

The Barnes–Hecker, 1926:

Michigan’s Worst

Mine Disaster

By Robert M. Neil

At 11:20 on the morning of Wednesday, 3 November 1926 an avalanche of water and mud burst into the underground workings of the Barnes–Hecker iron mine near Ishpeming, Michigan, and took the lives of fifty-one men. The sole survivor of the tragedy managed to save himself by climbing eight hundred feet up the vertical shaft ladder. The Cleveland–Cliffs Iron Company, headquartered in Cleveland, Ohio, operated the mine on the Marquette Iron Range.

It was a late fall morning on the remote Upper Peninsula of Michigan. At 7:30 a.m. the Barnes–Hecker Mine’s day shift of fifty-one men was preparing to go underground. One of the assembled men was not a Cleveland–Cliffs employee. He was William E. Hill, Marquette County mine inspector, reelected to his office the previous day.¹ He was at the Barnes–Hecker to inspect its workings with William F. Tippet, the mine captain. The mine was 1,060 feet deep and worked on the 600, 800, and 1000 levels.

Underground the shift proceeded normally on the three operating levels until 11:20. At that moment, Wilford Wills and John Hanna, tramming on the 800 level, heard a muffled dynamite blast in the workings above. The blast was quickly followed by a strong rush of air. The pair got off of their electric locomotive and then were knocked down by a much stronger air blast that hurt their ears and blew out their carbide hat lamps.²

Wills told his partner, “I think we better get out of here.” In the dark, the two frightened men groped their way back along the track four hundred feet to the shaft. There they briefly warned several other men of the danger and began to climb the vertical ladder to the surface, eight hundred feet above. Wills, in the lead, climbed frantically on the

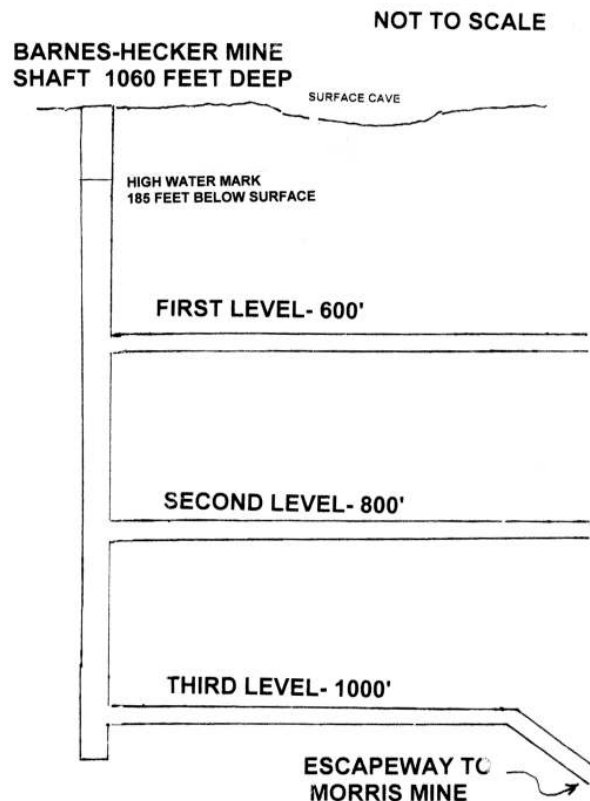
wet, muddy ladder. His gloves kept slipping on the rungs, so he tore them off with his teeth as he climbed. Three other men desperately began climbing the ladder behind him.

As they climbed, an overwhelming flood of water and debris broke loose in the upper workings and cascaded down the raises and drifts and into the shaft itself. As the men climbed for their lives, the rising maelstrom of water boiling up the shaft overtook them, knocking all except Wills off the ladder and to their deaths. Wills, totally exhausted, continued to climb.

Meanwhile three maintenance employees, thinking that the noise was a broken compressed-air line, climbed down the shaft from the surface. They met Wills climbing up about three hundred



Wilford Wills, the sole survivor of the Barnes-Hecker flood, taken one week after the disaster. (Used by permission of the Marquette County Historical Society, all rights reserved.)



A cross-section of the Barnes-Hecker Mine, drawn by the author, showing the shaft, drifts, and escapeway. The ore was soft hematite, mined by modified top slicing in the sublevel caving method.

feet below the surface. He gasped that there were men below him, but they could see and hear nothing. On the verge of losing consciousness, Wills kept climbing and finally made it to the surface. He collapsed at the shaft collar in intense pain with leg cramps. He was given smelling salts and revived in the mine dry.³

Wilford Wills had climbed eight hundred feet in fourteen minutes, an incredible feat. Wills, twenty-two and in excellent physical condition, was the sole survivor of this terrible tragedy. He had worked at the Barnes-Hecker for three years. All fifty of his fellow workers and the inspector perished in the mine. Within fifteen minutes water and debris had flooded to within 185 feet of the shaft collar.⁴

Charles J. Stakel was superintendent of the



Charles J. Stakel, superintendent of the Barnes–Hecker, Morris and Lloyd mines. (From “Memoirs of Charles Stakel,” used by permission of the Marquette County Historical Society, all rights reserved.)

North Lake District mines, which consisted of the Barnes–Hecker, the Morris, and the Lloyd. Stakel, forty-three at the time of the disaster, was a graduate of the Michigan College of Mines and highly regarded as a mining professional.

At breakfast on the morning of 3 November, Stakel mentioned to his wife that he planned to go underground at the Barnes–Hecker that day. She reminded him that she had an appointment in town and would need their car. Since the Barnes–Hecker was two and a half miles away, he decided to walk the half mile to the Morris and go underground there instead. His wife’s appointment saved Charles Stakel’s life.⁵

At about 11:30, as Stakel was inspecting

the Morris with the mine captain, a motorman rushed up and said, “Mr. Stakel, it’s an emergency, they need you at the Barnes–Hecker right away!” Stakel quickly took the cage to the surface and, still wearing his wet mine clothes, rode the running board of a worker’s car over to the Barnes–Hecker.

Stakel arrived at the Barnes–Hecker to confront a mine superintendent’s worst nightmare: a mine flooded with water, mud, and debris, and an entire shift of men trapped underground. Ed Hillman, the mine’s pipe foreman, quickly filled him in on the dire situation. Apparently the blast at 11:20 had broken into a large void, or vug, which ran steeply up through the stable rock into the soft overburden above. The resulting cave-in drained a nearby lake, precipitating an overwhelming torrent of water and quicksand into the workings on the 600 level.

This deluge burst into the shaft, trapping everyone on the two levels below it, and within fifteen minutes had flooded the mine to 185 feet below the surface. Hillman also pointed out a large new surface crater, 300 feet long, 150 feet wide, and 100 feet deep, about a thousand feet southeast of the shaft, the source of the water that inundated the mine. That water had been contained in the saturated glacial overburden, which was about two hundred feet thick in the area.⁶

The ore being mined at the Barnes–Hecker was soft hematite and the orebody was relatively small. The mining method was called sublevel caving, a timber-intensive method especially suited for mining soft, wet ore bodies. Cleveland–Cliffs had used this caving method with success on the Marquette Iron Range for more than fifty years, and it was also being used locally at the Maas and Negaunee mines. Because of previous experience with water problems at the Barnes–Hecker, the company decided to leave a two hundred-foot-thick horizontal pillar between the top of the mining area and the ledge below the glacial overburden. Officials felt that this would greatly reduce the possibility of any mining activity break-

ing through into the wet glacial material above.

The caving operation began with miners driving two raises at a 65-degree angle to the top of the ore block. One of the raises was used to drop ore, while the other contained a ladder for access. At the top of the block, a horizontal subdrift was driven and timbered to the limit of the ore. Next the ore was removed by drilling and blasting, scraped into the raise, and trammed to the shaft from chutes on the level below.

When mining on a subdrift was completed, the entire opening was filled with timber lagging, and the subdrift collapsed by deliberately blasting down all of the standing timber sets. This was done to create a thick, semi-pervious mat of crushed timber with no voids, in order to provide overhead protection from water and caving material. After mining the top subdrift, miners would

move twelve feet down the raises, cut another sub directly below the first, and repeat the mining cycle. This sequence was repeated twelve times to mine the ore body down to the first level, a vertical distance of 150 feet.⁷

The inherent safety of the caving method was created by the accumulation of crushed timber on each sub-drift as mining progressed downward. This formed a semi-pervious canopy above the mining areas to keep out water and other soft materials. The timber mat was frequently inspected to verify that it was crushed flat, with no openings or voids evident in the caved zones. At the time of the accident, the timber mat in the area was estimated to be fifty to sixty feet thick. For added safety, the mine's plan left a bed of 250 feet of rock in place above the mined zone to retain the unstable ground above.⁸



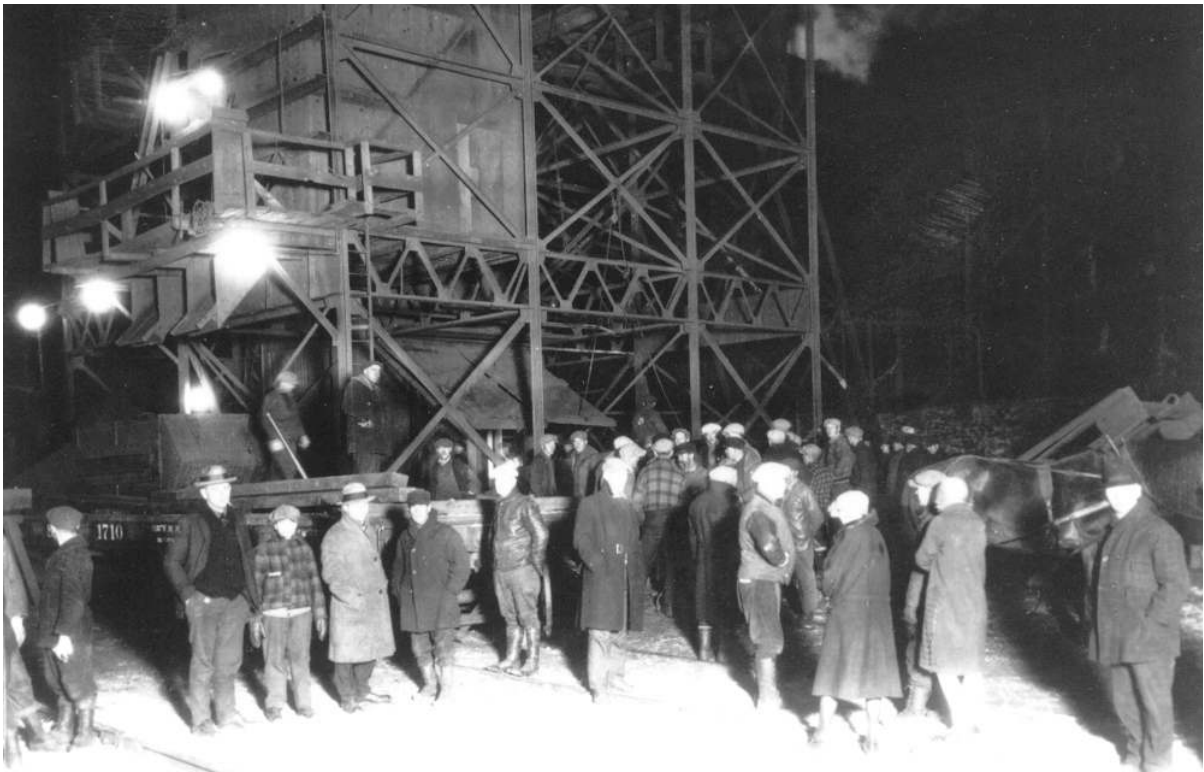
Members of the Barnes–Hecker crew pose underground two months prior to the accident. The man kneeling at left is William Tippett, the mine captain; the man standing at left is Peter Mongiat, pumpman; the others are unidentified. They all died in the disaster. (Used by permission of the Marquette County Historical Society, all rights reserved.)

Soon after he arrived at the Barnes–Hecker, Stakel realized that all of the men in the mine were irretrievably lost, and that he was dealing with a recovery, rather than a rescue operation. S. R. Elliott, the company’s assistant general manager, was in Crystal Falls, two hours away. Thus Stakel was in charge on the scene and compelled to make decisions quickly to prevent further loss of life. He immediately ordered the crews of the adjoining Morris and Lloyd mines hoisted to surface. This was vital because the Barnes–Hecker’s escapeway connected to the Morris’ sixth level and could flood the adjacent mine, about a mile and a half away. Fortunately, the escapeway was plugged with debris, so extensive flooding did not occur.

Meanwhile, S. R. Elliott arrived at the mine. After assessing the situation, he, too, concluded that there were no additional survivors. He requisitioned emergency pumping equipment from other Cleveland–Cliffs mines in the dis-

trict and ordered special skips designed to hoist water, called bailers, installed. At about 4 p.m., Stakel, company safety director William Conibear, and four other supervisors went down to the Morris’ sixth level to check the escapeway from the Barnes–Hecker. They walked warily along the main level drift encountering an increasing amount of sand, mud, and water. As the men pushed on in waist-deep water, they discovered seven severely battered bodies, among them those of William Tippett, mine captain, and William Hill, county mine inspector. At 8 p.m. these bodies were taken to the surface.⁹

Word of the disaster traveled quickly through the tight-knit mining community and groups of relatives and friends clustered around the Barnes–Hecker headframe waiting for news of the men below that would never come. Many maintained this vigil into the early morning hours. Among them was Ernest G. Bengry, later a long-time Cleveland–Cliffs employee, who was a boy of



The crowd gathered at the Barnes–Hecker shaft during the night after the disaster. (Used by permission of the Marquette County Historical Society, all rights reserved.)

about twelve at the time. He was at the mine with his father on the night of the disaster because his brother-in-law, Walter Tippet, was among those trapped underground. Tippet, thirty-one years old, married to Ernest's older sister, and father of four, died working his first shift in the mine. Bengry vividly remembered the noise of water surging in the shaft, which convinced him that no one could be alive in the mine.¹⁰

The following morning, a volunteer crew of experienced captains and miners drawn from all of the Cleveland-Cliffs mines on the range assembled to reclaim the water-filled shaft. Their job was backbreaking and dangerous. Shattered timbers, pipe, and debris plugged the shaft like a log jam. Progress was agonizingly slow; the heart-breaking work continuing for several months.

The company also moved quickly to deal with the human dimensions of a disaster that had widowed 42 women and left 132 minor children fatherless. A medical doctor and four nurses were assigned to visit the bereaved in their homes. They were able to provide for immediate orders of food and fuel, and to assure grieving families of further assistance. Cleveland-Cliffs temporarily waived the charges for rent, electricity, and water for those in company homes, and the American Red Cross and other local civic organizations also provided substantial assistance.

Verbal communication was an ongoing problem during this relief effort. Thirty-one of the victims, 61 percent, were born in other countries, predominantly Finland. This meant that some of the widows were not fluent in English, so friends and neighbors assisted and interpreted in many cases.

Even with this emergency relief, surviving family members faced serious long-term financial concerns. Cleveland-Cliffs Iron Company was self-insured under the Michigan Workman's Compensation Law. In 1926 that law provided for three hundred weekly payments of fourteen dollars to each widow, half of the average mining wage of about twenty-eight dollars per week.

53 MINERS KILLED IN DELUGE OF MUD

**Cave-In Under Lake Starts
Rush of Sand and Water,
Engulfing Michigan Pit.**

SEVEN TRAPPED IN TUNNEL

**They Are Overtaken by Torrent
in Only Avenue of Escape—
All Hope Abandoned.**

The headline of a front-page New York Times article of 4 November 1926 reporting the Barnes-Hecker disaster. The paper corrected the death toll to fifty-one in an article on 6 November.

In order to ease this financial burden, William G. Mather, president of Cleveland-Cliffs, personally authorized raising the weekly compensation to twenty-eight dollars, double the required rate. This decision essentially replaced the victims' take-home pay for the six-year period of compensation. County mine inspector William Hill was included on the compensation payroll, even though he was not a Cleveland-Cliffs employee.¹¹

In the aftermath of the disaster, rehabilitation work continued in the flooded Barnes-Hecker shaft. Crews doggedly pushing this brutal, hazardous task recovered three additional bodies in the shaft, those of the men climbing the ladder below Wilford Wills. This increased recovery to a final total of ten. Work continued for more than two months, until the shaft was repaired down to the 600 level.

As cleanup continued at the 600-level shaft station, Charles Stakel got a phone call from S. R. Elliott, who told him to get the men out of the mine immediately. After discussions with prominent mining consultants, the company had decided to abandon the mine and seal it permanently. The word, delivered 20 November, came none too soon. Within thirty minutes after the men had been hoisted to surface a plug of debris broke loose and the mine flooded again. Thus, a further loss of life was narrowly averted.¹²

The final chapter of the Barnes–Hecker disaster came with the Marquette County Coroner’s Inquest, held in Ishpeming on 2 February 1927. Mine officials, supervisors, and other employees with first-hand knowledge of the accident gave sworn testimony. That of Assistant General Manager S. R. Elliott and Mine Superintendent Charles Stakel was particularly relevant, as they detailed the mine planning and methods used at the Barnes–Hecker.

Elliott described the original mine development during 1920 as difficult and troublesome. After completing the shaft, while driving the main drifts on the three operating levels, miners encountered large volumes of water that temporarily shut down the mine until larger pumps could be installed. The water problems persisted until 1922, when a large surface drainage system was constructed. This system consisted of more than three miles of large ditches to drain away the water overlying the orebody. This scheme greatly reduced water flow into the mine. At the time of the disaster the mine pumped about seven hundred gallons per minute, and the elevated stopping areas were relatively dry.

The coroner’s inquest lasted only one day and apparently did not fix responsibility for the disaster. Experts regarded the caving system as the saf-

est mining method to use in soft-ore mines, and it had been successfully used in similar mining conditions in other mines on the Marquette Range. On 6 November 1926, prior to the inquest, twelve mining executives from the Lake Superior District met in Ishpeming, Michigan. Their meeting was advisory, with no legal status, but concluded “that the mine was operated according to the best mining practice and that all care possible was taken by the mining company to safeguard their employees and that the accident was due to causes that could not have been foreseen.”¹³

If that was so, then the only remaining explanation is that blasting above the first level broke into the saturated overburden, which quickly flooded the mine. But, in my view, the basic cause of the accident was the failure of management to correctly assess the danger posed by the tremendous volume of water imbedded in the glacial drift overlying the mine workings.

Some sentiment was expressed late in 1926 for an independent state investigation, but that went nowhere. The payment of double workman’s compensation, the fact that the Workman’s Compensation Act was a sole remedy statute, prevailing attitudes, and the relative poverty of the



The Barnes–Hecker Mine memorial, placed on the concrete shaft cap. (Courtesy of the Cliffs Shaft Mine Museum.)

victims probably explain the absence of independent litigation.

For their part, company officials wanted to move on, perhaps exhibiting a callousness not atypical of that era. The crisis was handled locally in Ishpeming, with very little involvement from Cleveland–Cliffs’ home office in Cleveland. The company’s chief public relations concern seemed to be recovering the remaining bodies, a task that ultimately proved impossible. Officials provided little information to the press; the local and Detroit papers carried only brief accounts of the disaster quite similar to those in the *New York Times*.

In the months following the shutdown, the company removed the headframe, the mine buildings, and the company houses at the Barnes–Hecker mine site. Employees and families were moved to other company homes in the area. Many of the victims’ third generation of descendants still live in the area, a number of them em-

ployed by Cleveland–Cliffs. Today, eighty-two years after the tragedy, the site has reverted to nature. All that remains is a simple obelisk on the concrete shaft cap. This memorial, inscribed with the names of all fifty-one of the Barnes–Hecker victims, forty-one of whom lie beneath it, is the only physical reminder of the worst mining disaster in Michigan’s history. ■

Robert M. Neil attended Michigan Tech and has worked in engineering and safety positions for Climax Molybdenum Company, Climax, Colorado; Hanna Mining Company, Iron River, Michigan; White Pine Copper Company, White Pine, Michigan; and Cleveland–Cliffs, Inc., Ishpeming, Michigan, and Cleveland, Ohio. He retired in 1987 as corporate director of safety and health for Cleveland–Cliffs. He wishes to thank Mr. Leo LaFond, mining historian at the Cliffs Shaft Mining Museum for his able assistance in providing the author with background and context for this article. Mr. LaFond’s grandfather, Louis Trudell, died in the disaster, leaving a widow and seven minor children.

Notes:

1. Thomas G. Friggens, *No Tears In Heaven: The 1926 Barnes–Hecker Mine Disaster* (2nd ed.), (Lansing: Michigan History Magazine, 2002), 18.
2. Wilford Wills, testimony, “Marquette County Coroner’s Inquest,” 2 Feb. 1927, 17. Transcript at Longyear Library, Marquette County Historical Society.
3. Wills, “Coroner’s Inquest,” 22.
4. Friggens, *No Tears in Heaven*, 21.
5. Charles Stakel, “Memoirs of Charles Stakel,” Marquette County Historical Society, 1994, 99-108.
6. Edward Hillman, pipe foreman, testimony, “Marquette County Coroner’s Inquest,” 21. “53 Miners Killed in Deluge of Mud,” *New York Times*, 4 Nov. 1926, 1.
7. S. R. Elliott, Cleveland–Cliffs assistant general manager, testimony, “Marquette County Coroner’s Inquest,” 25-6. Elliott’s testimony describes the mining method and mine planning in considerable detail.
8. “53 Miners Killed,” *New York Times*, 4 Nov. 1926.
9. Friggens, *No Tears in Heaven*, 22.
10. Ernest G. Bengry, interviewed by the author, 12 Jan. 1977.
11. Friggens, *No Tears in Heaven*, 25.
12. Elliott, “Coroner’s Inquest,” 36-7. Testimony cites F. W. Adgate, a consultant from the American Foundation Company, as advising Elliott to cease recovery operations and permanently seal the mine. The mine had been kept open mainly due to the desire to recover bodies. By the time the coroner’s inquest convened, the mine was officially closed.
13. Unfortunately, the inquest transcript contains only verbatim testimony, without conclusions about causes or blame. Apparently, the conclusions from the prior mining executives’ conference were adopted. A summary of that meeting was incorporated into the inquest transcript.