

Smith Mine
1.5 miles west of the town of Bearcreek
Red Lodge Vicinity
Carbon County
Montana

HAER No. MT-32

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PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR
WASHINGTON, D.C. 20013

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HISTORIC AMERICAN ENGINEERING RECORD
THE SMITH COAL MINE

I. INTRODUCTION

Location: The Smith mine is located on both the north and south sides of Bear Creek about 1 1/2 miles west of the town of Bearcreek and about three miles south-east of Red Lodge in Carbon County, Montana. The site is found in section 1, T8S, R20E and Section 6, T8S, R21E (see Figure 1).

Quad: Red Lodge East, Mont. - 1969

UTM: A 12/5001250/642900
B 12/5002500

Date of Construction: c. 1900 to 1953

Present Owner: James Slack
Red Lodge, Montana

Present Use: Abandoned.

Significance: In 1943 an explosion inside the Smith mine resulted in the death of 74 men making the mine the tragic site of the worst coal mine disaster in Montana history. The mine is also significant as one of the largest coal mines in Carbon County and one which was in continuous production for over half a century. The mine's life span coincides with, and is an example of the early beginning, productive development, decline and end of underground coal mining in Montana.

Historian: Paul Anderson, GCM Services, Inc. Butte, Montana, December 1986.

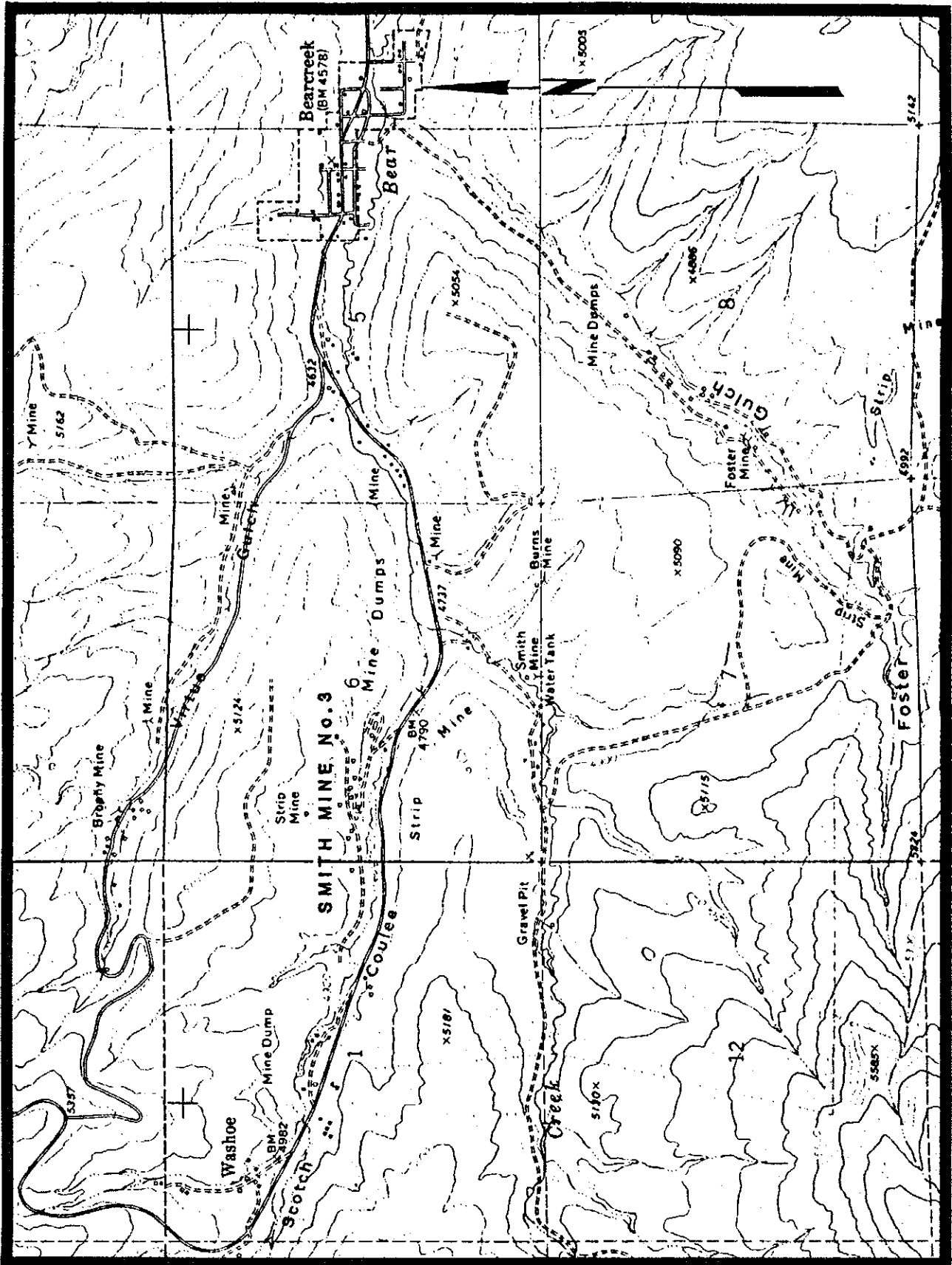


Figure 1.
Area of the Smith Mine
(U.S.G.S. Quad. Red Lodge East, Mont. - 1969)

II. HISTORY

A. BACKGROUND

"We're all going to get it one of these times, caught like rats in a trap" (Sam Alexander, coal miner).

The Smith mine is nestled in the narrow coulees near the head waters of Bear Creek at the east base of the Beartooth Mountain range. It was apparent from the time the area was first visited by white men in the 1860s that it was destined to be an important coal mining center. A colorful early prospector and hunter, James "Yankee Jim" George, reportedly first discovered the area's coal seams in 1866. He interested a number of Montana investors in the area but no actual mining was begun, primarily because most of the entrepreneurs were waiting for a railroad line to be built into the area.[1]

It was only a question of time, however, before mines would be opened. The coals in the field were a clean, high grade sub-bituminous variety suitable for railroads and industry as well as for use as a domestic fuel. The field contained about a dozen workable coal beds with some seams as much as eight feet thick. The seams were easily accessible from outcrops along the stream courses and early reports indicated there would be almost no problems with water or gas - a sadly ironic statement in light of the Smith mine's subsequent history.[2]

During the 1880s and 1890s the railroads were laying tracks across Montana while in Butte, Anaconda and Great Falls the mining, smelting and refining industry were in the process of being developed on a massive scale. The need for coal to fuel this development was crucial and the Red Lodge-Bear Creek coal field was a logical source.

The properties of "Yankee Jim" George had, by this time, been bought by Bozeman entrepreneur Walter Cooper who founded the town of Red Lodge and developed the Rocky Fork Coal Company. The company opened the area's first mine in 1887. Two years later the Northern Pacific completed its branch line from Laurel to Red Lodge. By 1891 the Rocky Fork Coal Company had 400 miners working in its East Side mine and, for a brief period, Red Lodge was the largest coal producing center in the state.[3]

The development of the Bear Creek field was delayed for almost two decades due to a quirk of geography. Although the Red Lodge mines along the Rock Creek valley and the Bear Creek coulees are only a few miles apart, they are separated by a high divide which prevented extending the railroad line from Red Lodge to the Bear Creek area. By 1906 a rail line had finally been constructed up the Clark's Fork valley from the town of Bridger to the Bear Creek area. The line was the work of S. A. Hall who originally envisioned building the railroad over the Beartooth mountains to Cooke City. This was part of a grandiose scheme Hall was promoting which would tie the Cooke City mines with a smelter Hall planned to build at Belfry. The operation would then be fueled by coal from the Bear Creek mines. Nothing came of these ambitious plans except for the building of the Yellowstone Park Railroad (later called the "Montana, Wyoming and Southern Railroad") but this was enough to assure the success of the Bear Creek mines. Within a year of the railroad's completion, the Bear Creek field was a rival to Red Lodge as a coal producing center.[4]

B. DEVELOPMENT OF THE SMITH MINE

The first development of the Smith mine was begun around 1900 by Elijah Smith and George T. Lamport who formed the Montana Fuel

and Iron Company (shortly after the name would be changed to the "Montana Coal and Iron Company"). Initially the operation was as a small-scale wagon mine with production of about 6000 tons of coal a year which had to be hauled by wagons over the divide to Red Lodge. With the completion of the railroad to the Bear Creek mines, the Smith mine rapidly expanded into a major commercial operation.[5]

Under the management of W. W. Worthington, new entries were driven and by 1907 the company's mine on Scotch Coulee (called the "No. 3 Smith Mine") had extended a main gangway and air course for nearly 1000 feet to the northwest into the No. 2 seam. Two other entries ran east and had a total of 19 rooms. Another entry was opened at this time into the No. 3 seam on the north side of the creek. A carless hoist was installed in the No. 3 seam and an electric locomotive was installed on the main line in the mine, although horses and mules were still used elsewhere in the workings.[6]

Surface facilities were also expanded with a modern tibble, box-car loader, shops and other buildings. The company negotiated a trade of 840 acres of company lands for 620 acres of the Northwestern Improvement Company lands which consolidated acreage of both companies. In addition, 1907 saw the opening of a new mine in the No. 3 seam in Foster Gulch.[7] The company was employing 40 miners and 15 outside men who produced 18,000 tons of coal, most of which was sold to towns along the Northern Pacific Railway.[8] The next year 21,810 tons were produced. In 1910 the figure was increased to 59,306 tons and by 1912 it had risen to 90,905 tons.[9] Improvements were made in the mine's ventilation system and the mine was reported to be safe and in good condition.[10]

During World War 1 the mine continued to expand production to meet war-time demands. The Foster Gulch mines were expanded and eventually the underground workings were connected with those of the

No. 3 Smith, making them the largest underground workings in the area. Following the war, production continued at a high level as demand remained high throughout the region. North Dakota coal mines had not yet been developed and there was a great demand for coal for the area's thousands of steam threshing machines in addition to the regular residential and industrial customers throughout the Dakotas, Minnesota, Montana, Idaho and Washington.[11]

The Smith mine continued to be a major producer during the lean times of the late 1920s and 1930s when many of the area's other mines were closed. In spite of sporadic labor troubles and increased competition from the newly developed strip mine at Colstrip the company was able to negotiate a contract with the Northern Pacific Railway in 1933 making it possible for annual production to be maintained at approximately 300,000 tons during the 1930s. The company made a large investment in a Stamp Air Cleaning Plant (later supplanted by a McNalley-Pittsburgh Coal Washer plant) which improved the quality of the stoker and nut size coal sold by the mine. With the outbreak of World War II, demand for coal increased rapidly and the mine's production grew to over 400,000 tons annually.[12]

The mine was not without its problems. Ironically, in light of what was to happen, the main problem at the Smith No. 3 was water. Underground springs and streams resulted in a large, constant flow of water into the mine which required large water pumps to work continuously to keep the mine dry. Sam Alexander, a miner at the Smith No. 3, told a New Year's Eve gathering in 1943, "We're all going to get it one of these times, caught like rats in a trap." [13] Alexander's premonition would be tragically fulfilled for he would die in the Smith No. 3 but not, as he thought, by drowning.

The Smith No. 3 also had a reputation as a "gassy" mine. The company maintained that the gassy area was the unused No. 2 seam which was at the end of the ventilation system so any gas was ventilated out of the mine and was not a danger.[14] Even so, safety precautions were terribly lax, although the Smith mine was probably no worse than most coal mines operating in Montana at the time. About half of the mine lamps in use at the Smith were an open-flame type; exposed electric wires were strung on wet beams; smoking was permitted underground; open flames were used to light the black pellet powder used for shooting down the coal; and no rescue equipment was available at the mine.[15]

Another problem peculiar to the Smith No. 3 was due to the use of a Goodman Track Loader which required more space than the equipment used in other mines. The seams were worked in five room blocks and, because of the space requirements for the loader, thin pillars were left to support the roof. As a consequence, the mine had more trouble with squeeze and collapse of workings than did other coal mines.[16]

In spite of the hazards and problems, the mine had a relatively good safety record for a mine of its size. In all its years of operation there had been only two fatalities. One miner was killed in a top fall in 1938 and another was killed in 1941 when a concrete wall fell on him. In 1941 a small fire burned for eight days but caused no injuries. The only accident involving gas occurred in 1939 when a pocket of gas ignited but, once again, no injuries were reported.[17]

The Smith mine also passed an inspection by the U.S. Bureau of Mines during November of 1942 under the new Federal Coal Mine Inspection Act of 1941. Assistant manager, William A. Romek reported that many recommendations were made following the in-

spection to which the company agreed. One recommendation made by Mine Inspector G. C. Arnold, however, caused heated debate between Arnold and company officials. Arnold insisted that the gassy No. 2 seam area be sealed by concrete stoppings. Head Inside Foreman, Elmer Price argued this was unnecessary since the area was no longer actively worked and that it was safer to vent the gas out of the mine rather than allow it to accumulate in a walled-off area. Company head J. M. Freeman offered to close the Smith No. 3 mine if it was considered too dangerous. Arnold said that was not necessary but insisted that the stoppings be placed in the main and back entries of the 2nd East of the No. 2 seam and the company reluctantly agreed.[18]

C. THE SMITH MINE DISASTER

The Smith mines were in full production on February 27, 1943. The mines were working three shifts, six days a week in order to meet the coal needs of a nation at war. Since it was a Saturday, the miners received time-and-a-half pay and it was also pay day. The weather had warmed and the sky was clear. A number of miners, who might have otherwise stayed home, came to work because it was a time-and-a-half and pay day. Clarence Williams had been sick and his wife asked him to stay home but he insisted on going to the mine rather than miss the extra pay. Bill Pelo had a flat tire and John Hodnik had overslept. Both just barely made it in time to go down with the 7:30 a.m. shift. For Pete Giovetti, who operated a motor hoist inside the mine, it was supposed to be his last day as a miner. He and his family had saved enough to buy a small farm which they planned to begin moving to the following day.[19] Joe McDonald was also working his last shift as a miner before reporting for military service the next Tuesday. As it turned out, the full day shift of 77 men all reported for work that day and by 9:30 that morning they were hard at work inside the mine.

Tony Planichuk, who was working above ground, remembered seeing a dust cloud rise from the mine shaft at about 9:30 but did not hear any sound. Others on the surface and at the nearby Foster mine reported hearing a muffled explosion. Alex Hawthorne, the hoistman at the No. 3 vein, telephoned the surface saying, "There is something wrong down here -- I'm getting out." Planichuk recalled running to the mine office where the mine manager tried to call underground but all the phones were dead. Hawthorne, who was working with pump men Willard Reid and Eli Houtenen, said later they suddenly felt an unusual pressure on their ears but heard nothing. But then a moment later there was a hurricane-like wind filled with debris from further inside the mine. Hawthorne called the surface and then dropped by the phone having been overcome by the gas. Reid and Houtenen had already started for the surface but were knocked over by the wind. They managed to get up and stagger further on but then they were overcome by the gas. The main fan at the No. 2 slope portal was still working and rescuers were able to travel down the airway where the air was still good. The three men were found unconscious but still alive. They were brought to the surface and revived. Of the 77 men who had entered the mine two hours before, they were the only three to survive.[20]

As the extent of the disaster became apparent, calls went out for men and equipment to help in the rescue work. Within a short time help arrived from nearby coal mines as well as from those in the Roundup area. Others came from the Benbow and Mouat hardrock mines to the north along the Stillwater River while others came from as far away as Butte and Salt Lake City. Heroic efforts were made to rebuild the shattered ventilation system so that the working faces of the No. 3 seam could be reached. The workings extended almost two miles in some cases and it would be days before full ventilation and power could be restored. Rescue equip-

ment was inadequate and many of the rescue workers braved the gas-filled workings until they were overcome and had to be carried out and treated in the emergency hospital set up at the mine. By March 1st, 118 men had been treated for methane and carbon monoxide poisoning. One rescue worker, Matt Woodrow, was overcome several times and on April 9th he died from the effects of the gas, becoming the 75th victim of the explosion.[21]

All the rescue efforts, however, were to no avail. Later investigations would show that 30 of the miners probably died instantly in the explosion while the other 44 would die within a short time from the methane and carbon monoxide gas. Five men in a small shop at the far end of the 5th southeast panel survived an hour and a half after the explosion. They tried to barricade the area from the deadly gas but failed. Before they died they wrote poignant messages in chalk on the mine walls. One note, found beside the bodies of Walter Joki and John Sudar, said, "Good bye wives and daughters. We died an easy death. Love from us both be good." Another read, "Frank Pajnich, Fred Rasborschek, John Sudar and Walter Joki. We try to do our best but we couldn't get out." And a third scrawled message from Emil Anderson said, "Its 5 minutes pass 11 o'clock Agnes and children I'm sorry we had to go this way God bless you all Emil with lots of love." [22] They, along with rescue worker Matt Woodrow, were the last to die in what had become the worst coal mine disaster in Montana history.

0. THE POST DISASTER INVESTIGATIONS

Immediately following the disaster, investigations were begun to determine the cause. Montana governor, Sam C. Ford, appointed a commission which included: R. H. Darymple, the Utah state mine inspector; William Redshaw, retired Billings coal operator; and

Abe Douglass, a Roundup coal miner. G. O. Arnold, Fred J. Bailey and M. R. Evans conducted an investigation for the U.S. Bureau of Mines while W. A. Boyle, Joe Masini and Joe Yanchisin represented the United Mine Workers of America. The Montana State Coal Mine Inspector Edward J. Davies and the Montana Coal and Iron Company also investigated the disaster.[23]

All the investigations agree that methane gas somehow accumulated in the mine and was accidentally ignited. This initial explosion caused coal dust to go into suspension which was then also ignited in a second explosion throughout the mine. It was also generally agreed that while some men died instantly from the explosions, a majority died from the effects of carbon monoxide gas and lack of oxygen following the explosions.[24] All the parties, including the company, agreed the mine had numerous safety problems. Concerning the cause and location of the explosion, however, there was almost no agreement and considerable controversy.

The Governor's commission released its report in February of 1944 and simply stated the disaster "...was caused by the accidental igniting of gas at some undertermined place in the mine." [25] This has become the accepted explanation in almost all published accounts of the disaster. There were, in fact, a number of different theories and numerous unanswered questions as to the cause of the explosions in the Smith No. 3 mine. State Coal Mine Inspector Edward Davies correctly noted in his report, "...it is not an exact science to determine the point of origin..." of a coal mine explosion.[26]

The Montana State Coal Mine Inspector and the commission of the the United Mine Workers representatives believed the initial explosion originated near the face of the 8th West Main entry (see Figures 2 and 3). It was thought that the cutting machines

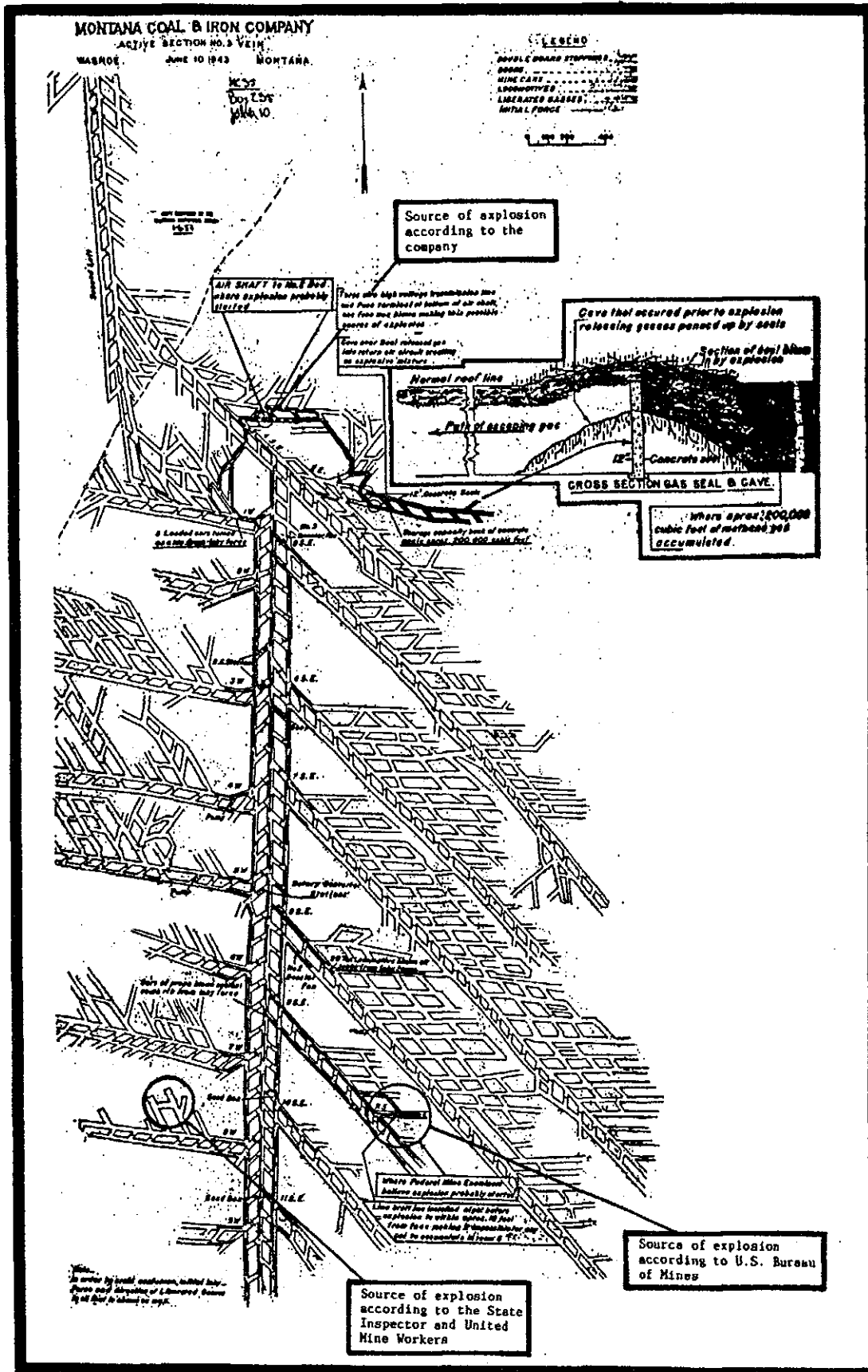


Figure 2.

Underground workings at the Smith No. 3 and possible sources of the explosion (from "Report of Mine Explosion" by the Montana Coal and Iron Company in Report of the Governor's Committee).

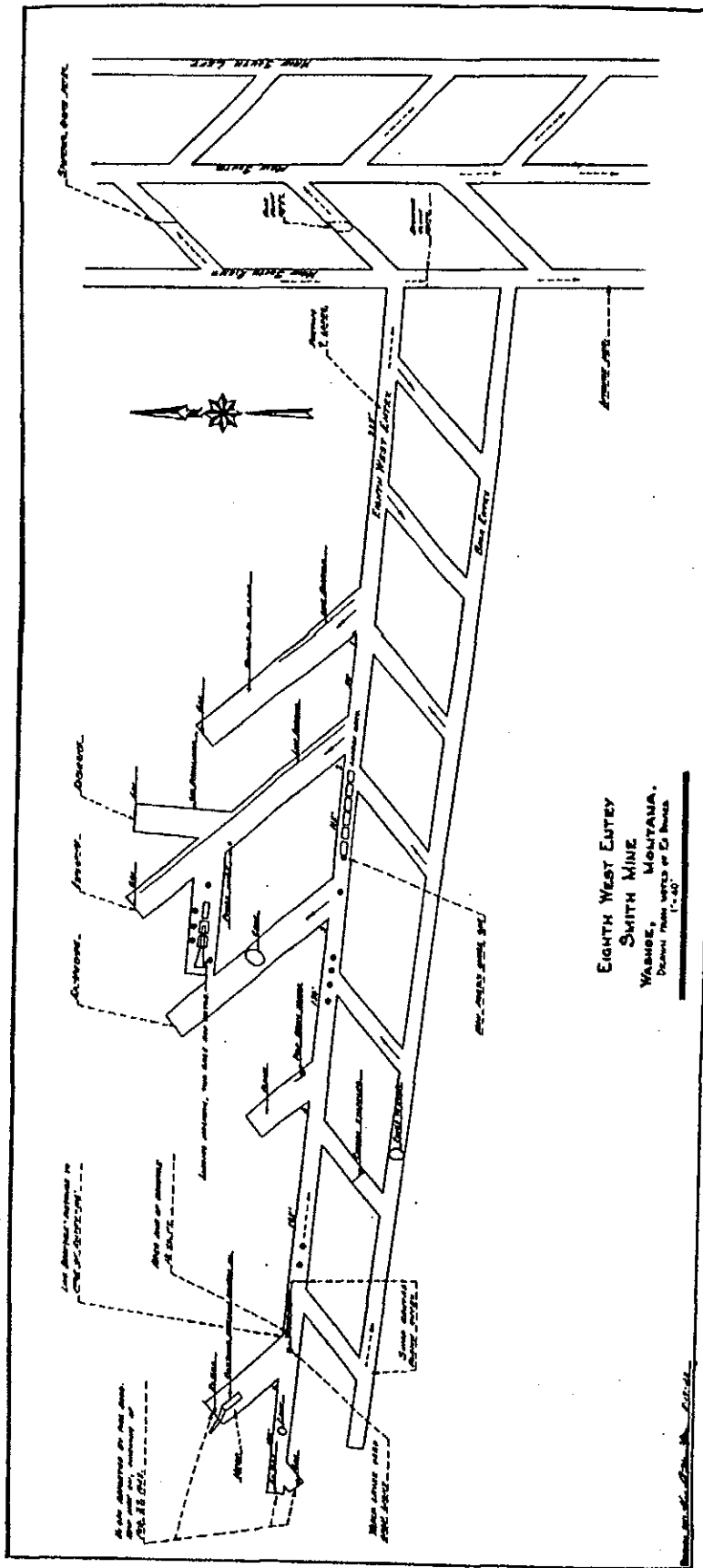


Figure 3.
Source of the explosion according to the State Coal Mine Inspector and the United Mine Workers of America (from Report of the Governor's Committee).

used in that area had cut into a pocket of gas which was not detected since the workers were using closed lamps. But then a trackman wearing an open-flame lamp may have entered the area and ignited the gas.[27] State Inspector Davies noted the area was still giving off explosive gas a month after the disaster and he noted the presence of gas in five working places in the mine on January 27, 1943, one month before the disaster.[28]

The Federal Bureau of Mines' position was initially ambiguous. Federal Coal Mine Inspector Arnold testified to the Governor's committee that the explosions originated at some point not disclosed in the governor's report. In the Bureau of Mines' report on the disaster, Arnold changed the point of origin of the explosion to the No. 5 room off the 9th S.E. entry (see Figure 2).[29]

Arnold noted in the report that the mine ventilation system was not adequate since the mine was known to be gassy and gas had been found during the November inspection. He also reported that the company had sent a letter dated December 22, 1942 saying the mine's ventilation system had been improved.[30]

The company maintained from the beginning that "...the explosion was probably caused by gas which seeped into the mine from unused tunnels and shafts." [31] After the tragedy, company personnel inspected the mine and, according to Assistant Manager William Romek, discovered there had been a cave-in over the concrete stopping ordered built by mine inspector Arnold to block off the gassy No. 2 seam. Romek estimated that as much as 200,000 cubic feet of gas could have accumulated behind the stoppings. If a cave-in had occurred, this gas would have been vented under pressure into the active mine workings. The company theorized that the gas was then ignited by a blown-out fuse at the bottom of the air shaft between the No. 2 and No. 3 veins (see Figure 2).[32]

The company report on the disaster maintained that although the mine was admittedly gassy there had been only the one small gas ignition in 35 years of operation. The company also argued that the mine was very damp and coal dust would need a very large methane explosion in order to cause enough coal dust to go into suspension to create the second explosion. The company maintained there was never enough gas at any of the working faces to cause such a massive explosion.[33] State Inspector Davies also supports this position saying, that ventilation was sufficient and the "...mine did not normally generate excessive volumes of methane.[34]

The company's theory of the disaster is supported by the known gassy nature of the No. 2 seam; the mine's history of problems with cave-ins coupled with witnesses who claimed to have seen such a cave-in at the stopping; plus the numerous known possible ignition points throughout the mine. Another contributing cause might, ironically have, been due to the improved ventilation which dried out the workings making the secondary coal dust explosion possible.[35]

The sealed No. 2 seam as the origin of the explosion was an area of the investigation which was not pursued for a number of reasons. Federal Inspector Arnold had an obvious reason to slight this area of the investigation since he was the one who insisted on the No. 2 seam being walled off. If the company's claim was correct, Arnold would have been, in part, responsible for the disaster. Romek claimed Arnold conducted a thorough inspection of the mine following the disaster - with the exception of the 2nd East entries off the 4th S.E. entries, which is where the concrete stoppings had been installed. Romek says he asked Arnold if this area would be inspected but was told it was not necessary since the stoppings had simply been blown in by the explosion.[36] Romek said he "was astonished by his [Arnold's] answer" since he felt

the "cause of the disaster was so conclusive" but his, and the company's response to Arnold's conclusions was ambiguous and irresolute at best. Company General Manager J. M. Freeman had instructed all salaried personnel at the mine to keep the company's conclusions as to the cause of the disaster confidential so as to avoid placing any blame on the Federal Inspectors which would bring on the antagonism of the Bureau of Mines.[37] Thus when asked by Arnold what his thoughts were as the cause of the explosion, Romek replied, "I could not state that I firmly believed it had been caused by their prior demands for the walling off of gas unnecessarily." [38]

Nor was the company very forthright at the inquest held in Red Lodge on April 12th through 14th. Towards the end of the last day of the hearings the coroner asked if the union had any further testimony or if anyone else wished to testify. At this point in the inquest no criticism of the company had been made and Romek said he felt it was better to let the inquest end rather than have possible criticisms of the company become part of the record.[39] However, since company head Freeman had been scheduled to testify next this meant the company's position on the cause of the disaster would also not be a part of the inquest's official record. In their report, the company offered a different and rather puzzling reason why they did not testify. The report states the company requested that its officials not disclose the company findings until after the inquest because they expected the Federal Bureau of Mines report "...would change the Management's theory as to where the explosion started." [40]

Romek says the company's later attempt to have the Governor's commission and the Bureau of Mines re-open their investigations so the company could present its case were not successful.[41] For some reason Romek does not mention the fact that the company's full report on the disaster was printed with those of the other investigations in the Report of the Governor's Committee.

The company's position was attacked by the report of the United Mine Workers of America. The Union noted that none of the company's findings were mentioned at the time of the investigations even though the other investigators were told the company would withhold nothing. The Union said it would have taken "two miracles" for the explosion to have occurred as the company described. The first "miracle" would have been for the cave-in to have occurred at the stopping which sealed the No. 2 seam since the one-foot thick concrete stopping itself would have been an effective support for the roof. The Union report said the stopping was probably blown in by the blast and then the cave-in occurred after the explosion obscuring the evidence. The Union also felt it would have been "...a most remarkable coincidence" for the fuse claimed by the company to have been the ignition point to have shorted out at the exact same time as the cave-in which released the massive amount of methane gas.[42] It could be argued, however, there were numerous other possible ignition points, given that about half the mine lamps in use were of the open-flame type, the miners were smoking underground and were using open flames to light the black powder charges.

The Smith No. 3 mine was never re-opened and soon after the disaster the underground workings of the No. 3 were flooded thus making it impossible for later investigations to either prove or disprove any of the conflicting theories.

A consequence of the Smith mine disaster was an increase in mine safety regulations. James D. Graham, president of the Montana State Federation of Labor, said after the disaster, "The Bearcreek mine should not necessarily be singled out. It was no more than typical of conditions [in other coal mines] in the state." [43] This was undoubtedly true and was indicative of the lax safety standards during this period. The governor's commission and the Carbon County coroner's jury made a number of recommendations for remedial legislation.

These included:

1. Statutory authority for the state coal mine inspector to close all or portions of any coal mine deemed too dangerous.
2. Enactment of legislation which would define and regulate "gaseous" mines.
3. Passage of laws prohibiting smoking or carrying of matches in any mine where electric cap lamps are required.
4. Passage of a law requiring the use of rock dusting in coal mines.
5. Passage of laws requiring the use of electric safety lamps and permissible electrical equipment in all coal mines.
6. Modernize existing laws on mine ventilation.
7. Restricting blasting when men are working in the mine unless permissible powder is used.
8. Provide underground workers with self-rescue equipment.
9. Keep helmets and gas masks at the mine in case of an emergency.

The Governor's committee also recommended that three central rescue stations be established at Bearcreek, Roundup and Giffen.[44]

Many of these recommendations were enacted into law but by the time they were put into effect the underground coal mining industry was in decline and there were comparatively few underground coal mines still operating in Montana which were affected.

Shortly after the disaster, Federal Mine Inspector G. O. Arnold resigned from the Bureau of Mines. Company general manager J. M. Freeman continued as company head and William Romek stayed on as vice president, secretary and director of the company until his resignation in 1958. Of the three survivors of the disaster, Alex

Hawthorne returned to work in the mine's surface electrical shop and lived until 1962. Eli Houtenen and Willard Reid were slow in regaining their health but also survived into the 1960s although they never returned to work in the Bear Creek mines. A total of \$447,700 was paid as compensation to survivors of the disaster.[45]

E. POST WORLD WAR II PERIOD OF THE MONTANA COAL AND IRON COMPANY

The Smith No. 3 mine never re-opened although the Montana Coal and Iron Company continued underground coal mining operations for another decade following the Smith mine disaster. The company shifted its operation to the Foster Gulch mines but here also, tragedy continued to haunt the company when, on July 17, 1943 two more miners were killed in a rock slide at the Foster mine.[46]

The company also opened up access to the No. 2 seam through the old Lamport mine located a short distance up Bear Creek Coulee to the south of the Smith No. 3 mine. The Lamport mine had first been developed by George Lamport in 1897 and was the first commercial coal mine in the Bear Creek area. [Lamport was also the founder of the town of Bearcreek]. This mine - called either the "Scotch Coulee" or the "No. 4 Coulee mine" - operated for only a few years and was not a large producer, closing permanently in March of 1946.[47] In spite of the disaster, the company still managed to produce 477,000 tons of coal during 1943, of which 150,000 tons went to Army and Navy installations and a similar amount went to the Northern Pacific Railway.[48]

In 1944 the company mines produced 576,000 tons which was to be their peak year. The end of World War II resulted in a declining demand for coal although the mine still managed to sell 499,810 tons of coal for 1945. The company's production steadily declined from this point on until the final closing in 1953.[49]

Further misfortune struck the company on the night of October 29, 1945 when the Smith mine tibble and rescreening plant were completely destroyed by fire. In the years following World War II the company was plagued with labor troubles, declining production and lowered quality of the coal mined. The company opened its No. 2 Smith mine in Foster Gulch which was then connected by rail to the Smith No. 4 Coulee mine. The coal from both mines was taken by trolley to the Smith mine preparation plant. This proved too expensive and was discontinued in June of 1947. The company also tried to store surplus coal in unlined storage pits but this caused serious problems with customers since the quality of the coal was lowered.[50]

The company then tried open pit mining in the upper area of Foster Gulch and in the gully just north of the Smith No. 3 mine site. Both attempts were costly failures since the quality of the coal proved to be inferior in volatile content and was mixed with large amounts of dirt and shale. The company received so many complaints from customers it was forced to discontinue operation of the strip mines in February of 1948. In spite of the difficulties, production at the mines was maintained during the late 1940s at around 200,000 tons annually.[51]

In 1950 the company lost its contract with Great Western Sugar Company which had been a steady customer since the 1910s. The next year parts of the Foster mine were closed off due to a massive squeeze in the underground workings. A far worse blow occurred to the company that same year when both the Montana Power Company and the Anaconda Copper Mining Company converted to natural gas and dropped their contracts with the Montana Coal and Iron Company.[52]

During this period the company attempted to open a new mine into the No. 3 seam one half mile east of the Smith No. 3. Warnings were made that this was a dangerous development since the seam was underneath the No. 2 seam which had been flooded after the 1943 disaster. The warnings were ignored and considerable development work went ahead. But then in the spring of 1953 the workings did collapse and were flooded. No lives were lost but a large amount of material and equipment was lost. By this time the mine's production was down to approximately 100,000 tons annually although the company still employed nearly 100 men.[53]

The coup de grace for the company came in the summer of 1953. The Northern Pacific announced that it had nearly completed the dieselization of its locomotives and would not contract for any further coal shipments after June 30th. In August the Montana, Wyoming and Southern Railroad closed down the line up the Clarks Fork to the Bear Creek coal field. The company mines, which had been closed for the summer, could not operate without the railroad and so they did not open in the autumn as planned. The company did lease the Foster No. 3 mine for a few years to five local miners who supplied the local domestic market.[54] The company also continued to operate other mining properties elsewhere but the closure of its Bear Creek mines meant the end of large-scale, commercial underground coal mining in the Red Lodge/Bear Creek coal field.

The Smith mine is significant as both the site of a major historical event and as an example of an industry and technology which has all but ceased throughout the region.

The decline in demand for coal plus the competition from more efficient and productive strip mines means that it is unlikely large-scale, commercial underground coal mining will be revived in the foreseeable future. For the first half of the Twentieth

Century, however, this was an essential industry. It fueled the railroads and industries throughout the region while heating countless homes and businesses. It was the principle energy source which made possible the settlement and development of much of the region. The productive life span of the Montana Coal and Iron Company's mines at Bear Creek coincide with this historical period. The great achievements in production as well as the failings of the Smith mines are both typical and illustrative of the underground coal mining industry in general.

The Smith mine will principally be remembered, however, as the site of the worse coal mine disaster in Montana history. This tragic event should serve as a reminder of the human cost paid for industrial development and progress. Underground coal mines were terribly unhealthy, dangerous places whose passing need not be regretted but they should be remembered as examples of the courage and sacrifice of men who daily went down into them and all too often - as was the case at the Smith mine on February 27, 1943 - paid with their lives in order to provide industry, businesses and homes with this mundane but vital commodity.

IV. THE MINE

A. DESCRIPTION SMITH NO. 3

The Smith mine is an unusual coal mine site since it remains partially intact unlike most historic coal mines in Montana which have been either dismantled or destroyed. Much of the mining complex at the Smith No. 3 remains as it was when the mine was in operation. Most of the structures were built at the time the mine went into large-scale, commercial operation (c. 1907-1910) and thus are similar in construction materials and appearance. Still standing at the Smith No. 3 are the following structures (see Figure 4):

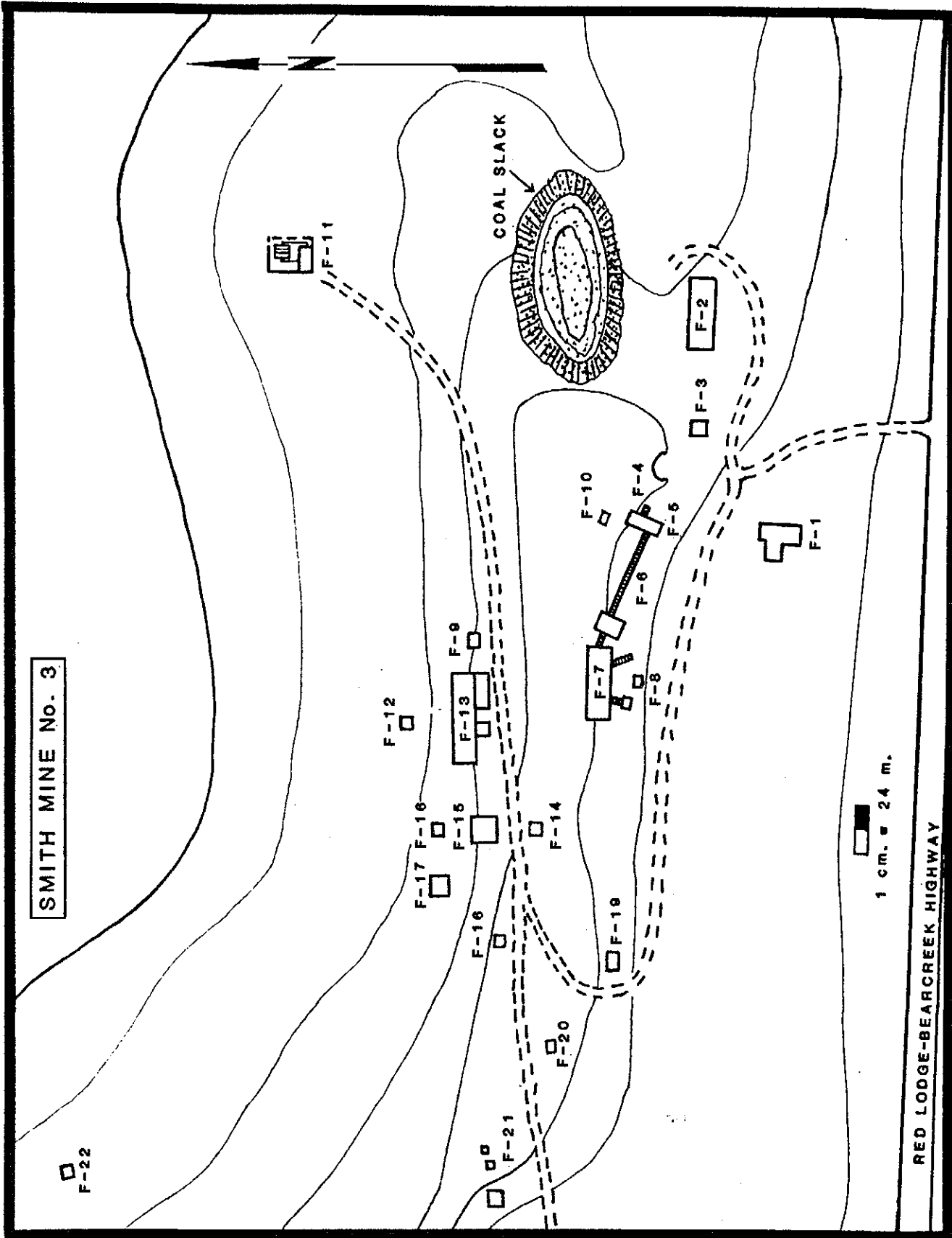


Figure 4.
Remaining features at the Smith No. 3 Mine.

Feature 1, the main office building, is one of the few structures on the site which is not covered with corrugated metal siding. The L-shaped building is of wood frame construction and measures 8 x 18 x 19 m. The simple gable roof is covered with asphalt roofing material.

Most of the major buildings which were part of the coal processing operations (this includes features 2, 3, 5, 7, 13, 14 and 15) are similar in that all have corrugated metal siding and are constructed with a mixture of wood and metal beams. Feature 2 was the main shop used for repair and maintenance of the mine's equipment. This large gable roofed structure measures 11.5 x 35 m. Just west of the shop is a similar, although smaller (5 x 7 m), building (feature 3) which appears to have been the payroll office. It was filled with cancelled payroll checks.

Features 5, 6 and 7 are the basic components of the coal processing operation after it was brought out of the mine. The coal was hauled from the mine entrances to the tibble (feature 5). The mine cars were then unloaded by being turned upside down in the rotary car dump at the top of the structure. The coal was then run through shaking screens which separated the standard size coal. The rest went to the bottom of the structure where it was carried by a 50 m long inclined conveyor belt (feature 6) to the top of the coal processing plant or "washery" (feature 7), where it was run over pulsating jigs and shaking screens which washed and sorted the various sized coal. The plant consists of two separate parts at a slight angle to each other. The east section measures 10 x 13 m with the conveyor passing over the top of it. Concrete footings for heavy equipment are in the interior of the The west section measures 15 x 37 m. On the outside of the north wall there is a vertical bucket conveyor and on the south side two horizontal loading ramps with hoppers projecting out from the structure. Originally there was a wooden trestle from the mine portal to the tibble but this has been destroyed.

Features 13, 14 and 15 are support buildings for the mining operation. The blacksmith/mine car repair shop (feature 13) measures 15 x 47 m. Feature 14 is a small (3.5 x 4 m) electric transfer building and feature 15 is an 11 x 19 m supplies/parts buildings. All are similarly constructed of metal and wood with metal, gable-style roofs and corrugated metal siding. The shop and transfer buildings have cupolas on the roofs for cooling purposes.

Two structures (features 16 and 22) were powder magazines. Feature 16 is located near the main complex of structures which is somewhat unusual. For obvious safety reasons they were usually located some distance from other structures as is feature 22. Feature 16 was apparently used to store detonators while feature 22 was the main magazine which usually stored 25,000 lbs of black pellet powder. The structure which housed the mine's boilers (feature 11) has been destroyed except for parts of the walls which were of stone and brick. A small wood shack remains at the south side of the ruined boiler structure. Parts of the boilers also remain in place. The area measures 20 x 25 m.

The remaining features on the site consist of small sheds (features 9, 12, 17, 18 and 19), remnants of the foundation for an unknown structure (feature 4), coal waste dumps, debris, junked machinery and a small frame house, shed and garage (feature 21).

Power for the mine was supplied by the Montana Power Company. A 50,000 volt AC line was reduced at the transformer station to 4400 volts which was then stepped down to 440 and 220 volts to power the mine's equipment.

[See HAER No. MT-31 for a description of the Foster Gulch mines.]

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