



July, 2001

From the Oregon Department of Geology and Mineral Industries

Learn more about Oregon's Geology by logging on to www.Oregongeology.com

HOW TO PAN FOR GOLD

Because gold is heavier than most sediments and gravel in a stream, it and other heavy minerals called "black sands" (including pyrite, magnetite, ilmenite, chromite, and garnet) can be collected in a gold pan when the right panning techniques are used.

First, get a gold pan from a hardware or department store or a store that specialized in mining equipment. Gold pans are flat bottomed, usually about 2 or 3 inches deep, with the sides sloping at an angle of about 45°, and should be at least 15 inches in diameter.

Take your pan to a likely looking location along a stream in a known gold-bearing area. You are looking for a gold trap - a place along the stream where the current slows down enough for the gold to settle out. Good possibilities are the insides of curves of streams (called point bars), areas where streams have overflowed, and on the downstream sides of boulders or other obstructions in the water.

Once you find a good place, follow these steps to pan for gold:

- 1.** Fill the pan about half or two-thirds full of soil, gravel, and small rocks from the stream channel.
- 2.** Put the pan under water, break up lumps of clay, and discard the stones.
- 3.** Still holding the pan level under water with your hands on opposite sides of it, rotate it halfway back and forth rapidly to wash out the clay and concentrate the heavy material at the bottom of the pan.
- 4.** Still holding the pan under water, tilt the pan forward, away from your body, and down slightly. Rotate and shake it to let the light gravel and sand dribble out the front. Push top material and large chunks of rock out with your thumbs.

Repeat Steps 3 and 4 several times until a deposit of fine-grained dark material overlain by a smaller layer of light material remains at the bottom of the pan.

- 5.** Take the pan with the residue and some water out of the stream. Rotate the pan in a circular motion, and watch carefully what is happening. The water is separating lighter

from heavier material-and gold, if it is present and you are doing the panning properly, is lagging behind the other material at the bottom of the pan.

6. Stop the rotation. If you are lucky, you will see a few flecks of gold in the dark material that remains in the bottom of the pan. Carefully drain out water and let the black sand and gold dry. Lift out most of the black sand with a magnet, and separate that gold from the remainder of the sediment with tweezers.

WHERE TO PAN ON FEDERAL LAND

In addition, gold panning is permitted on nearly all streams and rivers running through campgrounds on Bureau of Land Management (BLM) and USDA Forest Service (USFS) land in Oregon.

Maps showing locations of campgrounds may be obtained from local BLM and USFS offices; from the Nature of the Northwest Information Center, 800 NE Oregon St. Suite 177, Portland, OR 97232, phone (503) 872-2750; or from the BLM Oregon State Office, PO Box 2965, 1515 SW First, Portland, OR 97208, phone (503) 952-6002.

ALL THAT GLITTERS IS NOT GOLD

All the shiny gold-colored material in your gold pan may not be gold. Pyrite, known as "fools gold," has fooled many before you. On close examination, however, pyrite does not really look like gold. Pyrite has a brassy color, is sometimes tarnished, and, because it occurs as crystals, changes shades as you rotate it in the sun. Gold is always gold colored, soft, and malleable or bendable.

If you see gold-colored flecks that either float on the water or are so light in weight that they easily wash out of the pan, you probably have small pieces or "books" of mica, a mineral that because it is transparent and heat resistant was once used in doors of stoves so the fire could be seen. Mica has a tendency to break apart into flat sheets. It comes in several colors, and the gold-colored variety is sometimes mistaken for gold by inexperienced gold panners.

If you are lucky enough to find gold in your pan, it can come in many shapes: small lumps or nuggets, wires, feather-shaped crystals, or flat flecks. Pieces can range in size from almost microscopic "colors" (very small pieces) up to fist-sized nuggets, but your chances of finding the latter are pretty remote. However, gold panners are optimistic, and you never know what the next pan will produce.

PANNING ON STATE LANDS

In Oregon, areas below the vegetation line on navigable rivers and streams and ocean beaches belong to the State of Oregon and are therefore open for recreational gold panning.

GOLD VIEWING

A large collection of gold is on display in the lobby of the Baker City Branch, US Bank, in Baker City in eastern Oregon. Included in the collection is the famous Armstrong nugget, weighing 80.4 ounces.

WHERE TO PAN FOR GOLD IN OREGON

To find gold, you should go where gold has been found before in northeast Oregon, southwest Oregon, and the Western Cascades. These areas have many streams and rivers that can be successfully panned for gold.

FEDERAL LANDS

Mining claims on Federal land are not open for gold panning unless permission has been granted by the owner. However, four areas have been set aside on Federal land in Oregon for recreational gold panning:

Area 1. Quartzville Recreational Corridor:

Located in the Western Cascades, Salem District, Bureau of Land Management (free site). The Salem District Office address is 1717 Fabry Road SE, Salem, OR 97306, phone (503) 375-5646.

Area 2. Butte Falls Recreational Area:

Located in southwestern Oregon, Medford District, Bureau of Land Management (free site). The Medford address is 3040 Biddle Road, Medford, OR 97504, phone (541) 770-2200.

Area 3. Applegate Ranger District:

Located in southwestern Oregon, Rogue River National Forest (four fee sites where there is a charge of a dollar a day for panning in areas adjacent to campgrounds). The Applegate Ranger District address is 6941 Upper Applegate Road, Jacksonville, OR 97530, phone (541) 899-1812.

Area 4. Wallowa-Whitman National Forest:

Located in northeastern Oregon (free sites). Forest Supervisor is located at PO Box 907, Baker City, OR 97814, phone (541) 523-6391. Areas set aside for recreational gold mining in the Wallowa-Whitman National Forest are listed below:

a. Eagle Forks Campground, 9 mi northwest of Richland, T. 8 S., R. 44 E., Pine Ranger District, Halfway, OR 97834, phone (541) 742-7511.

b. McCully Forks Campground, on McCully Forks Creek just west of Sumpter, T. 9 S., R. 36 E.; Deer Creek Campground, on Deer Creek north of Phillips Lake, T. 9 S., R. 38 E.; and Powder River Recreational Area, on the Powder River just below Mason Dam, T. 10 S., R. 39 E.; all located in the Baker Ranger District, Baker City, OR 97814, phone (541) 523-4476.

c. Antlers Guard Station, on the Burnt River, T. 11 S., R. 36 E., Unity Ranger District, Unity, OR 97884, phone (541) 446-3351.

In addition, gold panning is permitted on nearly all streams and rivers running through campgrounds on Bureau of Land Management (BLM) and USDA Forest Service (USFS) land in Oregon.

Maps showing locations of campgrounds may be obtained from local BLM and USFS offices; from the Nature of the Northwest Information Center, 800 NE Oregon St. #28, Suite 965, Portland, OR 97232, phone (971) 673-2331; or from the BLM Oregon State Office, PO Box 2965, 1515 SW First, Portland, OR 97208, phone (503) 952-6002.

Learn more about Oregon's Geology by logging on to www.Oregongeology.com

The Oregon Department of Geology and Mineral Industries (DOGAMI) is headquartered in Portland and is an independent agency of the State. It has a broad responsibility in developing a geologic and engineering understanding of natural hazards, then applying this information to help mitigate the risks of earthquakes, landslides, floods, and tsunamis. The Department is also the lead state regulatory and reclamation agency for mining, oil, natural gas and geothermal exploration and production.

For more information on upcoming events and current projects, contact James Roddey at 800 NE Oregon St., Portland, OR 97232, (503) 731-4100, ext. 242 or DOGAMI field offices at 1510 Campbell St., Baker City, (541) 523-3133, 5375 Monument Drive, Grants Pass, (541) 476-2496, the Coastal Field Office, 313 SW 2nd, Suite D, Newport, (541) 574-6642 and the Mined Land Reclamation Program, 229 Broadalbin St. SW, Albany, Phone: (541) 967-2039--END--