

GEOGRAPHY

The Cornucopia Placer property is located on Pine Creek in Northeastern Oregon about 55 miles east of Baker (Figure 1). The property consists of 180 patented acres in section 10, 120 acres of unpatented placer claims in sections 10 and 15, and 160 unpatented acres in section 15 (Figure 2).

The elevation of the property is from 3500 to 4100 feet above sea level. Precipitation in the area is about 20 inches per year; snow has reached depths up to 10 feet. Heavy rains in the spring with a heavy snow pack in the mountains have caused rapid flooding in the region.

The working season can usually begin in April and continue into November. The property is within one mile of paved highway and its six miles north of the small town of Halfway, a ranching community. The mountains are forested with Red Fir, White Fir, Tamarack, Lodgepole Pine and Ponderosa Pine, with Aspen along the streams and sagebrush covering the foothills. The region is a natural habitat for elk and deer; geese, chuckers, and pheasants are plentiful in the lowlands.

GEOLOGY

Quartz veins of the Cornucopia lode mines cut granite rocks of the Cornucopia granitic stock. "Country rocks are mainly hornblende-biotite shist and hornfels derived from thermal metamorphism of graywackes, shales, conglomerates and greenstones"(1,pp88,89). About ½ mile below the old Cornucopia townsite and thence south, the low country is covered with Eocene basalt flows.

The gravels in Pine Creek consist mostly of rounded granite and blocky basalt. The boulders gradually decrease in size going downstream. A.F. Daily (2, p8) estimated the size as:

"25% larger than one man size boulders, generally 1 to 3 feet diameter, occasionally up to 5 feet.

25% one man size boulders, 4 inches plus to 1 foot diameter

20% 2 inches to 4 inches in diameter

30% minus 2 inches."

There is no stratification of the gravels; boulders, cobbles and fines are randomly scattered throughout the deposit.

The composition of the gravel along the sides of the canyon is mostly blocky basalt derived from down slope movement off the hillsides. Approaching the center of the canyon, the incidence of granite and metamorphic rocks steadily increases for a short distance until, within the stream gravels, the composition is a fairly constant mixture of more rounded particles of all of the above rock types.

Near the center of the channel, the gravel deposit is over 60 feet deep at the southern end of the property and about 50 feet deep at the northern end. Width of the gravels, from wall to wall, is from 250 feet to 500 feet wide (see seismic map folder).

The bedrock generally has a U shape with a V cut incised into the bottom near the center.

GEOMORPHOLOGY

“The granitic rocks of the Wallowa batholith were deroofed and in places deeply dissected during Cretaceous and early Territory time, after which most, possibly all, of the area was buried under flow upon flow of Columbia River Basalt. The range was subsequently uplifted and most of the lava has since been stripped, but evidence of its former presence is seen in the remnants of nearly flat lying flows perched on some of the highest peaks and ridges and the multitude of basalt dikes which intrude the granite and older rocks. Removal of the lava was accelerated by vigorous Pleistocene glaciation, of which there is much evidence.” (1,p84)

Glaciation probably formed the U shaped valley of Pine Creek; since then, the till has been reworked by stream action which also cut a deeper V into parts of the bedrock and generally concentrated the gold to lower levels of the gravel. Along the margins of the canyon, the stream gravels are intermixed with basalt talus from downslope movement. Approaching those areas values are expected to gradually decrease. Gold values are scattered throughout some patches of till that were only slightly exposed to stream action.

HISTORY

Lode gold was discovered in the Cornucopia Mining District in the 1880's; from then until World War II, over 300,000 ounces of gold was produced from the quartz veins. But the Pine Creek Placer deposit directly below the lode veins has never been extensively developed.

Prior to 1914, the property was mined near Boulder Creek. Drifting on the bedrock of a bench boulder gravel deposit there reportedly returned \$25.00 a day per man after the “pay” channel was struck. Then new owners equipped the property with flumes, pipe, giants, and water-powered operated derricks and proceeded to hydraulic the ground. That operation was a failure and shut down in 1914.

A six to 15 man operation in the 1930's near Boulder Creek used giants and a 90-foot electric-powered derrick.

In the 1930's, three shafts were sunk to bedrock on the property. They were (see map):

Boulder (Pine Creek)	53 ft.	1934	\$3.00 per yard
Ingram	65 ft.	1935	1.65
Aurous	61 ft.	1935	.405
*Victor	69 ft.	1935	0.498

* short distance south of the property

The Boulder Creek shaft had the highest production and the most extensive workings; \$19,972 from 765.8 cubic yards for an average of \$25.84 per cubic yard (2,p8). The Boulder shaft was flooded in 1935, and the other shafts were later abandoned due to heavy ground and pumping problems.

By 1940 the property, as it still exists, was owned by Mr. Milton Steinmetz, who had managed most of the shaft work. In 1940, the Morrison-Knudsen Company leased the property, then sampled it by cleaning and pumping the Boulder and Ingram shafts and taking bulk samples from the drifts and from along the columns of the shafts. They estimated from their evaluation that the property contained several million yards of \$0.93 per cubic yard material. M-K was considering installation of a large-scale placer operation but dropped the plan due to World War II.

In 1967, the property was leased from the Steinmetz family to Mr. Frank Ingram and Mr. Lucian Hawk. They made several attempts to profitably mine the property but each time failed due to the lack of engineering, poor equipment, and insufficient finance. From May 12, 1969 to September 30, 1969 they recovered 589.15 ounces of gold from approximately 11,077 cubic yards, or one ounce per 18.80 cubic yards (one ounce per 22.38 cubic yards after adjusting for 840 fineness) (4,ppl-9).

Since 1970, Cornucopia Placers, Inc. has subleased the property to a number of different companies, but all have failed, mostly due to poor management and lack of engineering.