

Grouting Well Ground Loops - Notes

If the installed Geothermal Ground Loop uses two 400-foot-deep boreholes. These 6" drilled boreholes contain the ground loop piping built with 1.25" HDPE pipe. Per state code, the boreholes are filled with thermally enhanced bentonite. This is a mixture of bentonite and sand that preserves the low permeability of the bentonite but enhances its thermal conductivity.

Reference: Successful Geothermal Grouting:

<http://info.ngwa.org/GWOL/pdf/100384208.pdf>

Water Well Journal, Feb. 2010

The overall thermal conductivity from the water inside the HDPE pipe to the earth, rock, and water surrounding the borehole is the mechanism used by the heat pumps to either extract heat from the earth or return heat to the earth.

<https://www.geoexchange.org/geothermal-101/>