Build Modified Quebec Style Bread Oven

Thought this project might be of interest...

My youngest daughter and I along with the help of my oldest son recently built a Quebec style bread oven with a few modifications in materials.

The Quebec bread ovens date back to the 18th and 19th centuries and were made from materials found around the homesteads at the time. The foundations were usually made of stone, the frame of alder branches and the oven was made from local clay mixed with straw. A shelter was usually built over the oven to protect it from the elements.

Our oven is somewhat experimental because we have modified the materials a bit. Here's what we did...

We built the foundation out of used railroad ties that we got free from the local railroad yard. Overall dimensions are 48"W x 48"L x 30"H.
We built a frame over the foundation and poured concrete for the oven base. It's 5-1/2” thick.

We first positioned the oven doors which we salvaged from an old woodstove. For the oven floor we laid out soapstone we got free from a local woodstove manufacturer's throw out pile -- we hit a good day. For the frame that will support the oven walls we ripped an 8 foot 2” x 4” into 1/8” thick strips. We added some branches for extra support and cloth on the top to keep sagging through the opennings to a minimum. The frame will be burned out later.
For the oven walls, instead of clay, we used adobe (4 parts Portland Cement, 2 parts Fire Clay, 2 parts wood chips, 1 part sand). We add water to this mixture until it is about as firm as workable clay. We built it up in layers over about week. With clay you have to do it all in one session.

This is the finished oven before burning out the interior frame.
When we burned out the frame a few cracks appeared due to the heat shock. This was expected and repaired. We then cleaned out the oven to make it ready for first bread baking.

We did our first test run of our oven today and here's what we got...

First we built two fires to get even heat throughout oven. And then we pushed the coals to the back and sides. We did this to make sure we maintained good heat for our test run. We got the oven up to about 800º. We maxed out our oven thermometer!

Then we mopped the baking area carefully. This helped bring the oven down to good baking temperature -- about 400º (according to my daughter, she's the bread baking expert in our house). She prepared 4 small loaves of a sourdough recipe she likes. We kept the loaves small for the test, because we didn't know how much time we had to bake. Smaller loaves bake faster. We put them in for 20-30 minutes.
We closed the doors and snugged them up with a piece of wood. We checked it every 10 minutes or so to make sure they were not burning and to let the coals get some air which seemed to keep them nice and hot.

My daughter checked them by tapping the bottom of the loaf. She says you should get a nice hollow sounding thump if it’s done. This one was just right!
By the time we took this photo we had eaten most of the first loaf. Hot, oven fresh with some real creamy butter -- good eatin! 🍩
We plan on sharing the other three loaves with friends and family tonight!

Our next baking day will probably be a full day so we can make many loaves with the same burn -- maybe a couple dozen loaves and some pizza!