minerals

## What have you and your company achieved in the past 12 months?

The past 12 months have been pivotal for TerraX. We stated our mission which is to deliver significant ounces on targets within a 5km radius next to top tier infrastructure. We have set the table to present an economic scenario attractive in an era lacking discovery. This summer we conducted our first drill program in over a year. The goal of the program although modest in size was to demonstrate the potential continued intensive drilling could bring. For example, we were successful in doubling the size of the Sam Otto target and demonstrated the existence of a large gold mineralized zone still open in all directions. In addition to technical success we have added two high profile members to our team in Gerald Panneton (founder of Detour Gold) and Louis Dionne. It is also worth mentioning that in the background we have significantly increased our trading volume and cleaned up the registry by bringing fresh interest in particular from institutional investors.

**ISIN:** CA88103X1087  
**WKN:** A0YFEB  
**FRA:** TXO  
**TSXV:** TXR

Outstanding shares: 132.1 million  
Options: 4.3 million  
Warrants: 10.9 million  
Fully diluted: 147.3 million  
(as of 09/26/2019)

**Contact:**  
TerraX Minerals Inc.  
1605-777 Dunsmuir Street  
Vancouver, B.C. V7Y 1K4, Canada

phone: +1-604-689-1749

info@terraxminerals.com  
www.terraxminerals.com

## What are the most important company catalysts for the next 6 to 12 months?

Drilling. We plan to resume drilling in January and our goal at that point is to never stop. Seriously, the vision is to build a world class gold company that adds value consistently and efficiently through the drill bit.

## How do you see the current situation on the market for precious metals?

I see it like most everybody else – school of fish. We have seen major statements about the cycle we have entered from economists, portfolio managers and gold bugs alike. There is no question - we are in a period of higher gold prices. Higher commodity prices will bolster the performance of gold producers who will in a matter of quarters attract higher multiples and with increased cash flows, free up capital to replace reserves. It is a great time to be invested in a junior explorer with great potential.

## TerraX Minerals Inc.





# Overview of SRC's communication programs



## Social Media Network

Access to over **60.000** followers and likers! •



## World wide Resource TV-Channels

Commodity-TV & Rohstoff-TV – more than **2 Mio** views p.a. •

**SRC** YouTube Channel – more than **1.1 Mio** views p.a. •

Partnership with Dukascopy-TV – worldwide **+20 Mio** views p.a. •



THE EXCLUSIVE MEDIA &  
COMMODITY CORPORATION



## Traditional IR-Services

That's where we are present!

- Professional **roadshows** in **Europe & Switzerland**
- **Write-ups** through our editors & third party authors
- Translation and dissemination via IRW-Press:  
**news releases, presentations, websites, factsheets**
- **Ringler Research GmbH** (GER) – fully licensed research,  
dissemination via **Bloomberg, Reuters, Factset, 250 institutions**



## Swiss Resource Capital AG & Commodity-TV Fairs and Events

- **Deutsche Rohstoffnacht** – INVEST Stuttgart
- **Edelmetallmesse**, Munich
- **Precious Metals Summit**, Zurich ...and more



## Interference & Clipping Marketing

- Access to more than **100 Mio** people
- Editorial dissemination via **+400** online portals

**Editorial and Live Marketing in German speaking Europe:**



