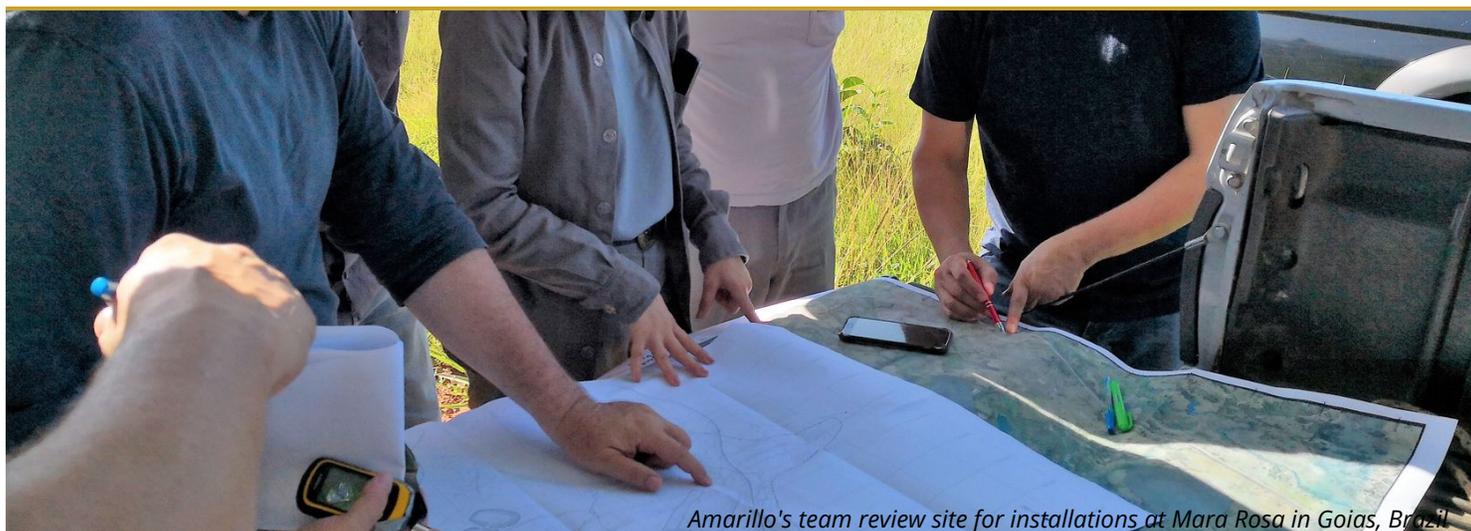


Edition ▼

Amarillo to complete Mara Rosa FS in third quarter

Through the lush green vegetation, remnants of some concentrate structures can be made out - near areas of meadow that are perhaps too flat and surrounded by hillocks - while under the scrub, large blocks seem to be sheltering from the withering heat. The meadows are former tailings storage areas, the hillocks were former heap leach pads and the rocks, oversize ore too big for a crusher, are all indications that there was once a gold mine at Mara Rosa in Goias, Brazil. It is where Amarillo Gold aims to start building a new mine next year.



Amarillo's team review site for installations at Mara Rosa in Goias, Brazil

Gold And Silver > Site-visits With a new management team, new energy and new finance, Amarillo (TSXV:AGC) is forging ahead to take the Mara project towards a production decision, with a feasibility study due later this year, and filing for its installation licence.

Comments

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**Paul Harris In
Mara Rosa,
Goias, Brazil**

Mara Rosa is some five hours north-west of capital Brasilia, a district that hosts other notable producing gold mines such as Yamana Gold's Chapada, AngloGold Ashanti's Crixas and Leagold Mining's Pilar.

Western Mining mined the original Posse pit in 1992-95, producing some 86,000oz from a 600 tonnes-per-day operation with a head grade of 3 grams per tonne, but Posse went out of business as a result of the creation of the Real as Brazil's currency in 1994.

"A premium was paid for gold in Brazil but after the creation of the Real, this disappeared. For a while the Real was stronger than the US dollar, which had a big negative impact on Brazil's gold industry and many mines went out of business," project manager Frank Baker told *Mining Journal*, a metallurgist and process engineer who has decades of experience in Brazil's mining sector.

The project passed through several hands before Amarillo bought it from Metallica Brazil in 2003 for US\$450,000. It began drilling in December 2005 and has since spent about C\$51 million on the project, including some on its second project in southern Brazil, Lavado do Sul, that is in its early stages with a modest resource.

New management

The potential of Mara Rosa to be a mine suffered the fate of many junior explorer's led by geologists: relative obscurity before the investment community due to lack of adequate marketing, positioning and ability to raise money. For Amarillo, this meant it was unable to progress after obtaining the first of three necessary permits to enter production when it received a preliminary licence (LP) in May 2016.

Management changes in 2018 have changed that and set the company on a more positive trajectory in the hands of mine builder Mike Mutchler as CEO.

Mutchler, a mining engineer and fifth generation miner, has a *curriculum vitae* most juniors only dream of adding to their ranks, with proven mine building experience—including in Brazil—as well as time working for majors and a highly regarded engineering consulting firm.

Crucially, Mutchler has recent mine-building experience in Brazil, having built the Maracas Menchen vanadium mine for Largo Resources in Bahia that started production in early 2016. Prior to Largo, he was COO of Rainy River Resources concluding his role with its sale to New Gold in 2013. Further back, he was VP project development for Kinross Gold, mine manager at its Cerro Casale project in Chile and project director for at its Paracatu mine in Brazil.

It was through his more recent role for Whittle Consulting that he became acquainted with Mara Rosa. "We looked at Amarillo as a potential client and as I learned more I found that Mara Rosa is a good, solid orebody that is not

geologically complex and will get bigger, in a company that is significantly undervalued," he said.

What's more, Amarillo needed a CEO and Mutchler climbed on board in early 2018.

Mutchler also has a MBA and that financial literacy helped his first task as CEO: a financial restructure to set Amarillo on a better footing.

Together with executive chairman and self-made man Canadian trucking magnate Rolly Uloth, he restructured the balance sheet with a C\$5.2 million raise in March-April 2018 and the sale of a 1.75% net smelter royalty to Royal Gold in June 2018 for U\$10.8 million. With these funds, the company retired a gold loan in July 2018 to leave the company debt free and now with \$2.2 million in its treasury. Getting rid of the loan removed a considerable encumbrance on the project as it bore interest at 12% per annum and was secured by a 5% NSR on Mara Rosa.

Mutchler hired Whittle to improve project economics and optimise the Mara Rosa pre-feasibility study, which resulted in the September 2018 PFS update. "This improved the net present value (NPV) by 10%, which makes a big difference to project economics," he told *Mining Journal*. In addition to optimising the project, using the Whittle model will save the company the time and money going forward it would otherwise have to spend doing trade-off studies as part of the FS.

If the FS and licensing is successful, it will not be too long before Mutchler's financial abilities are tested again to raise project finance. "We are concentrating on advancing the FS and the LI. Once we are shovel ready, we should get a share price re-rating to something like 40% of the NPV, which will put our market cap at about C\$80 million. At that point, raising \$40 million of equity and \$80 million of debt for construction will be realistic. My challenge for now is completing the FS and getting the LI without too much dilution at this share price," said Mutchler.

The relative obscurity of Amarillo has seen its share price languish in recent years as the market forgot about it. With the company currently trading at a price to net asset value (P/NAV) of 0.1 times, its mineral reserves are valued at \$25/oz compared to an average of \$48 for its Latin American peer group. Amarillo ranks above Belo Sun Mining at \$19/oz and INV Metals at \$12/oz but below GoldQuest at \$26/oz, Condor Gold at \$46/oz, Orla Mining at \$68/oz and Continental Gold at \$143/oz. "There is an opportunity to obtain a multiple increase in the share price by doing the work to make Mara Rosa shovel ready," said Mutchler.



Old ore blocks sitting in the shade at Mara Rosa shows growth potential outside the pit shell in Goias, Brazil

Feasibility and permitting

With a preliminary licence received in May 2016, Amarillo next has to obtain a licence to install (LI) with its application to be based on the detailed engineering it will do concurrently with the feasibility study with the aim of filing in August or September. SRK is working on the FS and LI, and Ausenco the basic engineering. The company believes it will take about six months to obtain the LI although it has budgeted additional time, as ground-breaking for the new mine is scheduled for April 2020. A 15-month build will see first gold pour in 2021.

Amarillo has opted for a contract mining model for Mara Rosa to contain capex, a model which worked successfully for Mutchler when he was at Largo and has reduced in risk as the performance of Brazilian contractors has improved over time. "Capex is important as it is much more difficult for a small junior to get money. Contractors in Brazil have got much better and more competent in recent years," said Baker.

With Mara Rosa located five hours from Brasilia, it sounds remote, but the expansive nature of Brazil means that is deceptive: The location is far from remote and has significant infrastructure that Amarillo will not have to build. The Mara Rosa deposit is 10km from the town after which it was named, meaning Amarillo does not have to invest in a camp as there is sufficient housing stock nearby to accommodate mine workers. The 450MW Serra Mesa hydroelectric operation is in the region and will just require a 138kVa line to be run alongside the existing 69kVa line. The history of mining in the region means Amarillo will have access to an experienced mining labour pool, while its local communities understand the benefit of having a mining operation nearby.

"We have a lot of support. Some 650 people attended our public hearing in 2016 and they are keen to have work opportunities. Chapada is in Alto Horizonte municipality and it receives so much money they don't have to rely on anyone else to fund their schools or health system, so there is a bit of jealousy of that here," said Baker.

But communities can be fickle, especially when it comes to water sources. The current context of Brazil, in which where the population is still reeling after a second upstream tailings dam failure at an iron ore mine operated by Vale that killed hundreds of people, has resulted in an uncertain situation. Indeed, new dam regulations issued in February by the National Mining Association [ANM] are stricter and will create uncertainty until it is clear how they will be interpreted by authorities and courts.

"The ANM dam resolution was very strict and banned the presence of any human activity within the evacuation zone, defined as an area in which people can evacuate themselves to safety under their own steam within 30 minutes of an alarm being sounded of a tailings dam failure. In practical terms, this could be up to 10km from the facility. We would have to buy all the land to ensure no human activity below a dam, which would not be viable," said Baker.

Foreseeing such issues, Amarillo has switched from a tailings dam to filtered tailings, so it doesn't become a permitting issue. "Using filtered tailings is safer and although it is more expensive, but it will be easier to close the mine and you can close as you go. We think opting for filtered tailings will help expedite the approval of our installation license. Our environmental consultant is working with two other companies going the tailings dam route and he doesn't know what the outcome will be. By opting for filtered tailings, we will avoid possible resistance from the regulator and concern from the communities," said Baker.

Similarly, to avoid water becoming an issue in a zone with ranching and agriculture, "we will only pump water from streams during the rainy season. We will develop a water storage facility to fill during the rainy season and will use for process water during the dry season", he added.



Mara Rosa shows growth potential outside the pit shell in Goiás, Brazil

Geological upside

Mara Rosa has in pit gold reserves of 1.1Moz grading 1.42 grams per tonne. The September 2018 PFS detailed a mine to produce an average of 123,000oz/y for eight years at an all-in sustaining cost of \$655/oz, yielding a NPV of \$244 million at a 5% discount rate with an after tax internal rate of return of 51% and 1.0-year payback at \$1,300/oz gold following an initial capital investment of \$123 million.

Investors typically want to see upside potential to enable them to maximise the opportunity and security of their investment, but with money tight, exploration is now taking a back seat at Amarillo while the FS and permitting are completed. Company exploration geologists believe there is still a significant amount of gold yet to find at Mara Rosa, and the possibility of extending its mine life long beyond its initial eight years.

The region has three geological belts with Mara Rosa being in the eastern belt in a magmatic arc of lower Proterozoic age. Gold mineralisation is hosted in hydrothermal alteration in a thrust fault zone extending from surface to at least 400m below surface between a hanging wall of gneiss and an amphibolite footwall. The orebody plunges 45-48% and the gold is associated with sulphides such as pyrite and tellurides.

Exploration has shown the mineralised trend in which Mara Rosa lies continues 3.6km to the north-east and 3.7km to the south-west on Amarillo's concessions, and where geophysical anomalies coincide with geochemical anomalies.

Amarillo has just completed a 15,000m drilling programme aimed at increasing the reserve and resource down dip and along trend, which brings the drilling total to 61,229m by Amarillo, with 59,903m around the Posse pit. Drilling has returned high-grade intercepts with double-digit grams per tonne of gold below the pit and along its extensions, providing company geologists with targets for a future drilling campaign. "There have been several double-digit, high-grade drill intercepts down plunge and this needs to be studied more. We will continue working up the geological information this year to determine future drill targets," exploration geologist, administration manager and 12-year Amarillo veteran Luis Silva told *Mining Journal*.

There are two main areas of exploration interest, according to Silva: to the northeast are what are called the Posse footwall zone and the Posse north extension, with an anomaly longer than the original Posse pit and where step-out drilling reported several multiple-gram hits at relatively shallow depths. To the south-west, grade continues down plunge and out of the pit shell as well as and below the pit shell. "We need to evaluate the continuity and thickness at depth down plunge, where we see grade getting better. The high-grade zone is in the pit but it continues down plunge. We need more holes to confirm the high-grade zone down plunge has continuity up to 350-400m below surface. We have never explored specifically for an underground mine but we have several interceptions below the pit," said Silva.

Results from the recently finished 15,000m of drilling will be included in a mineral resource update due in the coming weeks.

"We will run this bigger resource through the Whittle model and identify a proper mine plan and mining schedule to use for the FS," said Mutchler.



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