

## 'Underground Storage Tank' has whole new meaning at Sand Hills

MULLEN, Neb. — "You could drop this thing from a 747 and it wouldn't break," says Dick Youngscap of the heart of his irrigation system at Sand Hills Golf Club here.

An architect by trade and golfer by avocation, Youngscap is also a golf course owner, twice over — first with the Pete Dye-designed Firethorn Golf Course in Lincoln and now with the much-ballyhoed Sand Hills, designed by Bill Coore and Ben Crenshaw. But while golfers are

ooh-ing and aah-ing at the twists and rolls of the course when it opens this spring, they won't even notice its life's blood — the underground irrigation system centered around two 10,000-gallon railroad tank cars.

It's a hydropneumatic system. The tank cars are set in the ground, level, and connected to the water main from the water source — drilled wells. When the pumps are turned on, the air is compressed in the tanks.

The beauty is, you don't have

to turn on the system at low voltage and work it up, Youngscap said. "The shock is absorbed by the air cushion in the tank cars. Each car has 40 percent of its volume in air cushion."

This, he said, is the cheap way to prevent the water "hammer" that is so damaging to pipes and valves and which led to the invention of Variable Frequency Drive (VFD) pump systems.

"The key is its simplicity," said Youngscap, who designed the system. "Most systems have

valves, etc., etc. There is a lot of room for problems. I simply have an air cushion.

"If you bought this, it would cost you more than a pump station. So the key is getting the tank car. I got them for \$2,000 apiece.

"They're three-quarter-inch carbon steel and wouldn't break if you dropped them from a [Boeing] 747."

Youngscap said it cost \$3,000 to \$4,000 for a welder and to sandblast and clean out the tank

cars and connect an irrigation pipe to them.

Since the system gets waterlogged once in awhile, a compressor is necessary.

"Anyone can do it," he said. "A tank car is the last thing a scrap metal dealer wants to fool with — it's so tough."

Superintendent Keith Nordick, former first assistant under Bill Shrum at Brook Hollow in Dallas, said the Sand Hills system "is great. I've had no trouble at all."

Nordick, who came to the facility in March 1994, said, "The only thing that needs attention is to make sure the tanks don't get waterlogged. If they do, you lose your cushion."

But that check is only occasional and involves merely opening valves on the tank.

Scott Wilke, superintendent at Firethorn since it was built 10 years ago, is also happy with his boxcar system.

"We pump about 60 million gallons in a dry year and it works fine," Wilke said. "The hammering effect by the irrigation pump is eliminated. And we put all our motors about 8 feet underground, so we don't have to worry about it freezing in the winter."

Firethorn's underground system also includes a centrifugal pump in the pumphouse that brings water out of a nearby lake, and a compressor to keep the air at a proper pressure.

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## Golf-housing plan proposed by family in Montana town

TOWNSEND, Mont. — About 300 acres of pasture land near Warm Springs Creek may soon be transformed into an 18-hole golf course.

Bob Goggins and his father-in-law, Bill Higgins, want to develop the land, which is off Highway 12 just west of Townsend, into an 18-hole course surrounded by as many as 50 homesites.

Goggins says he hopes to begin selling house lots this spring with work beginning on the first nine holes of the golf course by this summer. An architect has been hired to design the golf course but the project is subject to regulatory agencies.

Goggins and Higgins have been planning the development for about a year and hope to have the course ready for play by fall 1996. The front nine holes would be behind the existing Bedford Inn Bed and Breakfast. The back nine would reach almost to the Springville Estates subdivision.

The city of Townsend already owns one golf course, the Old Baldy G.C.