

CLANCY CREEK WATERSHED
Includes the Gregory Site

**Tributary of Prickly Pear Creek, Tributary of the Upper Missouri
Gregory and Minnesota Mines**

Date: October 4, 2007

Status of the Site: Completed

Site Background: The Gregory and surrounding mines, discovered in 1864, were the first silver-lead lode deposits operated in Montana. American Hearth was the first smelter constructed in the district, it was unsuccessful and the site was sold for taxes in 1868. Later the Gregory Mine Company and Consolidated Gregory Mining Company assumed control. By 1886 the Gregory shaft was 730 feet deep and had six working levels. By 1887 approximately \$1.6 million in silver had been produced. During 1889 the Helena and Livingston Reduction and Smelting Company treated old concentrates on site. From 1911 to 1920 approximately 6,000 tons of slag was shipped from both the Gregory and Alta for reprocessing. In 1941 American Smelting and Refining explored the area, but did not find the anticipated reserves. Unsuccessful attempts were made to exploit the Gregory during the 1970's and 1980's. Helena Silver Mines, the successor to Helena and Livingston Reduction and Smelting Company, owns the site today.

Geologically the area is underlain by the Cretaceous boulder Batholiths and Elkhorn Mountain Volcanics. Ore is present in veins and replacements of chalcopyrite, pyrite, arsenopyrite, sphalerite, and galena.

Watershed: Clancy Creek flows into Prickly Pear Creek, which enters the Upper Missouri River. HUC# 10030101

Acres in Watershed: 20,000 total acres

Miles of Stream in Watershed: 10 miles

Miles of Stream on BLM Land: 0.5 miles

Miles of Stream to be cleaned up and BLM's Portion: Not determined

Lead Agency: DEQ

Support Agency: BLM

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AMLIS #: MT000700038

Reclamation Status: completed

Total Sites Reviewed: 2 sites

Water quality Issues: 2 sites

Gregory Smelter & Clancy Creek Tailings (BLM owns a portion of the tailings)
Minneapolis - also known as the Midway (Private)

Location Information: Site located in Jefferson County, Colorado Mining District,
Montana

Latitude/Longitude: 46° 23' 20" / 112° 12' 10"

Ownership: Mix of BLM and Private

The DEQ and BLM coordinated the remediation of the sites.

PRP Information: Complete, No PRPs.

Existing Studies: Montana Bureau of Mines and Geology (MBMG) Open File Report
No 348

Abandoned/Inactive Mines of Montana, U.S. Bureau of Land Management; Abandoned
Hardrock Mine Priority Sites (Pioneer Technical, 1995), BLM studies, Final Gregory
Mine Reclamation Work Plan, and Sampling and Analysis Plans (Montana DEQ), Final
Gregory Mine Reclamation Investigation (Tetra tech February 2001), Final Gregory
Mine Expanded Engineering Evaluation and Cost Analysis (Tetra Tech April 2001).

Water Quality Issues:

Sites: The Gregory Mine Draft EE/CA has divided the waste materials of concern present
on the site into the following 4 areas:

1. Gregory Mine Site
 - A. Waste Rock 74,000 cubic yards (cy)
 - B. Mill and Smelter Waste 23,300 cy (600 cy = BLM)
 - C. Gregory Tailings 23,000 cy
2. Clancy Creek Tailings 20,900 cy (3,000 cy = BLM)
3. Minnesota Mine Site 13,100 cy
4. Unnamed Mine Site 4,300 cy

Out of the total 158,000 cy of material containing elevated levels of metals the 3,600 cy, or 2.3% of the total volume is located on BLM managed Public Lands.

Recommendations for Remediation: Reclamation alternatives were developed based on the characteristics of the materials and their effects on human health and the environment. The Gregory Mine EE/CA reviewed the following 5 possibilities.

Alternative 1 No Action

Alternative 2 Institutional Controls

Alternative 3 Containment

Alternative 4 Excavation to an on-site repository (Gregory Repository)

Alternative 5 Excavation to an off- site repository (Wickes Smelter Site)

Alternative 4 was selected as because it provided the most effective environmental mitigation.

Water Quality Impairments (303 d Listings): Clancy Creek is not supporting drinking water use due to metals.