

Mine Mules:

Their Use in Coal Mines

in the United States

By Michael R. Sprowles

Coal has long been a source of heat and of power for manufacturing. People have used coal to heat their homes and fire blacksmiths' forges for centuries. In the eighteenth century, however, demand for coal rose significantly with the industrial revolution. The rise of steam-driven industry and manufacturing was only possible thanks to those most basic elements: coal and mining—a reality that extended well into the twentieth century in the United States. During the month of April 1927, 1,507,426 tons of coal moved along the Monongahela River alone.¹

To extract coal for such massive undertakings, mining companies needed to extend their operations deep into the earth. Although the industrial revolution itself would later produce mechanical advances in coal extraction, much of the earlier work was relatively simple. Explosives could be used to dislodge stone and break coal, but most of the work was done by hand. Once the coal was dislodged from the face, it had to be processed and transported to the industries which consumed it.

Getting coal to the surface was, and still is, the first move toward its final destination. In the era before World War II, it was transported to the surface in massive quantities almost exclusively in coal cars. From the beginning of the industrial revolution, many methods were used to remove coal cars from mines, among them the “mine mule.”

Mine Mules

Throughout history a menagerie of beasts has been employed to aid in human endeavors. When it comes to beasts of burden, the mule has provided exceptional service. A mule, the offspring of a male donkey

and a female horse, possesses the long ears, tufted tail, small feet, and short mane of a donkey, but with a larger and more horse-shaped body. This hybrid is particularly suited for labor, inheriting the donkey's endurance and sureness of foot, while gaining some of the horse's strength and its more cooperative temperament. Mules resist disease well, and are able to do the work of a horse under conditions harsh enough for a donkey. For these reasons, mules were considered exceptionally qualified for work in the deep recesses of mines.

A Pennsylvania newspaper of 1884 described the life of a mine mule well:

The nature of his employment inside is to draw cars in the gangways. It is a rare case when he requires more than a few days to thoroughly understand what is required of him, and thenceforth he performs his duties with unwavering, uncomplaining zeal. As soon as he has been harnessed he will take his place at the head of a "trip of cars." He will start at the right time and stop at the right place. If the driver be a new one and by mistake command him to stop short, it is probable he will be unheeded or that the mule, having stopped, will go to the rear and with his shoulder push the cars to their proper place. He learns the ropes very readily, and no regulated horse would ever dream of attempting things a mule does without a thought of its impossibility. To a mine mule nothing is impossible. Experienced drivers say mules may be taught anything, and the incredulous would experience a shock on witnessing some of the feats they are compelled to perform in the mines.²

These magnificent beasts of burden could be purchased for about two hundred dollars in 1913, and they were highly valued.³ They were able to work after age three or so and lived into their thirties on occasion.

The combination of the mule's desirable features but inability to reproduce meant that a major business in mule breeding existed. In 1884, many of these animals came from Kentucky, although other Midwestern states such as Illinois, Missouri, and Iowa were producing good stocks as well. Generally, mules of that era were the offspring of Spanish jacks, as male donkeys were called, and Norman mares.⁴

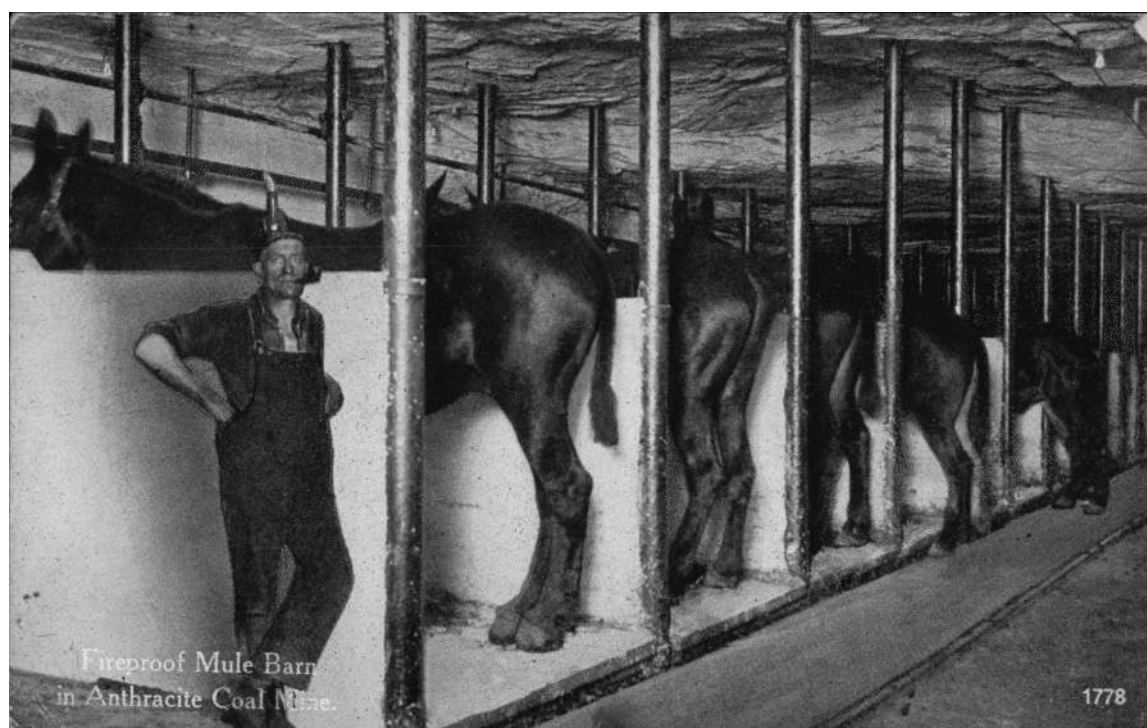
Life in the Mines

To reduce the amount of time required to move mules from their stables to their workplaces, they were often stabled in the mines themselves. The mules would only see the world outside of the coal mine on a handful of occasions. Whenever mules needed new shoes or became sick they were moved to the surface to see the blacksmith or veterinarian. Otherwise, they only saw sunlight after retirement from the mine or during workers' strikes or other times when the mine was shut down.

So much time spent underground affected their sight. "Their vision [was] sharpened by the perpetual night, so that they [acquired] the gift of the owl to penetrate far into the inky darkness of the deep, damp pit."⁵ This adjustment in their light sensitivity made it necessary to blindfold them for a time when bringing them to the surface, leading to the myth that mine mules were blinded by their years underground.

A majority of a mule's time was spent in the mines however, and their stables had all of the general amenities. Feed and straw were brought to them in coal cars, and they were separated, two to a stall, when inside the stable.⁶ Their harnesses and other working gear were hung nearby, as in any other stable.

There were a few differences in these underground stables, however. Steel doors were always mounted at the entrance to the stables to prevent mine rats from infesting their grain. On occasion, lights would also be left illuminated for them as



Mine mules in their stalls at an unknown anthracite mine. (Courtesy of CardCow.com.)

“some of them have been known to have piteous fears of being left in the dead darkness. [A boy] said that sometimes the only way he could get his team to move was to run ahead of them with the light. Afraid of the darkness, they would follow.”⁷

Mules and their Masters

The boys who worked with these mules were known as drivers. The Reverend John McDowell, a former coal miner himself, recounted his experiences with these lads in 1902:

The driver boy must go down the shaft in time to clean and harness his mule, bring him to the foot of the shaft and hitch him to a trip of empty cars before seven o'clock. This trip of cars varies from four to seven according to the number of miners. The driver takes the empty cars to the working places and returns them loaded to the foot of the shaft. . . . There are today ten thousand drivers in the anthracite coal

mines. These boys are in constant danger, not only of falling roof and exploding gas, but of being crushed by the cars. Their pay varies from \$1.10 to \$1.25 [per day], from which sum they supply their own lamps, cotton and oil.⁸

Being crushed by cars was a danger not just to the drivers, but to the mules as well, although the animals were often smart enough to get out of the way if the passage allowed.⁹ And for the drivers, the mules themselves could be quite dangerous. In October 1897, an Illinois newspaper reported that “last Thursday while assisting the blacksmith [to] put shoes on one of [the new mules], Mike Shea was kicked in the face. His upper jaw was smashed in, and it will likely cause Mike to be disfigured for life.”¹⁰

Despite such dangers, many drivers and other mineworkers grew quite close to their mules. Mules were given names, often quite affectionate and familiar, such as Topsy, Tom, Skip, and Daisy.¹¹ Many recorded instances exist of these ani-

mals being treated not unlike a pet. Mine workers often spent their breaks with the mules, perhaps because they reminded them of the world outside of the darkness. Often mules would be fed during these breaks as well—everything from bread to chewing tobacco.

Although mules were often treated well, not all mule drivers were kind. A stubborn mule or one that did not work was often beaten, as these behaviors slowed the production of miners paid by the ton. It was up to the “barn boss” to ensure that a mine’s mules were generally good workers. This was not always the case, as mules are often stubborn by nature. Benjamin Trunzo, of Beyer, Pennsylvania, recalled that

some were so smart they’d stand real still while you harnessed them, and hooked the cars to the singletree. Then with one quick motion, they’d lift a hind hoof and unhook the cars and just stand there and grin at you or run off. . . . Part of my job as barn boss was to take the green mules into the mines to try them out. I’d put lines on them and see if they’d obey my commands. If they acted real mean or wouldn’t work, we’d send them back.¹²

If found to be good workers, however, mules remained in a mine and were often treated well by the drivers and other mine workers.

Retirement

Although many mules died in the mines, many more reached, or rather achieved, a retirement of sorts. After many years of labor in the coal mines, mules could leave behind the darkness they had known most of their lives. One such mule was “Old Jack,” who retired after nineteen years under ground.¹³ After retirement, a former mine mule had to become accustomed to new surroundings once again. Sunshine and fresh air replaced the damp, dark workings. Mules were of-

ten confused by some of the features of their new surroundings. A 1930 newspaper recounted such a circumstance:

Timothy, a 16 year old mule, has discovered what grass is for, after living in ignorance for many years. Tim was brought to the surface after being 12 years in a coal mine. He was brought out blindfolded. After dark the blindfold was removed and Tim was turned out to pasture. When the sun rose and Tim saw where he was he was the most surprised mule in the world. No black sooty tunnels were around him, only sunshine and green grass. Thinking the grass was to lie on, Tim lay down for a long time. Then he saw a cow eating grass and he thought he would try it. The result was pleasing to the old mule. Tim knew all about hay, but green grass was something entirely new. Not since he was a four years old had he eaten any grass. One of 16 mules brought to the surface after many years underground, Tim will be used on the surface this winter.¹⁴

This account sheds a bit of light on a mule’s transition from the darkness of the mine, but it also mentions another point. After a mule “retired” from underground, it seldom retired from work. A coal company owned the mule and the company’s goal was to turn profit. So, as long as the company subsisted the mule, the mule would continue to labor for the company. Generally speaking, however, surface work was less difficult than that underground, as the mules were usually advanced in age.

Alternatives to Mine Mules

Despite the inherent problems with the mule discussed above, it generally remained the preferred animal under ground. Other animals, such as goats, and even people hauled coal carts

through the mines, but due to its greater capacity for work and more agreeable temperament, the mule was preferred over its living alternatives. Meanwhile, miners developed mechanical means of moving coal.

As steam power increased the need for coal, so it began to be used in its harvesting. The steam locomotive could do the work of many mules around the coal yard and at diminished cost. However, the steam locomotive produced great quantities of noxious and asphyxiating gases, making it unsuitable for use underground. Some companies experimented with steam engines in coal mines, but ultimately prohibited their use underground.¹⁵ So, miners continued to use the mule as the primary means of transporting coal to the surface through the nineteenth century.¹⁶

By 1897, the “electric mule” was already haul-

ing coal from the depths of many mines.¹⁷ The electric locomotive produced from fifty to one hundred horsepower, lacked the noxious fumes emitted by a steam locomotive, and was more easily controlled and cheaper to maintain than a mule.

The compressed-air locomotive offered another alternative to the mule’s employment underground. The *Wellsboro Gazette*, describing its introduction in a 1902 article, noted that “the machine which will displace the boy and the mule has been sought for during many years, and the operators have at last found it. A test has been made by the Philadelphia and Reading Coal Company, and has been so satisfactory that the company is now preparing to place the compressed air locomotives in all its mines.”¹⁸ The compressed air locomotive did not prove as successful as the



Goats pulling a load of coal from a mine, date and place unknown. (Courtesy of David Illig, www.Perryopolis.com.)

electric, however, and the mine mule continued to prove its worth underground, even against the electric locomotive, for years to come.

The Persistence of Mine Mules

Mules were still widely used in coal mines in the United States for a generation after electric and compressed-air locomotives became available. A 1927 estimate found 37,000 mules and other “mine animals” working nationally, compared to 14,280 electric locomotives.¹⁹ Although the public believed that the electric locomotive had replaced the mine mule, a Pennsylvania newspaper reported that same year that

contrary to the general opinion that the mine mule is being banished by the widespread use of electricity, . . . there are more animals at work today than years ago. . . . Electricity is for the haulage on main transportation channels of the mines, but the humble mule still labors in the far flung workings which feed these main haulage lines. There are more mules in the mines today than there were 20 years ago.²⁰

Throughout the following decades the number of mules dwindled, but the animals did not disappear from underground altogether. In 1970, mules still moved coal at small mines along the New Mexico–Colorado border.²¹ By then, however, the electric locomotive had generally replaced the mine mule in the larger coal mines, even as the demand for coal dwindled in the age of petroleum-powered locomotives and indus-

try. Animal welfare and safety regulations of the 1960s and early 1970s finally freed this beast of its burden within the mines of the United States.²²

Conclusion

In the early industrial age, the mine mule was just as important as the pick and shovel, if not more so. For a century and more, mules ensured that enough coal emerged from the mines to meet the demands of our rapidly expanding industrial economy, and even developed a certain mystique among those familiar with the mining industry while doing so. The use of mules, chosen partially for their endurance, lasted as long in the U.S. as the age of industry itself. New technologies and methods did not displace the mule from mining completely until traditional coal mining itself declined. Then, as the industrial era drew to a close, the mine mule trudged out of the darkness in which it had toiled for so many years and marched up into the light for one last time. ■

Michael R. Sprowles was born and raised in western Pennsylvania. He obtained his bachelor's degree in Anthropology from Kutztown University in Pennsylvania, and will receive his M.A. in Applied Archaeology from Indiana University of Pennsylvania this December. His thesis involves geophysical investigations and ground-truthing of the Allegheny Portage Railroad Industrial Canal Site. He is currently a research fellow at Ft. Drum military installation in New York state, conducting historic cemetery surveys and geophysical investigations. His research interests include nineteenth-century industrial archaeology, remote sensing, and avocational Viking studies.

Notes:

1. *Connellsville Weekly Courier* (Connellsville, PA), "Mine Mules Not Becoming Extinct," 2 June 1927.
2. *Indiana Progress* (Indiana, PA), "Mule Life in Mines," 27 Mar. 1884.
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4. *Indiana Progress*, 27 Mar. 1884.
5. *Indiana Progress*, 27 Mar. 1884.
6. Eileen Mountjoy Cooper, "'Spraggers,' Sunshine Lamps Now Part of Industry's Past," in "Coal Dust: The Early Mining Industry of Indiana County," under "Exhibits and Articles," at Special Collections & University Archives, Indiana University of Pennsylvania, website: www.lib.iup.edu/spec_coll.
7. Stephen Crane, "In the Depths of a Coal Mine," *McClure's Magazine* 3, no. 3 (Aug. 1894): 195-209.
8. Rev. John McDowell, *The Slow Process of the Boy who Starts in a Breaker, and Ends, an Old Man in the Breaker—as Told by a Man who was Once a Miner* (New York: Doubleday, Page and Co., 1902), 2659.
9. *Indiana Progress*, 27 Mar. 1884.
10. *Minonk News* (Minonk, IL), 14 Oct. 1897.
11. Cooper, "'Spraggers,' Sunshine Lamps Now Part of Industry's Past."
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13. *Huntington Daily News* (Huntington, PA), "Old Jack's Claim to Fame Challenged by Broad Top," 16 Jan. 1946.
14. *New Castle News* (New Castle, PA), "Eats First Grass After 12 Years," 11 Dec. 1930.
15. *Indiana Progress*, 27 Mar. 1884.
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17. *Xenia Daily Gazette* (Xenia, OH), "The Electric Mule," 12 Nov. 1897.
18. *Wellsboro Gazette*, "Turn Out the Mules," 3 Apr. 1902.
19. *Chester Times*, "Electric Engines in Mines Replace Mules," 27 Aug. 1927.
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21. *Mansfield News Journal* (Mansfield, OH), "Mules Haul Coal from Mines," 13 Mar. 1970.
22. *Huntington Daily News*, Ron Morgan, "Around the Broad Top," 24 May 1995.