

**Transcript of initial interview with  
Mr. Chris E. Herald**



**CEO of Solitario Zinc Corp.**



**NYSE Market: XPL**

**January 20, 2018**

**Chris E. Herald - Chief Executive Officer.** Mr. Herald has been a director of Solitario since August 1992. He has also served as Chief Executive Officer since June 1999 and President since August 1993. Mr. Herald also served as a director of Crown since April 1989, as Chief Executive Officer of Crown since June of 1999, President of Crown since November 1990 and was Executive Vice President of Crown from January 1990 to November 1990. Prior to joining Crown, Mr. Herald was a Senior Geologist with Echo Bay Mines and Anaconda Minerals. Mr. Herald currently serves as non-executive Chairman of Viva Gold Corp. Mr. Herald received a M.S. in Geology from the Colorado School of Mines and a B.S. in Geology from the University of Notre Dame.

**Smallcaps Investment Research: Welcome everyone and thanks for joining Smallcaps Investment Research. We're excited to have Mr. Chris Herald, with us today. He is the Chief Executive Officer of Solitario Zinc Corp, an asset-rich Company with interests in two high-grade zinc deposits in the Americas. The Company is listed on the NYSE Mkt with ticker symbol XPL. Chris, thanks so much for taking the time to join us today. Welcome.**

Mr. Chris Herald: Thank you very much. It's my pleasure, and look forward to the interview.

**As this is our initial interview, could you give us an introduction of Solitario Zinc Corp?**

Solitario is a pure zinc play with two of the highest grade undeveloped zinc deposits in the world. That is the Florida Canyon zinc deposit in Peru, and the Lik Zinc deposit in Alaska. These two projects are joint ventured with two of the five largest zinc companies in the world, Nexa for the Florida Canyon deposit, and Teck for the Lik deposit.

Solitario has been exploring for metals in both North and South America since its inception, about 20 years ago. It has been successful in identifying new projects, moving them forward, and joint venturing them with partners.

Finally, one of the other things that is important about Solitario is that we are well financed with about \$14 million in cash and no debt.

**Let's first zoom in on the Florida Canyon project in Peru. Can you tell us some**

**more about the history of the property and also about your partnership with Nexa Resources?**

The property has a fairly long history. Solitario discovered the Florida Canyon deposit in 1996 and at that time we formed a joint venture with Cominco, which is now Teck. Subsequently, Teck spent about \$17 million on the project. They drilled 80 core holes and most of these intersected high-grade zinc..

However, in the early 2000s, the zinc price dipped to about 35 cents per pound, and Teck dropped all their exploration projects, including Florida Canyon. Thus, we ended up with a 100% ownership of Florida Canyon.

Zinc prices took a number of years to recover. However, we continued to hold the property and in 2006 we entered into a new joint venture with a company called Votorantim Metais, a private Brazilian family-owned company. It is a large conglomerate with around \$15 billion in revenue, and they own the Cajamarquilla Smelter in Lima, Peru.

After 2006, they transferred their interest in Florida Canyon to their Peruvian subsidiary called Milpo. More recently Votorantim and Milpo combined all their mining assets and formed a new company called Nexa, which is listed on both the New York Stock Exchange (NYSE) and the Toronto Stock Exchange (TSE). They did about a half a billion-dollar IPO late in 2017.

During the last ten years Votorantim and its successors Milpo and Nexa spent about \$45 million exploring the property. They drilled 487 drill holes and they constructed a 700-meter tunnel to do underground drilling to outline the ore body.

This work produced an NI 43-101 compliant resource. The measured and indicated resources on this project stand at 2.8 million tons grading over 15% zinc equivalent. On top of that, there is an inferred resource of 9 million tons of 12.4% zinc equivalent for an additional 2.5 billion pounds of zinc.

This brings us up-to-date on that project. However, another important aspect of our relationship with Nexa is the terms of the joint venture arrangement. Nexa takes care of all the costs through feasibility and we are not required to pay them back. Thus, Solitario is fully carried through this development period. When the feasibility report is completed, which equates to a construction approval, Nexa will have earned a 70% interest in the project. We will have 30%.

Most importantly, Nexa has agreed to finance Solitario's 30% portion of construction cost through a project loan to our Company. Therefore, Solitario does not need to put up any capital before the start of the production. When the project is in production, we will pay them back through 50% of the net proceeds due Solitario.

As you can see, it is a quite a favorable joint venture arrangement as it allows for no equity dilution of Solitario to reach production. Thus, as good as our property is, the joint venture is just as good.

**In August last year an attractive Preliminary Economic Assessment (PEA) was released for Florida Canyon. Would you take us through the highlights of the PEA?**

The PEA demonstrated that the Florida Canyon deposit will produce excellent economic returns just because it's such a high grade project. We have even used a lower price for zinc for the PEA analysis. We used \$1.20 per pound of zinc, when the current price is about \$1.55 per pound. The PEA contemplated a production rate of 2,500 ton per day, which resulted in an after-tax Internal Rate of Return (IRR) of about 25% using an 8% discount rate and 100% basis

for the project. The after-tax Net Present Value (NPV) is then \$198 million.

Another positive aspect of this project is the relatively low Capex requirement which stands at \$215 million. Therefore, the payback period is only 2.6 years. Finally, the life of the mine is strong at 12.5 years. We do believe however that the life of the mine is going to be expanded once we do more work on the property. The cash flow of the mine is also healthy and stands at about \$950 million on a 100% basis and we will receive 30% of this stream.

To conclude, I believe it is fair to say that the PEA exceeded expectations both for us and for Nexa. Consequently, we are happy with the results of the report.

**What are the plans at Florida Canyon in 2018?**

The key to getting this project through the feasibility and into development, construction and production is the completion of the access road leading to the deposit. This has been an issue for the project in the past. Although the property is not far from a paved road, the area consists of rough terrain, which does not allow easy access. So building an access road is critical to the project.

That is Nexa's main goal for 2018. Once this is finished, it will allow Nexa to do a lot of the pre-development work necessary to bring the project into production once the feasibility work is done. The access road will also allow them to put a second tunnel in the area in order to access the Karen-Milagros zone.

**Let's move over to another project, the Lik Zinc property in Alaska. What can you tell us about this project?**

This is a relatively new project for Solitario. We acquired a 50% interest in the deposit mid-2017 through our acquisition of Zazu Metals. Our joint venture partner here is Teck Resources, which is the second largest zinc producer in the world.

Interestingly, Teck owns the Red Dog mine, the lowest cost zinc mine in the world, which

is only 22 kilometers from our project area. Therefore, Lik is near to a comprehensive infrastructure that is already in place and that has been operating for about 30 years now.

In our view, the Lik deposit represents one of the highest grade undeveloped open pitable deposits in the world. It has an indicated resource in excess of 17 million tons grading about 11% zinc equivalent. On top of that, it has an inferred resource of about 3 million tons at a similar grade.

All this pares well with how much we paid for the deposit. We paid Zazu about a half a cent per pound of zinc which was an attractive price for us. We were also fortunate to acquire the Lik deposit right before zinc prices took off in the second half of 2017.

We believe that this timing, the acquisition price, as well as the sheer size of the project, is giving our shareholders a significant exposure to zinc which in turns means great leverage to zinc prices. While we are expecting the development of Lik to take more time than in the case of Florida Canyon, we believe this does not in any way lessen the value of this exciting project. Especially when we can work on it with an equally exciting partner, Teck Resources.

**Also for this property a Preliminary Economic Assessment was completed.**

You are right. Zazu completed a PEA back in 2014. Similarly, to Florida Canyon, Lik displays outstanding economic returns at a price of \$1.20 per pound of zinc. The after-tax NPV is about \$291 million at a discount rate of 8% and on 100% project basis. The cash flow stream is also favorable. Overall, we see Lik as a good-sized zinc mine with a production of about 300 million pounds of payable zinc equivalent per year.

One should also note that the remaining life of the Red Dog mine is now only a little over 10 years and thus we believe that Lik represents a natural continuation of zinc mining in that area.

**What are the plans at Lik for the next 12 to 18 months?**

Together with Teck, we have decided to conduct a geophysical survey on the property in 2018. The Lik deposit outcrops were easy to find, but most of the success that Teck has had at its Red Dog operation was by searching for buried zinc deposits using a gravity geophysical technique. They have been doing this for a couple of decades now, and they have really refined that method. Teck is very confident that if there is a buried deposit at Lik, we are going to detect it. Moreover, Lik never underwent such a survey and thus we believe it could be an exciting program for us.

Finally, we will also continue some of the environmental monitoring for permitting baseline at Lik in 2018, results of which we should receive later this year.

**A final project that I'd like to cover, is the La Promesa high-grade silver-zinc-lead property in Peru. Can you give some color on this project and its potential?**

La Promesa is a wholly owned early stage project for us that has some interesting potential. We have done a limited amount of surface work on the property years ago, which yielded positive results.

We discovered at least a half dozen narrow veins that are extremely high grade. For example, we sampled the surface exposure of one vein and it resulted in 1.2 meters of 63 ounces per ton silver, almost 2 kilograms per ton silver, 33% zinc and 5.5% lead.

There was also another wider vein which was further down in elevation. That vein yielded 24 ounces per ton silver, 19% zinc and 7.2% lead. We believe these samples represent outstanding drill targets and explain our excitement about this project.

What we need to do next is to reach an agreement with the local community in order for us to obtain approval for drilling. We hope to achieve this step in the next month or two. If we do achieve this goal, then we hope to

drill on the project before the end of 2018 after we finish the surface work and obtain drilling permits.

**Are you on the lookout for additional properties?**

We are continuously on the lookout for opportunities. We are always open to discussion on the corporate front where we could do a transaction with a third party or even contemplate a combination of two companies that would form a stronger entity.

We are also initiating a generative program in two areas in Peru. This is a result of our 20-year work in the country. In that period, we took about 50,000 rock, soil, and stream sediment samples. Now we went back to this database and started to focus on base metal or zinc anomalies which we neglected in the past as we were focused on silver and gold.

Due to this effort we have identified two areas with strong anomalies of zinc and zinc plus silver and a little gold. These are located in an area in Southern Peru and also one in Central Peru.

In the next couple of weeks, we are going to have our field crews out there assessing the probability of finding a new zinc or zinc-lead-silver deposit. We believe this should not take much time and thus there is a possibility that we will have a couple of new projects to work on during 2018.

**Solitario also has a strategic equity investment in Vendetta Mining Corp. What can you tell us about Vendetta Mining, and do you plan to hold on to your equity position?**

We have acquired an interest in this junior zinc company through an equity placement that they did in May of 2016. They own the Pegmont zinc property in Queensland, Australia and the results of their drilling campaign on the property have been good. They were able to update their resource and now have about 11 million tons of roughly 10% zinc equivalent on that project.

Due to these developments, we have done well on our investment. We own 11 million shares of the company which is now trading at \$0.23 per share. Our current cost basis however is only \$0.025 per share. Thus the investment is basically a 10-bagger for us.

We also like the management of the company. Couple that with the exciting asset and we believe that we have a reason to be long-term holders of the shares. We might monetize portions of the investment opportunistically, but most will be held for the long run.

**Speaking about cash, what's your total cash and marketable securities position like, and what's the Company's current cash burn rate?**

Right now, we have about \$14 million in cash and marketable securities. \$12 million of that is in cash and the rest is in Vendetta stock, which is worth roughly CAD\$2.5 million, and we also hold 100,000 shares of Kinross stock, which is worth about \$0.5 million.

Our burn rate, including our exploration activities, G&A, and all the regulatory costs of being a public company, is about \$2 million per year. If we do any drilling, that would be added to the budget. But currently we see about \$2 million a year in expenditures moving forward.

**Could you briefly describe the share structure of Solitario?**

Over the past 20 years, we have been disciplined when it comes to financing and equity issuance. In fact, the last financing we did was in 2011, so we've been living mainly on our success on the exploration front and our joint ventures.

Right now, we only have 58.4 million shares outstanding and as you mentioned earlier, we trade both on the NYSE under the symbol XPL and on the TSE under the symbol SLR. This assures sufficient trading liquidity of about 100,000 shares a day combined.

I also believe that insider ownership is worth pointing out. Management and directors own 9.2% of the stock, thus everybody's interests are aligned. This creates an incentive system that prevents dilution of shareholders with unnecessary financings.

**The price of zinc has been on a phenomenal ride since early 2016. In fact in two years' time, the price more than doubled. Do you see this trend continuing?**

I believe it will, but probably not at the rapid rate of the past two years. The reason for my bullish view is the current situation of the zinc market, which features a supply/demand imbalance that has been in the works for some time.

The root of this can be traced back to the previous decade, in which the zinc price was depressed. This suppressed investment in new zinc projects. Furthermore, in this same period of time, 12% to 14% of the existing zinc mine production was shut down due to exhaustion of reserves. For example, the closure of the Century Mine in Australia. Five years ago, it was still the second largest zinc producer in the world. Another half a dozen mid-sized zinc mines have closed for the same reason.

Another argument for stronger zinc prices is the fact that bringing supply into the market is not an easy task. Most of the mines that potentially can be developed are probably five years from production. Thus, I believe that zinc prices will have to remain strong to cause more investment to create new production.

Finally, even if the price of zinc has doubled we are not seeing this reflected in the stock price of most zinc equities, especially in the junior sector. I believe that once investors are again fully focused on zinc, there could be a tidal wave of activity in terms of investment. Moreover, in my view this wave is not far away.

**How do you differentiate yourself from other resource companies that are active in the zinc space?**

Firstly, we believe we are better capitalized than other junior zinc companies. There are probably 20 to 25 such companies listed on the North American exchanges, but the vast majority of these do not have anything near the capital we have available through our cash and marketable securities.

Secondly, we are a two-asset Company which allows us to be more diversified. Our plan is to become an intermediate tier Company over the next couple years. We are on our way of doing that with the Zazu acquisition and with our other programs.

Finally, our two key projects are supported by two of the five largest zinc producers, Teck and Nexa which add credibility to our efforts. Certainly, our partners think highly of both of these projects and see them as economic and worthy of the investment needed to bring both to production.

**Can you tell us a little bit about yourself and the other key executives of the Company?**

I am the CEO of the Solitario. I have over 35 years of experience in the mining industry with a background in geology. I graduated from the University of Notre Dame and finished my Masters of Science degree at the Colorado School of Mines.

Our COO is Walt Hunt who has been with the Company since its inception. He has experience in mining operations and exploration. He also obtained his Master's Degree from Colorado School of Mines and we both worked for major mining companies. However, the last 20 to 25 years we were focused on Solitario and on our predecessor parent company called Crown Resources.

I should also mention Jim Maronick who is our CFO and who has been in the industry for 25 years and with Solitario for the past 20. He is fully versed in regulatory issues both in the US and Canada.

I should also point out that this management team has experience in major deals with larger mining companies. For instance, we sold Buckhorn Mountain Gold Deposit in

Washington State to Kinross Gold for about \$220 million in 2006. I can't say we are going to replicate this deal, but I believe we have the experience to create value for our shareholders.

On the director side, we recently had a turnover of several people and added new directors. There is James Hesketh who is the CEO of Viva Gold and John Labate, CFO of Gold Resource Corp, a successful smaller sized gold producer. We also have Josh Crumb who has been associated with Lundin and focuses on certain financial aspects. I have to say that Josh has been a good addition to our team. Last but not least, we also have Gil Atzmon who was CEO of Zazu Metals and again proved to be a good pick in terms of directorship.

All in all, I believe we have both the management and directors that can take this Company to a new level.

**Before we go, what would you say are the most important catalysts that investors should look out for at Solitario in 2018?**

I think catalysts are another thing differentiating our Company from others. We have several 'irons in the fire' to report on in 2018.

At Florida Canyon, we see the access road as a key point on which we'll provide an update. Once the road is finished we could see

increased development activity on this interesting project.

At the Lik deposit, it is going to be the geophysical survey that we are going to jointly fund with Teck. This effort could help us discover new buried deposits which would only add to the significant potential of the area.

At La Promesa, we hope to sign a community agreement soon, which could mean we are going to drill on the property before the end of the year.

I would also mention the dark horse catalyst for our Company and that is our generative program in Peru. We are going to conduct work on underexplored areas which have a good anomalous signature in both zinc and silver. Hopefully, we will be successful in our exploration efforts which could yield several new projects.

Due to all this, I believe 2018 is going to be an active year for Solitario and its shareholders.

**Well thank you Chris, it's been a pleasure speaking with you and we appreciate your time and insight. We'll certainly continue to follow Solitario's progress and we hope to have you back in the future for an update.**

Okay. Thank you very much. It's been a pleasure talking with you and we look forward to doing it again.

## **Interview Feedback**

We welcome your questions and feedback regarding this interview at:

<http://www.smallcaps.us/ceo-chris-herald-explains-what-makes-solitario-such-an-attractive-zinc-play>

Transcripts are edited for clarity.

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