

HOW TO PAN FOR GOLD

by

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This instruction was written for those who do not have an experienced panner handy to teach them the technique. Others have their own techniques, which may vary from the one that follows, but I have found this one very satisfactory.

It is first important to understand the factors that tend to concentrate gold in order to increase your chances of finding it. Places where streams flow over exposed bedrock are uncommon in many areas. Material consisting of clay, silt, sand, pebbles, cobbles, and boulders commonly covers the bedrock. The thickness of this material can range from an inch or so to 10 or more feet. If bedrock is not exposed in the stream bed, try to find a spot where the bedrock is exposed along the banks of the stream. There, it's likely that the amount of material covering the bedrock in the stream bed is minimal. The gold will generally be concentrated in the bottom 6-8 inches of the sand and gravel, or at the top of the bedrock surface and in crevices or depressions in the bedrock.

Gold commonly occurs with other minerals that, like gold, are heavier than quartz, which can make up the majority of the silt- and sand-sized material in the stream bed. Quartz has a specific gravity of 2.65, which means that its weight is 2.65 times an equal volume of water. The so-called heavy minerals, which include the black-sand minerals, have specific gravities ranging from 3.4 to 5.5. Gold has a specific gravity which, depending on its silver content, ranges from 15.6 to 19.3, which is why it occurs at or near the base of the sand-gravel

deposits and why it migrates quickly to the bottom of the gold pan during the panning process. It's a general rule of thumb that if you don't have any black sand in the bottom of your gold pan, there won't be any gold. In that instance, you either haven't dug deep enough or you need to move to another place. The presence of black sand is a good indicator of gold, as well as the fact that you are doing the panning right.

After removing the uppermost boulder and cobbles from the stream bed, dig down as deep as you can, to bedrock if possible. Shovel the bottom 6-12 inches of gravel into your gold pan. A coarse screen or sieve will make it easier to get the coarsest material separated from the sand and will speed up the process. Be sure to scrub any clay adhering to the boulders and cobbles into the pan, and knead up any clayey material in the pan also. Your pan should be about half full at this point. You can save yourself sore ankles, legs, and lower back if you sit on a small stool or large rock with your feet in the stream.

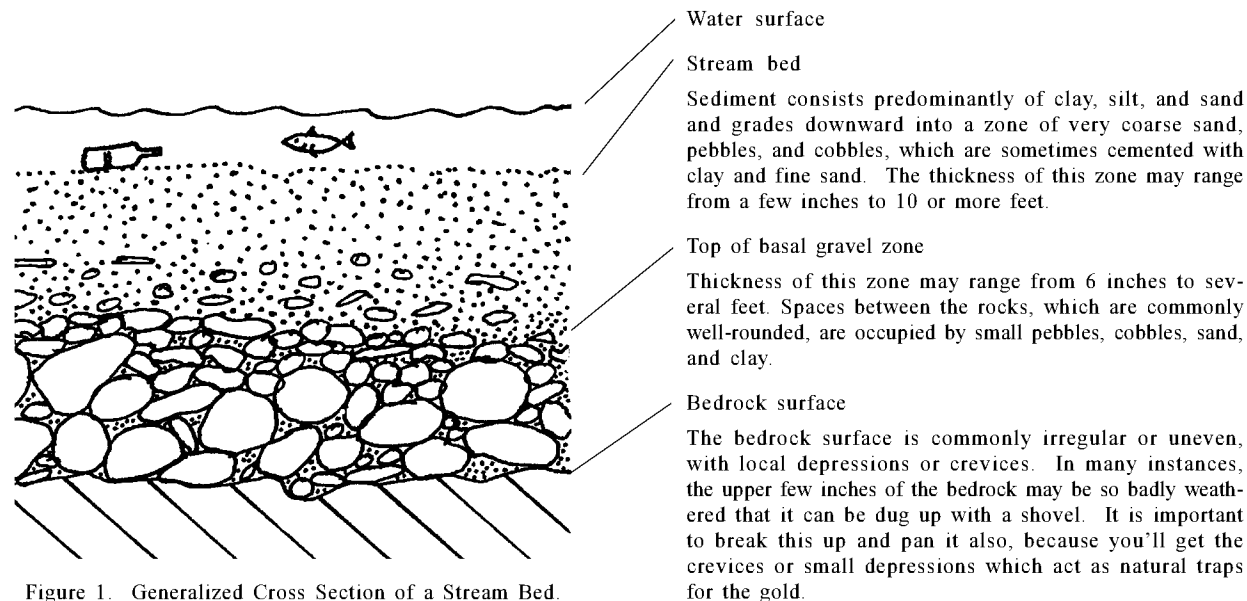


Figure 1. Generalized Cross Section of a Stream Bed.

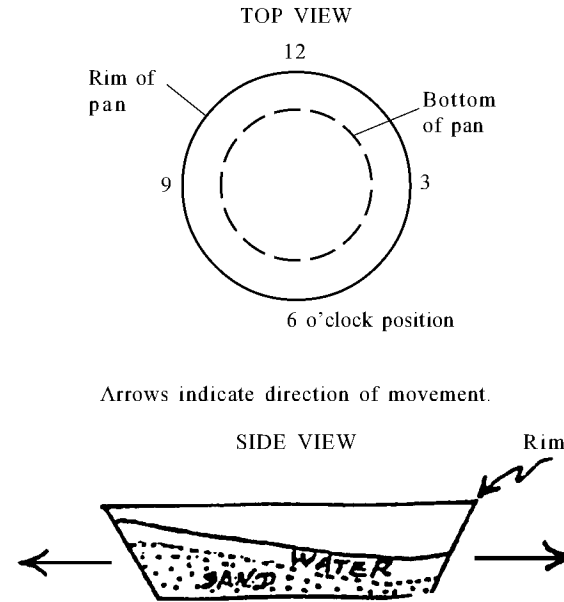


Figure 2. Section view showing approximate position of water and material in pan when pan is shaken to left or 9 o'clock position.

STEP 1:

Fill your pan with water and using your fingers, stir the material around and pour out the muddy water, repeating this until the water in the pan is fairly clear. Grasp the pan so your left hand is at the 9 o'clock position and your right hand is at the 3 o'clock position. With the sand and small gravel covered with an inch or more of water, gently agitate the pan and its contents in a circular motion for 15-20 times, without any of the material sloshing over the edge of the pan. This motion is similar to the way that you shake a frying pan with an egg or omelet in it. Pick out the large pieces.

IMPORTANT: Pick a spot on your pan, such as a hole, rusty place, scratch, or whatever and keep this spot in the 12 o'clock position away from you until you're through panning. If you rotate the pan during the panning process, you could risk losing some of the gold. The goal of the following steps is to concentrate the black sand and gold at the 12 o'clock position at the point where the beveled side of the pan makes an angle with the bottom of the pan (Figure 2).

STEP 2:

Hold the pan level with the material covered by an inch or two of water, shake the pan back and forth left and right for 8-10 times, keeping the pan level, as shown in Figure 2. The material in the pan should have leveled out.

STEP 3:

Now, gently rock the pan from side to side, and at the same time, gradually increase the tilt of the pan away from you, smoothly and continuously, allowing the water to spill over the edge of the pan. This side-to-side wave action of the water will winnow the coarser gravel to the top and toward the 12 o'clock position. Some of the material will be washed out with the water, but that's what you want it to do.

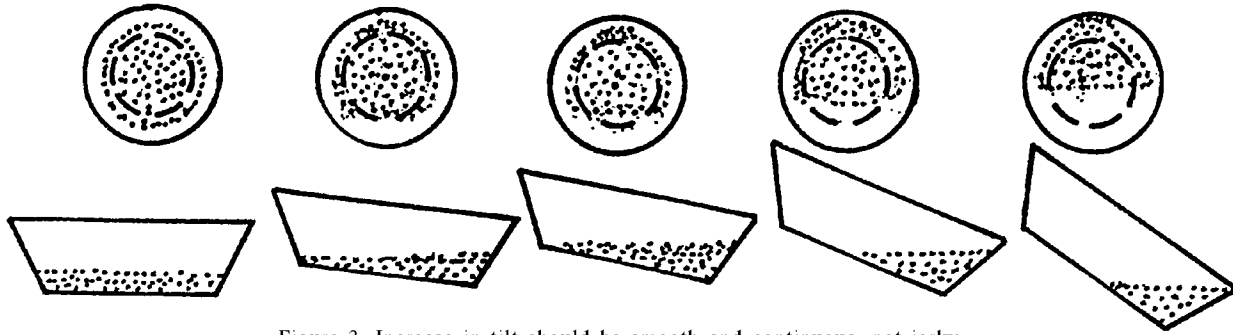


Figure 3. Increase in tilt should be smooth and continuous, not jerky.

Stop when the edge of the sand and gravel reaches the rim of the pan (see Figure 3).

With the pan in the last position shown in Fig. 3, gently immerse the inclined pan in the water until the material is covered with about an inch of water. Now comes the tricky part, which takes practice. As you increase the tilt of the pan toward the 12 o'clock position, GENTLY (NOT SUDDEN OR JERKY) pull the pan toward you so that some of the material is washed out of the pan, similar to receding surf on the beach. Do not lift it so far that the rim of the pan leaves the water (See Fig. 4).

Now, level the pan with an inch or so of water in it and repeat Steps 2 and 3 over and over until only a few tablespoons of material are left in the pan. As the amount of material in the pan lessens, you will be using less and less water as you go along. As you near the end of the panning procedure, you'll not only be putting less and less water into the pan during Steps 2 and 3, but you should be able to begin to see some black sand. The more black sand that there is, the better the chance of finding some gold. The black sand will begin to "climb" up the beveled part of the pan towards the rim, so be careful not to let it be washed out of the pan. When you level the pan to repeat Step 2, the shaking motion will make the black sand settle back to the bottom of the pan.

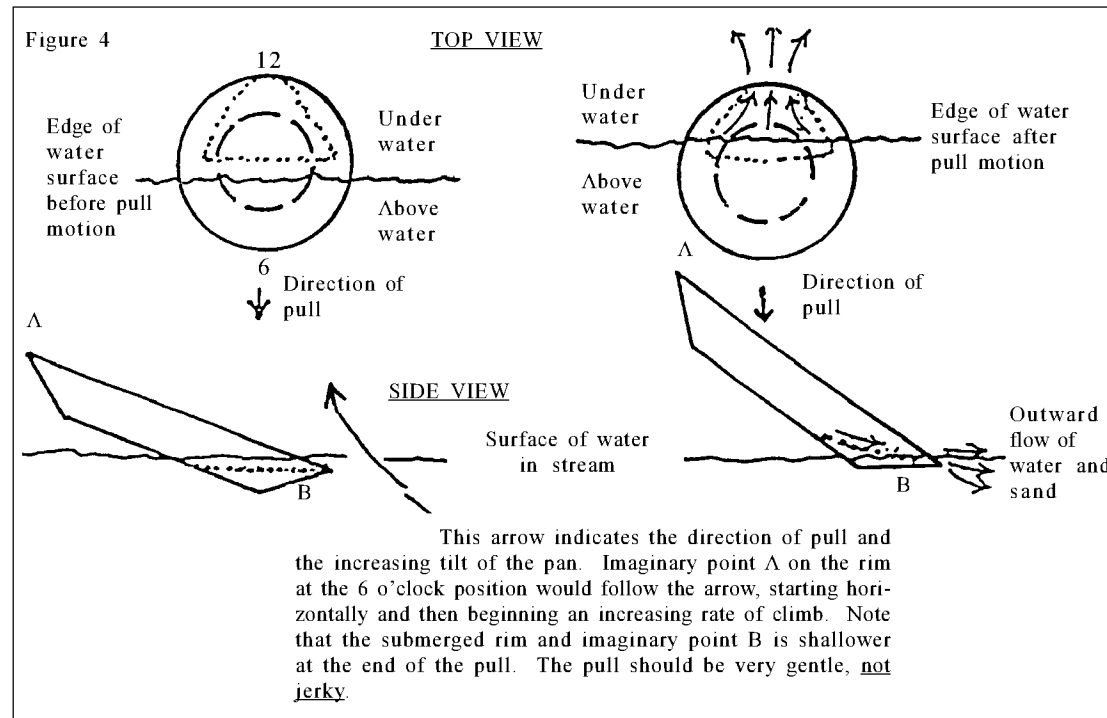
STEP 4:

When you get to the point where there are only a few tablespoons of white to tan quartz, black sand, and hopefully gold, at the angle of the side and bottom of the pan, put a few tablespoons of water into the pan, level it, and VERY gently and slowly swirl the water in the pan, with the pan making a circular motion like a spinning coin does as it levels out just before

coming to a stop. This will carry the quartz sand away, as well as some of the black sand, leaving the gold in its trail. It may take 4-5 swirls to expose the gold. With much of the quartz sand in the area between the 9 and 6 o'clock positions, incline the pan toward you, immersing it in the water, and increase the tilt so as to wash the quartz sand out of the pan. Then, add a small amount of water to the pan, incline it toward the 12 o'clock position, shaking it so that the sand is again concentrated at the 12 o'clock position, then level it and repeat the circular motion. You will probably need to repeat this several times to separate most of the quartz and black sand from the gold.

The gold and some of the black sand can be washed into a small bottle using a funnel, or sucked up with a "gold sniffer."

GOOD LUCK!



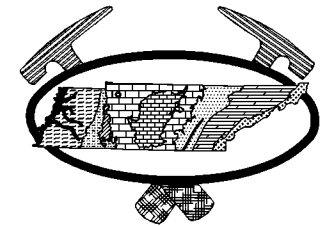
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