

by Ron Hood  
Illustrations by Karen Hood

# THE Firebed<sup>®</sup>

*“I burned my buns!”*

*“Huh??” I mumbled intelligently as I tried to clear my sleep-clouded mind.*

*“Yeah...,” he said, “Look here, I’ve got plastic melted on my pants, and I burned my rear.”*

*“You didn’t use enough dirt,” I said, as I noticed that it was really cold out there. “Out there” was the air two feet from the rock overhang I was calling home.*

I looked at my survival student with the most severe look I could muster under the conditions (wrapped in canvas and covered with a foot thick layer of pine needles), and asked him if he had followed the Tooferate rule. “Uhhh, I forgot it,” he said. I groaned and said, “Learn it.” He left, but I knew that he would learn the rule from a well-rested student before the next night began. The rule is important when you want to use a firebed.

What is the Tooferate rule? What’s a firebed? Well...



The firebed is a basic survival technique used by many cultures during periods of cold weather when adequate insulation isn’t readily available. It remains one of the best ways to stay warm in the coldest weather. It is essentially nothing more than an area of ground that has been heated by a fire and then used as a bed. How you heat that area is the topic of this little bundle of words.

## **Building the Firebed**

Probably the easiest way to make a firebed is to build a long fire on a flat piece of ground, burn it as a cooking/heating fire for a couple of hours and then just kick the coals into a nearby hole.

While the coals are getting used to their new home, you take dirt from the surrounding area and cover the old fire site with about four inches of dirt. When the area is covered (and hopefully flat), you lay down a piece of canvas or a mat and plop down for a snooze on the soon-to-be-warm dirt pile.

While this method is expedient, it has a certain lack of class. It is also difficult to control the intensity and duration of the heat being released into the pile of dirt you call a bed. Since you are laying on a pile of dirt, gravity and your inevitable night movements will tend to metamorphose your rear into a digging engine which will soon find itself adjacent to some very warm ground. Time to get up!

I prefer the following technique and have used it hundreds of times during field trips with my survival students. Find a suitable site, one free of overhanging fuel, nearby flammable clutter, wet ground and major root systems. Dig a hole, and build a fire in the hole. Burn the fire for a certain amount of time. Cover the fire pit with the right amount of dirt, and the dirt with debris like pine needles, leaves, etc. Cover the debris with canvas, plastic (tarp, trashbags, etc.), leather or just your tired body and snooze. Turn over whenever the top gets too cold or the bottom gets too warm. Now the details.

### The Tooferate Rule

Actually the Tooferate rule is just numbers, Two-Four-Eight. They stand for the following essential bits of information:

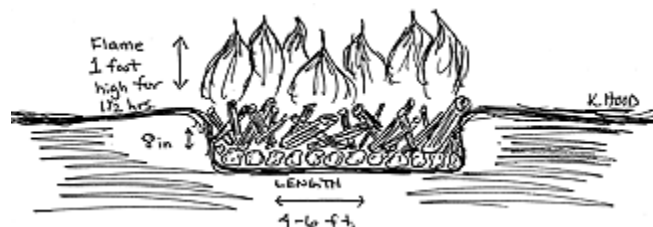
...The fire burns for **TWO** hours.

...You put **FOUR** inches of dirt on top of the coals when the burn is finished.

...The original hole was **EIGHT** inches deep.

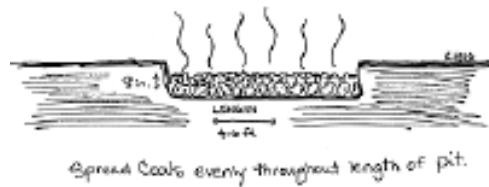
...That's it folks.

...“Whoa there Fella! How **LONG** is that hole? How **WIDE** is that hole?”

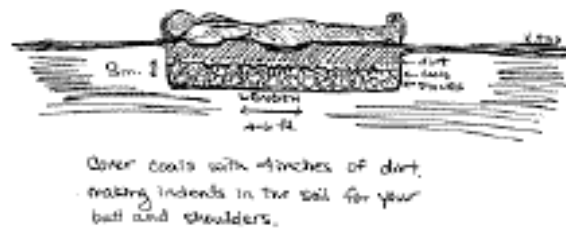


It does not really matter. You can treat the hole-digging like wood-chopping, it warms you when you dig it, it warms you when you burn in it and it warms you when you sleep on it. I don't like to get too warm digging, or gathering wood; it's a waste of precious physical energy. The bigger the hole, the more wood and energy you need to use. My beds tend to come out at about one foot wide, six feet long and eight inches deep. The fire will heat the earth out from the edge of the pit

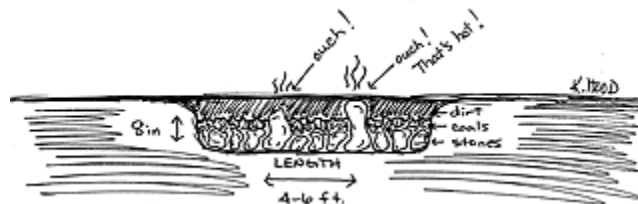
to a distance of about 18 inches from either side. That should accommodate even the most profound body or restless sleeper.



Once the hole is dug, line the inside with fist-sized rocks. These stones aren't there so much for holding heat as they are for allowing air to get to the fire for a hotter burn. Do not tile the bottom. Place them about one inch apart. The tops of all of the rocks should be at about the same height inside the hole. **CAUTION, DO NOT USE STREAM STONES!** Avoid any rock that may explode when heated. Stones taken from a stream bed may be soaked with water. When the water heats up and becomes steam, you could be laying on blasting stones. These can cause injury or scatter your fire to nearby flammable material. Rocks taken from the surface of the ground are probably okay even if the outside is wet.



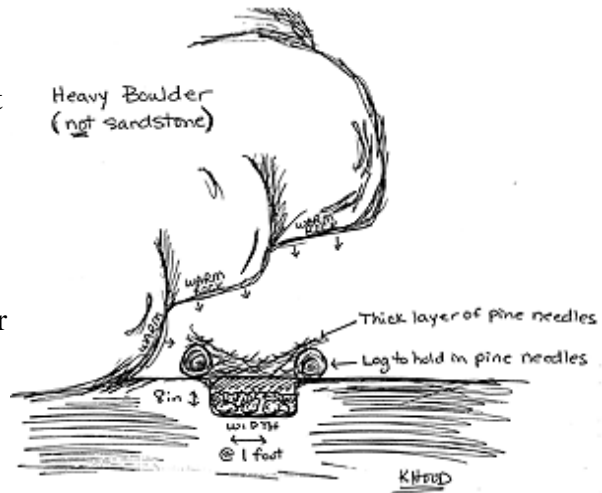
Once the hole has been lined with stones, start your fire. Burn the fire hot and spread the coals out evenly across the bottom of the pit. It is important that the coals be spread as the fire burns or you will have HOT spots! The fire should burn long not high. You aren't trying to signal Mars so the flames should only be a foot or so high. Burn with flames for about an hour and a half, then let the fire die down. Keep smashing the coals with a walking stick or fire prod to make certain that the pit is covered evenly. If the fire burns for more than two hours, no problem. There's no advantage but no problem either. After two hours or so has passed, cover the coals with dirt. You **DO NOT** need to remove the coals. Once the pit is covered, there is almost no visible sign that you had a firebed.



If it is a nighttime, I often build a small fire pit off to one side, a safe distance away, and start a fire to illuminate the area for the completion of the construction process. Once the dirt is in place, stamp the ground down. This compresses the earth and helps you to find spots where there isn't enough dirt covering the coals. A little hint: to dimension your firebed, measure your hand

span, tip of thumb to tip of little finger—that is about the depth of the hole you dig. To check the depth of the dirt, measure the length of your index finger. I push my index finger into the dirt over the coals. If I start to get burned, the dirt is too thin, and I add more dirt. After compressing the dirt and checking the depth, check the area for loose coals that may ignite the material you will be using as a cushion.

Now you wait. If heat comes out of the ground after 30 minutes— you need more dirt. If the heat starts out after about 1 hour, you will be just about right. After the bed is ready, you can cover it with your cushion material. I prefer dead pine needles because they smell great as they soak up the moisture being kicked loose from the soil. Sometimes, if I have been out for a few weeks, I add sage leaves to the padding. This helps to cover the sublime odor my body exudes after long-term survival living. Remember too, the ground may give up a lot of moisture. If the ground is wet you should cover the bed with a water proof material, or let the moisture bake out. If you do not, you may have a bad case of “Dish Pan Body.”



The bed will release its heat slowly over many hours. If you plan to camp in the same spot the next night, you can just dig up the pit, refire the coals for an hour or so, cover up and snooze again. Without refiring, the bed **MAY** last two nights, but don't count on a comfortable second night.

Just a thought. Sometimes I will wrap meat (marmot, quail, etc.) in leaves and canvas and bury it in the dirt at the foot of the bed. When I get up, I have a hot cooked meal ready to go. If you try this trick, remember to put the food at the **FOOT** of your bed. The odor may attract some toothy critter and it is much better to have it rooting around your feet than your head!

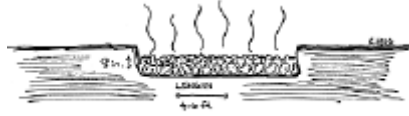


When you build your firebed, try to build it in an area away from rocks that you may scar with the flames and smoke. Naturally you want to do as little damage as possible with your experimentation. If you need to build the bed for a real survival situation, things change.

In a survival situation, build the bed under an overhanging rock, the rock above your head will absorb heat as well as the ground below. This will result in your sleeping between two heat sources. It is a little like a low grade oven. I have used firebeds in -10° F temperatures with only a piece of canvas as a cover. The sleeping area hovers around 75°F!

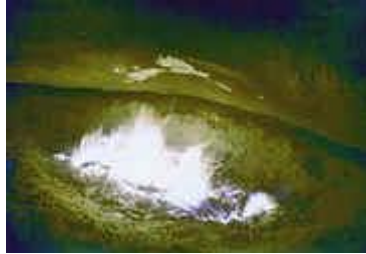
**A few pointers with regard to the firebed and overhead rocks:** Check the overhead rock to be certain that it is not just a projection of stone, like a finger, that might break off onto you. The

heat from the firebed can cause the rock to fracture and fall; a crushing end for an otherwise good survival story! Likewise, do not set your firebed under sedimentary rock like sandstone with inclusions, such as rocks. These may pop free and hit you in the head! Large leaning boulders, overhangs and boulder piles usually offer the best choices.

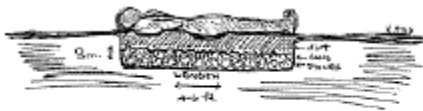


Spread Coals evenly throughout length of pit.

**#1 & 2 - The firebed hole with rocks lining the bottom. The rocks came from the hole itself so they were used in the construction of the bed. Note the "Auxiliary" fire in number 1.**



**#4 - A firebed burning in a rock overhang. The soil is sandy and would not trench. To get the proper depth the hole was quite wide. Note the exfoliation above the bed which is caused by the intense heat.**



Cover coals with 4-inches of dirt, making indentations in the soil for your butt and shoulders.

**#3 - The fuel should burn the length of the pit so that all of the pit is heated evenly. Note that in this case the ground was VERY hard so the rock lining was left out and the hole only dug to about 5i. The earth is what retains the heat.**



**#5 - During the daytime the properly spread and burned coals will look like this. Note that the bed is away from the stone wall in order to control the wall temperature. If the fire were against the rock, it would be too hot and the sleeper and/or equipment could be burned. The fire could also damage the rock.**

Once the bed is constructed and the dirt compressed, you can add a barrier to the edges of the bed to keep your insulation from wandering away from you. I like to roll a log up to each side of the bed. Large stones will work as well. The barriers should make the sleeping area look a little like a stone or log coffin. Fill the coffin with pine needles or leaves to make your bed. Wiggle down into the insulation and cover up with a piece of canvas or plastic... Snooze Time!



#6 - The appearance of the coals during the night.



#8 - A waterproof covering over the bed and padding will keep you dry. Lots of moisture is released from the soil and/or vegetation.



#7 - An ideal rock shelter with a firebed. This is a very warm shelter.



#9 - A finished firebed with padding, rock barrier to control sloughing of the padding, overhead stone and a view!



#10 - A finished firebed with an overhead debris cover. Note, the cover is constructed after the bed is covered with dirt!

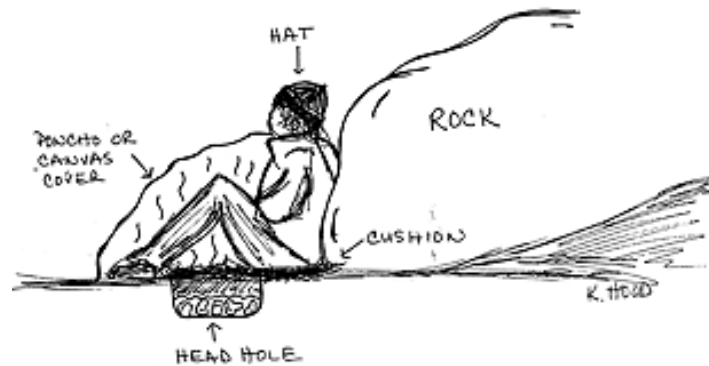
If you are in a hurry or do not have any insulation available – winter desert survival comes to mind – just use your canvas or plastic and sleep on the ground. Before you do, lay on the bed the way you plan to sleep. Mark where the small of your back encounters the ground. Spread your hand wide and draw two parallel lines with your thumb and little finger, across the width of the bed where the small of your back will be. The lines will be roughly the same width as the small of your back. Dig small depressions (about 1/2-inch deep) above and below these lines for your rear and back. When you lay down those cups will hold you centered on the bed and the raised area in the center will offer support for the small of your back. They make sleeping on the ground tolerable if not comfortable.

### **The "Head" Hole**

Another technique for using warmed earth is sometimes called the "head hole," because it requires that you dig a hole about the size of your head. Construction of the head hole follows this order:

1) Find a sheltered spot close to a tree or a large rock. The center of a "V" where large rocks come together is ideal. Trees are less ideal because they generally offer less protection from wind and may suffer damage as the result of your endeavor to stay warm.

2) Sit with your back against the rock, knees up almost to your chest. Mark the ground directly below your knees and between your legs.



3) Dig a hole the diameter of your head and follow the Tooferate rule. At this point the hole is basically just a campfire. After the fire has burned down and been covered with earth, put down a layer of pine needles, some bark or small branches as a cushion/insulator seat. You can also use your pack, rope, or other gear for this purpose.

4) Sit against the rock, knees up, on the cushion. Drape your back, body, and feet with a poncho, a hide, some canvas or a blanket to make a small tent that will channel the heat from the heated earth between your legs into your little shelter.

While this technique is not as comfortable as the firebed, it will keep you warm in low temperatures and can be used in hunting stands.

I hope I have imparted some useful knowledge for those cold nights.

**Good Luck!**