

# **Captain Jack Mill**

## **Left Hand Canyon, Boulder County, Colorado**

### **Site Summary**

#### **Location**

The Captain Jack Superfund site is located at the headwaters of the Lefthand Creek Watershed in a narrow valley about 1.5 miles south of Ward in Boulder County, Colorado.

#### **History**

Mining for gold and silver began in this region in 1861 and continued intermittently until 1992. Camp Frances, near Ward, was started in the early 1890s. It was here that the Big Five Mining Group managed several mines, including the Adit, Ni-Wot, Columbia and Dew Drop. The combined ores came down to the Camp by way of the adit tunnel. Processing was carried out in the Dew Drop Mill or the larger Big Five Mill - located on the side of the gulch below the Camp. The Colorado and Northwestern Railroad was built through the Big Five/Camp Frances area to the town of Ward to service the mining area.

The histories of the Big Five Mine, located about 500 feet upstream from the mill, and the Captain Jack Mine (also known as the Black Jack Mine) are uncertain. The Black Jack Mine operated intermittently as an underground mine following its patent approval in 1917. The Big Five Mine operated without a permit, so there is no way to track its official history through conventional paper trails. It is unknown how long it originally operated before it was shut down. The Big Five Mine consists of an adit (tunnel), a large waste rock pile and a settling pond. The Mill Works area includes several lagoons previously used for settling tailings from the mill. The lower portal consists of the Black Jack adit and the contents of a shed. Other mine wastes include waste material in Lefthand Creek and waste rock from the mine tunnels.

The EPA added the Captain Jack site to the National Priorities List (NPL) on September 29, 2003.

### **Environmental Concerns**

#### **Chemicals**

Samples indicate the presence of elevated concentrations of lead, arsenic, thallium, zinc, manganese, copper, magnesium, cadmium, aluminum, calcium and iron. Site contaminants of highest concern are lead, arsenic, and thallium.

#### **Exposure**

Lefthand Creek is one of the sources used by Lefthand Water District to supply drinking water to approximately 15,000 water users. Elevated levels of metals and other contaminants have been found in surface water and sediment samples from Lefthand Creek and its tributaries and from wetlands fronting along the creek. Groundwater samples from two nearby wells show elevated levels of metals. Uncovered tailings, ore concentrates and surface soil contaminants could pose a threat of dust emissions, especially to the nearby residences. In addition to human exposures, the elevated metal concentrations in sediments and water entering Lefthand Creek affect aquatic life.