## How to Prevent Your Artesian Well From Freezing

## **BEFORE** DRAINING

## **AFTER** DRAINING

An artesian well is a well where the **static water level** is above the **water table level** due to the pressure of the groundwater in the aquifer. In some cases the water level is above the ground level making the well a "flowing" artesian well. In both cases, the water level is generally above the **frost line** which can allow freezing to occur in certain climates.

There are two issues that must be addressed with an artesian well: water needs to be pumped to the surface and need to prevent the well and pump system from freezing.

Bison Pumps has the perfect solution for both of these issues. Our Bison Pump Deep Well Pump is a highly durable stainless steel pump that is designed to bring the water to the surface when the static water level is below ground level as well as handle the high water pressure within an artesian well.

To address the freezing issue, the static water level needs to be lowered below the frost line. This is accomplished by installing a **pitless adapter** just below the frost line. A **drain pipe** is then connected to the exterior of the pitless adapter that runs out and away from the well. When the pump is not in use, water drains from the pump head through a 1/8" diameter **weep hole** drilled into the top section of pipe and back into the well. This water then drains out through the pitless adapter and drain pipe.

Drain Away

Drain Pipe

**Pitless Adapter** 

Well Casing

Ground Level

**Frost Line** 

Weep Hole

**Static Water Level** 

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Ground Level

**Frost Line** 

**Static Water Level** 

Water Table Level