

**Little Thumb Pit, Dry Creek Pit, Ice Lake Pit
in Yellowstone National Park**

**Abandoned Mine Lands Division, Wyoming
Department of Environmental Quality
4 West Herschler Building
Cheyenne, WY 82002
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**July 1997 to November 1997 for \$442,883
Engineer - Nelson Engineering
Construction - G.M. Stewart Corporation
in cooperation with the National Park Service**

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Road building quarrying in Yellowstone National Park, our country's first national park, had left scars on the landscape and presented threats to visitors and the environment. Three sites were identified by the Park Service as priority sites for reclamation. These were the Little Thumb Pit, Dry Creek Pit, and Ice Lake Pit. ([Map showing pit locations](#)) All three sites were Class 2 Hazard Rating sites due to proximity to visitors using the park and highwalls. The three sites had a Class 1 Environmental Rating due to deteriorating conditions and off site impacts. The Wyoming Abandoned Mine Lands Division provided engineering services for all three sites. Construction funding was provided for the Little Thumb and Dry Creek Pits with the Park Service reclaiming the Ice Lake pit.

Little Thumb Pit

The Little Thumb Gravel Quarry was opened in the 1930's. It was last used in 1990 when rejected fill dirt from road construction was dumped in the pit. The pit interior had no vegetation. The center had compacted soils. Erosion was a problem, depositing sediment in Little Thumb Creek. Material eroding into Little Thumb Creek had created barriers and blockage of the creek. Siltation into Yellowstone Lake .4 miles downstream of the pit was also evident during runoff. Impacts to grizzly bears (endangered species) and Yellowstone cutthroat trout were a direct result of the siltation.

The site location is 1.9 miles northeast of West Thumb Junction off the Grand Loop Road. The site is located just north of the West Thumb Geyser Basin, which receives over one million visitors a year. Grizzly bears are attracted to trout spawning in the creek. The location represents a danger to bears due to high area traffic. Trout were unable to move up the creek due to siltation, concentrating bears in the high traffic areas.

The pit was approximately 11.5 acres with a 150 foot highwall. It was visible from the road. Visitors would hike into the area via a closed service road to explore the pit. Visitors tracking bears were also accessing the pit area. Aside from the obvious danger to the public from human/bear interaction, the interaction between bears and the public was causing bear deaths and relocations to occur.

Reclamation included installing settling ponds and siltation traps to provide site specific erosion control. ([Little Thumb Creek with new silt trap and drop structure](#)) The pit was regrading and contouring to provide for reseeding and proper run-off control. ([West portion of Little Thumb Pit showing constructed minidrops after reseeding](#)) Little Thumb Creek was rechanneled. Manmade spawning areas were added to the creek after rechanneling through the use of boulders and logs. ([Little Thumb Creek with new spawning areas](#)) These improvements will make the creek more usable by the trout.

After pit work was completed, the pit access road was reclaimed. Old culverts were removed from the access road and the road itself reseeded. The reclamation of the road and pit will benefit the grizzly population by reducing visitor traffic into the area. Bear

fishing will be reduced in lower reaches of the creek as the spawning area was doubled. ([Little Thumb Creek, water is flowing through new spawning areas, returning the creek to a pre-mining state](#))

Dry Creek Pit

Located off the Grand Loop Road between West Thumb and Old Faithful, the pit was about 4 miles off the main road on a previously paved road. This pit was used for road materials during the US Army occupancy of Yellowstone at the turn of the century. The pit was about 2 acres in size with the access road disturbing an additional 15 acres. The pit area is steep terrain with rolling hills and rock outcrops.

Reclamation involved regrading and backfilling the pit as well as the removal of the asphalt road base. The pit was subexcavated under the high wall to allow for disposal of the waste asphalt. Culverts and bridges were removed along the old road. ([Equipment removing old culvert from the access road](#)) Downed trees were scattered across the old road area to discourage vehicle access.

Ice Lake Pit

This site was opened in the 1960's. It was 13.8 acres in size and 60 feet deep. It was located .2 miles from the Ice Lake Trailhead and .1 miles from the Norris Blowdown Fire Exhibit. The Park Service completed reclamation of this pit with engineering services provided by AML.