

## Atlas Coal Mine National Historic Site

### Pre-Visit Worksheet: General

#### Mine Vocabulary

Use these words to fill in the blanks and learn about the workings of the Atlas #3 Coal Mine. There are 9 blanks, and 10 words.

**Battery lamp:** A style of lamp worn by miners. The battery is worn on the belt, and the lamp slots into the cap. Like a flashlight, there is no open flame.

**Carbide lamp:** A type of lamp worn by miners. This brass lamp slots into the cap, and is fueled by calcium carbide and water. It produces an open flame, like a candle.

**Drift mine:** A style of mine you can walk straight into, because the entrance is the same level as the coal seam.

**Fireboss:** The man who uses explosives to blast down the coal. He is also responsible for the safety of miners working in his section.

**Firedamp:** A mixture of explosive gases, especially methane, found in coal mines.

**Mantrip:** The underground train ride which carried miners through the mine at the beginning and end of their shift.

**Room and Pillar mine:** A style of mining. Coal is dug from long narrow rooms. Rooms are separated by pillars of coal, which help hold up the roof. The resulting mine layout is much like an underground city.

**Shaft mine:** A style of mine you must descend an elevator to get in, because the coal seam is deep underground.

**Sub-bituminous:** The grade of coal produced in Drumheller. This relatively soft coal was ideal for home heating. As an “immature” coal, it has less methane gas than harder grades of coal.

**Tipple:** The main building in the surface plant, where coal is handled after it leaves the mine. In the tipple, coal is sorted by size and stored in large bins. From the bins, it is loaded into trains.

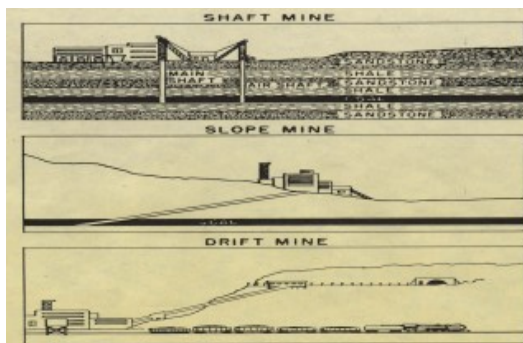
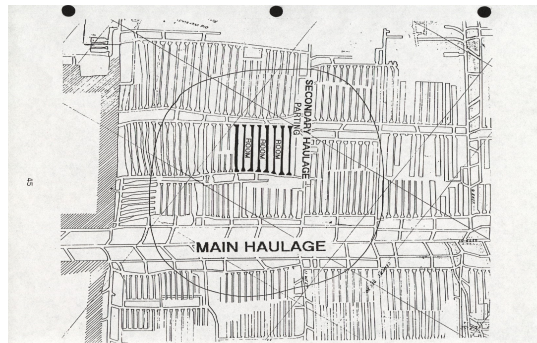


Diagram: 3 Types of Mine Entries



Map: section of a room and pillar mine

#### Workings of the Atlas #3 Coal Mine

The Atlas Coal Mine National Historic Site preserves the best example of a plains coal mine in Canada. It is the last of 139 coal mines registered in the Drumheller Valley. Coal in this region occurs in flat lying seams, which were formed in swamps during the dinosaur years. Any seam thick enough for a man to crawl through could be mined.

There are three different kinds of underground mine entries. A miner descends an elevator to get into a \_\_\_\_\_ mine. A miner walks or rides down an incline to reach a slope mine. A miner rides a coal car straight into a \_\_\_\_\_ mine. The Atlas #3 was a drift mine. A miner hiked up to the mine entrance, climbed in a coal car, and rode to the section of the mine he was assigned to.

The coal cars were hitched together and pulled by small locomotives or ponies. A mine train is called a \_\_\_\_\_ when it is carrying miners. It might take 15 to 60 minutes to get to the working section of the mine, depending on how far back this was. Most mines in Drumheller were \_\_\_\_\_ style. That meant they were laid out like an underground city. It was easy to get lost, especially because of the dark. The only light was the cap lamp worn by the miners. The most common lamp used in Drumheller was the \_\_\_\_\_ lamp, which meant each man wore an open flame on the front of his head. Each miner also carried carbide and water to refuel his lamp, in case it went out.

Mine ponies worked alongside the men in many mines. They lived underground most of the year and worked 8 hour shifts along with the men. The lower the mine ceiling, the smaller the pony. A big mine used full sized horses, whereas a small mine used ponies scarcely bigger than a dog.

Most of the mines in Drumheller used electric-powered mine machinery. The Atlas used electric machines to undercut and load coal, and battery locomotives to haul coal out of the mine. After it was hauled out of the mine, the coal was tipped onto a long conveyer belt which transported the coal to the surface plant. The main building of the surface plant is the \_\_\_\_\_. Here, the coal was sorted by size and stored in giant bins. From the tippel, coal was loaded into trains or trucks.

If you were a young man who wanted a job in the mine, you would probably start in the tippel. Once you were old enough, you could work underground. Your first job underground might be pushing empty coal cars from the coal face to the main track. From there you could progress to driving ponies, operating a machine, or digging and loading coal. If you studied hard, you might become a \_\_\_\_\_, and set the explosives to blast down the coal. You also inspected the mine to make sure the roof was strong and the air was good. You knew that \_\_\_\_\_ could seep into any coal mine and cause a deadly explosion. Luckily, the grade of coal in Drumheller is \_\_\_\_\_ - \_\_\_\_\_. This coal has less methane than harder grades of coal.

If you were a young woman in Drumheller during the mining years, your life would be linked to the mines. Very likely, your father was a miner, your brothers grew up to be miners, and you would marry a miner some day. However, you would never work in the mine yourself. Women were not allowed in the Drumheller mines.

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### Before your field trip

Write a **Curiosity Question** on the space below. What are you curious about, and want to learn from your field trip?



### After your field trip

Write the answer to your **Curiosity Question** on the back of this sheet.

