New Abandoned Underground Mine Map

The new Known Abandoned Underground Mines of Ohio (Map EG-3) shows that known abandoned underground mines (AUMs) are located in approximately half of Ohio’s 88 counties. Most of the mines are located in the historic coal and clay mining districts of eastern and southeastern Ohio. The map can help Ohio citizens determine if they’re living, working, or building above AUMs. Known Abandoned Underground Mines of Ohio can also be used to determine if AUMs might adversely affect new underground mine operations, or water, oil, and natural gas wells.

Data used to create the map were also used to create ODNR’s free AUM Interactive Mapping System (IMS). Internet users can enter a street address into the IMS and check for AUMs near the property. The Web site can be accessed at <www.ohiodnr.com/geosurvey/>. The Ohio Geological Survey and its partners continue to search for records of what could be thousands of historic underground mines that were never reported to the state.

The wall map and associated text are available in paper form for $15 plus sales tax and shipping. Please see ordering information on page 8.

The Rockies Express Pipeline Comes to Ohio

The massive Rockies Express Pipeline (REX) is but one small part of the solutions our nation needs for reliable, clean, reasonably priced energy. The 1,679-mile REX pipeline, scheduled for completion in 2009, will be capable of transporting nearly 1.8 billion cubic feet per day of natural gas extracted from the Rocky Mountain states of Colorado and Wyoming to the banks of the Ohio River at Clarington, Ohio, in Monroe County. When combined with the many interconnections to existing natural gas pipelines, the REX pipeline will be part of one of the largest natural gas distribution systems in the world. Planned future construction of additional pipelines radiating from Clarington will transport natural gas to Mid-Atlantic and New England States. The price tag for the REX project is projected somewhere between six and eight billion dollars.

Throughout southern Ohio in 2009, thousands of 40- to 80-foot sections of 42-inch-diameter, high-quality, steel pipe will be welded together to create this pipeline. The pipeline will be lowered into the trench and buried with subsoil and then topsoil. To ensure that no leaks are present, crews will flood the pipeline with water and pressurize it beyond normal operating pressures. The final step is restoring the area to its original condition and marking the boundaries of the 50-foot wide permanent easement.

Before a single segment of pipe is moved into place, the REX pipeline project will have undergone rigorous permitting processes, held numerous public open houses and forums, participated in countless meetings with state and local governments, and negotiated acquisition of right-of-ways to ensure the pipeline construction is safe and environmentally sound.

Those opposed to the REX pipeline were provided with opportunities to express their concerns and solutions were discussed and often reached. Opposition to the pipeline centered around potential impacts on sensitive environments, such as streams and wetlands, and the rights of individual property owners.

Early in the planning process, the Ohio Geological Survey provided REX officials and contractors with basic geologic information in the form of maps showing bedrock geology, depth and elevation of bedrock, and thickness of stream and river valley sediments. ODNR officials met with REX representatives to express concerns about the REX pipeline crossing under the State and National Scenic Rivers located in southern Ohio. As a result, staff geologists were on site during the horizontal directional drilling (HDD) under the Little Miami and Big Darby State and National Scenic Rivers and under right-of-ways crossing Caesar and Deer Creeks, in Caesar Creek and Deer Creek State Parks, to monitor any potential problems with the HDD drilling.

The main concern of the ODNR was to reduce the environmental impact of any drilling fluids that could escape through drilling-induced fractures of the surrounding bedrock and valley-fill sediments. The escape of these drilling fluids is referred to as a frac-out. The frac-out of drilling fluids could enter the na-
tional scenic rivers and streams along the REX pipeline right-of-way, particularly at times of low flow, and have a deleterious impact on protected species of mussels, fish, and other aquatic creatures. Staff geologists were on site to monitor drilling progress and any frac-outs and, if frac-outs occurred, to notify appropriate agencies and officials so that containment and mitigation efforts could be quickly undertaken. Once HDD drilling is completed at each National Scenic River crossing, the REX pipeline is safely protected by a buffer of some 50 to 200 feet of solid bedrock between the stream bed and the top of the pipeline.

The impact of the REX pipeline project on the U.S. economy is as yet uncertain. In the next decade, some energy experts predict that demand for natural gas in the United States could increase by over 50 percent. Natural gas—the cleanest-burning fossil fuel and one of the most abundant domestic energy sources—is easy and safe to transport through pipelines and could lessen dependence on foreign oil supplies. But the lack of new pipelines to transport this commodity to market is a major drawback to its utilization. Thus, the REX and other future pipelines may be one solution to the growing demand for clean, reliable, domestically produced energy in the United States.

—Gregory A. Schumacher and Michael P. Angle

Editor’s Note: Please do not trespass on REX pipeline property or the private property of adjacent landowners. For additional information about the Rockies Express Pipeline, please visit <http://rexpipeline.com>.

The Rockies Express stretches from Rio Blanco County, Colorado, to Monroe County, Ohio.

Douglas J. Mullett, 1956–2009

With deep regret we announce that one of our own has passed: Geologist Doug Mullett lost a courageous battle with Mantle Cell Lymphoma on January 5, 2009, at the age of 52. Doug was employed by the Ohio Geological Survey as the supervisor of the Energy Resources Group from February 2007 until his death. While Doug may not have been at the Geological Survey long, he always had a positive attitude and made a huge impact on the lives of our staff.

After receiving his B.S. degree from Mount Union College in 1978, Doug went right to work in the Ohio oil field, first for Appalachian Exploration in Gnadenhutten, then on to New Frontier Exploration in North Canton. He returned to school and received his M.S. in Geological Sciences from Wright State University in 1981. Doug then joined Cities Service in Tulsa, Oklahoma, from 1981 through 1985 when he returned to Ohio to work for Lomak Petroleum in Hartville. In 1986, Doug returned to school once again, this time to Kent State where he pursued a Ph.D. and was employed as a geology instructor through 1991.

Doug changed course in 1991 by entering the environmental geology field where he remained for the next sixteen years. In Michigan, Doug worked for five different firms, always at increased responsibility levels, and handled work including tank removals, RCRA regulation support, superfund site remediation, and staff and contractor supervision. He was beloved by his co-workers. In 2007, Doug found his “dream” job. He was thrilled to be working for the Ohio Geological Survey and we were thrilled to have him on our team.

Doug leaves behind his loving wife, Judy Cerett-Mullett. He was the extremely devoted father of Trevor, Brock, Chase, and Cole; son of Myron and Phyllis (Rupp) Mullett of Alliance, Ohio; and brother of Vicki (Greg) Vasto, Pam (Bruce) Hickinbotham, Cindy (John) Donelan and the late Greg Mullett.

Active in numerous organizations, including the Boy Scouts of America, the American Association of Petroleum Geologists, the Ohio Academy of Science, and the American Institute of Professional Geologists, Doug will be remembered for his kindness, gentle soul, generosity, and devoted love for his family.

Donations may be made to the Mullett Boys Education Fund, c/o Citizens First Bank, 33205 Grand River Ave., Farmington, MI 48336.

www.ohiodnr.com/geosurvey/