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The Women Emerald Miners of Colombia

Dubai-based Fura Gems is hiring dozens of women to help bring De Beers-like discipline to a once violent and wild industry.

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Nubia Galeano slips the short-handled pick into her left rubber boot and turns on her headlamp as she enters a steaming, cramped tunnel, one of thousands that crisscross the vast Coscuez emerald mine. The corridor narrows, and Galeano, already dripping in sweat, is soon crawling on all fours. When she reaches a space so tight her small body barely fits, she pulls out her pick and starts digging. The 45-year-old, single mother of

two fills her sack with up to 40 pounds at once and crawls backward until she can stand back up and retrace her steps to the surface.

Outside, she washes the load in a small stream, indifferent to the swarming bugs and the buzz of dozens of other miners around her. Adept at spotting the tiniest speck of green, Galeano quickly realizes she's come up empty-handed. She dumps the pile and sits down for a quick rest before entering the mine again. In the course of her eight-hour shift, Galeano repeats her ordeal five times.



▲ A mountain village near the spot where Fura Gems plans to begin construction of a modern mine later this year.

This is more or less how the world's biggest, brightest emeralds have been unearthed since even before the arrival of the Spanish *conquistadores*, who seized working mines from indigenous peoples more than 400 years ago. But changes are coming. Fura Gems Inc., based in Dubai and listed on the Toronto Stock Exchange, bought mining rights to the Coscuez deposit in 2017 and is moving forward on construction of new, modern mining facilities. For workers like Galeano, those plans hold out the promise of earning a living wage for the first time and, along with it, company-subsidized health insurance. But only a fraction of independent miners can expect one of these new jobs. Others could be shut out, losing their livelihoods.

Moving the Colombian mining industry into the modern era, though, isn't without drawbacks. The company will have to carve out its operations in a remote and

inhospitable area known for steep mountains and a steamy climate. The region also has a legacy of control by violent clans. For decades, corpses floating on the nearby Minero River were a familiar sight as mob families fought for control and settled scores.

“About 90 percent of the sector is held by private companies, individuals and families,” says Dev Shetty, Chief Executive Officer at Fura Gems. “We want to do things differently.”



▲ Newly hired Fura Gems workers in the operation’s washing room. It will soon be replaced by a larger, modern facility.

Fura Gems is vowing to make a clean break from that past. It’s working to win over nearby villages by offering to hire an unprecedented number of female miners. The company is setting up a gem washing plant run entirely by women, an initiative the company says has never been attempted before. Women workers will wash the rocks and pick out the emeralds using machines maintained by women, overseen by women engineers and supervised by women security guards.

For now, the company has hired 48 female employees -- 17 percent of a 288-strong workforce -- and a dozen work at a small washing room that will be replaced by the larger, more automated plant that’s scheduled to begin operations in May.



▲ Informal miners sift through rocks and sand by a small stream. On a good day they find small specks of emeralds to trade for food at local markets.

The women, wearing bright orange overalls and green helmets, work in eight-hour shifts for a salary of about \$350 per month, well above Colombia's minimum monthly rate of \$260. To Isabel Porras, a 45-year-old mother of six and grandmother of one, landing a spot in the washing plant has been a godsend.

"Before, we risked our lives every day in those tunnels -- we knew them so well we didn't even need the headlamps and the helmets," says Porras, who started mining at 12 to help her single mother raise her eight siblings. "It's tough, and you suffer because you spend month after month digging rocks with no result. You come back home empty-handed, and the kids can't wait. They need to eat."

Decades of informal mining and the lack of investment in exploration and technology have already depleted the most easy-to-get emeralds. Long considered the world's highest-quality because of their brightness, color and purity, Colombia emeralds are now harder and more expensive to find. Production fell to 1.9 million carats in 2018, from a record high of 9.8 million carats in 2004, according to Colombia's National Mining Agency.



▲ Nubia Galeano spent years saving up to pay for her son's university tuition in Bogota. "But things got tough, so I brought him back," she says. She alternates between mining and cutting hair. "I'll never be able to pay his studies just as a hairdresser."



▲ Life during the emerald wars wasn't easy for young girls, says Maria Alvarado, a 43-year-old Fura Gems employee who started working in the tunnels at age 14. Emerald lords used to kidnap any girls they liked, she remembers. "They kept them until they found someone more attractive, then they threw them aside," she says.



▲ Dalia Gonzalez starting working weekends in the mines when she was 10. "First it was me and my six siblings, now there's only three of us left," the 22-year-old says. The others have left Coscuez in search of better opportunities.



▲ “Out there in the tunnels you had to toughen up so men wouldn’t try to cross the line,” says Isabel Porrás. “Men are always saying we’re not able to do things. But we are. We just need to prove it.”



▲ Most women miners in Coscuez have applied for jobs at Fura Gems' washing plant. But so far only 12 have been hired. Marta Melo wasn't one of the lucky ones. She works alongside her friend Nubia Galeano, with whom she splits their meager profits.



▲ “There has never been so much work around here—and God knows we needed it,” says Carmen Delgado, a Fura Gems employee. As an independent miner, she returned home empty-handed most days. But once, as a kid, she found a big emerald, worth around \$9,000. “It was beautiful, but my dad sold it and I never saw it again.”

Shetty, formerly with Gemfields Group Ltd., launched Fura Gems in 2017. He believes only foreign capital and international mining standards can bring the sector back to life.

“It’s no good having good resources if you can’t mine them out,” Shetty says. Colombian mining families and owners of emerald mining licenses “understand that and realize they need to capitalize the business and organize the place -- if not, they’ll be left behind.”

He’s not the only one, of course, to have this thought. Fura Gems will have competition from U.S.-owned Minería Texas Colombia, which operates an emerald mine nearby. And the Colombian government is encouraging more foreign investment.



▲ Livardo Moreno, a gem buyer, inspects the small emeralds turned up by the miners.

Colored gemstones, which include emeralds, rubies and sapphires, make up about \$2.5 billion of the \$20 billion gemstone market, says Kieron Hodgson, executive director of mining research at Panmure Gordon in London. Diamonds represent more than half of the sector -- and there's a good reason for that. De Beers, a unit of Anglo American Plc, forever transformed the sector after it launched a marketing campaign in the 1940s that succeeded in making diamond rings the must-give offering from groom to fiancée.

"We love the De Beers model because years ago they came in and organized the place," Shetty says. "Once they did that, a lot of people understood how to make money out of diamonds."

No single player has ever controlled colored gemstones, which remains mostly in the hands of small private companies and families. Gemfields, the largest listed player by far, controls about 10 percent of the market. Now, Fura Gems is setting up a grading system similar to the one used for diamonds to classify emeralds by color and brightness, and price them accordingly. The company plans to stockpile Colombian gems for the first two years and then sell lots in quarterly auctions.



▲ Crosses near a tunnel used by informal miners that memorializes three workers killed when a portion of the mine collapsed in 2015.

Reliable supply will help stabilize prices, while industrial mining will bring in more buyers, especially those concerned about traceability and the conditions under which the precious stones are mined.

“If a major jeweler was to add an emerald as the middle stone to a bridal collection, they need to guarantee they can have hundreds of identical emeralds to ensure the product line could be a success,” Hodgson says. “Colored gemstone jewelry designers and manufacturers need to have the utmost confidence that mines can fulfill the intended demand for specific qualities of the goods they wish in the same way they have the confidence that De Beers can always deliver the diamonds that they need.”



▲ Fura Gems miners at a morning prayer session following their daily safety briefing.

By midyear, Fura Gems intends to start digging a large tunnel to reach the richest deposits, now far out of reach of everyday miners. The mine has the potential to generate 350,000 to 400,000 carats per year, about a fifth of Colombia's total production currently, the company estimates.

A lot could still go wrong. The company is in talks with the government to renew its mining license, which expires in October 2020. It also needs to keep investors on board as it will need more funds to build the mine, all while keeping local communities' support.

That's not a sure bet. The jobs and relatively high salaries are welcome. But not everyone will benefit equally. The company employs about 300 workers in an area inhabited by 2,000 families, many of whom remain deeply skeptical and suspicious of outsiders. The old methods, moreover, benefit the local economy because artisanal miners sell what they find to locals in exchange for food and services, says Maximiliano Barbosa, a councilman at the nearby village of San Pablo de Borbur and the president of the local independent miners' association Asobarecol.





▲ Women miners hold the rudimentary tools they use to dig rocks from the tunnels.

“We are really worried -- what are we going to live off?” he says. “We also want to be respected, we don’t want a multinational company that’s not Colombian taking away all of our resources and giving us our tunnels back in 20 years, when there’s nothing left.”

Fura Gems has started to restrict artisanal miners’ access to some of the tunnels in Coscuez, stirring worries among locals that the company may close the tunnels

altogether. If that happens, locals will protest and block roads to prevent the company's access to the mine, Barbosa says.



▲ Miner Isabel Porras and her granddaughter.

One way or another, with or without Fura Gems' new jobs, women in Coscuez will find a way to survive, says Porras. She sits on the terrace of her bright green wooden house with her 3-year-old granddaughter on her lap. Colorful Christmas lights hang over a crucifix just above an altar of a saint decorated with yellow plastic flowers and pictures of Porras's children. She serves *tinto*, the sweet coffee popular with Colombians. She has put on makeup and scrubbed the mine's black dust from her hands. Her orange overalls are already washed and hanging out to dry.

"There aren't many opportunities around here, so you need to seize them when they come up," she says. "If the job with the company disappears, I'll just go back to the tunnels. The only alternative I have is to keep fighting."