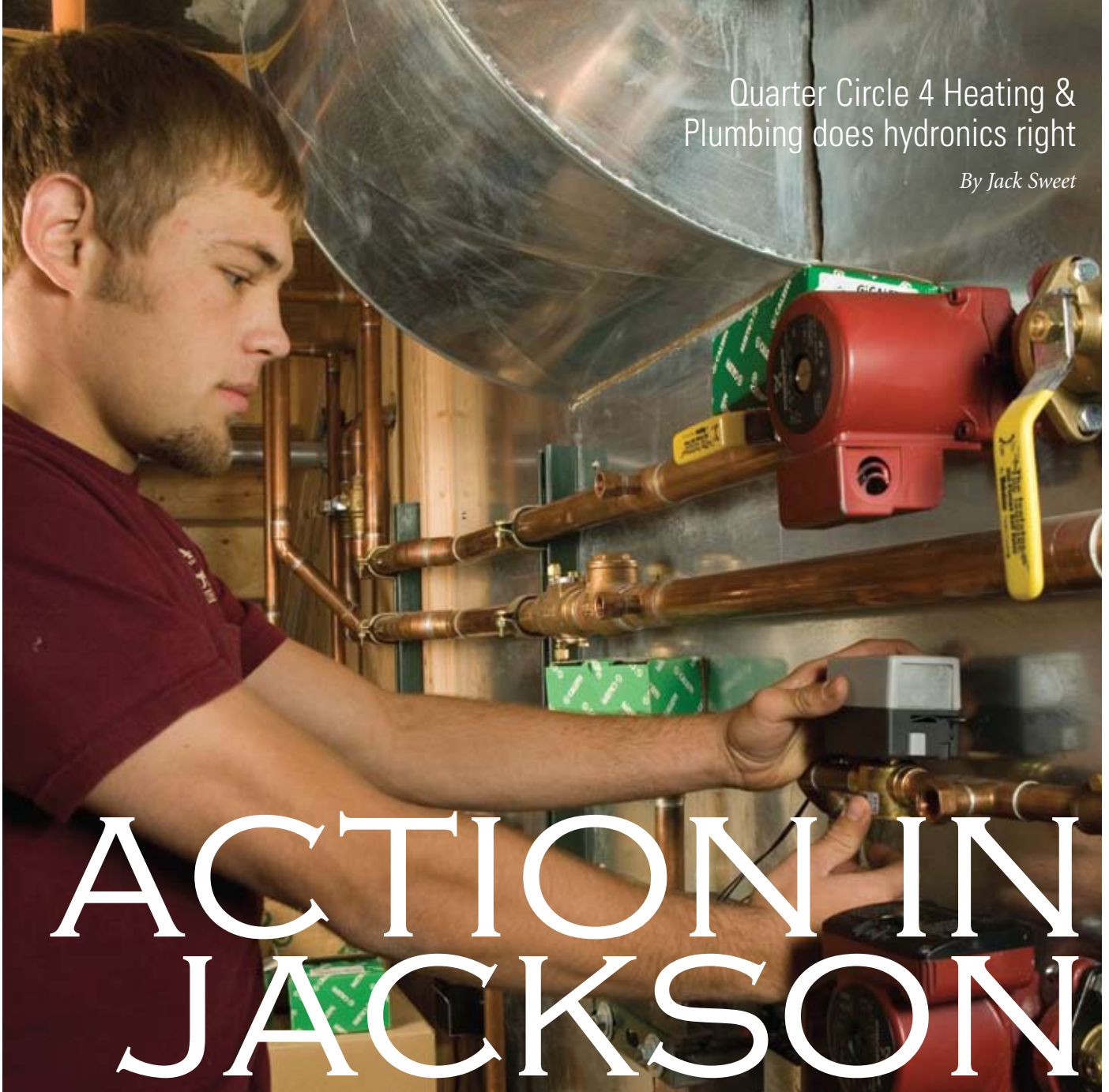


By Jack Sweet



# ACTION IN JACKSON

**T**he days of cattle herds and roundups and hot branding irons isn't completely over. A quick check with various resources will reveal there are more than 28,300 unique, registered designs being scorched into cattle hides in the state of Wyoming, each marking the cattle as the property of one ranch or another.

With branding and its attendant Western flavor so common, it's not unusual to run across Wyoming businesses that have adopted a cattle brand theme as their name or logo. Witness Quarter Circle 4 Heating & Plumbing in Jackson. In business and specializing in high-end, custom radiant and hydronic heating for about four years now, owner Jim Sondgeroth said the name's meaning is pretty simple.

"Here in Wyoming everyone has their own [cattle] brand and there are four people in my family, so I just called it Quarter Circle 4," he said of the design, consisting of the numeral "4" bordered on the top left with, what else? A quarter-circle.

Sondgeroth said almost every home he does is hydronic, even the "smaller" 2,000 or 3,000 square footers. The reason, he said, is that people are after the much-touted hydronic comfort, which they've become familiar with since it's relatively common in the area.

The Jackson area hasn't been affected too much by the current economic downturn brought about the bursting of the housing and credit bubbles. As a result, hydronic installations and new construction have remained steady.

"That hasn't really hit very hard up here. Jackson is its own little island, really. We've got people up in the mountains that are having a little bit of trouble and a few down south," he said. "Most of this area, right here in Jackson and the surrounding areas, is still going pretty well. Most of the people up here know about hydronics. They're actually a pretty smart group of people when it comes to heating systems."

One of the most recent new construction projects taken on by Sondgeroth and the Quarter Circle 4 crew was a 7,500-square-foot custom home in nearby Solitude, Wyo., that required a custom

**Above:** Clay Sondgeroth, Quarter Circle 4 apprentice, installs Caleffi zone valves and Grundfos circulators at a big residential hydronics job in Jackson, Wyo. The firm is one of the leading mechanical contractors in the area. Photo by Steven Jones.



**Bob Ciulla, owner of Ciulla Construction Co., Inc., and Jim Sondgeroth take a break outside to review house plans. Photo by Steven Jones.**

hydronic system as well as a forced air system as backup. The project also consisted of about 2,500 square feet of exterior radiant snowmelt. The home itself was built from a green log kit. Not “green” in the sense of “environmentally friendly.” Rather “green” wood in the sense of uncured, undried logs.

“We had to allow for almost 14 inches of settling in the logs,” Sondgeroth said. “That created some interesting problems for plumbing and heating. There was a center part of the house that had a concrete slab, and the perimeter wall and some of the interior were these 24-inch green logs that were settling all the time, so we had some issues to deal with.”

Fortunately, Sondgeroth was working with a contractor familiar with the characteristics of the unusual building material, so most of the “gotchas” were avoided. But heat loss calculations needed some tweaking as the system was designed.

“Any time you’re working on a log home, you’ll find more heat loss,” Sondgeroth said. “And then, this one had a lot of north-facing glass. There are three staircases in the house and, at the top of the main one you’re looking right out the window to the Grand Tetons. It’s a phenomenal view. There’s all that, plus it’s right on the river; so it’s generally a lot colder there.”

The system itself is straightforward. Sondgeroth said he uses Viessmann boilers on all of his jobs. This one called for a pair of 300,000 BTU Vitola oil-fired boilers: “It reminds me of the old slogan, ‘You won’t be fired for buying IBM,’” Sondgeroth said. All the circulators are from Grundfos: “Some 2699s, some 2664s, some 1542s...” he said. “I can’t remember all the numbers of them. We’re fond of the wet-rotor design three-speed capability and long-term reliability.”

In addition, the 22-zone home was plumbed with Rehau PEX tubing. The whole thing is controlled by a thermostatic control panel from Crestron Electronics in Rockleigh, N.J.

Seeming rather unusual at this time was the homeowners’ choice to use fuel oil to fire the boilers instead of natural gas, propane or electricity. Sondgeroth said, though, he installs quite a few oil-fired systems in the area.

“You can get more BTUs out of oil than any other fossil fuel,” he said. “Maintenance costs more because fuel oil is dirty, but most of the bigger systems we put in are oil. There aren’t a lot of people who like to put oil systems in, but I don’t mind it.”

But isn’t fuel oil getting to be a tad expensive? The price per gallon for home heating oil, according to *homeheatingoilprices.com*, was about \$3.71 in the Jackson area on Apr. 1, 2008 the “end” of the winter heating season. Early estimates from the Energy Information Association indicate the price could start high as \$4.50 a gallon—or higher—this winter.

“It’s going up just like everything else. I don’t order it. I just set it up for my clients,” Sondgeroth said. “I normally put in one or two 1,000-gallon tanks, and then let them deal with the oil company.”

Now, many of the homes Sondgeroth works on are admittedly located in remote areas. Is the rising cost of fuel oil turning customers’ thoughts toward solar radiant systems?

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No. 171 on Reader Action Card

# Radiant



Above: The Quarter Circle 4 crew consists of (L to R) Jim Sondgeroth, owner; Clay Sondgeroth, apprentice; Tim Ryan, journeyman plumber; Clint Nicholes, apprentice; and Justin Sondgeroth, apprentice. Photo by Steven Jones. Left: The home's log and timber-framed construction permit wide, open spaces inside and broad views of the Teton Mountain Range and Snake River, outside. Photo by Steven Jones.

"We're just now getting into that. I'm actually putting a solar system on my house, because it's a little easier sell if I can take people back down and show them I'm doing it," he said. "It's starting to come around a little bit. I've done some already. It's just a matter of getting it to where people are comfortable with the look.

"People are a little leery about the solar panels. And it's not so much the homeowners—it's ordinances in the subdivisions. There are a lot of these people who want to go more 'green,' but they don't want to give up the look they're after, so there's kind of a fine line we're walking right now. The solar end of it is starting to pick up for me. It's starting to move along a little better and it's getting easier to sell it."

Making hydronics an easy sell is elementary. And so are the mechanics of laying out and installing a system. After all, it's no great feat of engineering or design to pump hot water through tubes embedded in concrete or stapled to the underside of a floor. But there's

slightly more to the creation of a properly operating hydronic system than that. There's, like...*math* and stuff. And getting the education and actually knowing what you're doing is the absolute, no-doubt, for-sure key to success in the hydronics game, according to just about everyone, including Sondgeroth.

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—JIM SONDGEROTH**

"Do your homework and study up on it before you really get into it. Some people see the amount of money a hydronic system costs and they think it's quick money—they

can just go in and bang it out," he said, adding that about 90 percent of his service calls involve fixing things people have installed wrong.

"I go to two schools every year to stay up on this, and there are guys who think they need to get into the hydronic end of it and they don't really know what they're doing. They don't know about heat loss; they just don't have a clue," he said. "Up here, we typically go to minus 30 degrees Fahrenheit with our design temperatures. A lot of these guys don't understand that or at a higher elevation you have BTU loss just because of the elevation. They don't figure that in.

"A lot of guys will put in boilers that are undersized and homeowners complain they use too much fuel. On the other hand, I have homeowners burning 3,000 gallons of fuel a month and they don't care. But the number one thing is education. Be educated before you do it—getting people to understand that is the hard part." ■