

Detroit Mine
Site 5ST540

The Detroit Mine was a formally engineered and productive shaft operation, which has been reduced to archaeological features and artifacts. The site, at around 10,300 feet elevation, lies on a saddle between Gibson Hill and Prospect Hill in the McKay Mining District. The area is vegetated with a young lodgepole pine forest, and prospects and mines are scattered in the area. The site is center to a convergence of recreational roads used by off-road vehicles. At present, the site retains archaeological integrity but heavy traffic is accelerating the decay of both the site and its setting. Several weeks after the site was recorded, the headframe collapsed and then was pulverized by off-road vehicle traffic.

Detroit Mine History

The Detroit was probably claimed during the early 1880s when Gibson and Prospect hills experienced a wave of prospecting. The property saw little development during the decade, however, because owner George C. Smith lived in California and had difficulty managing activity due to the distance. In 1888, he hired contract miners to begin sinking a shaft, but the operation failed to come to fruition.¹

The Detroit became one of the few mines in the region to lay idle and undeveloped through the 1900s. The P.F. & E. Mining & Milling Company can be credited with finally sinking the shaft and encountering a gently dipping vein during the late 1910s. Around 1920, the mine's surface plant burned and, unwilling to invest in new buildings, the company decided to lease the Detroit and let the new operators absorb the cost. George Robinson, who had experience leasing productive mines around Breckenridge, saw the Detroit as an outstanding opportunity and signed a lease. Robinson organized the Detroit Leasing Company in 1921 and completed the necessary repairs the following year.²

When finished, the surface plant consisted of a steam hoist, boiler, and shaft house, and the shaft was only 100 feet deep. Initially, Robinson hired a crew of three miners to develop the vein and, when the mine was ready for production by 1923, he increased the workforce to ten. For two years, the miners brought a substantial volume of ore to the surface, and when the vein showed signs of exhaustion, Robinson engaged in a twofold campaign to find more pay rock. Underground, the crew sank the shaft to a depth of 250 feet and drove exploratory workings. On the surface, Robinson employed a churn drill that sampled the area through deep bore holes. It remains unknown which plan was successful, but Robinson found enough pay rock to sustain operations through 1926.³

For unknown reasons, Robinson failed to renew his lease, and the Aco Mines Company assumed the property in 1927. Aco apparently did well and generated an impressive thirty tons of ore per day. The miners also accessed the adjoining Standard workings through an underground connection and extracted low-grade ore from the property. Production continued through 1928, when Aco suspended work because the Great Depression caused metals prices to collapse. The Detroit saw no further activity of significance.⁴

¹ "Mining News" *Mining Industry* 11/30/88 p229.

² Colorado Mine Inspectors' Reports: Detroit.

³ Colorado Mine Inspectors' Reports: Detroit.

⁴ Colorado Mine Inspectors' Reports: Detroit.

Detroit Mine Site Description

The Detroit site currently features archaeological evidence of the equipment installed during the 1910s and of the buildings erected in 1922. One of the most important features is the shaft (F1), whose collar remains intact. Including the timbering, the shaft is 5½ by 10 feet in area on the outside. Inside, the shaft features two compartments that are each 4 by 4½ feet in-the-clear. The southwest one was the utility compartment, which accommodated an escape way and plumbing for compressed air, drainage water, and steam for a pump. The northeast compartment was for hoisting and accommodated an ore bucket. Miners divided the compartments with a solid plank bulkhead to enhance up-cast and down-cast ventilation currents. In general, intact shafts are rare in Summit County because most imploded after the support timbering decayed. For this reason, the Detroit Shaft is an important feature.

When miners developed the underground workings, they dumped waste rock around the shaft in the form of a pad (F2) approximately 110 by 165 feet in area. As they continued work, the miners extended an elevated trestle southeast from the shaft and used it to dump additional waste rock. Over time, they created a small cluster of lobes around 5 feet higher in elevation than the rest of the dump. Overall, the entire waste rock dump is 110 by 215 feet in area.

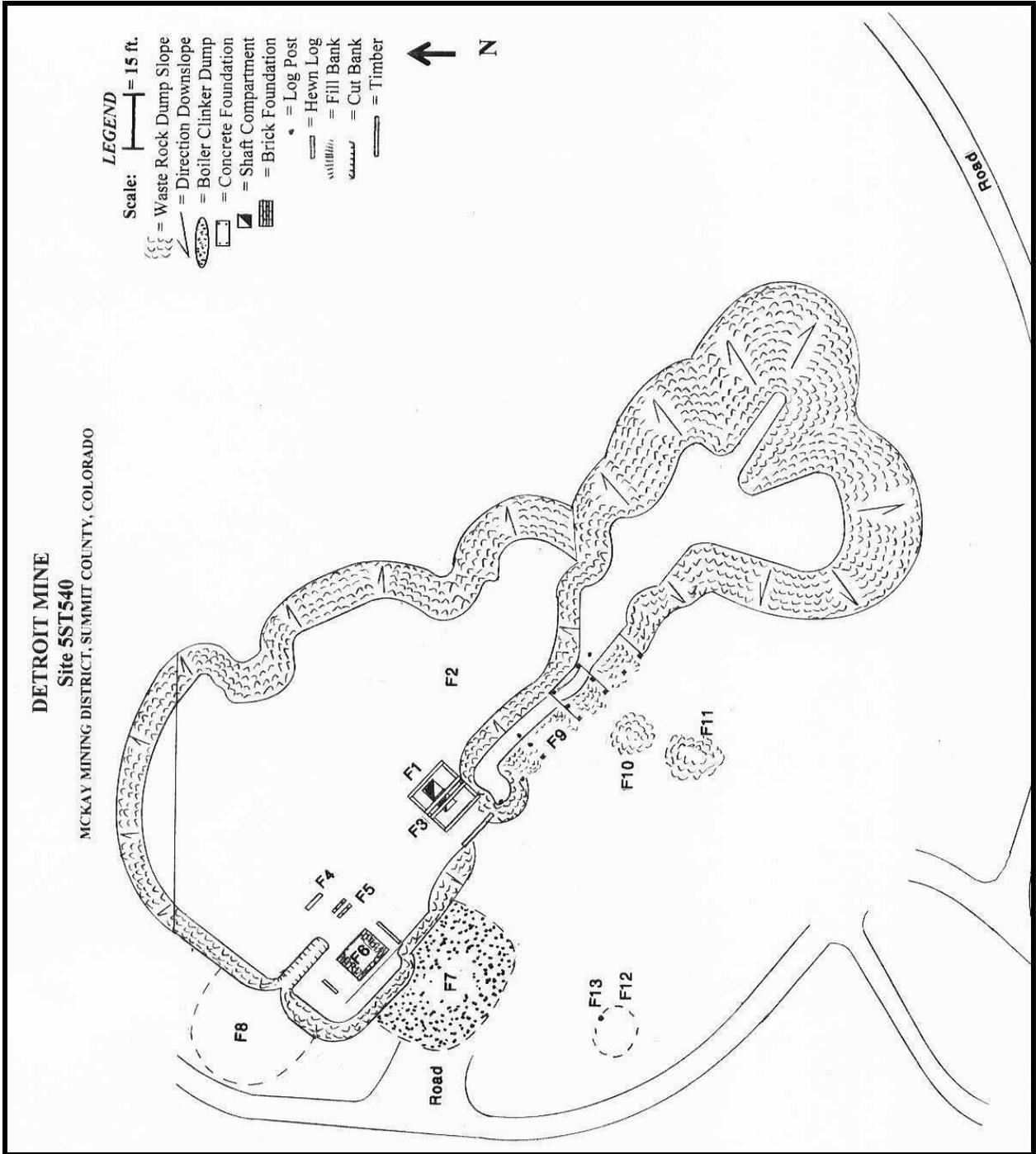


Figure 2.58: Plan view of the Detroit Mine site.

A frame hoist house, now gone, enclosed the mine's hoist, boiler, and shop. The building, erected in 1922, was 25 by 25 feet in area, and most of its footprint (F4) currently remains. The footprint manifests as changes in soil character and segments of timber wall footers. The hoist, now gone, was anchored to a timber foundation (F5) 4½ by 5 feet in area. The foundation consists of two timber bolsters bolted to cribbing buried in ballast, and its

footprint indicates that the hoist was a 4½-by-5-foot single-drum steam unit. A boiler provided steam for the hoist and other machinery, and it stood on a brick foundation (F6) adjacent to the hoist. The foundation consists of a 9-by-12-foot brick pad, and it indicates that the boiler was a return-tube unit.

When workers cleaned ash, clinker, and residue out of the boiler's firebox, they dumped the waste south of the hoist house. Over time, they created a surficial clinker dump (F7) 36 by 42 feet in area. Artifacts are mixed in, buried deposits are unlikely, and off-road vehicle traffic has spread out some of the material.

The mine's blacksmith shop stood southwest of the hoist house, and a scatter of industrial refuse (F8) now marks its location. The refuse occupies a 15-by-20-foot area, and a mound of burned gravel probably represents the forge.

Workers constructed a large ore bin northwest of the shaft to store pay rock between shipments. The bin (F9), currently buried underneath piles of low-grade pay rock, was a flat-bottom, open structure 12 feet wide, 60 feet long, and 6 feet high. The bin featured a series of four cells 18, 15, 12, and 15 feet long (northwest to southeast). The bin consisted of plank walls supported by log and timber posts, and the front of each cell featured a louvered gate so ore could be unloaded into parked wagons.

One of the sample holes (F13) that the Detroit Leasing Company bored in 1925 lies a short distance south of the hoist house area. Workers used a 5½-inch pipe as a casing and collared it with a salvaged length of riveted steel pipe, which is characteristic of churn drilling. A refuse scatter (F12) surrounds the hole.

Within the last fifty years, long after the mine was officially closed, someone erected a headframe over the shaft. The headframe (F3) was a four-post derrick 13 by 14 feet in area and 25 feet high. Workers used salvaged utility poles for the posts, hewn logs and timbers as cross-braces, and timbers for the crown. The sheave wheel remains in place on the crown, and the northwest side features diagonal braces. (The headframe collapsed several weeks after the site was recorded, and the sheave was stolen).

Despite the heavy impact of off-road vehicle traffic, the site possesses a full artifact assemblage. Off-road vehicle traffic has, however, fragmented fragile items and battered large materials. Dateable artifacts are broad in timeframe and fall within the general periods of activity documented by archival sources. Structural debris lies scattered throughout the site, and industrial items are associated primarily with the hoist house platform, boiler clinker dump, blacksmith shop area, and refuse scatter.

Detroit Mine Interpretation

The Detroit Mine is an excellent archaeological example of a formally engineered, well-capitalized, steam-powered shaft operation. The mine was moderately productive and medium in scale. As a reflection of formal engineering, the surface plant was properly arranged and oriented according to a master datum line taken off the shaft. The surface plant, however, was a mix of light-duty and production-class facilities. The hoist was a 4½-by-5-foot steam unit, which was a size that engineers recommended for deep prospecting and not for ore production. Further, the hoist was bolted to a timber foundation, which engineers deemed temporary. The boiler, however, was a production-class return-tube unit, a type noted for its efficiency. The shop was in its own building instead of in the hoist house, which was a production-class practice. This afforded the shop worker plenty of space to manufacture hardware and service equipment.

The ore bin was cleverly designed to meet the changing needs of long-term production. The structure featured four cells that allowed the operator to pursue two strategies. One was segregating the ore into four grades of material, with some grades sent straight to a smelter and

others shipped to a concentration mill for initial treatment. The other strategy was to lease portions of the mine to different lessees. The cells allowed each party to keep its production separate, since the parties were paid by the ton.

The Detroit Mine possesses a substantial waste rock dump, which reflects extensive underground development. Because the shaft was only around 250 feet deep, the volume of material indicates that miners drove lengthy horizontal passages.

Detroit Mine Significance

The Detroit Mine was a gold and industrial metals producer that operated during the 1910s, and again from 1922 until 1928. The site offers a complete assemblage of archaeological features and artifacts that retain integrity relative to the above timeframes. The site possesses ambiance relative to mining during the 1910s, and it lies in a setting disturbed only by off-road vehicle tracks. Because of the site's physical characteristics, it is recommended eligible for the NRHP and the SRHP under Criterion C.

In terms of Criterion C, the Detroit is a sound archaeological example of the type of shaft mine common to the Breckenridge area during the 1910s. The building platforms, machine foundations, and artifacts represent a formally engineered, capitalized, deep shaft mine. These types of operations were important to Breckenridge's mining industry by the 1910s because the easily extracted, shallow ore had been exhausted, leaving deep deposits that only could be worked with mechanization and capital.

The site is also recommended eligible under Criterion C because it is a contributing element of a localized historic landscape. The area features other mines including the Standard Mine and numerous shafts and waste rock dumps on the Detroit Placer claim.

Detroit Mine Management Recommendations

Management recommendations suggest several actions. First, the site should be preserved. Heavy off-road vehicle traffic is accelerating the site's disintegration. Recreationists use the site for stunts, they pass across the waste rock dump and other features, and drive aggressively around the area. The trails should either be closed to motorized use or routed entirely around the site. Barricades should then be erected around the site to prevent further traffic.

Second, because the site lies in a heavily used recreational area, the site provides an excellent opportunity to educate the public regarding deep hardrock mining and shaft operations. This can be accomplished through signage or pamphlets. Signage will also help preserve the site because it will make the public aware of the site's value and importance.