Fish Creek Bridge
Cyr-Iron Mountain Road
9 Miles West of Alberton
Mineral County
Montana

HAER No. MT-49

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
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HISTORIC AMERICAN ENGINEERING RECORD
FISH CREEK BRIDGE

I. INTRODUCTION

Location: The Fish Creek Bridge was located on the Cyr-Iron Mountain Road in Mineral County, Montana, in the NE¼NE¼ of Section 1, Township 14 North, Range 25 West (USGS Tarkio, Mont. 7.5 min. quadrangle, Provisional Edition, 1983). The closest town is Alberton, lying approximately 9 miles east of the bridge, along Interstate Highway 90.

Date of Construction: 1934

Present Owner: The bridge is owned by Champion International.

Present Use: The bridge was designed primarily for vehicular traffic along an unimproved road. The bridge was recently removed after construction of a new concrete structure immediately upstream from the old bridge. It currently stands on the creek bank near its former abutments.

Significance: The Fish Creek Bridge was determined eligible for listing on the National Register of Historic Places under Criterion A on January 10, 1986. It is historically significant due to its association with the activities of the Civilian Conservation Corps (CCC). CCC camps were established throughout the nation as an emergency relief program during the early 1930s, and were especially active within the National Forest system in the western and southern states. This bridge represents the results of the efforts of a small group of men working on a labor-intensive project, with minimal mechanized support. Its presence is a graphic representation of the efforts of a single "spike camp" of CCC enrollees, and the success of a national recovery project at the local level.

Historian: Janene Caywood, Historical Research Associates, Missoula, Montana, January, 1987

II. HISTORY

A. THE CIVILIAN CONSERVATION CORPS AND THE FOREST SERVICE IN MONTANA

The Civilian Conservation Corps (CCC) was established during President Franklin D. Roosevelt's "New Deal" era, during the Depression of the 1930s, when thousands of people were unemployed. The CCC was designed to provide work for the nation's unemployed young men, while furthering natural resource conservation. Congress passed the enabling legislation on March 31, 1933, and on April 5, President Roosevelt issued Executive Order No. 6101, which "established the official existence" of the CCC. [1] By July of the same year, enrollees were working out of a variety of camps established throughout the country, on projects coordinated and directed by a variety of federal agencies, including the Forest Service, Soil Conservation Service, and Bureau of Reclamation.

During the tenure of the Civilian Conservation Corps (CCC) in Montana, a large percentage of enrollees participated in projects directed by the Forest Service. Fort Missoula, located on the outskirts of the town of Missoula, served as a District Headquarters for the Corps. Enrollees enlisted and were processed at the Fort, and then detailed to one of many camps throughout Montana. From 1933 to 1942, the Fort Missoula District had at least 82 camps, 29 of which were designated as forestry camps. The enrollees in the 29 forestry camps worked on projects in the National Forest system in Montana. [2]

Within the organizational structure of the CCC, the Army took charge of camp organization and discipline, as well as the logistics for projects. However, the Forest Service administration identified the specific projects to be completed by enrollees and many times supplied the technical expertise and direct supervision of the work crews. In Region

1 of the Forest Service, CCC crews concentrated on improvement of transportation and communication systems on forest lands, construction of new Forest Service administrative sites and improvement of existing structures, control of timber disease, reforestation projects, and forest fire control work, as needed. [3]

B. BRIDGE CONSTRUCTION BY CCC CREWS

In relation to other activities, the number of bridges built by the CCC was comparatively small. However, within the region, CCC crews erected a wide variety of bridge types as part of the effort to develop transportation networks on National Forest land. These include pack bridges on the Selway and Cabinet National Forests, a concrete vehicle bridge across the Gallatin River to the Squaw Creek Ranger Station, a stone bridge in St. Regis, and a suspension bridge near McCleod. [4]

Most of the bridges identified above are large structures, bridging major streams. However, CCC crews built many smaller, yet no less impressive structures on forest roads throughout the region. The Fish Creek Bridge may be included in this category of small bridges. The type of structure built depended upon the location of the proposed structure and the type of materials that were economically and logistically available. For example, bridges built in more remote areas of the forest appear to have been built of native materials such as logs and stone. Bridges built closer to extant transportation systems tended to be constructed of prefabricated materials, transported from regional supply centers.

C. CONSTRUCTION OF THE FISH CREEK BRIDGE

A small group of enrollees from the Nine Mile CCC camp built the Fish Creek Bridge during the summer of 1934, the second year of active

service for the Corps. The bridge is located in a narrow, steep-sided canyon near the mouth of Fish Creek, a tributary of the Clark Fork of the Columbia River. Since the location of the proposed bridge was approximately 18 miles west of the Nine Mile Camp, the CCC established a temporary "spike camp" for enrollees during the construction period. The Mineral Independent, a weekly newspaper published in Superior, Montana, stated in its March 15, 1934, edition, that:

> A steel bridge is to be built across Fish Creek at its mouth near Scenic Bridge on the Yellowstone trail, to connect with the new road planned across Garcia's ranch property into the wilderness of Fish Creek. A spike camp of the Civilian Conservation Corps is to be established, with 25 men being sent from the Nine Mile to work on this bridge erection.

Mr. Jack Garcia stated that the CCC established the spike camp in an open meadow below the barn on his father's homestead property approximately one mile from the bridge site. [5] At the time of construction, the road ended at the Garcia ranch. However, a narrow track, just large enough for a single vehicle, had been graded down to the west bank of Fish Creek at the bridge site, in order to haul building supplies into the canyon.

The Forest Service Regional Engineer approved the construction blueprints, which came from the American Bridge Company of New York and are dated 1918. The blueprints were part of a series entitled "U.S. Government Military Bridges," and are complete with an order number. A variety of bridge blueprints were available to federal agencies, and the Regional Engineer probably selected plans that would satisfy the specific requirements and limitations of the Fish Creek project.

Mr. Vurl Springer, a CCC enrollee in 1934, worked on the bridge from its start to completion. Springer indicated that there were actually only 10 or 12 enrollees involved in the construction, rather than the 25 suggested in the article from the Mineral Independent. [6] The Forest Service provided the bridge foreman and a cook, as well as the groceries for the crew. Also, the Forest Service provided a carpenter for a short time to build the forms for the concrete bridge abutments. [7]

All materials for the bridge (i.e., the steel I-beams, angle sections, plates, rivets, etc.) had to be transported 45 miles from the railroad shipping point in Missoula to the construction site. The bridge foreman gave the job of driving the truck to Vurl Springer. Springer hauled all of the cement and steel for the bridge in a small Ford pick-up truck, a task that required many round trips. The crew shoveled gravel from a gravel bar on the Clark Fork River, which was then transported by truck the four miles back to the bridge site to mix with the cement for forming the concrete abutments. [8]

The majority of the tasks for completion of the bridge were accomplished through the use of manual labor and hand tools. With the exception of the truck for hauling, the enrollees had only hand shovels and a small, hand-operated cement mixer. The first step in construction of the bridge consisted of digging the footings for the concrete abutments. Next, the Forest Service carpenter built the forms, and the CCC crew poured the concrete. The concrete for each abutment had to be mixed and poured in one day. This task took about 24 hours, with the men working continuously from 7:00 a.m. one morning until 7:00 a.m. the following day. The work time was extended to about 36 hours for the second abutment poured, because they ran out of cement in the middle of pouring. Springer had to drive to Missoula and return with more cement in order to finish the abutment. [9]

After the crew poured the abutments, they built a "false work" of logs and poles across the river to serve as a support for the truss sections of the bridge. The work crew assembled the truss sections separately, and then slid them with ropes along the false work. The crew worked from one end of the bridge to the other, riveting the sections together as they were moved into place. The treated timber decking and steel running plates were laid after the truss was completed, and the men then removed the false work.

The enrollees worked from May until the beginning of September to complete the bridge. The only heavy machinery used was a bulldozer, which was brought in at the end of the project to fill in the dirt behind the concrete abutments. By October 1934, another CCC crew had finished grading a new road westward from the bridge to the railroad siding of Rivulet. [10]

A listing of structures maintained by the Regional Structural Engineer for the Forest Service lists the cost of construction for the Fish Creek Bridge as $8,679.05. This figure probably does not include the wages of the enrollees, which would have been paid by the CCC.

IV. THE BRIDGE

The Fish Creek Bridge is a single span, riveted Warren pony truss with verticals. It measures 67 feet 6 inches long and has an outside deck width of 13 feet 2 inches. The roadway width is 11 feet 9 inches. The structure was supported by concrete abutments (at the Fish Creek site).

The design for the military bridge involved two basic plans, one for the end panels and another for the interior. Except for size, the appearance of the members was the same. Such a design was easily

adapted to any length necessary to span creeks, ravines, or narrow rivers. The plans were undoubtedly used repeatedly, as they date to the First World War.

The main members are comprised of angle sections. Both the upper chord and lower chord are double angles. The first panel on either end has 6x6x½-inch angles, while the four interior panels have 8x6x7/8-inch angles. The diagonals are double angles 5x3½-inch of thicknesses varying from 5/16-inch to 3/8 and 7/16-inch. The V-connection rests on I beam floor beams. The verticals (non-load bearing) are double angles with knee braces or four angles. All of the members are rigid, being riveted together with gussett plates, splice plates and angles, and brackets. The rivets are 7/8-inch on 1 1/16-inch open holes.

The deck system is situated 2 feet 4¼ inches up from the bottom of the 5 feet 11 inch pony truss. This arrangement tends to hide the six I beam floor beams, the bottoms of which are riveted in place to the verticals and the lower chord. Four stringers are bracketed between each floor beam. A 4x6-inch wooden beam tops the stringers, and the floor system of 5½-inch Douglas-fir strip sets on the wood beam. A checkered steel plate protects the deck from tire wear, and a 7½-inch square beam serves as the curb on either side.

The expandable design gives the bridge an unusual appearance. There are no inclined end posts or portals as one would expect to see. Instead, this prefabricated structure has rivet holes on the angle verticals in the end position as if ready to rivet on another panel.

V. END NOTES

1. Elizabeth Gail Throop, "Utterly Visionary and Chimerical: A Federal Response to the Depression; An Examination of the Civilian

Conservation Corps Construction on National Forest System Lands in the Pacific Northwest" (Master's thesis, Portland State University, Oregon, 1979), p. 12; John A. Salmond, The Civilian Conservation Corps, 1933-1942: A New Deal Case Study (Durham, North Carolina: Duke University Press, 1967).

2. Bill Sharp, unpublished list of Civilian Conservation Corps camps in Montana, provided to Lolo National Forest Cultural Resource Specialists, no date.

3. Alison T. Otis, William D. Honey, Thomas C. Hogg, and Kimberly K. Lakin, "The Forest Service and the Civilian Conservation Corps: 1933-1942," report prepared for the United States Department of the Interior by Pacific Crest Research and Services Corporation, Corvallis, Oregon, 1986, pp. 18-19.

4. Ibid.

5. Jack Garcia, telephone interview with Janene Caywood, December 17, 1986.

6. Vurl Springer, interview with Janene Caywood, Missoula, Montana, November 21, 1986.

7. Ibid.

8. Ibid.

9. Ibid.

10. Russell Corn, telephone interview with Janene Caywood, November 12, 1986.

11. American Bridge Company, "U.S. Government Military Bridges, U.S.S.P.Co. Order No. XAB4391," 1918.

VI. BIBLIOGRAPHY

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C. THESES

Throop, Elizabeth Gail. "Utterly Visionary and Chimerical: A Federal Response to the Depression; An Examination of the Civilian Conservation Corps Construction on National Forest System Lands in the Pacific Northwest." Unpublished Master's thesis, Portland State University, Oregon, 1979.

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Garcia, Jack (Rivulet, Montana) to Janene Caywood [telephone interview], December 17, 1986, Missoula, Montana.

Springer, Vurl to Janene Caywood [personal interview], November 21, 1986, Missoula, Montana.

E. UNPUBLISHED DOCUMENTS

Sharp, Bill. Unpublished list of Civilian Conservation Corps camps in Montana, provided to Lolo National Forest Cultural Resource Specialists, no date.

F. NEWSPAPERS

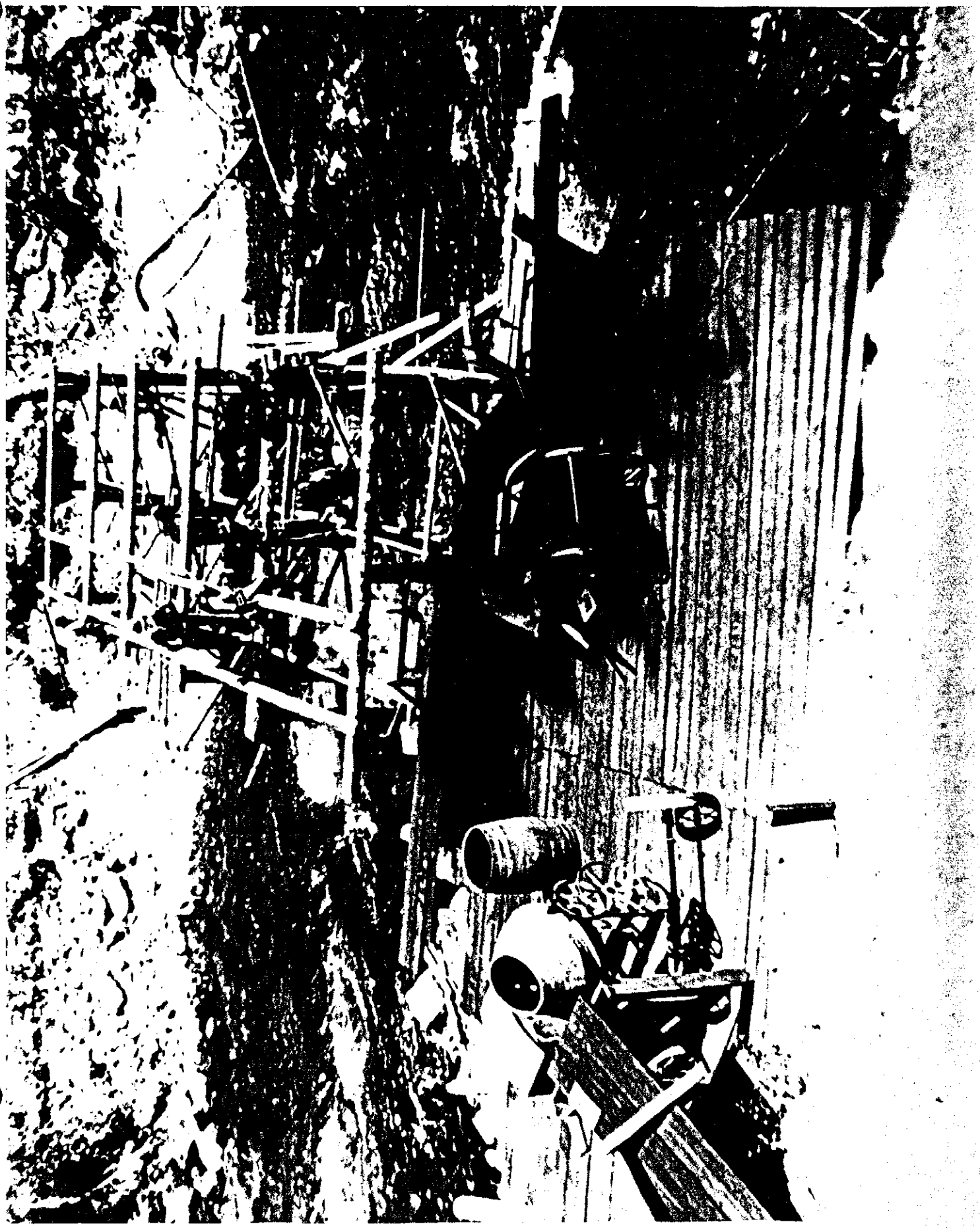
Mineral Independent, 15 March 1934.

G. BRIDGE PLANS

American Bridge Company. "U.S. Government Military Bridges, U.S.S.P.Co. Order No. XAB4391." 1918. Copy on file at U.S. Forest Service Northern Region, Missoula, Montana.

COPY OF 1934 PHOTOGRAPH. MIXING CONCRETE FOR ABUTMENTS.

COPY OF 1934 PHOTOGRAPH. LOG AND POLE FALSEWORK PRIOR TO BRIDGE ASSEMBLY.



COPY OF 1934 PHOTOGRAPH. MOVING TRUSS SECTIONS INTO PLACE.