



Mercenary Alert: A Copper Company Closing in on Cathode Production

A Special Alert Musing from Mickey the Mercenary Geologist

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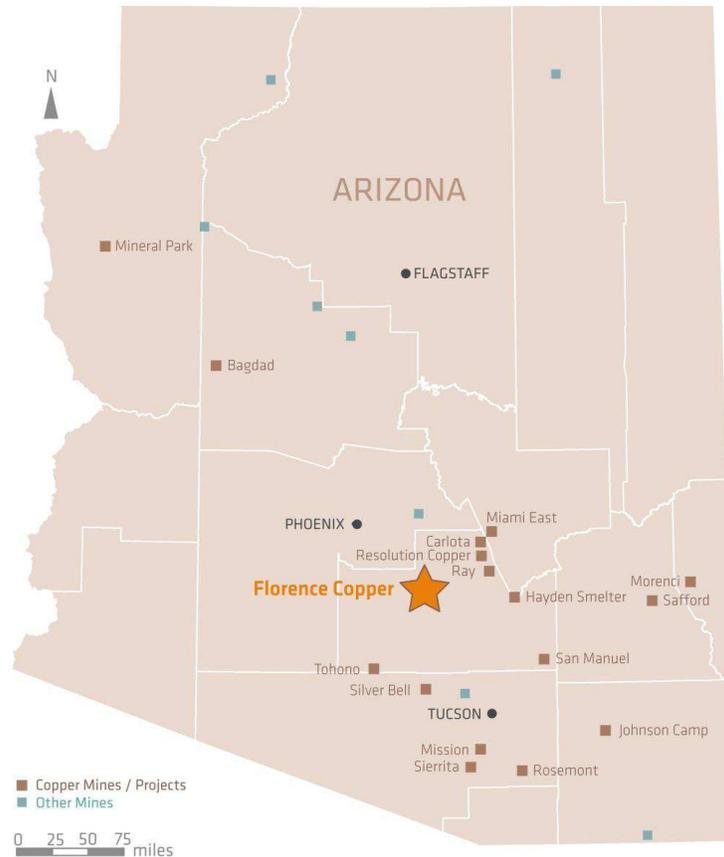
December 8, 2011

Longtime subscribers recognize my substantial track record addressing the supply and demand fundamentals of copper ([Mercenary Interview, November 11, 2011](#)). And most of you are well aware that I am a secular bull on the commodity despite occasionally opining on certain short-term bear fundamentals and/or predicting near-term price corrections ([Mercenary Musing, January 3, 2011](#)).

Because of my long-term bullish view on copper, I have been looking for nearly three years for the right copper project with robust economics held by a currently undervalued company. I was an early shareholder of likely candidate Antares Minerals but took profits and exited a few years ago. I had the opportunity once again with Antares in April 2010 but missed timing the market and never covered the company before it was taken out by First Quantum Minerals six months later.

Now I may have found a near-perfect candidate:

The company is [Curis Resources Ltd \(CUV.T\)](#) and its flagship project is the **Florence** deposit located in the heart of copper country 60 miles southeast of Phoenix, Arizona. The name “Curis” is an acronym for Copper (Cu)-Recovery-In-Situ and its focus is near term development of the Florence Copper Project into a world class, low-cost, solution mine producing pure copper cathode. This project was advanced by mining giant BHP with a feasibility study, operating permits, and a successful pilot plant test just as the bottom fell of the copper market in the late 1990s.



Location Map of Arizona Copper Mines and Major Projects

I was introduced to Curis by Brad Hemingson, one of the principals of Leede Financial, a Vancouver-based investment bank and brokerage firm. Brad invited me on behalf of Curis to attend an analyst tour of the Florence project in mid-January. After a scant 15 minutes of website due diligence, I accepted and booked a flight to Phoenix. I will have more on the project and field trip but first let's go thru the company's share structure and people.

Curis Resources Ltd started life in late November of 2010 as PC-1 Capital Corp, a capital pool company trading under the symbol ICC. The Florence project was its qualifying transaction and the company raised \$38 million at \$2.00 in conjunction with the vend-in. On February 3 the company was listed on the Venture Exchange with the symbol CUV and in early May graduated to the Toronto Stock Exchange.

For the first couple of months it was trading in the \$2.50 range, and then took off with company promotion, the aforementioned analyst tour, and a record price for copper. It reached a high of \$4.00 in early February then drifted lower until mid-May when a commodity-wide sell-off hit the market and established a lower base price of about \$2.00. A 30% correction in the price of copper in late September to early October sent the stock tumbling again.

Recent weakness in the mid-90 cent range can be attributed to tax-loss selling as the stock flirts daily with its all-time low of 90 cents. Also there is rumor of recent selling by one of the property vendors:



Curis has 56.2 million shares outstanding and 60.8 million fully diluted, including 4.4 million options and minor broker warrants. The company is part of the Hunter-Dickinson Group (HDI), who along with insiders and management control 23% of the shares. Institutional investors Salman Partners, Wellington West, and Dalman Rose financed the qualifying transaction. Current market capitalization is \$55 million and cash position is about \$6 million.

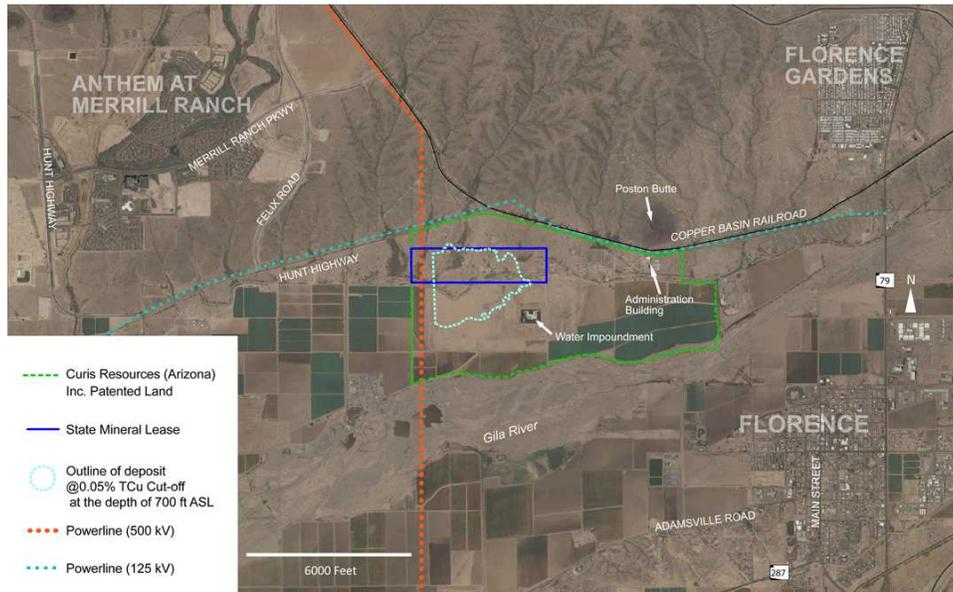
Curis Resources Ltd has assembled top-notch management and technical teams to fast-track the Florence In-Situ-Recovery (ISR) project to production.

Management consists of principals of the Hunter-Dickinson Group including Chairman and engineer Russell Hallbauer, and Directors and geologists Bob Dickinson, Dave Copeland, and Bob Schafer. I have known Bob for about 25 years, and consider him one of the best economic geologists in the business. The CEO and President is mining executive Mike McPhie, who I first met on the field tour and since have gotten to know in subsequent meetings over the past 11 months.

CUV's technical team is equally impressive and includes the following engineers: Vice President of Corporate Development Mel Lawson, metallurgist Glenn Hoffmeyer, and copper ISR experts John Kline and Steve Axen. John Kline was previously the Chief Metallurgist at Florence for BHP Copper and longtime HDI geologist Bob Cluff is the Qualified Person for geological resources. Environmental affairs, permitting, and sustainability are the responsibility of hydrologist Dan Johnson and engineer Loretta Ford. Rustyn Shearer and former Arizona State Senator Rebecca Rios ably handle community relations and government affairs.

Florence Copper is a long-lived porphyry copper project that was first explored by Asarco in 1960 and discovered thru drilling by Conoco Metallics in 1970. Although the ore body does not crop out, leached capping and minor copper silicates occur at nearby Poston Butte. The project was previously known by this name and was Conoco's flagship Arizona project in the early to mid-1970s. By 1976 it was being wound down and worked out of Conoco Metallics' Albuquerque office. During my tenure with that

company, I remember examining Poston Butte core and discussing the deposit with the project geologist and exploration manager.



Florence Copper Project: Land and Infrastructure

In 1972 Conoco developed two shafts and a crosscut, installed grinding, flotation and vat leach pilot plants, and mined a bulk sample for on-site metallurgical testing. However, relatively small size, low-grade, and proximity to farmland irrigated from the Gila River aquifer precluded development of an open-pit mine in the 1970s and 1980s. With rising copper prices in the early to mid-1990s, Magma Copper then BHP advanced the project to a pre-feasibility study and permitted it for ISR production. Low copper price scuttled the project in 2000. Hunter Dickinson acquired the private and state lands in 2009 and 2010, assembled the teams discussed above, financed the project, and took the company public little more than a year ago.

My field visit to the Florence project started on January 12 of this year with a quick flight from Albuquerque to Phoenix and cab to a nearby hotel. I met buddies Brad Hemingson and Bob Schafer (where else but in the bar?) and we proceeded to dinner with a group of 12.

The next morning the large analyst group took a tour bus to Florence where we visited the office and an informative display room explaining the deposit and ISR process to the layman. Then we were introduced to the technical and community relations teams, and given presentations on all aspects of the project by McPhie, Cluff, Copeland, Ford, Lawson, and Shearer. Next we toured the original BHP well field, water impoundment, and pilot plant areas, and a huge Quonset hut core shed dating from Conoco days, now complete with nesting barn owls.



Florence Copper Analyst Tour



Irrigated Farmland Adjacent to BHP ISR Well Field

After a huge and delicious Sonoran-style lunch, we went to the Town of Florence community center for a presentation and discussion by Rusty Shearer and Rebecca Rios on important community outreach and information programs that Curis has implemented.

Following an obligatory drive around the many facilities of Florence's main employer, the State of Arizona prison system and new snowbird condominiums, we returned to the office for a core exam. I was able to examine a typical drill hole penetrating the deposit with HDI geologists Bob Cluff and Bob Schafer including the copper oxide ore horizon, a thin supergene-enriched zone, and T.D. in primary sulfide mineralization.

We piled into the bus again at sunset and proceeded to dinner where our speaker was the Arizona State Land Commissioner who convinced us of the State's support for the project. We drove back to Phoenix late that night and I caught a plane to Albuquerque the following morning.

The Florence project site hosts a shallowly buried porphyry copper deposit with measured and indicated oxide mineral resources of 429 million tons grading 0.33% Cu copper at a 0.05 % cutoff for 2.8 billion pounds of copper. Inferred resources are 93 million tons grading 0.27% Cu. Total resources stand at over 3.3 billion pounds of copper.

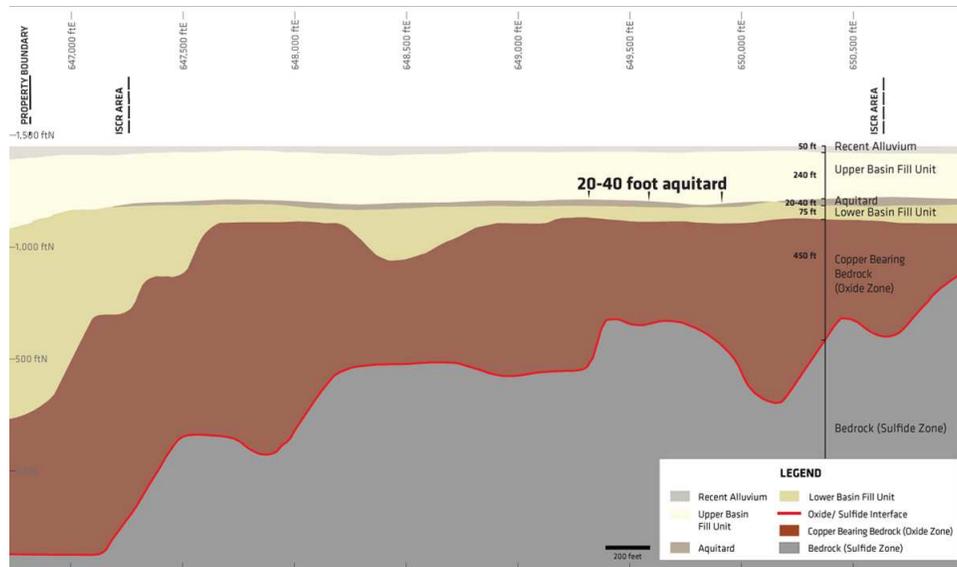
The deposit formed 62 million years ago when numerous dike swarms of Laramide granodiorite porphyry intruded Precambrian quartz monzonite. Hydrothermal solutions associated with dikes altered the country rock and deposited disseminated and veinlet copper-iron and iron sulfide minerals in strongly faulted and fractured host rocks. The deposit has a high chalcopyrite to pyrite ratio accounting for the preservation of copper oxide minerals.

Mid-Tertiary block faulting and erosion oxidized the upper parts of the deposit, converting sulfides into oxide minerals. The deposit was then buried under conglomerate gravels, sandstones, calcareous siltstones, and mudstones. A 20-40 foot thick clay layer 60 to 100 feet above the bedrock is an aquitard, preventing groundwater in water-bearing layers above the deposit from mixing with copper-bearing rock and waters below.

Oxide mineralization consists primarily of blue to green chrysocolla in veins and fracture fillings. Thickness of the oxidized zone ranges from 100 to 1000 feet and averages 400 feet. Transition from oxidized mineralization to sulfide zones is an abrupt contact.



Florence Project Core with Blue and Green Chrysocolla

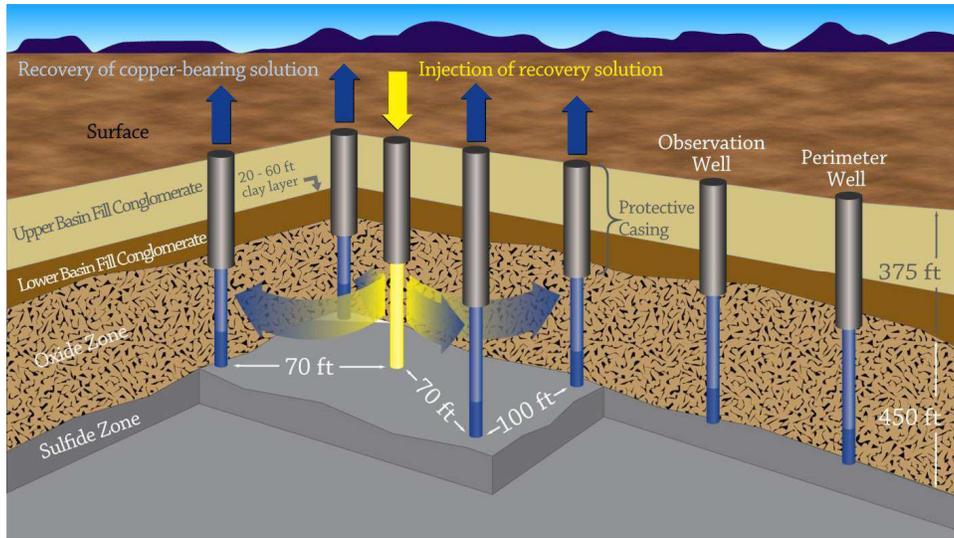


Geological Cross-Section of the Florence Copper Deposit

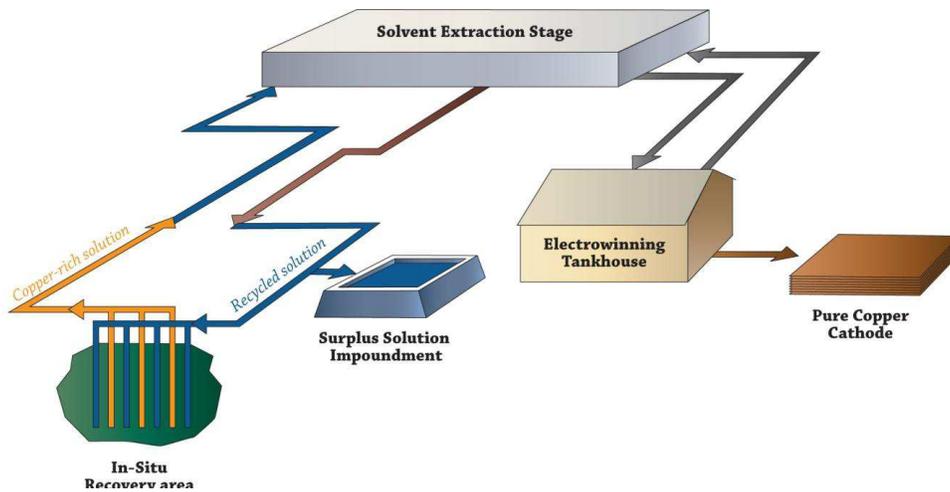
The Florence Copper Project is amenable to in-situ recovery methods due to the shallow, soluble copper oxide mineralization, extensively fractured bedrock, sharp contacts, an overlying impermeable sedimentary rock layer, and groundwater conditions that allow for both copper recovery and aquifer protection.

ISR presents significant benefits over traditional mining practices, including minimal surface disturbance, an enclosed, contained, and recycled solution mining and recovery process, lower capital expenditures, lower operating costs, lower post-closure environmental costs, and broader post-mining land-use options. Following reclamation of the copper-bearing aquifer and removal of surface facilities, the site will be converted to residential development, agricultural cultivation, and/or recreational use.

Although in-situ copper mining has been employed throughout the world for more than 50 years, all previous projects have been in areas of current or past conventional mining. Florence Copper will be the world’s first commercial greenfield ISR operation. The project will produce 99.999% pure copper cathode on-site through a standard solvent extraction/electrowinning (SX/EW) process:



Diagrammatic ISR Well Field



ISR and SX-EW Process

Advancing Florence Copper to commercial production includes installation of an ISR well field, upgrading and expansion of solution storage tanks, addition of more water impoundment facilities, and construction of an SX/EW plant and associated infrastructure.

Current activities include engineering and environmental feasibility studies, full project permitting, operation of an on-site office, and community outreach. Curis Resources anticipates delivering a feasibility study and announcing project financing initiatives by the end of January 2012.

Recently the company awarded a Phase I engineering procurement and construction management contract to M3 Engineering of Tucson. In late Q1 2012, Curis will initiate project development of an operational well field and SX/EW demonstration plant. Initial copper cathode production is on-schedule for Q4 2012 and commercial production is targeted for mid-2014.

A scoping study was published last year by well-respected SRK Consulting of Tucson, Arizona. The results indicate ISR development of the Florence Project offers strongly positive economics.

The base case economic analysis produced an after-tax NPV of US\$360 million at a 7.5% discount rate with an IRR of 30%. Payback will be early in year four of a projected 19 year life-of-mine. Economics were based on a conservative \$2.50/lb long-term copper price, 49% recovery, and a production rate of 76.5 million pounds of copper per year.

Total operating costs including property taxes are estimated at less than 70 cents/lb Cu. Total capital costs are \$682 million, consisting of initial capex of \$238 million and on-going sustaining capital over the mine life of \$444 million. Project economics are very sensitive to copper recovery rates and recent metallurgical work indicates much higher recoveries than the base case scenario of 49% can be achieved.

If SRK's analysis proves accurate, Curis Resources will produce copper well within the lowest quartile of operations worldwide.

Curis Resources Ltd is now at a critical stage of the project with a feasibility study, major permits, and Phase I project financing due within the next couple of months. Personally I have no doubt that the project will be robustly economic and, given the strong institutional support plus the track record of HDI, Curis should be able to arrange attractive project financing via a combination of bank debt and a strategic alliance for off-take of copper.

Florence Copper should be environmentally benign and economically robust; however, it is not without detractors. Recently a nearby land speculator lobbied strongly against the project and the town's volunteer planning and zoning commission failed to approve applications for a land use change. Subsequently, Curis decided to acquire all major State and Federal environmental and operating permits before submitting a new application next year. Local elections in November 2012 will replace the current elderly mayor and retiring commissioners.

That said, Curis enjoys widespread and overwhelming community support in Florence. The company's public relations and government affairs team continues to work hard to educate the local public about the economic benefits of the proposed solution mine and its environmentally sound technology.

The Arizona Governor and State Land Commissioner are both strongly on record supporting the project. With almost half of the recoverable copper located on a State Mineral Lease, the company can install its demonstration well field recovery plant and start commercial production there. However, state land carries a sliding scale royalty payment up to 8% not present on private lands owned by Curis. This royalty is a legacy based on obsolete copper prices from the BHP days and is scheduled for renegotiation in early 2013. Note that all project economic studies have assumed a full royalty payment.

In my opinion, Curis Resources Ltd is one of those fundamentally strong, worn down, and beaten-up companies that I have mentioned again and again for the past month. Markets are queasy and uneasy, speculators are holding the high-risk/high-reward junior resource sector in disdain, liquidity is low, the copper price is volatile and off 25% from its yearly high, and we are in the midst of an especially heavy tax-loss selling season.

With all these factors converging, I think now is the contrarian's time to buy in the current trading range either side of \$1.00. I have been accumulating Curis Resources Ltd for the past couple of weeks at these levels.

It certainly looks like a no-brainer opportunity to me and that is precisely why I am initiating coverage. Pending near term catalysts for the stock include the feasibility study and project development financing.

Please recognize that all mine development projects are inherently high risk. CEO Mike McPhie recently pointed out to me that CUV and previous operators have advanced Florence Copper to the point where technical risk is minimal and execution risk remains. Therefore, we are dependent on the Curis/Hunter Dickinson team to get the project permitted and the capital expenditures financed in a timely manner that will be non-dilutive and beneficial to all shareholders.

Not only do I own Curis stock but it is also a paying sponsor of my website. Therefore, my views on the company are strongly biased since I stand to profit if the share price goes up. In addition, I am not a qualified investment professional and cannot recommend that anyone buy or sell this or any other stock.

But if my Alert perks your interest, I suggest you may want to study the company's website, share structure, financials, people, and flagship project. Also take some time to learn and understand the copper ISR process and then you can decide if Curis Resources Ltd meets your speculating criteria.

It did mine.

Ciao for now,

Mickey Fulp
Mercenary Geologist



Acknowledgement: Erin Ostrom provided her usual fine job of editing.

The [Mercenary Geologist Michael S. "Mickey" Fulp](#) is a Certified Professional Geologist with a B.Sc. Earth Sciences with honor from the University of Tulsa, and M.Sc. Geology from the University of New Mexico. Mickey has over 30 years experience as an exploration geologist searching for economic deposits of base and precious metals, industrial minerals, uranium, coal, oil and gas, and water in North and South America, Europe, and Asia.

Mickey has worked for junior explorers, major mining companies, private companies, and investors as a consulting economic geologist for the past 24 years, specializing in geological mapping, property evaluation, and business development. In addition to Mickey's professional credentials and experience, he is high-altitude proficient, and is bilingual in English and Spanish. From 2003 to 2006, he made four outcrop ore discoveries in Peru, Nevada, Chile, and British Columbia.

Mickey is well-known and highly respected throughout the mining and exploration community due to his ongoing work as an analyst, writer, and speaker.

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