

Kath, Joe

To: Barker, Kathy
Subject: Final Report: Barney Grace Mine - WPF 2008

DATE: April 16, 2009

Final Report on: **Stabilization of the abandoned "Barney Grace Mine" entrance: Indiana bat Federal Priority 2 Hibernacula, Alexander County, IL.**
Project Completed: July 19, 2008

In order to maintain summer and winter roosting habitats for the Federally endangered Indian bat [and to assure long-term viability for other State endangered bats, namely the Southeastern bat and Rafinesque's big-eared bat], within the Mississippi Bluffs Ranger District of the Shawnee National Forest, it was necessary to stabilize the entrance of the old, abandoned Barney Grace Mine/BGM (underground silica sand mine) and to properly gate the stabilized entrance to prevent trespass and/or unofficial use.

Prior to this stabilization effort, the BGM was monitored for several years by the IDNR, in conjunction with Southern Illinois University-Carbondale and the Unimin Specialty Minerals Corporation. We determined that the entrance to this mine was closing in and blocking internal/external air-flow, thereby increasing internal mine temperatures and making the habitat unsuitable for chiropteran hibernation purposes. This negative change in temperature, along with documented trespass and disturbance from local citizens, caused a noticeable decline in the number of Indiana and Southeastern bats using this mine. Personnel from all agencies realized that without stabilization, this mine entrance would suffer a catastrophic collapse preventing any future bat use and more than likely lethally trapping bats inside.

An 8' diameter galvanized steel culvert measuring 20' in length (12 gauge steel) was purchased from Energy Culvert Company, Inc. in Energy Illinois and delivered by semi-truck to the project staging area. Professional personnel from "The Job Shop" in Marion, Illinois were hired to construct a bat friendly gate using 4"x4" steel angle iron - following accepted bat gate protocols designed and approved by the American Cave Conservation Association (ACCA) and Bat Conservation International (BCI), Inc. A large front-end loader owned and operated by Unimin engineers cleared and contoured the entrance to the mine and then pushed the culvert into place. Once in place, open areas around the culvert were back-filled with soil, rocks, and large pieces of timber. Over the course of 2 days, welders with "The Job Shop" constructed a fully functional and intact bat-friendly gate on the culvert entrance. All work was completed on July 19, 2008. Invoices are maintained within the project files of Joseph Kath in Springfield, Illinois. Thank you.



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