

ECU Silver Mining - An Extraordinary Junior Mining Company

By Adrian Douglas

In September I attended the Cambridge House Resource Investment Conference in Toronto. This gave me the opportunity to meet with Michel Roy, the President & CEO of ECU Silver Mining. We spent several hours discussing the story of ECU Silver Mining which, as you will see, is a very exciting and extraordinary one.

A stand-out from the crowd

The first thing that struck me about ECU led me to choose the title to the article. There are literally hundreds of small companies who are generally referred to as “Junior Mining Companies”. This is a total misnomer because most of them are exploration companies and have no mining activities whatsoever! Even when they make “discoveries” there are no guarantees that such discoveries will be proven to be economically viable; even if they are, it typically takes at least a decade to plan and permit the eventual mining operation, and millions of dollars of capital must be raised to procure the necessary plant and equipment.

ECU, however, is truly an “extraordinary” junior miner. The Webster’s dictionary defines “*extraordinary*” as “*going beyond what is usual; exceptional to a very marked extent*”. Unlike most Junior Mining Companies, ECU is a junior mining company that is actively mining. It currently produces around 300 tons of ore each day from their 100% owned 610 hectare Velardeña property in the Durango State of Central Mexico. There are seven mines on the property but mining and exploration are currently conducted in two mines, Santa Juana and San Mateo. The Junior Mining companies who do have some production typically use a third party to mill and process their ore. ECU is again extraordinary because it has its own mill and processing plant; a characteristic which is extremely beneficial for the future, as we will see shortly.

ECU Silver Mining Inc, as the name suggests, has been primarily focused on the mining of silver. But much of the ore also contains very high grades of gold. Most of ECU’s revenues have been generated from silver production since mining was re-started in 2005, but the ore has not been processed for gold extraction as the company lacked the necessary pyrite circuit. A pyrite circuit will be commissioned in the coming weeks. The projected future revenues show more revenue will be generated from gold than silver. However, ECU is again out of the ordinary in that it is growing its resource base so fast that it is climbing the ranks rapidly to be one of the biggest silver miners in the world on a resource basis.

Many Junior Miners perform “wildcat” exploration. They study the regional and local geology in order to infer where an ore-body may lie and then a drilling

program is launched to test the theory. They drill “wildcat” boreholes which allow bringing a core sample of rock to surface of 1” diameter. The cores are tested in a laboratory for mineral content (known as “assaying”). The mineral content (known as “grade”) is extrapolated from the core sample measurement to be reported in terms of the grams of mineral per ton of host rock and the drilled footage over which the grading was observed.

ECU is again extraordinary in that its current exploration program is not “wildcatting”, but exploring out from the current mine infrastructure. Michel Roy is a very experienced geologist and explorationist. He has over 30 years of experience and at one point in his career was running the largest exploration team in Canada.

As a result, when Michel Roy became involved with ECU, initially as a consultant geologist and later as President and CEO, he looked at the Velardeña property in a totally different light compared to the previous owners, Williams Resources, from whom ECU had acquired the property. In his first visit to Velardeña he was astonished to observe how continuous and uniform the Terneras vein is over 1,200 meters and the Santa Juana vein for several hundreds of meters, as proven by mine workings over those lengths. Such linear extent without significant pinch-outs was the first clue that the mineralization in the area must have occurred on a massive scale. Michel Roy had a strong suspicion that Velardeña had huge untapped potential beyond the near to surface silver-rich oxide veins that had been traditionally mined. That suspicion has now been vindicated with recent big exploration discoveries.

Operation “Mine-Sweeping”!

When Michel Roy first took the helm of ECU in 1999, however, the first priority was not planning an exploration program. The previous senior management had left a mess that needed to be cleaned up. Large loans had been taken out without the appropriate investment being made to assure future cash flow to repay the loans. ECU’s financial condition was dire. As an emergency measure the company sold its mill and the mining crews were leased out to another mining company to generate revenue. Efforts were initiated to pay off or re-finance the loans. To make matters worse the Company also had to fight litigation that challenged the very legitimacy of ECU’s mining rights.

The litigation was eventually decided in ECU’s favor and months of hard work got ECU’s financial situation to turn the corner. The company bought a milling facility in 2005 that could process the rich sulfide ore found by a drilling campaign performed in early 2004 and then re-started production. With the company well on the road to becoming cash flow positive ECU could finally turn its attention to investigating the extent of the mineral potential of the Velardeña property.

Talking Geology – “Intrusions” are welcome!

The geological environment of the Velardeña region is very complicated. The source of the silver, gold and base metal deposits is from magma intrusions that thrust their way into the overlying limestone formations to create what is known as a “skarn”. This is the part where readers eyes glaze over and they skip to the next section! But please, just bear with me a little while because I am going to attempt to explain the very complex geological phenomenon of magma intrusions in simple terms. Understanding the geological model, even at a rudimentary level, is absolutely essential to understanding the vast potential that ECU has to add resources and reserves, and why it is an extraordinary situation.

Skarn-face is here!

I have researched on skarns and it is certainly a complicated geological phenomenon with complex geochemistry leading to mineralization, mineral transport and deposition. As a piece of trivia the word “skarn” is not in the Microsoft Word dictionary and it proposes a correction to “scar”!

During the Cretaceous age (between 135 million years ago to 65 million years ago), in what was then a marine environment, calcareous sedimentary deposits (limestone) were laid down which over time and with burial formed massive limestone layers.

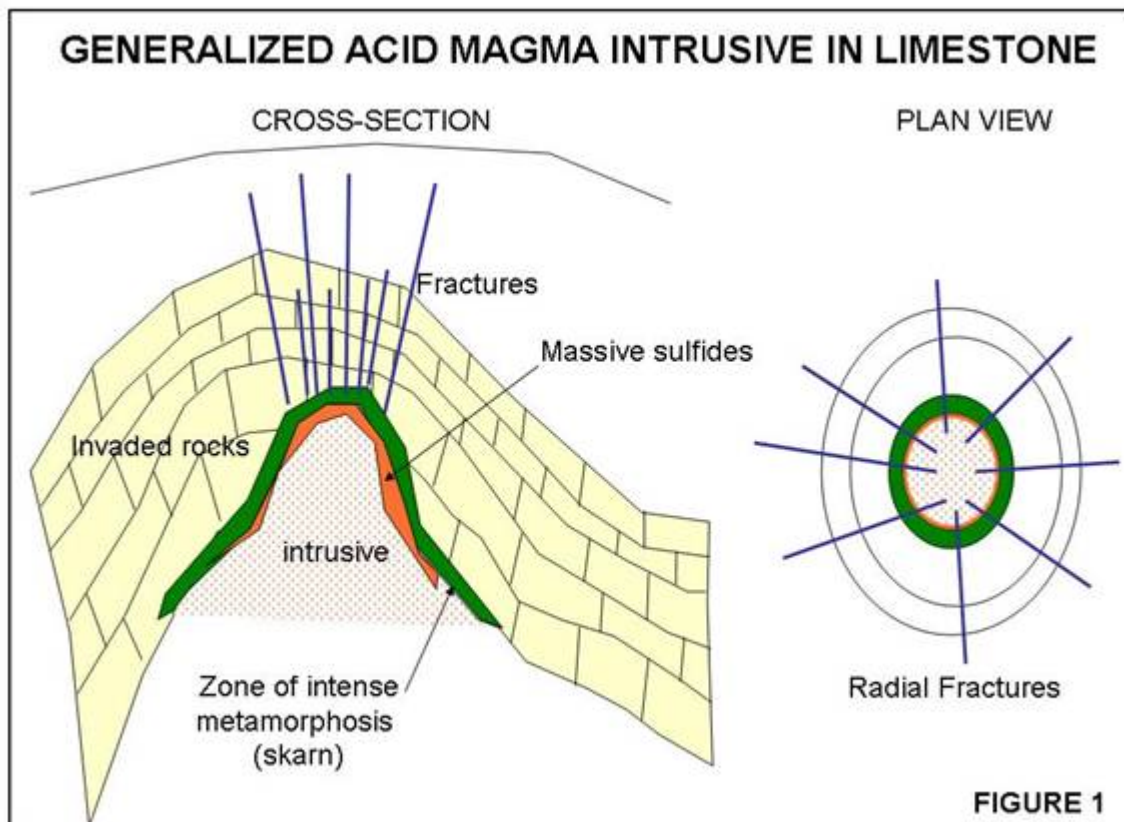
In the Central Mexico region where Velardeña is located, toward the end of the Cretaceous geological age, in a period known as the Laramide Orogeny, tectonic activity caused the limestone layers to be buckled into mountains and valleys and also caused extensive faulting and fracturing. This was a very high energy geological event which gave rise to the Rocky Mountains and the Sierra Madre mountain ranges, which can be seen to have been folded in a NW-SE alignment. This immense disturbance of the earth’s crust gave rise to a period of magmatism and volcanic activity. The liquid magma was squeezed through cracks and faults in the overlying rocks. When the magma escapes to surface it is “extrusive”, which we know as a volcano, while if the magma is contained within the rock it is “intrusive”.

A generalized schematic of an acid magma intrusive is shown in Figure 1.

The magma intrusive is acidic in nature and extremely high temperature (300 to 500 degrees Celsius). The hot, acidic intrusive reacts with the overlying limestone in a complex geochemical reaction. The contact zone between the magma and the limestone is a zone of intense metamorphosis and the chemically altered rock is called “skarn”. As the intrusive magma continues to force its way into the limestone, it causes uplifting which leads to radial cracks or fractures as shown in Figure 1 in the plan view. There may also be other cracks or faults in the rock that were pre-existing before the magma intrusive event.

At this stage hydrothermal alteration may occur. Superheated aqueous fluids are created by the heat of the intrusive magma and underground water and volatile

fluids that come from the magma. These fluids dissolve metals and minerals and concentrate them. These hot fluids percolate through the fractured limestone rock depositing the minerals and creating the mineralized veins by filling the fractures. This percolation may continue for hundreds of thousands of years. The crystallization of minerals occurs in the fractures at shallower depth first as this is the coolest environment. The dissolution of the limestone wall of the fractures in the hydrothermal alteration process is most aggressive near the intrusive because the circulating fluids attain their highest temperature there and as a result the pressure and velocity of flow are highest. This explains why the mineralized veins typically have an increasing aperture with depth. The fact that the deposition of minerals occurs last of all close to the intrusive means that the mineral content can be expected to be higher close to the skarn. The residual fluids after the fractures are mineralized are cooked over time and may result in the formation of massive mineral sulfide lenses.

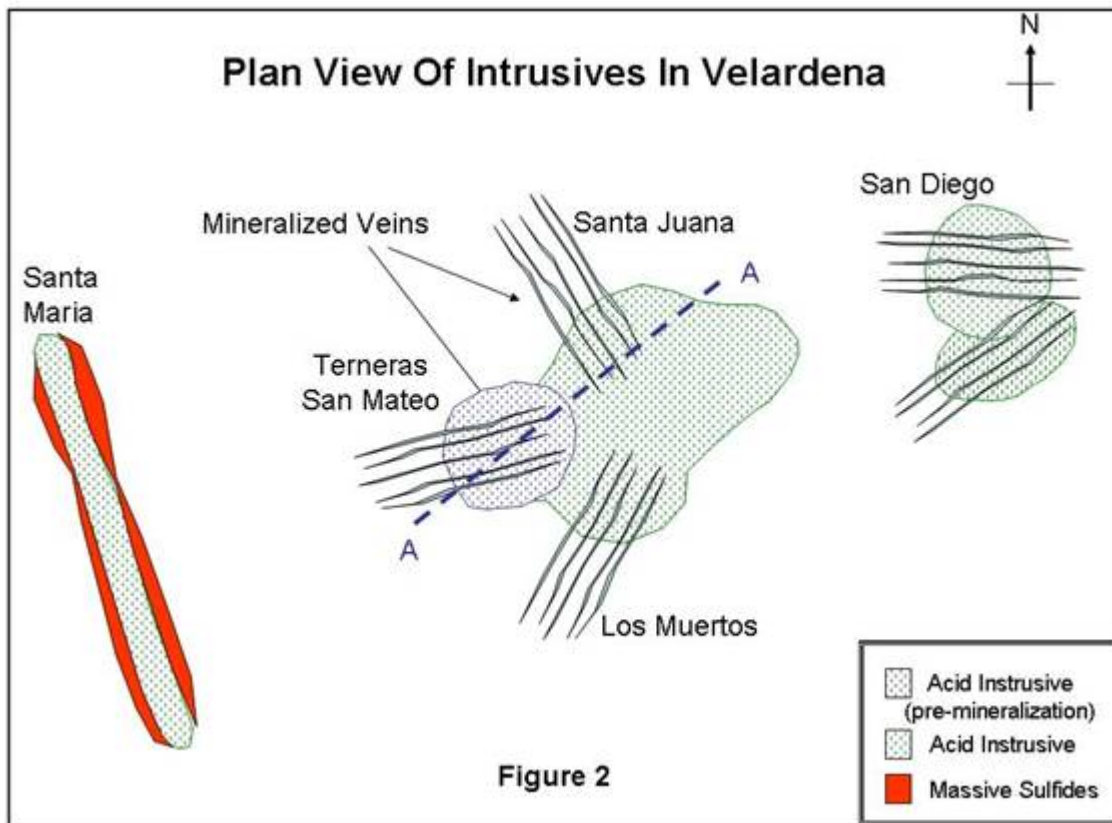


Many geologists believe that the huge temperature gradients coupled with stress induced by deformation of the limestone is responsible for brittle fractures. These fractures may well be oriented in a sheet system of fractures (like a loaf of sliced bread) which then get mineralized by hydrothermal fluids. These fractures are very densely spaced and can be described as a “stockwork” of veins when they are mineralized.

In Velardeña there were several magma intrusives that were forced up from below the earth's crust. The first was in the San Mateo area and was not associated with any mineralization. A plan view of these intrusives is shown in Figure 2. The first intrusive is shown in blue shading.

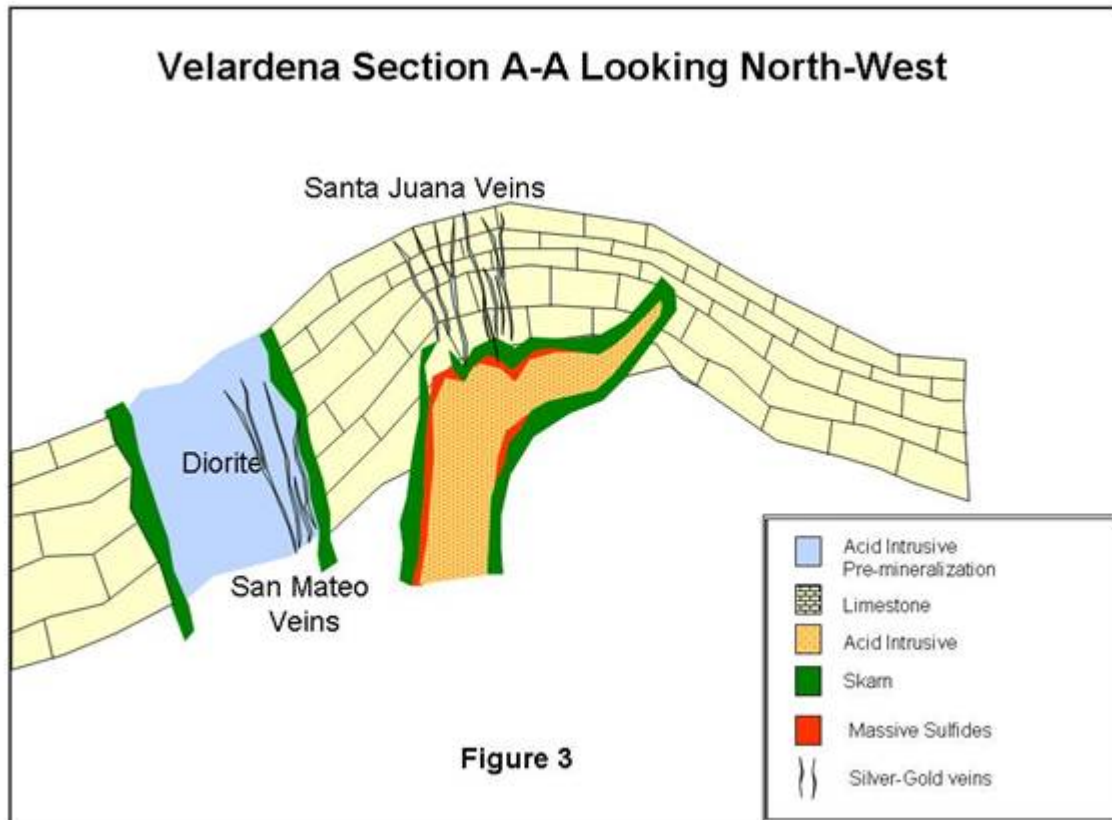
The magma intrusive created fractures in the limestone and the contact zone was cooked into metamorphic skarn rock but there were no dissolved metals in the hydrothermal fluids at that time and so no mineralization occurred. The intrusive is mainly diorite, a material similar to granite but with less quartz content.

At a later stage there was a second phase of magmatic intrusion. These are shown in green shading in Figure 2. Figure 3 shows a simplified representation of the intrusives in the Santa Juana/ San Mateo area in a cross-section looking NW (the section A-A indicated in Figure 2).



The second intrusive in the Santa Juana/ San Mateo area intruded through the same weakness of the limestone formation as the first intrusive. This caused not only fracturing of the intruded limestone, but also of the first intrusive thereby creating conduits through which later mineralizing hydrothermal fluids could circulate.

The second intrusive event was accompanied by mineralization. The circulation of superheated aqueous, mineral rich, volatile fluids led to the transport and deposition of minerals that can be seen in the Velardeña vein systems.



The immense stress caused by thermal gradients also led to further stress cracking of the rocks and probably gave rise to the highly fractured stockwork zones that have been recently discovered on Level 17.5 and 18 in the Santa Juana mine. These appear to be mineralized fractures that are oriented NW-SE that are closely spaced in a sheeted-vein system. Such a zone could be suitable for bulk mining.

The geological phenomenon associated with intrusives suggests there could be a real bonanza as the exploration goes deeper in Velardeña. Already more numerous veins have been encountered with increasing depth, including the discovery of new stockwork zones, and the vein width and grades are increasing with depth. As the skarns are explored further, there is also the possibility of encountering massive sulfide lenses which are typically found near the intrusive/skarn contact.

ECU has a very strong geological team and has had 100% success in the exploratory drilling program so far. This is not due to good luck, but due to the deep understanding that the company has of the local geology. The geological model suggests that despite the major discoveries that have been made so far there are perhaps more and bigger ones to come!

Taking it to the Next Level – Understanding the jargon

ECU has issued many press releases about their recent discoveries. The press releases contain many terms of mining jargon that are not necessarily understood by the average investor.

Most of the exploration work has been conducted from the underground mining infrastructure of Santa Juana and San Mateo.

Mining is performed by removing ore from a particular “level” underground. The mining proceeds by what is usually erroneously referred to as “tunneling”. The strict mining definition of a “tunnel” requires it to be open at both ends, like a railway tunnel. The technical term for a tunnel that is open at one end is an “adit”. If the adit is cut in the same direction as the mineralized veins it is called a “drift” and the process of making it is called “drifting”. If the adit is driven at an angle across the mineralized veins it is called a “cross-cut”. The process of making it is called “cross-cutting”. The adit may be driven from a surface opening (known as a portal) or from an underground vertical shaft. The adit is usually driven horizontally but with a slight slope toward the shaft so that any water can run back to the shaft to be pumped out. If the adit is excavated upward to an upper level it is called a “raise” and if it is excavated downward to a deeper level it is called a “winze”. The horizontal adit levels are typically spaced about 40 meters apart vertically.

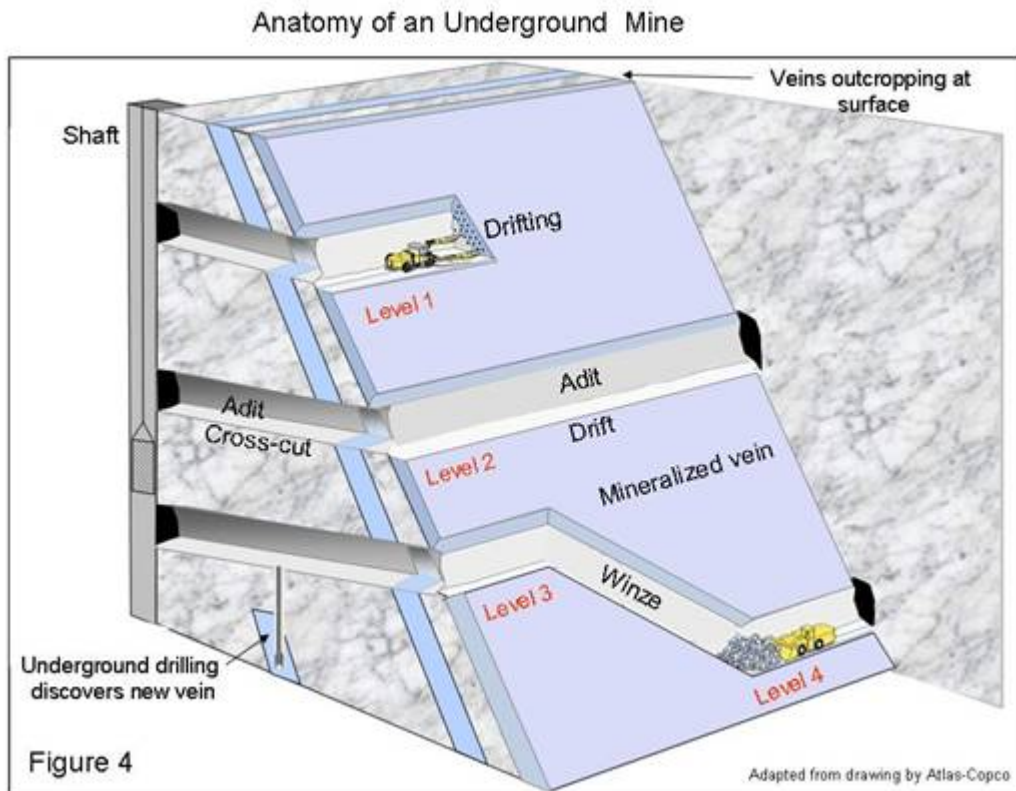
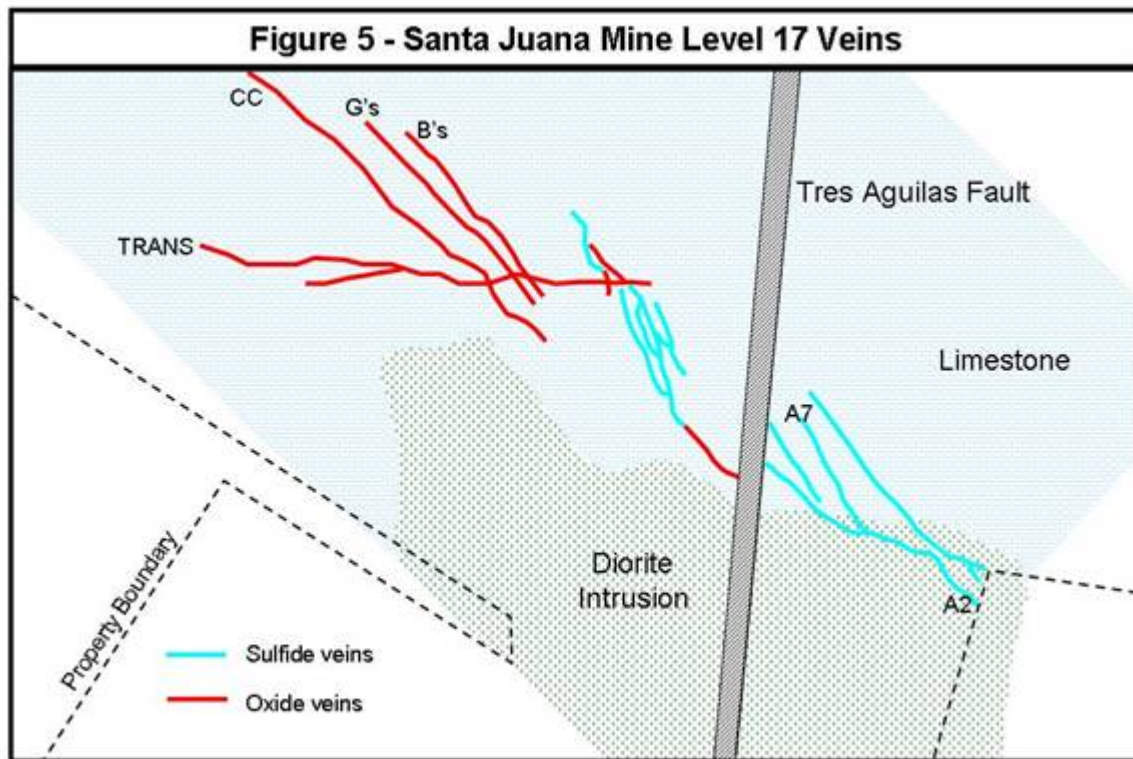


Figure 4 shows a schematic of an idealized construction of an underground mine in which thin veins are being mined.

Figure 5 shows the veins that cross the Level 17 of the Santa Juana Mine. The veins are generally oriented NW-SE. Most of these veins were initially found on the 12th level of the mine with the exception of the Santa Juana vein itself that outcrops on surface. The veins vary in width from 0.2 meters to 1 meter but recent mining and exploration has found that these veins become wider with depth and the precious metal grades increase with depth. The CC vein has been drilled all the way to level 22 and indications are it extends below that. The discovery of the extension of the vein system laterally on the South Eastern side of the Tres Aguilas fault was as a result of drilling in 2004. It is in this area that most of the mining is currently performed. These veins are mineralized with sulfides as shown in Figure 5.



Exploring the Geological Model

At the end of 2005 ECU launched a 50 hole, 15,000 meter exploration program. Although this is called exploration it is conducted from a mining infrastructure which is currently in production. This is not “wildcatting”; it is exploring the geological model. Every hole that has been drilled has encountered precious metal bearing mineralization with good grades. This does not occur by getting “lucky”, it occurs because the company has put a lot of effort into understanding the geological setting that gave rise to the Velardeña mineralization and then going about proving up the model.

Extraordinary Success

At the end of September 2006, ECU had completed just 30% of its exploratory drilling program in the Santa Juana mine. The results so far have been extraordinary:

- Discovery of more than 30 mineral-rich veins,
- Discovery of two new mineralized skarns,
- Discovery of a wide stockwork zone (highly fractured zone where the fractures are mineralized) on Levels 17.5 and 18;

- **Discovery of a sheeted vein type zone with at least 70 meters of proven horizontal continuity and a width of 5.25 meters on Level 15. It should be noted that some assays are still pending so the width may increase further.**
- **Confirmation of at least 450 meters of vertical continuity for veins from Level 12 through Level 18 and beyond.**

Drilling of Skarn #1, has shown it to be a mineralized green skarn with a minimum of 100 meters of lateral continuity, grading 1.21 g/t Gold and 1.73% Zinc over 31 meters in hole TA 17.5-06. This is expected to be nowhere near the lateral limit of what appears to be a very big structure.

Skarn #2 graded 1.68 g/t Gold over 37.1 meters in hole TA 17.5-05A

The large stockwork zone that was discovered on levels 17.5 & 18 is very exciting. Samples revealed grades of 2.43 g/t Gold, 57 g/t Silver, 0.23% Lead and 0.44% Zinc over a 28.2 meter width, followed by confirmation of continuity by drilling over significant height and width. Such zones are typically ideal for bulk mining processes. The discovery has led to further advanced exploratory drilling.

The major discovery on Level 15, of a sheeted vein system with at least 70 meters of horizontal continuity, 5.25 meters wide with average grades of 4.29 g/t Gold, 161 g/t Silver, 1.37% Lead and 3.19% Zinc is very significant. Such lateral continuity and width would typically suggest a very extensive mineralization. This level 15 discovery included an intercept grading 9.96 g/t Gold, 300 g/t Silver, 1.92% Lead and 2.82% Zinc over a 6.55 meter width.

ECU again showed how extraordinary they are in that while these impressive discoveries were being notched up in the Santa Juana mine, an entirely new westerly extension of the San Mateo vein was discovered in the San Mateo mine which is 900 meters away from the Santa Juana mine. The San Mateo vein was shown by drifting to extend at least 84 meters (276 feet) in length with average grades of 5.02 g/t Gold and 526 g/t Silver with over 0.43 meters of width. Not only was the vein width increasing in the westerly direction but the grades were too. The final 15 meters of drift yielded 10.95 g/t Gold, 707 g/t Silver, 2.62% Lead and 5.4% Zinc. Such results suggest that the San Mateo vein is likely to have significant further vertical and lateral extension.

Counting the Ounces

Early in 2006 ECU commissioned an independent study to update its resource base in accordance with the guidelines laid out in NI-43-101. This was published in June 2006.

The report showed a 42% increase in indicated resources and 608% increase in inferred resources. Indicated resources were reported at 17.4 million ounces of silver-equivalent and inferred resources were 81 million ounces of silver-equivalent

giving a total indicated and inferred resources of around 100 million ounces of silver-equivalent. However, it should be stressed that none of the 2006 discoveries were included in the updated resources because the cut-off date for preparation of the report precluded allocating the necessary time for the appropriate analysis work. So the report is essentially a NI-43-101 compliant report of the resources that were known before the commencement of exploration. The report did not, however, include credits for the base metals.

ECU is required by a technicality related to the NI-43-101 guidelines to call these ounces “resources” and not “reserves”. Resources become classified as reserves when they are shown to be economically viable to mine. This has to be done by commissioning a pre-feasibility study. But ECU is mining from Velardeña and has reported a profit in Q2 2006 so the economic feasibility is not in question but in the absence of a pre-feasibility study the ounces must be reported as “resources”.

ECU was again extraordinary in that it took a very conservative approach to its NI-43-101 resource estimation. While many junior miners are only too willing to give the most optimistic scenario, ECU on the other hand excluded veins of less than 1 meter in width and oxide grades of less than 235 g/t of silver and sulfide grades of less than 150 g/t of silver. What ECU excluded to count in its resources would be the subject of a “great discovery” press release for other junior miners!

ECU has commissioned an updated NI-43-101 report to include the four major discoveries of 2006 and include base metal credits. This report is due by the end of 2006 or early 2007. The company is not giving any indication on what the new resource base could be but considering the importance of what has been discovered I personally would estimate it could be within the range of 250-300 million ozs of silver equivalent.

Extraordinary Value

When junior mining companies make discoveries investors usually get over excited and bid up the stocks to excessively rich valuations. To illustrate my point I can refer to “the talk of the town” of recent months, namely Aurelian Resources. They have reported some excellent drill results that have shown high gold grades in their Fruta del Norte property in Ecuador. The company stock is currently trading at \$26. There are 34 million shares outstanding which values the company at almost \$900 million. They have not done sufficient exploration to compile a NI-43-101 compliant report. If they were to do so, however, they would need to demonstrate at least 8 million ozs of gold resources (400 million silver equivalent ozs) just to merit the valuation that investors are giving the company!

In looking at the resources of some of the largest primary silver producers such as Coeur D’Alene, Hecla and Pan American Silver an average value of an ounce of silver resource in the ground can be determined (see Table 1). The values range

from US\$4.62/oz to US\$3.17/oz with an average of US\$3.89/oz of silver in the ground.

The 100 million silver equivalent ozs of resources that ECU has reported would value ECU in the range US\$462 million to US\$317 million. As of October 4, 2006 ECU was sporting a market cap of US\$450 million. This means that ECU is extraordinarily under-valued because the 100 million ozs of resources does not include any of the four major discoveries of 2006, nor any credits for base metals. The current share price has nothing factored into it for the 2006 discoveries!

ECU traded as low as CDN\$0.02 in 2002. The rise to the current price of around CDN\$2.65 only reflects the turnaround in the company's financial condition from near bankruptcy to profitability, the successful end to litigation and an independent NI-43-101 compliant assessment of the resources they had up to the end of 2005. Because of this impressive rise in share price some investors seem to believe they have missed the boat. On the contrary, the share price only values the company for its reported 100 million ozs of resources giving no credit to the four major discoveries of 2006, and nothing in terms of future expectation. If I am correct at estimating the resource base to be closer to 300 million ozs when ECU updates its NI-43-101 report then ECU should be trading at around CDN\$5.70 just for what has already been discovered when in fact it is trading at CDN\$2.50 (as of October 4, 2006)! I know of no other mining stock where an investor can still benefit fully from the stock appreciation that should be commensurate with four major discoveries after the announcement of the discoveries has already been made!

Company	Reserves & resources Million Ozs	Market Cap \$ Million	Value Ag in ground \$/oz
Gour D'Alene	268	1320	4.92
Hecla	170	880	3.88
Pan American	470	1490	3.17
Average			3.89

Table 1

Furthermore, it should be noted that ECU has only completed 30% of its exploration program. Every hole that has been drilled to date has hit significant mineralization. It would be reasonable to assume that this trend will continue. What could turn out to be the real bonanza in their exploration program has yet to come. The geological skarn model that ECU has developed gives rise to the possibility of encountering massive silver/gold rich sulfides. Even in the absence of such bodies the currently known vein system is open at depth and so deeper drilling will very likely add significantly more resources. In addition the company has even further potential for lateral extension of the vein system. There are some exploration targets such as veins located on surface that have never been drilled!

Taking all this into account it is clear that the resource base of ECU is likely to continue to grow. Investors will eventually value the stock at levels that will take this into account.

Why have investors been slow to recognize the extraordinary results and future potential of ECU? ECU has arranged its own financing and has not sought the help of the large investment bankers. As a result they have not benefited from the “recommended buy” to a large client base that comes as part of the package when dealing with the big banks. It would even appear that there is a large investment house that has been actively shorting the stock (there is a significant body of evidence to demonstrate this), perhaps with the motivation to make life difficult to “go it alone”. Given the extraordinary success of ECU and future potential, shorting their stock could turn out to be extraordinarily expensive. As the story of ECU gains momentum the core of shares that is held in strong hands continues to grow. The short sellers will find it extraordinarily difficult to cover, which, in my opinion, will lead to an impressive short squeeze.

Just Milling Around

Only approximately one in one thousand junior mining companies ever go from exploration to production. Their potential either does not pan out or they sell out to a major after having confirmed their discovery. In going to production one of the challenges a junior mining company faces is to develop an effective milling and metal extraction process. The processing system is usually designed from data obtained in small scale laboratory tests, which inevitably leads to problems at full scale level.

ECU is again extraordinary in that they have their own milling and processing system capable of up to 340 tons/day. This allows them to use this as a pilot plant for experimentation so that a large plant can be properly designed with a view to minimizing commissioning issues.

The Future

ECU will continue their exploration drilling program which is only 30% complete. They currently have one drilling unit but intend to add two more imminently to accelerate the work. They have constructed an on-site analysis laboratory to be able to conduct sample assays quicker and at a significantly reduced cost.

ECU will upgrade their milling facility to process significantly more ore in light of the extraordinary success they have had in exploration and the fact that new discoveries are accessible from the existing mine infrastructure.

ECU will release an update to its NI-43-101 inventory estimates either at the end of 2006 or early 2007.

ECU will assess the feasibility of bulk mining the newly discovered stockwork zones.

ECU will add a pyrite circuit to its processing plant which will enable recovering 15,000 ozs of gold and 150,000 ozs of silver from partially processed material.

In separate work to this article I have developed a proprietary analysis technique that indicates that silver will very likely outperform gold by a very large margin. This is also the view of some other analysts, notably Ted Butler, who have arrived at the same conclusions using different methods. The fundamentals of silver indicate that the silver price must rise by many multiples of today's price in order to ration very scarce supply against growing demand. Silver mining companies, such as ECU, will be major beneficiaries of such predicted silver price appreciation.

ECU is no longer a penny stock and is trading average daily share volumes of over 500,000 shares, and while the company has made no comment, it would seem logical to expect the company to seek a listing on the revered TSX as opposed to the TSX Venture exchange where it currently trades. This would enlarge the investor interest in the stock.

An Extraordinary Opportunity

ECU is an extraordinary junior mining company. They are one of a few junior miners who are actually producing, which allows self-financing of future exploration and development. They have almost quadrupled their resource base but this does not include the four major discoveries they have made in 2006. The share valuation of ECU does not factor in the value of the new discoveries let alone the future exploration potential.

The skarn geological model that has been developed suggests that higher grades and wider and more densely spaced veins together with massive mineralized sulfide bodies could well be discovered as the exploration program moves toward entering the skarns. While the geological model can never be 100% certain until drilling has proved it, what is 100% certain is that the intrusive exists, that it brought precious and base metals, and that it created the veins by fracture-filling. Observations of increasing grades, vein aperture and more densely spaced veins with depth increase the confidence in the geological model. ECU is exploring to find the area where the veins are meeting, and to find wide massive sulfide veins in the target sector, to investigate the favorable skarn (green skarn) for sizing and economic evaluation as well as trying to locate potential massive sulfide lenses enclosed in it. The exploration program is being ramped up with two more drilling units being added to have three exploratory drilling units so investors do not have to wait long to find out if the geological model pans out as predicted.

ECU has an extraordinary management team headed by Michel Roy who has turned the company around from near bankruptcy and successfully defended legal

challenges against the company's mining rights, re-started mine production and launched a highly successful exploratory program.

In my opinion this extraordinary junior mining company represents an investment opportunity that will deliver extraordinary returns.

ECU Silver Mining trades on the Toronto Venture exchange under the symbol ECU.V and on the NASDAQ Pink Sheets as ECUXF.PK

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October, 2006

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For full disclosure I am pleased to say that I am a long standing share holder of ECU. This article has not been commissioned by ECU and I have not, nor will I, receive any compensation for writing it. Mineral exploration is a tough business with many risks involved; please factor your own risk tolerance into any investment decisions. My motivation in writing this article is the same as with all my contributions to the Café that I wish to bring information that will help the Café community ride this precious metals bull to the best returns