



Letter to Shareholders from President & CEO, Dr. Keith Barron

February 17, 2022

Dear Shareholder:

I have been asked from many quarters what our “Go Forward” plan is for the Company. After considerable consultation with our Board members, our investors, and industry experts, we have decided to focus down on our core competencies – namely porphyry copper and epithermal gold, while understanding and appreciating that our work to date on sedimentary hosted concepts - which we believe is valuable - has unfortunately gone unrewarded in the market. We are a small company and chasing all of the numerous metal occurrences on our property is unsustainable and unsupportable. Certain prospects should be critically examined for joint venture or other possibilities. We do not live in a vacuum and can see the rapid move in the gold price and the share appreciation of our neighbour to the south. This is not lost on us. We have numerous porphyry copper and epithermal gold prospects, and I believe that success with these targets will increase our market visibility and maximize shareholder value.

Potential of the Cordillera de Cutucu

Geologically, this is a Jurassic-aged back arc rift system in which structural geology and volcanism has localized porphyry and epithermal copper and gold deposits. This rift system lies inboard of the Andes Mountains and extends down the length of the South American Continent. For much of the intervening geological time since the Jurassic (around 155 million years ago) these rifts have been immense linear chasms, gradually infilled by sediments. In parts of Ecuador the rift basin remains a topographic depression that now localizes the larger oil reservoirs of the country, up to 4 km below the modern surface. In the Cordillera de Cutucu and contiguous Cordillera del Condor, stretching south to the Peruvian border, and for a narrow strip of land straddling the Colombian border to the north, the faults controlling the rift basin have been inverted in the Tertiary, and the land pushed up as much as 6 kilometres into the sky and then eroded back down by tropical rainfall. The erosion has exhumed numerous bedrock gold occurrences and over 20 porphyry copper bodies in the Cordillera del Condor, and the Mocoa and Bonita porphyries up in the Colombian-Ecuador border area.

This exhumation by erosion has in the Cordillera del Condor, exposed numerous gold zones, and porphyry copper deposits, however most of the gold vein systems have been eroded down leaving only the placer gold in alluvial gold deposits, which have been the object of exploitation by the Colonial Spanish from 1560-1620, and then by mestizos from about 1920 onwards. The Shuar indigenous population did not have a tradition of gold mining and did not adorn themselves with gold jewellery. The Fruta del Norte gold deposit does not come to surface and was discovered intact from erosion because it sits in a fault-bounded depression and is covered by sediments. Most of the copper porphyry deposits are dissected by erosion and lithocaps have gone. Only at Warintza and Mirador are there remnants of hypogene secondary copper blankets. In the Cordillera del Condor, volcanics and sediments are preserved as scabs



sitting on top of the Zamora Batholith; a large body of granitic rock which is the ultimate source and heat engine for the porphyries.

The trend of the numerous mineral discoveries in the Cordillera del Condor, when projected along the ridge system to the north, highly suggests that the contiguous Cordillera de Cutucu is the extension of the mineral belt, and indeed in the formation documents of Aurelian Resources in 2003 I highlighted this area for exploration (this is a matter of public record). Later in the period 2008-2013 I found abundant archival evidence of historic gold mining in the Cutucu, though until recently we only knew of gold mining near the village of Patuca (since 2012). Our airborne geophysical survey in 2017 confirmed that the Zamora Batholith extends under the Cutucu, and that therefore the entire belt is prospective in the same way as the Condor Belt. However, there is a difference....

The Rio Santiago, which slices its way east-west through the Cordillera, is the only river in the area which runs down to the Amazon and thence to the Atlantic. It sits in a deep canyon. The valley of the Santiago topographically separates the Condor to the south from the Cutucu in the north, and geology suggests that it is a dip-slip fault where the north side is moved down, relative to the south. What this means is that the south side has been thrust vertically by faulting and then eroded back down. The sedimentary and volcanic cover rocks in the Condor are largely eroded away, making mineral exploration easy. Conversely, in the Cutucu the mineral deposits lie under shallow cover necessitating the use of geochemistry, geophysics and clever geological detective work to find them. If the area had been eroded deeper there would be numerous gold occurrences on surface and the land would be swarming with artisanal miners. Instead, the hypothetical vein systems should be intact, though a challenge to find.

Our discovery of sedimentary hosted copper and silver and of sedimentary hosted zinc-silver-lead in the Cutucu over more than 50 kilometres length is very significant, but I believe these occurrences were all unknown to the Spaniards. During the period of the Conquistadors the Spanish were exploiting native copper in Venezuela, and zinc-silver-lead in Guatemala, and any discoveries in the Cutucu would have come to the attention of the Council of the Indies in Seville. It is my belief that had these occurrences in the Cutucu been known to the Spanish they would have been extensively "rat-holed", as they have been in other parts of the former Empire. I think we can confidently exclude these areas to be anywhere near the "Lost Cities", though the road network shows evidence of a pre-Colombian culture.

Finding the Gold Systems under Cover Rocks

Miraculously, the epithermal systems we have found to date lie right at the paleosurface, though they are Jurassic in age. This means they were formed, buried by several kilometres of sediment, and that the sediment was eroded away through time right back down to the original land surface. I would not be surprised if we found dinosaur footprints somewhere. The epithermals are manifested by silica-marcasite terraces, as are presently forming today at hotspots and geysers like in Yellowstone National Park.



In a news release yesterday (Feb 16), Lundin Gold explained the challenges of working in “post-mineral cover” in their quest to find another Fruta del Norte. Their regional exploration results are not too dissimilar from our own, and the goal of their 2022 programme will be “to move into completely covered areas with the aim of locating areas where mineralized fluid flow was more focussed.”

A recent study undertaken by staff at Hecla Mining and an MSc thesis at the University of Western Ontario: “Evaluation of Raman Spectroscopic Geothermometry of Graphitic Carbon as a Mineral Exploration Tool - A Case Study of the San Sebastian Au-Ag Mine, Durango, Mexico” gives us another tool in our exploration arsenal. All of our epithermal areas are in black shales with abundant carbon. Many years ago, people working in the oil patch realized they could infer the temperature of rocks during burial and uplift by looking at the crystallinity of the carbon in the sediments. If the rocks got too hot, then the oil would volatilize and be driven off. In this way you could tell if an area had any potential and save lots of money on exploration. Fluid inclusion work has been useful for telling us at what temperatures hydrothermal fluid was trapped in minerals such as quartz. We have contracted some of this work already. What has been developed here though is a much simpler and cost-effective way of determining the hottest part of a geothermal system by looking at the carbon. Hecla found that the richest part of the gold-silver systems were within 200 metres of the “upflow zones” where the hottest temperatures were found. We are fortunate that black shales are so abundant in our field areas, and we intend to carry out some pilot studies as soon as possible. I suspect that once we have narrowed the search down, we will be able to locate veins with Induced Polarization (IP) surveys. We wanted to carry these surveys out in the last two years, but the technicians were blocked by Covid for entering from Mexico.

Legacy of David Lowell to Exploration in the Cordillera

Dr. Lowell was active in the area when I started Aurelian Resources in 2001, and I had met him in the late 1990’s at an SEG conference in Vancouver. Lowell’s most significant career discovery was the Escondida copper porphyry in Chile in 1978. This was the culmination of a 1-million-hectare exploration programme called the “Atacama Project”. It was a follow on from Lowell’s previous “Covered Area” Project in the SW USA which resulted in the Casa Grande West Cu-porphyry discovery. Lowell was involved in the drilling and evaluation of the Warintza porphyry, which is now the subject of drilling by Solaris Resources Inc.

Lowell, together with John Gilbert correctly deduced in 1970 that porphyry copper deposits are enclosed by predictable ordered concentric shells of differing alteration mineralogy, like an archery target in plan view. By figuring which shell you are in, you can vector towards the bullseye core of the system and hence the ore zone.

Lowell had determined that in areas more than 50% covered by sedimentary rock he could use a reverse circulation drill to sample the bedrock and tell what type of alteration if any was present. By drilling a number of holes, he could quickly get a sense of where the core of the porphyry system lay. The key would be that at least some of the deposit would have to be at surface to give a geochemical expression - the starting point for the pinpointing - and that the drilling be rapid and cost effective. Because of the altitude and the aircraft ceiling it was not possible for Lowell to sling a magnetometer beneath a helicopter



in his exploration and he did not employ regional geophysical prospecting techniques. In the areas where he explored, a number of copper porphyry deposits have since been located. These are entirely buried but were found using geophysics.

One of the reasons Lowell targeted “partially buried” deposits was the high potential for preservation of a secondary “copper blanket” on top of the deposit, beneath the sedimentary cover. Weathering over time and vertical shifts of the groundwater horizon can result in the depositing of “supergene” secondary copper in a more or less horizontal zone in or above the porphyry, and this will be multiple times the grade of the underlying unweathered deposit. Escondida was so rich and lucrative as a mine because it had such a thick blanket preserved from erosion, primarily by the desert climate. In the Cordillera de Cutucu, our drilling has shown the presence of red bed sandstones and salt deposits in the Chapiza Formation which overlaps in age with the porphyries. The salt and red beds indicate ambient desert conditions, analogous to today’s Atacama desert. There are secondary copper blankets partially preserved at Warintza and the Mirador mine and we can perhaps speculate that there might be porphyries with wholly preserved secondary blankets in the Cordillera de Cutucu.

Globexplore Drilling of Hermosillo, Mexico has recently entered Ecuador and they have developed a helicopter portable reverse circulation drill. Aurania is in discussions with Globexplore. All of the components are man-portable with the exception of the compressor. Lowell’s exploration was only successful because he could afford to drill 24/7. If Aurania can use such a drill, and minimize moves to short hops, it could be cost effective. This drill can also be switched to diamond core if necessary.

Aurania has just completed a soil survey on the Awacha target and will carry out reconnaissance mapping in the area to the north, which only became available to us for examination December 19th. My hope is that there is a porphyry cluster. Geophysics has indicated some buried magnetic bodies. Before drilling I would like to see a gravity survey (as Lowell performed on his porphyry targets in Chile) to assess the depth of post mineral cover at both Awacha and Tatasham. I would like to see a bit of gravity work along the trend of mineralization at Tiria-Shimpia as well, since barite, galena and sphalerite are of high density and potentially could show up well; but this is subject to available funds and personnel.

There is much to keep us busy, and we have many exciting prospects in the pipeline. I am very optimistic for the future of Aurania, and I believe 2022 will be a great year.

Keith M. Barron PhD
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Aurania Resources Ltd.