

Driving a well:

I am afraid I must say that I am not really impressed by the article. The process would work as explained, but some of the steps are pretty confusing. For instance, putting a sanitary seal on to prevent contamination of the aquifer... Where? I do not know of any sanitary seal that will seal around a pipe and seal against dirt.

A sanitary seal as I know them are what are used at the top of a well that seals the drop pipe(s) to the well casing so nothing can get down the well and contaminate it. To protect the aquifer, a different method is called for. When we were putting in driven wells, and jetting in plastic wells in southeast Missouri we were not required to do this.

However, we did do it in several cases because we thought the risk of contamination was high enough to justify it. What we did was dig a hole around the pipe to about three feet deep after installing the point and pipe, making the well, checking flow, and capping the well. The hole was large enough to allow putting a piece of pipe larger than the well pipe, and long enough to go into the hole, be pressed down into the earth solidly, extend six inches or more above the ground, and leave at least three to four inches of space all around the larger pipe.

Keeping the larger pipe centered around the well, we poured prepared QuikCrete around the larger pipe to fill the hole to the surface of the ground, plus just a bit more so we could do a taper on the concrete to help shed water away from the larger pipe.

Then, either a commercial seal was installed, or a homemade version was used. This kept surface water from working down the well pipe.

There will most likely be a local code with pretty specific requirements for preventing aquifer contamination when installing a well. If there are not any, or it is a PAW (Post Apocalyptic World) situation, then you might get by without the seal. However, for your own, and everyone else's safety, I would install one as I described at the very least.

Here is the method my father and I used way back when:

My thoughts on driving steel well points:

I highly recommend an internal stainless screen with half-moon slots cut in the outer casing such as this one:

https://www.bakerwatersystems.com/products/water-well-products/driven_well_equipment/well_points/well-point

The internal screen prevents the smearing of clays that can reduce the effective draw area of the screen. This can be a real problem on external screen drive points.

Plus, the screen is protected and will not be ripped or punctured by a rock or other item in the soil that might contact the screen as it goes down.

In addition, there is no huge point on the end of the screen, as is usually found on outside the pipe screen drive points. You only have to drive the size of the pipe and coupling. The point can be turned to clear the slots when in the aquifer without stripping off the screen. The screen won't peel if sliding along a pebble or rock.

I also recommend using heavy duty drive couplings as opposed to basic pipe couplings. They take the stress much better, spreading it over more threads than the short couplings and cover all the threaded area, reducing corrosion long term.

https://www.bakerwatersystems.com/products/water-well-products/driven_well_equipment/well_points/shallow-well-drive-coupling-imported

We used this type of screen when they first came out and had great success with them. But we learned to jet plastic wells in and pretty much quit using steel drive points due to the ease of jetting and the much cheaper price.

If you use the above type point, keep tightening it a half turn every so often, make a full revolution when you're in the aquifer. Before you try to pump a single drop of water out of the pipe, pump at least a few gallons water down the pipe to flush as much stuff away from the screen as possible, including any fine sand

that might be in with the coarser sand. This will let the coarsest sand to settle back against the screen and improve water flow.

And, rather than a regular galvanized pipe cap for outside the pipe drivers, a drive cap will last longer, and since it is vented, will make driving the well at least a bit easier.

https://www.bakerwatersystems.com/products/water-well-products/driven_well_equipment/well_points/drive-cap

Oh. Find some brawny friends, promise them their choice of adult beverage and let them help drive the point. Contrary to popular opinion, the driving gets a lot harder once you hit a sandy aquifer. They are hard to drive in clay, yes. But they will slide through clay. If it is good sand, with lots of water flow capability, the sand will tend to grab the metal just like course sandpaper.

We built a mechanical driver system after the first three or four 2" well points we drove by hand. Less than thirty feet, but man, it nearly killed both my father and myself. With the mechanical driver, my dad could sit in a folding chair, work a lever and raise and then drop a 180-pound weight time after time, pausing and holding the weight at the top for me to tighten the pipe every so often

Just my opinion.

With the gas engine (or electric motor) running, and the drive belt loose enough to slip, when the idler wheel arm is pushed forward it puts enough tension on the drive belt for it to turn the large pulley and cable drum to lift the drive weight. When the weight is lifted to the point just before the guide comes out of the driven pipe the idler wheel arm is pulled back and the weight will drop. Enough tension should be immediately applied to the drive belt to keep the cable from running off the drum. It takes practice.

When the pipe is driven to a foot or so above the ground the weight is lifted and a safety bar is put in place and the weight lowered onto it so the next piece of pipe can be added. The weight is lifted, the safety bar removed and the weight is guided into the pipe as it is lowered gently. Again, more practice with the idler arm to gain the control needed to let the belt slip enough to move the weight slowly.

