

Intro - maybe talk about while on bald spot, if it's warm enough

Carleton is the first college in Minnesota that is installing a large scale system of geothermal wells to completely replace the use of steam when providing heating and cooling. The geothermal system is projected to provide 70% of our annual energy need for heating and cooling. The geothermal wells are part of a greater utility master plan to be Carbon free by 2050, a catchphrase that you'll see a lot around campus. Overall, the project is using 320,000 feet (or 60 miles) of piping. In addition, many science classes have been able to do projects that relate to the project, to teach an applied example of the science that they're learning right on this campus.

The well fields work by using the earth as a thermal battery.

You can also point out that Bell Field is already done and nobody can tell the difference, so it won't ruin any of the green spaces.

Bald Spot

Vertical wells will be drilled (or were drilled) during the Summer of 2018 and will hopefully be completed by Spring 2019. Unfortunately, this means that there will be no ice rink during this winter, but the project will be completed by 2019, and the ice rink will be back with added benefit of being a part of a more environmentally-friendly campus! There will be 133 bores.

Mini Bald Spot

Drilling on the mini bald spot began in the Summer of 2017. They promised to be done by the beginning of fall term, but it ended up taking a little longer. They were very courteous about the delay, providing snacks and earplugs for surrounding dorms every "Well Field Wednesday." They also allowed nearby geology classes to look through the soil horizons underneath the mini bald spot. The mini bald spot also uses vertical bores. There are 77 bores. Each vertical well (in the mini bald spot and regular bald spot) is 520 feet deep, the height of 3 Carleton smoke stacks.

Bell Field

Bell field, unlike the bald spot and mini bald spot, uses horizontal wells. This is both because it is lower, and thus closer to the water table, as well as due to the different bedrock formations underneath the surface. The water pressure would've been so high at the depth of the potential vertical wells that there would have been geysers shooting up all over the field, while the bedrock formations made it such that horizontal wells were more stable and realistic. Drilling of the 95 bores on Bell Field both began and ended in the Summer of 2017 so that it didn't affect the soccer season.

If they have more questions, there will be a fact sheet back at admissions, or you can tell them to go to <https://apps.carleton.edu/geothermal/>

QR Code for the Carleton Geothermal Home page:

