Over the past two years, **Cobalt 27 Capital Corp** has been amassing the largest physical cobalt position outside of China through the acquisition of 2,157.5 tonnes of high and low-grade cobalt metal. It is part of its strategy to give investors exposure to physical cobalt and the surging demand in the electric vehicle battery sector.

Benchmark Mineral Intelligence's **Caspar Rawles** met with Chairman, **Anthony Milewski**, to dig deeper into a development that is reshaping the cobalt industry.

GETTING PHYSICAL

Caspar Rawles: You have been actively trading cobalt for some time now, when did you begin looking at the market and how have things changed since you started?

Anthony Milewski: The first time I looked at the cobalt market was in 2008 after there was a huge spike in the metal price.

Back in 2008, I was thinking about it in terms of cobalt content in cell phone batteries and other industrial applications. The idea that the electric vehicle (EV) demand would come and completely change the market the way it has did not cross my mind back then.

It's truly amazing how fast the EV adoption rates have accelerated over the past few years and the impact it has had on a host of metals, especially cobalt.

CR: Can you give us a small introduction to Cobalt 27, the reason it was founded and its key stats?

AM: A couple of years ago, we were looking around the world, and thinking about what the future of mining would look like, and the future of metals. We were thinking about mechanisation, artificial intelligence and semiconductors, and we started to look at EVs. At that time, they were in their infancy with almost no units out for sale except in Silicon Valley.

I test drove one and could see that this is something that has come of age.

EVs aren't new. They've been around for 100 years. Some of the first cars were EVs. Therefore, I wanted to understand exactly what this EV movement was, and as an investor in basic materials, what minerals and metals it would require.

I could immediately see that over time there is going to be an impact on copper and nickel, manganese, lithium and, ultimately, cobalt. As I looked at the different materials, nickel and copper are big liquid markets. Lithium already had a lot going on. I arrived at cobalt. Cobalt is largely a by-product of nickel and copper mining, which makes it unique, because unlike other metals, it's very hard for the supply side to respond.

That captivated my attention and I immediately began trying to figure out how to invest in it. I looked at different options and I could see that the London Metal Exchange (LME) warrant was not very liquid. The mining companies all had big market capitalisations very little exposure to cobalt as relative to the overall size of the company.

> **Nickel and copper are big liquid markets; Lithium already had a lot going on; I arrived at cobalt**

There were a number of junior developers with small market capitalizations that didn't really match our risk profile.

Having thought about it, I tried to figure out the best way to play it and having experienced the uranium bull market, I recalled Uranium Participation Corp. Later, having experienced the gold bull market, I thought about Silver Wheaton.

I thought, 'What if you put them together, Uranium Participation Corp and Silver Wheaton, and did it for cobalt?' That's the genesis of the idea.

This vehicle is a pure play on cobalt. It is underpinned by the largest physical cobalt position in the world outside of China. The Chinese government has a larger position. That NAV underpins our growth strategy, which is streams and royalties. We have approximately six royalties, which have right of first refusal to convert into streams. We're actively in the market looking for cobalt streams.

CR: Cobalt has historically been a difficult mineral to invest in, you aim to change that. Can you explain the challenges investors have faced in the past?

AM: Cobalt is a by-product of nickel and copper mining in 98% of the production around the world. This fact alone makes it challenging to isolate cobalt as an investment. Until Cobalt 27, equity investors were forced to buy junior exploration companies with a certain risk profile or large mining companies whose profitability is overwhelmingly driven by other metals. More adventurous investors could buy the physical metal but with great difficulty. LME warrants have also been an option to investors, but liquidity has not made it attractive to many funds.

CR: How will Cobalt 27 offer investors a way into the cobalt space?

AM: It is very simple. We have the largest physical cobalt position in the world outside of China that under pins our equity value. Over time we will grow through additional

> **I see this cathode evolution to 811 as incredibly positive**

physical purchases or streams and royalties.

CR: Cobalt 27 recently completed a C$200m ($160m) raise, these funds were used to purchase 2,157.5 tonnes of high and low grade cobalt metal. How did Cobalt 27 make this purchase when market supplies are so tight?

AM: Cobalt 27 had options to buy physical going in to the public offering. It took nearly two years to put the position together which included taders, producers and funds.

CR: Does acquiring metal give investors enough exposure to the lithium ion battery industry which uses a variety of cobalt chemicals?

AM**:** Cobalt is one piece of the puzzle. I like the supply and demand dynamics and importance of the metal to the lithium ion battery. That said, I believe an investor who is focused on the basic materials aspect of the electric vehicle and battery storage thematic would do well to look at other metals in addition to cobalt such as nickel, copper, and lithium. Over time as the commercial and home power storage thematic develops metals such as vanadium and lead are also likely to become more interesting.

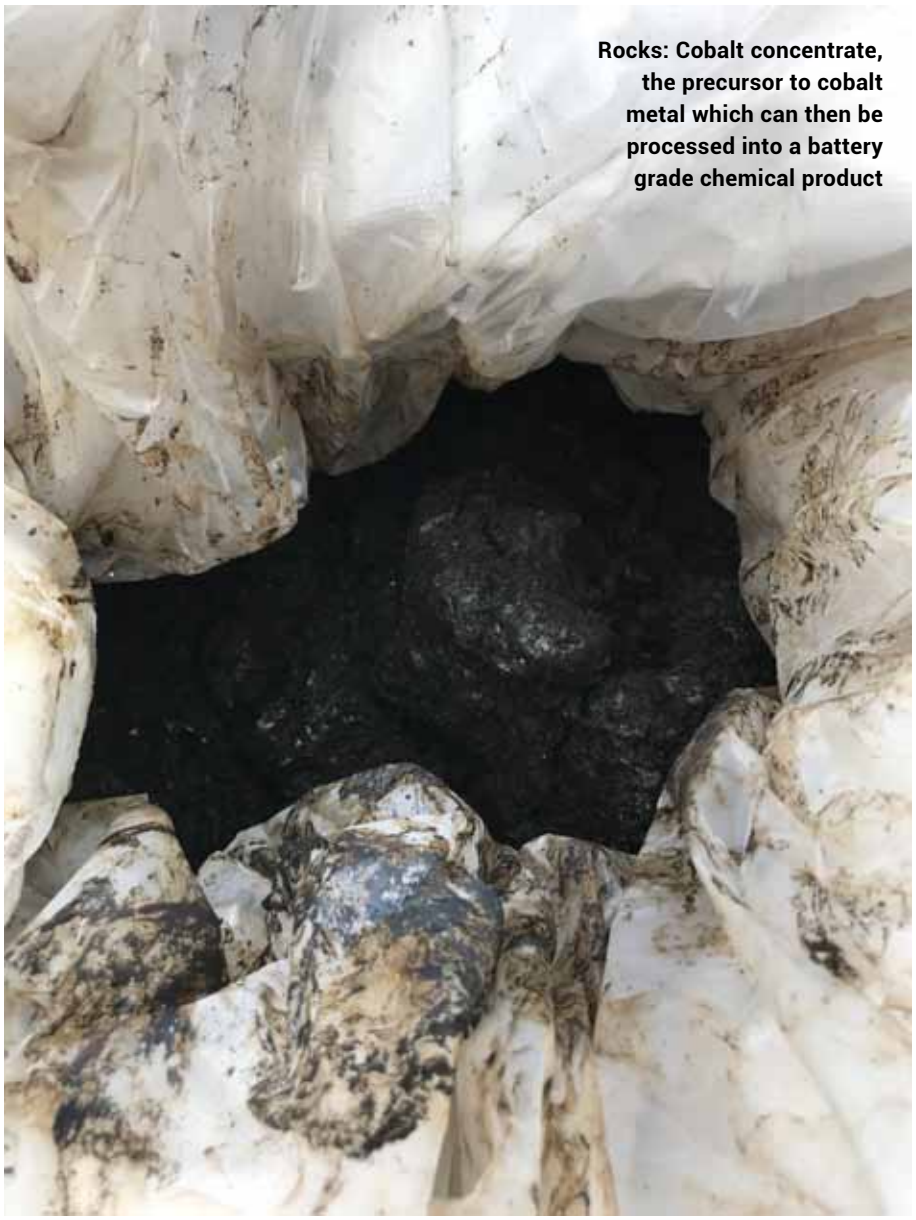
CR: Can you elaborate on the cobalt royalty contracts you have acquired?

AM: The royalties we currently have are largely call options and examples of the management's ability to transact. Going forward we will focus on producing assets.

CR: How key are further royalty acquisitions to the strategy of Cobalt 27 and will these be from producing mines or developers?

AM: We see streaming transactions as an avenue for growth. Our investors would like to see a larger more liquid company. We believe that streaming transactions is one way to achieve this goal.

CR: Cobalt is produced largely as the by-product of copper and nickel projects; historically when these two markets have performed poorly cobalt production has been impacted. Do you foresee any long-term risk regarding royalties you have acquired – or plan to do so – from nickel or copper sources?



Rocks: Cobalt concentrate, the precursor to cobalt metal which can then be processed into a battery grade chemical product

"This vehicle is a pure play on cobalt. It is underpinned by the largest physical cobalt position in the world outside

AM: Nickel and copper prices have rebounded significantly in recent months. That said, when we look at a stream we stress test our models to make sure that a given asset can withstand lower prices. I think we are at a point in the cycle where the copper and nickel mines that are currently producing are in pretty good shape to continue to produce even if prices return to near recent lows.

Broken cathode cobalt metal

CR: There has been much discussion in the industry about battery manufacturers moving toward high nickel/low cobalt cathode formulations. Does this concern you and your outlook for demand in the cobalt market?

AM: The current formulation of the NMC battery is a 5-3-2. We are seeing a roll out of the 6-2-2 as we speak. The next big change to chemistries is an 8-1-1 and likely four to five years away. It is my belief that the lithium ion battery is the battery of choice for automakers for the next decade.

The testing period and design required to bring in a new technology would take a minimum of five years from when a party tries to make a change. For that reason, when we talk about batteries, we are not talking about substitution but instead innovation.

More specifically, innovation within the lithium ion battery. The acceleration of demand for EVs and rapid adoption is so significant that in order to keep cobalt supply from being a bottleneck to the cobalt story we need the chemistry to continue to evolve towards the 8-1-1.

I see this cathode evolution as incredibly positive. Setting aside any disruption to the supply chain in the Democratic Republic of Congo or increased EV demand, the cobalt fundamentals are so strong that the changes underway in the chemistries are very positive to both EV adoption and cobalt more overall.

“What if you put them together, Uranium Participation Corp and Silver Wheaton, and did it for cobalt? That's the genesis of the idea

CR: Considering the new cobalt supply entering the market between now and 2020 from Glencore's Katanga and ERG's RTR projects, together with demand side pressure increasing from mass market EVs, how do you see cobalt prices reacting?

AM: Cobalt is the same as any other commodity. The market will find an incentive price to bring on more production. I believe that we are going to need a higher price to incentivise production. Through the cycle you are going to see mines in Canada, US, and Australia be built due to their cobalt contents. In order for those capital expenditure cheques to be written we will need to see higher cobalt prices for longer.

The world doesn't have enough cobalt!