

## **General**

The Millwood Mine is an underground single level category III room and pillar Limestone mine, with gas and oil wells in the area. The mine's previous owners abandoned the operation in 1990 and it was idled for 25 years until Golf Mining, LLC purchased the mine and resumed production in 2015. The mine is in Central Missouri and operates two 12-hour shifts per day, 5 days a week – employing 26 miners with a small maintenance crew on weekends. Hours of operation are from 05:00 to 17:00 on day shift and 17:00 to 05:00 on night shift. Hours are usually 07:00 to 15:00 on weekends. Terry Phillips is currently the Mine Manager.

## **Mine Access**

Mine access is provided by one adit. A ladder access is currently being installed to provide secondary egress up the ventilation shaft to the surface but is not yet accessible.

## **Explosives**

All explosives are stored on the surface in an approved storage facility. Explosives needed for day-to-day operation are taken underground via a powder truck as needed.

## **Electricity**

Electrical service to the mine is provided by an independent electric company. Power is provided to transformers located on the surface and distributed to the working areas via power centers underground.

## **Gas**

This mine has been classified as a Category III mine. Due to its proximity to gas wells, explosive gas concentrations may be encountered if there is insufficient ventilation.

## **Communication**

This is accomplished by two-way radios that are carried by mine personnel. Battery pager phones are also present in some areas of the mine.

## **Ground Control**

Ground control is maintained with roof bolts. Timbers are located in areas of the mine for secondary support.

## **Materials**

All materials to work the problem are located underground or on the surface.

## **Mining Methods**

Room and pillar method is accomplished by conventional mining techniques. Material is loaded by front end loaders into haul trucks and hauled to the surface crusher.

**Mine Maps**

The mine maps were last updated on January 5, 2023.

**Mine Equipment**

The mine currently utilizes face drills, haul trucks, loaders, bolters, and various utility vehicles for transporting personnel.

**Ventilation**

The mine is ventilated by a non-reversible 100,000 cfm fan that is located on the surface at the portal. The mine utilizes an exhausting system that enters the mine ventilation shaft and exits the portal. Old workings at the mine have been sealed off due to the limitations of the main fan. The fan controls are located on the surface.

**Water**

Normal water drainage underground is accomplished with portable pumps. The mine will sometimes have accumulation of water in areas due to power loss or pump failure.

**Notification**

All federal, state, and local officials have been notified.

**Backup Teams**

Two additional trained and fully equipped mine rescue teams are on site and are available for backup support.

# Team Briefing - Day 1

Thank you for responding to the Millwood Mine. Mine Manager Terry Phillips has arrived and received the following information:

Eight miners are scheduled on this shift - six of which entered the mine at 05:30. The remaining two miners – a Material Handler and Supervisor, remained on the surface. The Material Handler hitched a trailer to deliver supplies underground and upon entering the mine, smelled something burning and observed light smoke coming out of the portal. When he arrived at the first intersection, he dropped the trailer and returned to the surface office to inform the Supervisor to contact the underground miners and see what was going on.

The Supervisor could not contact the underground crew, so he called the Mine Manager and informed him of the smoke. The two men grabbed fire extinguishers and headed down to the mine portal but could only access part way in and had to return to the surface due to poor visibility and atmosphere.

Three hours have passed, and you will be the first team to enter the mine. There has been no communication with the miners underground. The ventilation shaft and portal are being monitored for gases and guards have been posted. The main fan at the portal is off and can be started and stopped. There is power to the mine, and it should be available for use if necessary. If you are ready and willing, we need your mine rescue team. Your objectives are listed below, and the mine manager will be available for any questions or requests. GOOD LUCK!

## **Field Problem Objectives:**

- Explore entire mine and ventilate gas concentrations in all accessible areas if it can be done safely
- Extinguish or seal all fires
- Locate missing miners and bring all survivors to surface prior to recovery of any bodies
- Your back up team will relieve you in 60 minutes