

>> *Alternative energy*

Heating and cooling from the ground up

For a warm store and chilly 'beer cave,' Apple Valley taps the earth's energy

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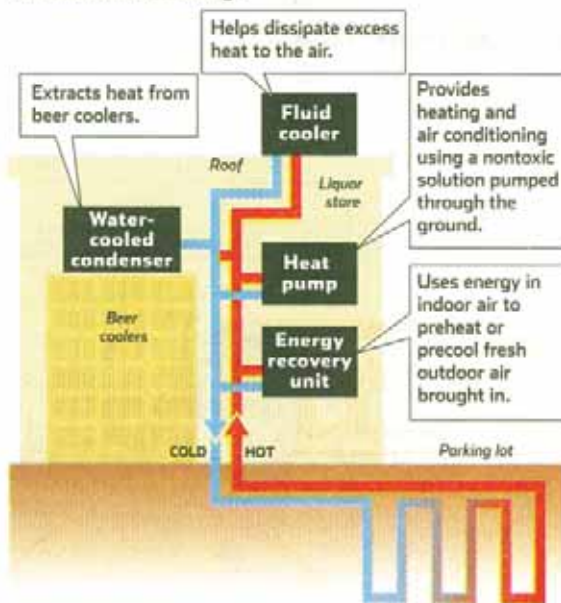
When Apple Valley's new municipal liquor store is completed this fall, it will have aisles for wine and liquor and two beer coolers — one for six-packs and a walk-in "beer cave" to load up on cases.

To keep all those cold ones cold, the store's parking lot is being crisscrossed deep underground with a geothermal heating and cooling system that uses the earth itself to absorb the heat from the coolers.

In the winter, that same system also will retrieve heat from the ground and from the coolers to keep the store toasty warm.

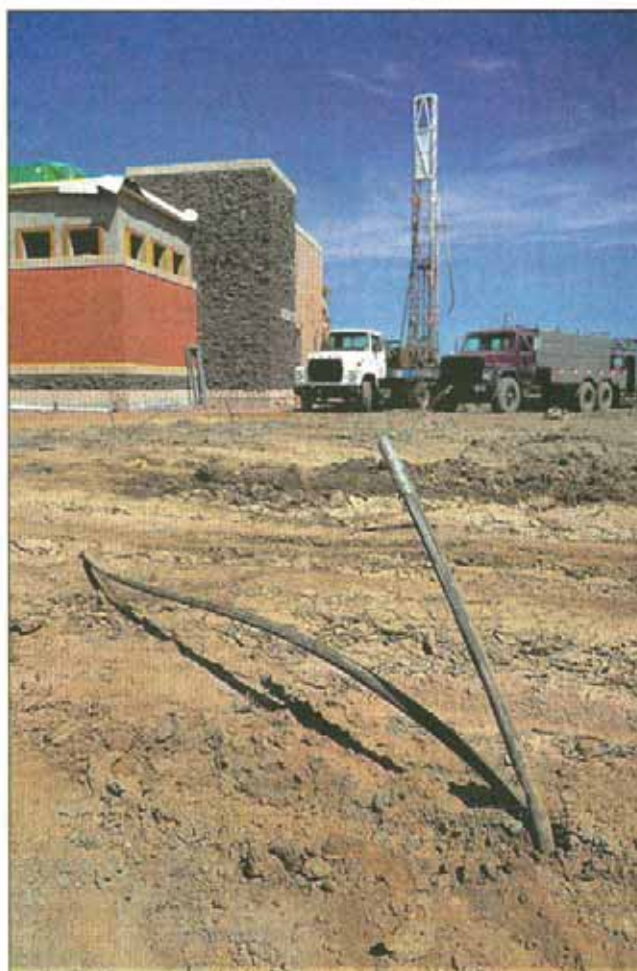
How geothermal heating and cooling works

Geothermal systems use earth's temperature to dissipate cooling and heat from the building.



Source: CNH Architects, Apple Valley

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Geothermal pipes await connection Wednesday at the site of the new Apple Valley municipal liquor store. The system will use electricity to run its heat pumps but will produce more energy than it consumes.

"We'll have the warmth that leaves the building in the summer to heat the building in the winter, which I think is neat," said Scott Swanson, director of Apple Valley's three liquor stores, including the one under construction off Pilot Knob Road at 157th Street.

Geothermal heating is an old concept, but it's getting a new look for commercial and residential build-

ings alike as energy prices rise. The concept takes advantage of the constant temperatures deep below the frost line, where it is always about 50 degrees, summer or winter, and uses this as a free, renewable energy source to save money.

The 16,000-square-foot Apple Valley store will save money right

GEOTHERMAL STORE, 2C >



Wayne Hilbert owns Apple-Valley-based CNH Architects, which designed the store. He credits rising energy prices with making geothermal systems more popular.

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