

# **SNAKE RIVER GOLD**

## **By, Lawrence L. Dee, Geologist**

### **Introduction**

The Snake River begins at the continental divide in the Teton Range of Western Wyoming. Flowing southward, it follows an arc across southern Idaho until it eventually heads north and forms the western border of the state, and finally joins the Columbia River in south central Washington. Gold has been found throughout most of the 800-mile length of the Snake River from the headwaters near Yellowstone National Park to Lewiston, Idaho.

The source of the Snake River gold was the subject of considerable speculation around the turn of the century. Some researchers felt that the gold was supplied by streams entering the Snake and by lavas lying close to the river. Many theories were advanced to explain how such a large river could have the huge number of fine gold deposits that were being found.

We now recognize that the gold was derived from the deposits in the Rocky Mountains near Yellowstone National Park and that it originated as fine particles. An interesting fact concerning Snake River gold is that the Green River of Utah contains similar fine gold, also derived from the same source.

### **Snake River Gold**

Snake River gold is unlike most of the gold that was mined during the gold rush days in Idaho. It is found in very fine particles called "flour" or "float" gold. There are good reasons for these names. While not as fine as flour, they probably seemed like it to the hard working miner. The particles do float if contaminated with oil or if the recovery water is too turbulent. This was one of the many problems faced by the miner attempting to recover the Snake River gold from the sand and gravel. The main consideration was and still is today, that the gold is so fine and light that the particles have little value. Thus it took a tremendous amount of work to obtain enough gold from the gravels to return a profit. It is estimated that at least 1000 colors or particles were necessary to equal one cent in value using the old gold value of \$20 per ounce. At a gold value of \$300 per ounce, 67 colors would be needed to equal one cent.

Millions of dollars in gold remain in the Snake River sands and gravels. Modern prospectors and miners still attempt to recover the bright colors that, unlike most placer gold, are almost pure. So far no one has shown that it can be done at a profit except for a handful of gravel operators with processing plants along the river. They are able to sell the tremendous amounts of gravel that must be mined in order to produce enough gold to realize a profit.

### **Mining History**

The earliest recorded mining on the river was by soldiers from Fort Boise who mined near where the Boise River joins the Snake. Rich gold discoveries in the Boise Basin in 1863 encouraged two thousand miners to rush to the upper Snake River believing there was gold in abundance. The newspapers later reported their disappointment when they could either not find gold or it was so fine that they could not recover it. Later in the century, the burlap sluice was devised and then it became feasible to mine some of the better deposits along the river.

By the 1870s, most of the miners on the river were Chinese. As was generally the case in western placer camps, the Chinese were relegated to the low grade deposits which the Snake generally contained.

The deposits said to provide the best returns on the entire river were located on Bonanza Bar west of American Falls. This site, as well as the area from Raft River to Buhl, was extensively worked during the late 1800s and into the 1900s. Many old mining sites were reopened during the Depression when a man could make two or three dollars a day working the gold bearing gravels and enjoy himself while doing it.

Several sizeable mining camps sprang up along the Snake during the late 1800s. Dry Town, near the present town of Murtaugh, had four stores, a restaurant, and about six residential tents. A local newspaper stated that "Shoshone City, the largest hamlet on the river, consists of four canvas shanties, and a tent, all used as trading posts." A town called Springtown was built on the north and south sides of the river near the Hansen Bridge, and a camp called Mudbarville existed near Buhl.

### **Gold Dredges On the Snake**

Several large dredges were built and operated on the Snake in attempts to economically recover the fine gold. The first, the Burroughs Dredge, was reportedly built about 1892 and operated from the mouth of the Raft River down to the Starrhs Ferry Ganyon. The dredge consisted of a boiler, engine, and six-inch sand pump. The richest gravel it found was at the mouth of the Raft River which ran 37 cents a cubic yard (gold at \$20/ounce). The Burroughs dredge was very modern for its time and was capable of washing about 200 cubic yards of gravel per day. However, it suffered greatly from downtime because of the large boulders that were caught up in its suction pipe.

The second dredge was built by the Sweetser-Burroughs Mining Company and operated in the river in the area from where the Raft River joins the Snake to near Burley. This suction-type dredge operated for about ten years and, because of its low operating costs, did return profits. The mining company also built large water wheels in the river just below the present site of Minidoka Dam, and raised water for sluicing the sand on 216 acres of mining claims. This did not prove very successful and the wheels were later used for irrigation.

### **Gold Deposits**

Early mining and geological reports on Snake River gold mining indicate that some deposits produced thousands of ounces of gold but were generally exhausted within a year or two. In 1890, one writer stated that a mining claim could be opened for about \$5000 and return from \$10-\$50 per day (gold at \$20/ounce); it was stated that \$5000-\$10,000 in gold could be recovered from an acre of ground by special blanket sluices designed to save the fine gold. The writer did not say how many men would be needed for the returns, but he stated it must have been a large crew.

As in most placer mining districts, the deposits that were easiest to work and most productive were quickly claimed and worked out. In later years, as well as today, what remained were bar and bedded gravel deposits containing very fine gold in quantities which today probably do not exceed \$5 per cubic yard at the very most. The values reported by credible miners and prospectors today range from a few cents to a high average of \$3 per cubic yard.

In the early days of Snake River mining, the gold was recovered by use of a device called a "burlap table." Recovery was reported to be 90 percent or more if properly operated. It would be difficult to utilize this labor intensive device today unless gold prices were to rise considerably.

The era of Snake River gold mining remains an exciting part of Idaho's history. The Snake River deposits are certainly one of the most interesting and unique gold deposits in North America.

### **Distribution of the Gold**

Snake River gold is generally distributed throughout the length of the river and can be panned just about anywhere. The gold deposits occur wherever sediments are present in the river itself, adjacent to the river, and above the river. The early miners apparently found large deposits of the fine gold in the river, called river bar deposits. They also discovered gold above the river in deposits known as "skim bars" and "bench gravels."

The large bar deposits in the river were worked by the early dredges - some quite successfully. The small to medium sized mining operations on land worked the skim bar and bench deposits. The skim bar was an ancient river bar in which the gold was concentrated in the top few inches or feet of sand and gravel. These were usually worked by one or two men using rockers.

Bench gravels were elevated bars in which the gold was concentrated in "paystreaks" at the surface or somewhere in between the surface and bedrock. These paystreaks varied in thickness from a few inches to several feet and could occur almost anywhere within the deposit. An unusual mining situation existed at Drytown, near the present town of Murtaugh, where the gold was mined by digging the sand and gravel from between huge boulders deposited by the Bonneville Flood.

Unlike most coarse gold placers where the weight of the gold particles allows them to settle on or near bedrock, the Snake River flour gold is not concentrated on or close to bedrock. The reason for its erratic distribution is that the gold particles are so light that the action of the water moves them along rather than allowing them to concentrate at every point where the current slows as it would in a coarse gold deposit. The concentration of Snake River gold was largely based on the speed of the river current at the time the gold was deposited. Thus the term "flood gold" refers to fine gold deposited during spring floods.

Often the deposit was covered with barren sand and gravel which could be tens of feet thick. This was removed by hydraulic or ground sluicing until the paystreak was reached. The paystreak was then mined by washing the gravel through the special burlap sluices used to recover the gold.

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