

**United States Department of the Interior
National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section _____ Page _____

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SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 09001182

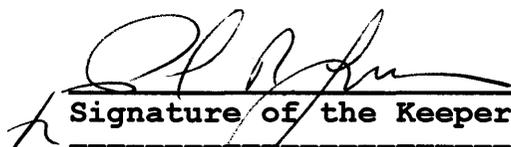
Date Listed: 1/4/2010

Natural Pier Bridge
Property Name

Mineral MT
County **State**

Montana's Historic Steel Truss Bridges MPS
Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.



Signature of the Keeper

1/4/2010

Date of Action

Amended Items in Nomination:

Classification:

The *Number of Contributing Properties Previously Listed* should read: 0
[This refers only to resources within the nominated boundaries of this property not to other bridge locations associated with the MPS context.]

These clarifications were confirmed with the MT SHPO office.

DISTRIBUTION:

- National Register property file
- Nominating Authority (without nomination attachment)

United States Department of the Interior
National Park Service

1182

NOV 20 2009

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional certification comments, entries, and narrative items on continuation sheets (NPS Form 10-900a).

1. Name of Property

Historic name Natural Pier Bridge

Other names/site number 24MN243, MDT No. L31089001+04001

2. Location

street & number Milepost 1 on South Frontage Road

not for publication

city of town One Mile Southwest of Alberton

vicinity

State Montana code MT county Mineral code 061 zip code 59820

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property meets does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

national statewide local

Signature of certifying official

Date

Title

State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria.

Signature of commenting official

Date

Title

State or Federal agency and bureau

4. National Park Service Certification

I, hereby, certify that this property is:

Signature of the Keeper

Date of Action

entered in the National Register

determined eligible for the National Register

determined not eligible for the National Register

removed from the National Register

other (explain:)

[Signature] 1/4/2010

5. Classification

Ownership of Property
 (Check as many boxes as apply)

- private
- public - Local
- public - State
- public - Federal
- private

Category of Property
 (Check only one box)

- building(s)
- district
- site
- structure
- building(s)
- object

Number of Resources within Property
 (Do not include previously listed resources in the count.)

Contributing	Noncontributing	
		buildings
		sites
1		structures
		Objects
		buildings
1	0	Total

Name of related multiple property listing
 (Enter "N/A" if property is not part of a multiple property listing)

Montana's Historic Steel Truss Bridges

Number of contributing resources previously listed in the National Register

9

6. Function or Use

Historic Functions
 (Enter categories from instructions)

Transportation/Road-related(vehicular)= Bridge

Current Functions
 (Enter categories from instructions)

Transportation/Road-related(vehicular)= Bridge

7. Description

Architectural Classification
 (Enter categories from instructions)

OTHER: Warren Through Truss

Materials
 (Enter categories from instructions)

foundation: Concrete

walls: _____

roof: _____

other: Steel, Wood

Narrative Description

(Describe the historic and current physical appearance of the property. Explain contributing and noncontributing resources if necessary. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, setting, size, and significant features.)

Summary Paragraph

The Natural Pire Bridge is a 2-span riveted steel Warren through truss structure. It is 374 feet in length and 16 feet wide. An unusual feature of this bridge is a concrete pier that rests on a rocky outcrop in the Clark Fork River. The bridge also has two approach spans and decorative cast iron guardrail anchor posts. The bridge represents the standard Montana Highway Department design for Warren through truss structure. The design was in use by the department from 1915 until 1933. The bridge is at its original location and the setting is, for the most part, unchanged. It still functions in its historic capacity as a local access to Alberton and the primary east-west highway in the area.

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

- A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B Property is associated with the lives of persons significant in our past.
- C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D Property has yielded, or is likely to yield, information important in prehistory or history.

Areas of Significance

(Enter categories from instructions)

Engineering _____

Transportation _____

Period of Significance

1917-1959 _____

Significant Dates

1917 _____

1925 _____

Significant Person

(Complete only if Criterion B is marked above)

Cultural Affiliation

Architect/Builder

Montana Highway Department _____

Lord Construction Company _____

Criteria Considerations

(Mark "x" in all the boxes that apply)

Property is:

- A owned by a religious institution or used for religious purposes.
- B removed from its original location.
- C a birthplace or grave.
- D a cemetery.
- E a reconstructed building, object, or structure.
- F a commemorative property.
- G less than 50 years old or achieving significance within the past 50 years.

Period of Significance (justification)

The Period of Significance for this bridge is 1917 to 1959. It encompasses its construction date and the period it served as an important river crossing of the Yellowstone Trail in western Montana. It has functioned as a local access route for Mineral County residents since the 1930s when US Highway 10 was realigned to the north side of the river.

Criteria Consideratons (explanation, if necessary)

Narrative Description

The Natural Pier Bridge crosses the Clark Fork about two miles west of Alberton in Mineral County. The bridge is located at the edge of a canyon that stretches six miles to the Cyr area. The Bitterroot Mountains dominate the skyline west of the bridge, while the Nine Mile Divide delineates the valley to the east. The river has cut a path through the Precambrian Belt Supergroup, which consist of thick, fine grained sediments deposited 1.5 billion years ago. Indeed, the rocky outcrop supporting one of the bridge's piers is comprised of Precambrian mudstone. Though the bedrock outcrop is mudstone, this particular mudstone (and other mudstones in the Belt Supergroup) resist erosion well due to being slightly metamorphed. This area was submerged under Glacial Lake Missoula beginning about 15,000 years ago. Evidence of the cyclical catastrophic floods are evident in scoured rock and the lack of significant amounts of soil in the vicinity of the Natural Pier Bridge. Alberton is located in a small mountain valley. It was a division point for the Milwaukee Road Railroad from 1908 to 1980. Where there is enough room between the mountain ranges and the river, some local residents graze cattle; the area is increasingly being subdivided into residential parcels that are occupied by everything from modest modular homes to large "trophy" houses. The Natural Pier bridge serves local traffic from Alberton and Interstate 90. The Montana Department of Fish, Wildlife & Parks Natural Pier Bridge Fishing Access Site is located adjacent to the bridge on the northeast side of the river.¹

The Natural Pier Bridge is a 2-span riveted Warren through truss structure with two treated timber approach spans. The bridge is 374 feet in length and 16 feet wide with a roadway width of 15 feet. The superstructure consists of two truss spans, one 175 feet (ten panels) and the other 140 feet (eight panels) in length (even-numbered panels are standard to Warren trusses). The substructure consists of three reinforced concrete piers. Two of the piers consists of two concrete columns connected by a concrete web wall. A concrete pier rests on a rock outcrop in the Clark Fork River. The Montana Department of Transportation replaced the original deteriorated columnar-type pier with a solid reinforced concrete pier in 1999. The abutments are also reinforced concrete.

Both steel truss spans have sloping upper chords. The upper chords consist of continuous steel plates riveted to the top flanges of two laced channel sections with batten plates. The lower chords are laced angle sections with batten plates. Vertical and diagonal members are steel laced angle sections. Portal braces are angle sections and the top struts are laced angle sections riveted to the upper chords. The top lateral and sway braces are angle sections riveted to the vertical members and the upper chords. The deck is supported by seven lines of steel I-beam stringers resting on nine steel I-beam floor beams. The stringers and I-beams support a timber deck with timber running planks. The original angle section guardrails were anchored at the bridge ends by decorative square cast iron posts with decorative headpieces. In 1999, the badly damaged guardrails were replaced with similar angle section rails mounted on steel I-beam posts. Three of the four old cast iron guardrail anchors still remain.

Two 29-foot treated timber stringer approach spans reach the bridge on the southwest end. The spans have timber decks with running planks and are flanked by the 1999 guardrails.

Integrity

Other than the periodic replacement of the timber deck and the replacement of one of the concrete piers in 1999, there have been no substantial changes to the Natural Pier Bridge since its construction in 1917. The bridge is the standard riveted steel Warren through truss design developed by Montana State Highway Commission bridge engineers in 1915. This particular design was adapted to the terrain of the area and includes a concrete pier resting on a rock outcrop in the Clark Fork River; a design feature found nowhere else in the state. All of the structural components and features common to the design are present on the bridge and are unchanged, including the decorative cast iron guardrail anchor posts. The bridge retains its distinctive truss configuration, simple angle section guardrails, and the timber deck. Other than the construction of nearby Interstate 90 in the 1960s, the setting of the bridge site has not significantly changed. The surrounding area is still used for residential and recreational purposes. The Natural Pier Bridge retains all its essential elements of design, workmanship, and materials. It appears and functions as it did in 1917 as an important crossing of the Clark Fork River in western Montana.

¹ David Alt and Donald W. Hyndman, *Roadside Geology of Montana*, (Missoula: Mountain Press Publishing, 1991), 52-53, 71, 73; Mineral County History, (Superior: Mineral County Historical Society, 2004), 6.

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets)

(see Continuation page)

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67 has been requested)
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____

Primary location of additional data:

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository: **Montana Department of Transportation**

Historic Resources Survey Number (if assigned): _____

10. Geographical Data

Acreage of Property 2
(do not include previously listed resource acreage)

UTM References

(Place additional UTM references on a continuation sheet)

1	<u>11</u>	<u>689538 (NAD 27)</u>	<u>5209512 (NAD 27)</u>	3	_____	_____	_____
	Zone	Easting	Northing		Zone	Easting	Northing
2	_____	_____	_____	4	_____	_____	_____
	Zone	Easting	Northing		Zone	Easting	Northing

Verbal Boundary Description (describe the boundaries of the property)

Boundaries for the Natural Pier Bridge are drawn to encompass bridge spans, its immediate approaches and that portion of the Clark Fork River spanned by the bridge. The width is increased beyond the measurements of the structure to include the piers and abutments.

Boundary Justification (explain why the boundaries were selected)

The boundary for the Natural Pier Bridge measures 374 x 25 feet. The boundary encompasses the bridge and its approaches on both sides of the Clark Fork River. The boundary is centered on the bridge.

11. Form Prepared By

name/title Jon Axline/Historian

organization Montana Department of Transportation date September 13, 2009

street & number 2701 Prospect Avenue telephone (406) 444-6258

city or town Helena state Montana zip code 59620-1001

e-mail jaxline@mt.gov

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** (7.5 or 15 minute series) indicating the property's location.
A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Continuation Sheets**
- **Additional items:** (Check with the SHPO or FPO for any additional items)

Photographs:

Submit clear and descriptive black and white photographs. The size of each image must be 1600x1200 pixels at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map.

(See continuation pages)

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, PO Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

Statement of Significance Summary Paragraph (provide a summary paragraph that includes level of significance and applicable criteria)

Beginning in 1915, the Montana Highway Department standardized the use of riveted Warren trusses on the state's roads. The Warren truss is easily recognized by the "W" configuration of the diagonal members of the truss. The simplicity and economy of design of the truss made it appealing to American bridge engineers in the early 20th century. The Minneapolis Steel and Machinery Company built the first known Warren through truss in Montana across the Beaverhead River in Madison County in 1907. By 1915, portable field riveting machines supplanted the need for pin-connections, making a stronger and more reliable vehicular bridge. The Montana Highway Department standardized a Warren through truss design in 1915 as part of its effort to provide a reliable, durable, and affordable bridge design to Montana's counties. The first Warren truss built under standardized design crossed the Bitterroot River near Florence in Ravalli County. Built in 1915, it provided the model for other Warren through truss bridges constructed in Montana until 1933. Although the Commission and counties built nearly 150 Warren trusses on the state's primary and secondary highways, the Natural Pier Bridge is one of only a few intact examples of the state-designed trusses remaining in Montana. The bridge is also the only structure in Montana to incorporate a natural feature into its construction. The bridge was an important component of the Yellowstone Trail (later US Highway 10).

Narrative Statement of Significance (provide at least one paragraph for each area of significance)

The Natural Pier Bridge is an excellent example of a multi-span riveted steel Warren through truss bridge and is eligible for the National Register of Historic Places under Criterion A. The bridge was built from standardized designs developed by the Montana Highway Department in 1915. The design was adapted specifically to this site and incorporates a natural rock outcrop in the design. The highway department adopted the Warren truss design because it was able to carry heavier loads with less maintenance than the pin-connected Pratt trusses, it was more durable as a vehicular structure, and because of it was also inexpensive to fabricate and construct. The Warren through trusses were the standard truss bridge designed and built by the Montana Highway Department beginning in 1915. The Natural Pier Bridge is exemplary of the design and representative of the highway department's bridge-building programs from 1915 to 1941. The bridge is eligible for the National Register of Historic Places under Criterion A because of its association with the highway department's first great bridge-building boom from 1915 to 1926 and because it is indicative of the way bridges were built in the Treasure State during that period. The department adapted the standardized design, advertised and awarded the bridge contracts, and supervised the construction of the structures. The state and counties shared in the costs of constructing the bridge. In this case, the funding was shared by Mineral County, the state, and the federal government because of the bridge's location within the Lolo National Forest. The bridge was also an important component of the State's program to improve important Federal Aid highways in the 1910s and 1920s. The bridge was also associated with the agricultural and silviculture development of the Clark Fork valley as it provided access to the Milwaukee Road Railroad station at Alberton for residents on the south side of the river.

The Natural Pier Bridge is also eligible for listing in the National Register of Historic Places under Criterion C because it is an intact example of the type of standardized riveted Warren through truss that the State Highway Commission built in Montana from 1915 to 1933. The bridge also exhibits an unusual design feature – one of the concrete piers is set on a natural rock outcrop in the Clark Fork River. The Montana Highway Department built Warren trusses at narrow river crossings. The design was particularly adaptable to different crossing conditions and was easy to build and affordable to both the State and the county governments. There have been minor structural modifications to the bridge and vehicular collisions have not significantly damaged any important structural components. The Natural Pier Bridge retains its historic appearance and configuration with all of its original structural components and features intact. The bridge, moreover, still functions as an access across the Clark Fork River at Alberton and three of its original cast iron guardrail anchors are still intact.

Engineering Significance

Beginning in 1915, the Montana Highway Department standardized the use of riveted Warren trusses on the state's roads. The Warren truss is easily recognized by the "W" configuration of the diagonal members of the truss. The simplicity and economy of design of the truss made it appealing to American bridge engineers in the early 20th century. The Minneapolis Steel and Machinery Company built the first known Warren through truss in Montana across the Beaverhead River in Madison County in 1907. By 1915, portable field riveting machines supplanted the need for pin-connections, making a stronger and more reliable vehicular bridge. The Montana Highway Department standardized a Warren through truss design in 1915 as part of its effort to provide a reliable, durable, and affordable bridge design to Montana's counties. The first Warren truss built under standardized design crossed the Bitterroot River near Florence in Ravalli County. Built in 1915, it provided the model for other Warren through truss bridges constructed in Montana until 1933. Although the Commission and counties built nearly 150 Warren trusses on the state's primary and secondary highways, the Natural Pier

Bridge is one of only a few intact examples of the state-designed trusses remaining in Montana. The bridge is also the only structure in Montana to incorporate a natural feature into its construction. The bridge was an important component of the Yellowstone Trail (later US Highway 10).

Developmental history/additional historic context information (if appropriate)

In 1916, the highway commission and the U.S. Department of Agriculture, which oversaw the federal Bureau of Public Roads and the Forest Service, began plans to build two large bridges on the Yellowstone Trail in Mineral County. Responding to pressure from the lumber companies and the Yellowstone Trail Association, Mineral County had embarked on an ambitious bridge-building program just two years after its formation from the western part of Missoula County. In its original incarnation, the Yellowstone Trail incorporated portions of the old Mullan Road on the north side of the Clark Fork west of Alberton, a small Milwaukee Road division point in eastern Mineral County. By 1916, however, plans were underway in the county to move the road to the south side of the river to St. Regis where it would cross over again to the north side. The Alberton and St. Regis bridges were critical to the county's plan. The State Highway Commission's bridge department designed both bridges, but because both structures would be located on a county road within a national forest, the USDA and Mineral County shared in the funding for the projects. The county let contracts to the Wausau Iron Works of Wausau, Wisconsin for the St. Regis bridge and the Lord Construction Company of Missoula for the Alberton bridge in 1916. Of the two structures, only the Alberton bridge still exists intact.²

Now called the Natural Pier Bridge, it replaced an old timber through truss built by Missoula County. Both the old and the new bridges utilized a rock outcrop in the Clark Fork for one of its piers. Along with incorporating the outcrop into its plan, the bridge is a standard highway commission-designed, two-span riveted Warren through truss. The county ran out of funds twice while building the structure, forcing two bond elections and a grant from the USDA to complete the bridge in late 1918. For all the financial problems the county suffered during its construction, however, the value of the Natural Pier Bridge was short-lived. In 1932, the Montana Highway Department completed the construction of the Scenic Bridge (24MN304), a deck truss structure across the Clark Fork River near Tarkio and, in 1932, completed a second deck truss at nearby Cyr (24MN305). The two new bridges rendered the Natural Pier Bridge superfluous as traffic on US Highway 10 was re-routed to the east side of the river. The Natural Pier Bridge continues to carry traffic across the Clark Fork to residences and recreational areas on the west side of the river. In 1999, the Montana Department of Transportation (MDT) completed a project that rehabilitated the structure. The project included a new deck, guardrails, reinforced concrete pier and strengthening of the deck to accommodate contemporary traffic demands.³

² Jon Axline, *Conveniences Sorely Needed: Montana's Historic Highway Bridges, 1860-1956*, (Helena: Montana Historical Society, 2005), 66.

³ Axline, *Conveniences Sorely Needed*, 66; *Mineral County History*, 63; Bridge Inspection Records (1979 – 2007) Montana Department of Transportation, Helena, Montana.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Name of Property Natural Pier Bridge

County and State Mineral County, MT

Name of multiple property listing (if applicable)

Montana's Historic Steel Truss Bridges

Section number 9

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Bibliography

Alt, David and Donald W. Hyndman. *Roadside Geology of Montana*. (Missoula: Mountain Press Publishing, 1991).

Axline, Jon. *Conveniences Sorely Needed: Montana's Historic Highway Bridges, 1860-1956*. (Helena: Montana Historical Society, 2005).

Bridge Inspection Records, 1979 - 2007. Montana Department of Transportation, Helena.

Mineral County History. (Superior: Mineral County Historical Society, 2004).

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

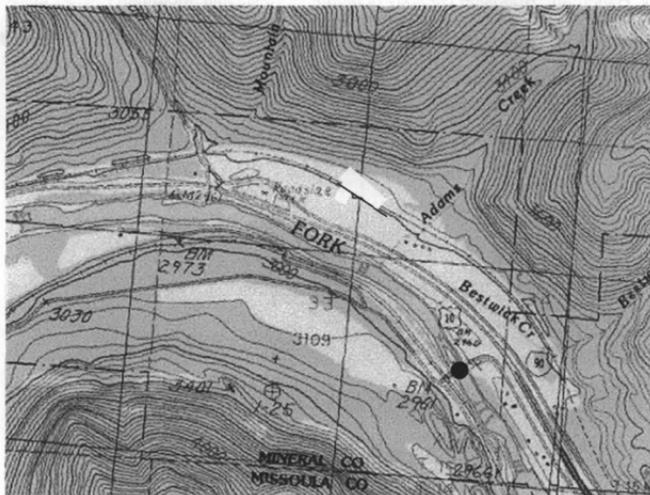
Name of Property Natural Pier Bridge

County and State Mineral County, MT

Name of multiple property listing (if applicable)
Montana's Historic Steel Truss Bridges

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Page 1



Location of Natural Pier Bridge (T15N R23W, S33 Stark South quadrangle map, 1999)

**United States Department of the Interior
National Park Service**

National Register of Historic Places Continuation Sheet

Name of Property Natural Pier Bridge

County and State Mineral County, MT

Name of multiple property listing (if applicable)
Montana's Historic Steel Truss Bridges

Photographs

Page 1

Name: Natural Pier Bridge (24MN243)
County and State: Mineral County, Montana
Photographer: Kristi Hager
Date of Photograph: May 2007
Location of original negative: Montana Department of Transportation. Helena, Montana.
Description and view of camera: West profile of truss spans and pier located on rock. View to the northeast.
Photograph: 0001

Name: Natural Pier Bridge (24MN243)
County and State: Mineral County, Montana
Photographer: Jon Axline
Date of Photograph: August 2008
Location of original negative: Montana Department of Transportation. Helena, Montana.
Description and view of camera: West profile of truss spans and north portal. View to the southeast.
Photograph: 0002

Name: Natural Pier Bridge (24MN243)
County and State: Mineral County, Montana
Photographer: Jon Axline
Date of Photograph: August 2008
Location of original negative: Montana Department of Transportation. Helena, Montana.
Description and view of camera: West profile of truss spans. View to the south.
Photograph: 0003

Name: Natural Pier Bridge (24MN243)
County and State: Mineral County, Montana
Photographer: Jon Axline
Date of Photograph: August 2008
Location of original negative: Montana Department of Transportation. Helena, Montana.
Description and view of camera: Detail of guardrail newel post. View to the south.
Photograph: 0004

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Name of Property Natural Pier Bridge

County and State Mineral County, MT

Name of multiple property listing (if applicable)
Montana's Historic Steel Truss Bridges

Photographs

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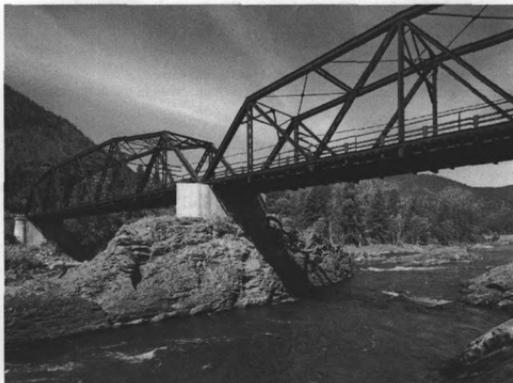


Photo 001: West profile of truss spans and pier located on rock. View to the northeast.



Photograph 002: West profile of truss spans and north portal. View to the southeast.

United States Department of the Interior
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National Register of Historic Places Continuation Sheet

Name of Property Natural Pier Bridge

County and State Mineral County, MT

Name of multiple property listing (if applicable)
Montana's Historic Steel Truss Bridges

Photographs

Page 3



Photograph number 0003: West profile of truss spans. View to the south.



Photograph Number 0004. Detail of guardrail newel post. View to the south.