



## **USDA-CSREES 2007 National Water Quality Conference**

### **Potential Downstream Drinking Water Impacts of the Flathead Mines Drainage on Sullivan Creek**

The Flathead Mines are located 35 miles Northwest of the town of Polson, just north of the Flathead Indian Reservation in northwest Montana. Mining operations in the area generally consisted of silver extraction. During the late 1930s and 1940s it was one of the largest silver producers in the Pacific Northwest (Anderson & Fredlund 1983). Activities left deposits of exposed mine tailings consisting of pyrite. These tailing have noticeable visual impairments on the land with orange and yellow discolorations on the surrounding area. Additionally, the exposed pyrite is responsible for the acidification of Sullivan Creek which flows through the area of these mines (pH 2-3). Analyses of Sullivan Creek water and sediment samples were conducted to determine if the acidic stream was mobilizing and transporting any heavy metals into the local Reservation Watershed and its surrounding environment. These samples were analyzed for chloride, sulfate, lead, cadmium, nickel, arsenic, and selenium. Techniques used for these analyses included Colorimetry, Turbidimetry, and Flame Atomic Absorption Spectrometry. References Anderson, Paul, and Lynn Fredlund 1983 "Cultural Resource Inventory and Evaluation for the Hog Heaven Project, Flathead County, Montana." Prepared for CoCa Mines, Ltd., and Floyd C. Bossard & Associates by GCM Services, Inc.

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