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Rock Solid, Rock Along

Unique materials and diversity have helped this quarry stay afloat during rough economic seas.

by [Kerry Clines](#), Senior Editor

The east coast of Florida isn't exactly the kind of place someone would expect to find a rock quarry, but that's exactly where you'll find **Rock Solid Rock LLC**. The **quarry** mines a unique material — coquina — in the form of rock, shell, and sand. The operation is located in Titusville, a small coastal city where townspeople can look right across the Indian River at Cape Canaveral. The town's seawall and the edge of the bridge leading to the cape are lined with coquina rock that came from the quarry.

Humble beginnings



Rock Solid Rock opened in October 2002. The owner of the operation, Robi Roberts, is a long-time resident of Titusville who owned both a construction business, which was sold in 2005, and a stormwater utility business, which she still owns, prior to opening the quarry. Roberts bought the mineral rights to a piece of property owned by a friend for a period of 20 years and set up shop.

The operation started out very small — producing 30,000 tons the first year — but by 2006, it was producing 66,000 tons per year.

“For a three-man band, that wasn't bad,” says Nicolle Lochary, facility manager. “We had an operator, a **scalehouse** operator, and me. That was it, till we got this sand job. Now we've got about 10 people. We took a couple of guys from the stormwater end, trained them, and moved them over to the mine. We're shipping out about 10,000 tons a week now.”

The sand job is a beach re-nourishment project coordinated by Brevard County and the Federal Emergency Management Agency (FEMA). Beach sand is being replaced in several areas along the coast where hurricanes have washed it away over the years.

The coquina shell sand works well on the beach because it is a shell material that came from the sea in the first place. But it also addresses one of the major environmental concerns surrounding the beach re-nourishment project — sea turtles. The turtles need to be able to dig through whatever sand is placed on the beach in order to lay their eggs. Coquina sand is loose and doesn't compact easily, making it a good choice.

“There are **quarries** located all up and down the East Coast along the railroad that was built back in the 1800s,” Lochary says, “but we're the only licensed pit left that produces

coquina shell sand. The people placing the sand on the beach didn't know anything about us, though. They learned about us through Mike McGarry of Brevard County Natural Resources."

Simple operation

"This is a simple operation," says Rick Cleveland, production manager, "small, and not much to it. The track hoe is the beginning of the operation for this sand. We dig the sand out of [the pond] and load it in the dump truck. The truck then places it in a stockpile. We stockpile the wet stuff separate from the dry, so it can sit overnight and drain."

The next morning, the material is dry enough to run through a screen to separate the bigger rocks from the sand. "We just have one screen right now," Cleveland says. "We have two grates inside the Powerscreen. The different sizes of rock come off different belts into separate piles." The sand for the beach re-nourishment project is deposited into another pile.

Wheel loaders scoop up each of the piles and move them to the appropriate place in the pit to await loadout. The sand for the beach job is hauled up to the top of a long sand pile and dumped at the very end. From there, the trucks are loaded.

"We load a truck in about a minute and a half," Cleveland says, "so they don't spend much time waiting. Right now, a truck's cycle time — to get loaded, go [to the beach], dump, and get back here — is about 2 hours and 30 minutes. We're having a hard time keeping truckers here because they only get about three loads a day like that. At the next beach site, which is closer, they should be able to get six or seven loads a day. We'll have a million trucks out here then."

"We've been able to get the material almost perfected through the screen machines, so we can pass the sieve test," Lochary says. "We can figure out the consistency without having to mix it with any other material, so we don't have to buy any material to mix with it to get the sand that they want for the beach job."

Staying afloat

The sour economy has had an effect on just about everyone, including Rock Solid Rock. Prior to mining sand for the beach re-nourishment job, the quarry had been mining the highly sought-after coquina shell. This shell, because of its unique colors and texture, is very popular with golf courses across the state. The flat shape of the shell makes it lie flatter on the cart paths, and it drains better than sand in the bunkers. Golf courses, however, are not immune to the effects of the poor economy. Not as many people are playing golf now, so that business has fallen off.

"We were working on a big order to be shipped to the Bahamas for a golf course they were building on the Turks & Caicos Islands," Lochary says. "The company that was building it went belly up when the economy slumped, so that job went south."

Most of the coquina rock has already been mined out of the quarry, which leaves only sand and shell. "We don't have much rock left," Cleveland says. "If I had a mountain of rock out here, I could sell every rock I had, especially with it being the beginning of storm season. There's a 200-foot area we can still mine — I still have rock over there — but we've got to move the overburden. It's so slow right now."

The beach re-nourishment project has picked things back up a bit for the quarry, but the high tides that occur a couple times a year have been a problem. The dump truck drivers

hauling the sand to the beach don't want to waste half a day waiting for the tide to go out. The fewer loads they transport, the less money they make.

Lochary thinks the stimulus bill will have a positive effect on the business. "It may take a while to trickle down to us, though," she adds. "By the time the jobs get designed or the Department of Transportation lets them out to bid, we might not see the work for six to seven months."

Sharing people and equipment with the stormwater utility business has helped both companies stay afloat and meet their payrolls without having to lay off any employees. When business is slow on the utility side, workers and equipment can be shifted to the quarry to help out, as they are now with the beach re-nourishment job. When the utility business picks up, hopefully this year, employees can be shifted back as they are needed. "When the quarry began, it was along the same line as our construction business as far as equipment needs," says Del Kelley, chief financial officer and son of owner Robi Roberts. "It was a simple way to diversify. It didn't require a whole new business plan and personnel and equipment. We were able to share. This economy has certainly made people be creative," he adds, "it's an interesting time."

In the meantime, Roberts and Kelley are taking advantage of the lull to turn over command of the business. Roberts retired and left oversight of the business to her son, and the still waters have allowed him to pursue some of his own interests. "Del's outlook hasn't changed," Lochary says. "He's taking advantage of the freed-up time to do things he wants to do. He knows it won't be like this forever. Eventually, we'll go back to working 60 to 70 hours a week rather than 24."

What is coquina?

Coquina, which means tiny shell, is the native stone of Florida. It was formed a long time ago when shell and sediment settled to the bottom of what was then the sea and became compacted over time. Some of the shell settled and formed rock around palm trees that later died and rotted, leaving large fossilized holes in the rock.

When first mined, the coquina rock is extremely soft, but the longer it is left out in the air to dry, the harder it gets. The density can vary, however, and so can the color — veins can range from tan to light peach to bright orange.

On-site equipment

Case 621 D wheel loader

Powerscreen Turbo Chieftain 1200

Volvo EC700B excavator

Volvo L120E wheel loader

Komatsu WA250 wheel loader