

WESTERN MONTANA In BUSINESS MONTHLY

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Cultured Log Systems — Logs you have to feel to believe

By TYLER CHRISTENSEN



Dick Morgenstern stands in front of his office made of cultured concrete logs. The logs of concrete look like they're made of wood.
Photo by DEAN BAKER/InBusiness

Dick Morgenstern, 60, started Cultured Log Systems after nearly 30 years of work in the precast-concrete business. His company has developed patented technology to build what look like wooden log homes but are in fact log homes made of concrete.

Morgenstern was born and raised in Missoula, where his father owned a ready-mix concrete business until 1975. He took pre-medical and engineering classes at Montana State University in Bozeman and at the University in Montana starting in 1963, but ultimately left with no degree. He joined the Army in 1966 and worked as an X-ray technician before returning to Missoula to work in road construction and excavation.

He ran Missoula Concrete and Construction for 25 years before selling it in 2000; however, he stayed on as general manager until starting Cultured Log Systems last year.

His wife, Marsha, is a recently retired schoolteacher. They have a son and a daughter, both of whom are married and expecting children of their own. They all continue to live in Missoula, and son Jack Morgenstern, is a principal in Cultured Log Systems.

Five keys to success

- Do something you love.

Current Stock Quotes

Market Watch

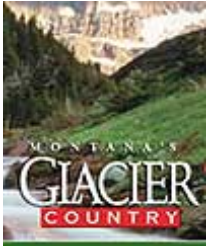


Index	Last Trade	Change
NASDAQ	2121.46	4.62 ▲
SP 500	1215.63	0.34 ▲
Russ 2000	660.20	4.74 ▲
AMEX	1727.12	3.66 ▲
NYSE	7556.45	37.55 ▲
30 YR BOND	45.58	0.49 ▲

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- **Find and hang on to good people.**

- **Pay attention.** The public will tell you what it wants and what it's willing to pay for it.

- **Know at what price point you break even.**

- **Concentrate your efforts** on the areas in which they're best spent — and leave the rest alone.

It was during the wildfires of 2000 that Dick Morgenstern's idea to build log homes out of concrete really took shape. He'd been carrying the basic concept of fire-resistant concrete homes with him for years, but couldn't settle on a form.

Then the answer came to him.

"I was driving up the Bitterroot when I saw one of those hand-hewn log homes with the flat fronting that had been stained the color of concrete," Morgenstern said.

He started experimenting, applied for a patent in 2001 and finally received one this year. Now, his young company has done \$1 million in gross sales in a year, has completed six custom-built homes and has another six in the works, one of which will be featured in the 2006 Parade of Homes in Whitefish.

Morgenstern's Cultured Log Systems supplies the hardware and materials for the concrete logs, and also delivers and wrecks old buildings, but actual production of the logs is contracted to Missoula Concrete Construction - a business Morgenstern owned and operated for 25 years before selling it to Douglas Bauer in 2000. Morgenstern continued to work for the company as general manager for four more years before striking out on his own last year.

It was hard at first to find business partners, but he ultimately found four: his son, Jack Morgenstern, Bauer, Tim Robertson and Stewart Hansen. They raised about \$250,000 to start the company.

They decided to name the company Cultured Log Systems rather than Concrete Log Systems because people automatically think that concrete logs must be cold and dreary. But now, people who see their finished product do a double take when they hear the logs are made of concrete.

"We're thinking this is really going to grow," Morgenstern said.

Architects have been showing an interest, and the federal government is looking into replacing buildings in national parks with fire-resistant concrete log buildings.

"We get calls from all over the world," said Hansen, who is company president.

The idea is catching hold as people realize they can enjoy the rustic look of a log home but save themselves the worry of wildfires. These logs have a minimum three-hour fire rating, Hansen said.

Also, the logs are practically maintenance-free. They won't mold or fall prey to insects and rodents. They come stained with a color the homeowner chooses, and won't need to be restained for at least 20 years. And unlike conventional log homes, they don't need to be sealed every other year.

"It does away with all those issues," Hansen said.

The logs won't twist, settle or shift, which means they're earthquake-resistant, too. Because they're made of concrete, their insulation capability is superior to wooden logs.

And since they're not made of mature trees, they're quickly finding favor with the green-building community.

"And that, by far, is the fastest-growing sector of the building community," Hansen said.

Essentially, the logs are made of two slabs of concrete which sandwich a slab of insulation, forming a log about 6 inches thick. The sandwich is held together by pencil-sized fiberglass spikes, chosen because they don't conduct heat. They're chinked with the same kind of rubber synthetic used in conventional log homes, and reinforcing steel helps hold the structures together.

Though they weigh 100 pounds a linear foot, the logs actually go up in a quarter of the time it takes to put together a conventional log home, Hansen said.

That's because all the pieces are already made to fit before they're transported and erected on site, Morgenstern said. A typical 2,000- to 3,000-square-foot home takes about three days to put up.

"We don't go beyond putting the logs up," Morgenstern said. "The builder takes it from there, but builders are telling us it's easier to work with because the walls are flat on the inside."

The finished cost is comparable to conventional log homes, with prices starting at about \$140 per square foot of living space.

"We've been able to replicate the exact look and feel of wood," Hansen said. "You can get up to 6 inches of this and you can't tell the difference."

Experiments with methods, materials

That part of the manufacturing process took Morgenstern a while to figure out. For years he experimented with different methods and materials before deciding on the current combination.

"It was a comedy of errors," Morgenstern said.

For instance, he had a hard time finding a wax that would release the real wooden logs he uses to make the concrete molds.

"You'd tear the wood apart before you ever got the mold off," he explained.

Eventually he found a liquid wax that would work. He also found a rubber-making kit that would work, but it's pretty expensive stuff. A 10-gallon kit costs about \$400, and it takes 11 kits to make four

28-foot molds. The good news is that the molds can be reused again and again; Morgenstern said he can still use the molds he made four years ago.

Morgenstern's biggest fear, however, was that the logs would look plastic and fake. He experimented for six months but never really felt good about his results until his wife, Marsha Morgenstern, introduced him to faux-painter Pam Schultze of P.S. Design.

"She has a technique that turns concrete into wood. You have to touch it (to know the difference)," Morgenstern said. "When she starts out she might polka-dot the building with this putrid yellow and you're just hoping no one drives by. But when she paints that final layer - oh my, it's good."

Schultze knew how to do wood graining but had never before painted concrete, so she talked with Morgenstern about what kind of materials would work and experimented until she got it right. Now, the three-layer process requires about 100 man-hours to paint an average-size home, she said.

"People really need to just go take a look at it and really see how authentic he's made these logs," Schultze said.

Now, Morgenstern's challenge is in convincing people that the logs are, in fact, made of concrete.