BLUE BEAVER CREEK PRATT PONY TRUSS Spanning Blue Beaver Creek Faxon vicinity Comanche County Oklahoma JP Number 17575(04) Structure Number 16N2470E1730007 NBI Number 00444

PHOTOGRAPHS

AND

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Final

HISTORIC AMERICAN ENGINEERING RECORD
Submitted to:
Oklahoma State Historic Preservation Office
Oklahoma Historical Society
Oklahoma History Center, 800 Nazih Zuhdi Dr.
Oklahoma City, Oklahoma 73105
February 2015
SHPO File No. 0710-00/MOA #223

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PHOTOGRAPHS

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INDEX TO BLACK AND WHITE PHOTOGRAPHS

The following photographs document the Blue Beaver Creek Pratt Pony Truss in its original location spanning Blue Beaver Creek. These photographs were found in 2014 in a box in the possession of the ODOT-Cultural Resources Program. A date-stamp on the photos indicate they were taking in 1994, but there was no accompanying information or a photo log to provide the name of the photographer and direction that camera was facing. ODOT has determined that John Hartley was responsible for the original photographs. The photographs are presented here for they provide a view of the Blue Beaver Creek Bridge in its original location prior to being removed.

- 1. DETAIL OF BRIDGE PLATE
- 2. DETAIL OF BRIDGE PLATE
- 3. SIDE VIEW AND WOODEN DECK
- 4. SIDE VIEW AND WOODEN DECK
- 5. FULL VIEW OF RAILING AND DECK
- 6. DETAIL OF TRUSS AND DECK
- 7. DETAIL OF BRIDGE PINS
- 8. DETAIL OF WOODEN DECK
- 9. DETAIL OF TRUSS
- 10. DETAIL
- 11. DETAIL VIEW OF ABUTMENT AND UNDERSIDE
- 12. DETAIL OF STEEL-MAKERS MARK

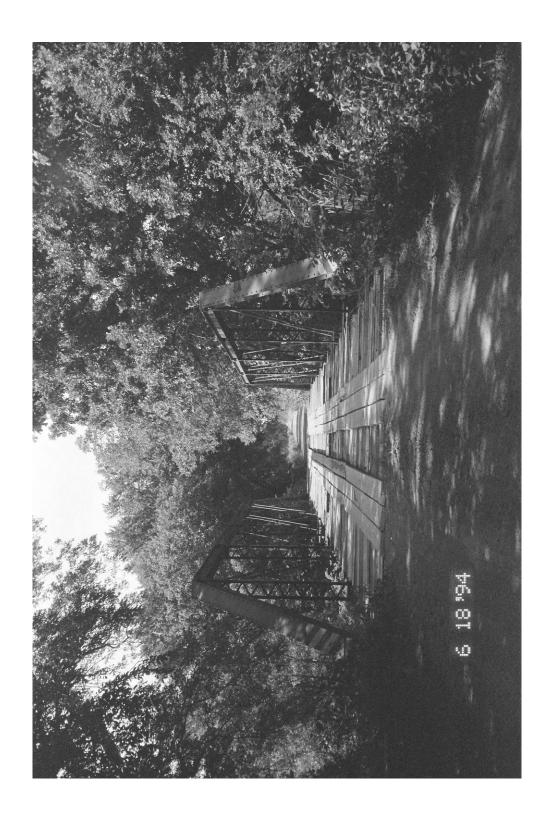
- 13. DETAIL OF STEEL-MAKERS MARK AND PINS
- 14. FULL VIEW OF BRIDGE
- 15. DETAIL OF BRIDGE PINS
- 16. UNDERSIDE AND ABUTMENT
- 17. DETAIL OF UNDERSIDE
- 18. UNDERSIDE AND ABUTMENT
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- 20. SIDE VIEW OF BRIDGE
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- 23. UNDERSIDE AND ABUTMENT
- 24. SIDE VIEW OF BRIDGE
- 25. SIDE VIEW OF BRIDGE











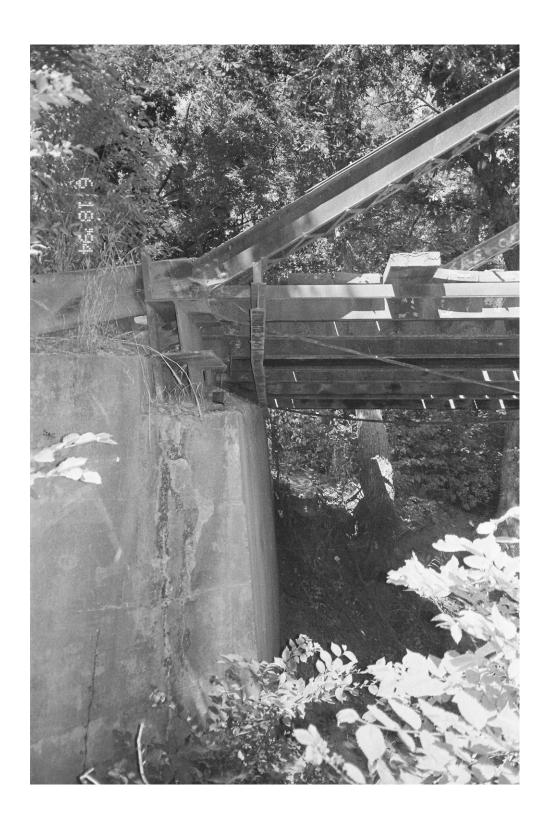








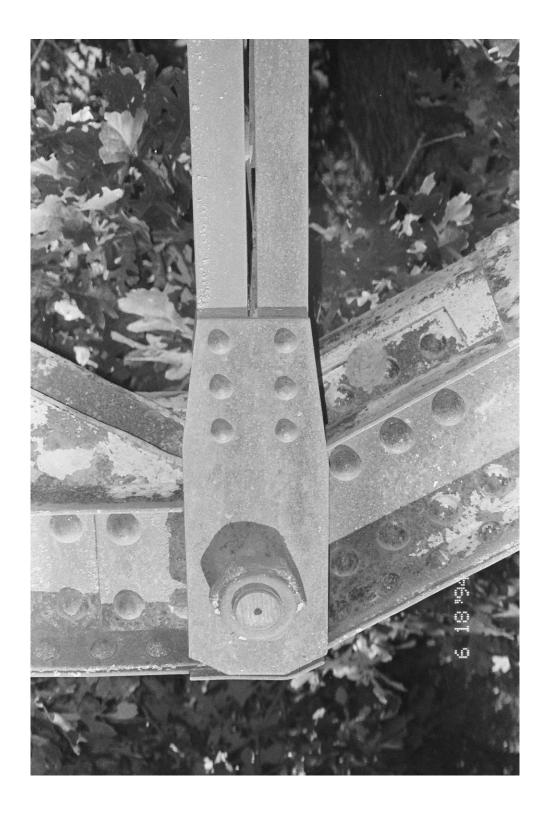






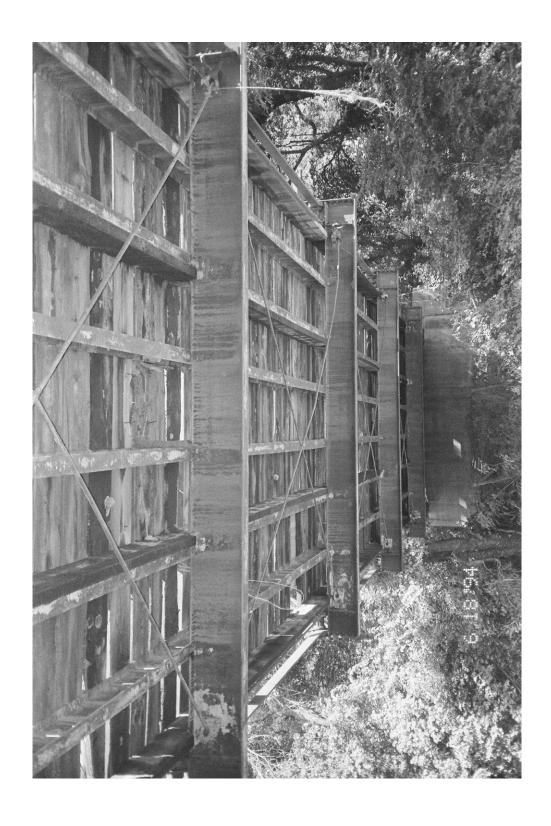








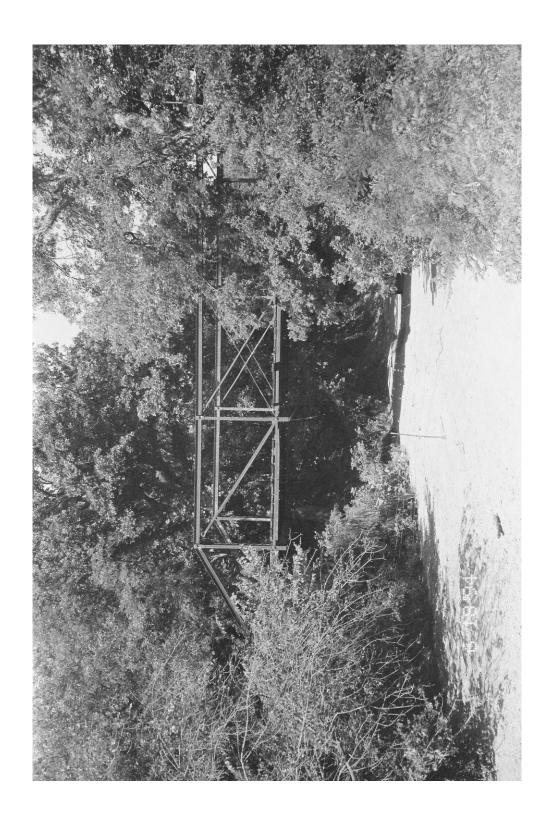


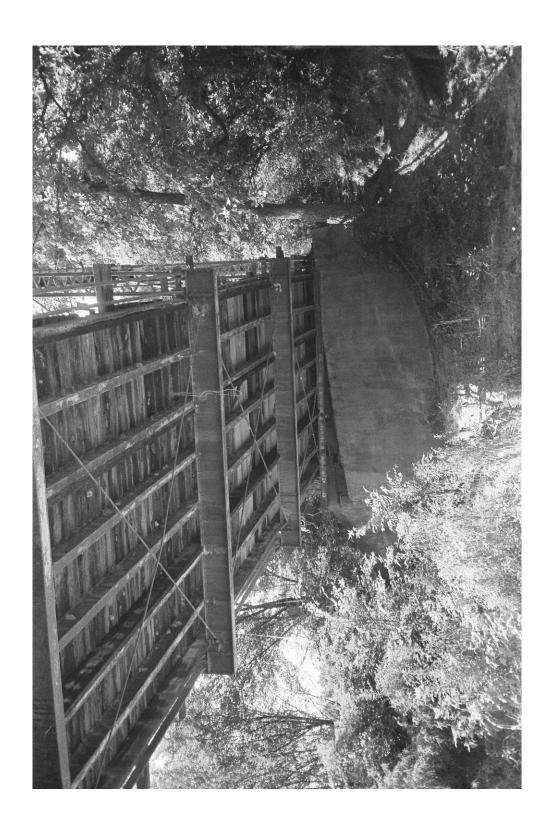


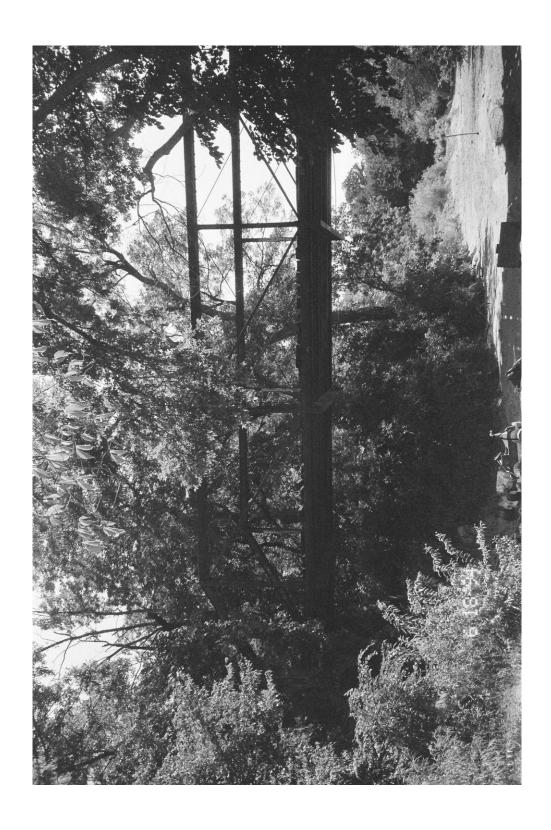


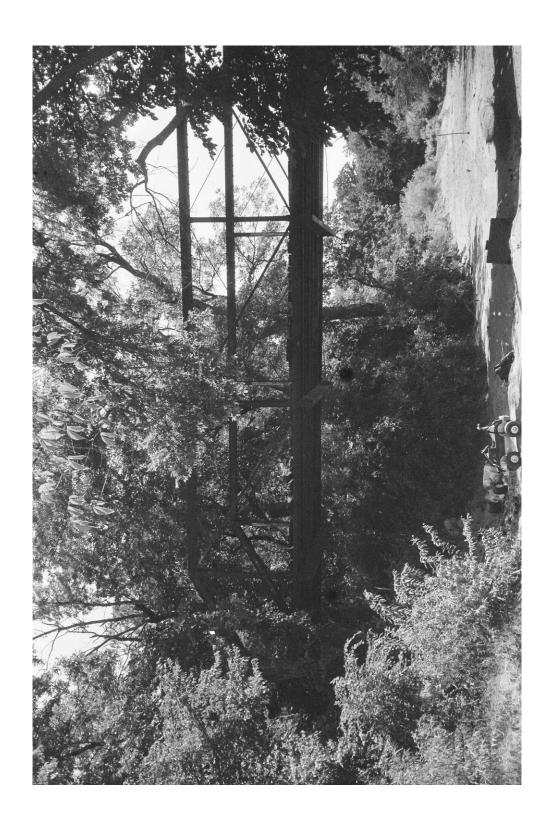












BLUE BEAVER CREEK PRATT PONY TRUSS

Spanning Blue Beaver Creek
Faxon vicinity
Comanche County
Oklahoma
JP Number 17575(05)
Structure Number 16N2470E1730007
NBI Number 00444

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

BLUE BEAVER CREEK PRATT PONY TRUSS BRIDGE

Location: Spanning Blue Beaver Creek approximately 2.5 miles northeast of the

Faxon in southwestern Comanche County. UTM: Zone 14N, 539049E, 3815304N

Legal Location: T1S, R13W, on the section line between Section 4 and Section 5

Map Reference: U.S.G.S. 7.5' series, FAXON, OKLA (1936)

Present Owner: Camp Y'Shua

Present Use: Carries vehicular traffic on NW Comanche Drive (a private road) across

Medicine Creek

Significance: The Blue Beaver Creek Bridge is an early example of a Pratt Pony Truss

bridge built by the Boardman Company of Oklahoma City, Oklahoma

List of Preparers: Historian/ Kelli E. Gaston

Architectural Historian/ Consultant to Geo-Marine, Inc.

Photographer Plano, Texas

Principal Investigator Marsha Prior, Ph.D.

Geo-Marine, Inc. Plano, Texas

Report Production: Anna Banda

Geo-Marine, Inc. Plano, Texas

PART I: HISTORICAL INFORMATION

A. Physical History:

1. Date of Construction: 1916

2. Architect/Engineer: unknown

3. Builder/Contractor/Supplier: Boardman Company

4. Original Plans: not available

5. Alterations and Additions: The structure remains unaltered, but has been relocated

B. Historical Context

1. Introduction

In outlying rural communities across Oklahoma, bridges frequently stand as the most notable examples of expert engineering. These functional structures are artifacts representative of a community's development as well as changes in engineering practices over time. The community of Faxon in rural Comanche County was once a bustling agricultural center. The rolling hills stretching in every direction were ideal for growing a variety of crops, but to the north and east, the fertile agricultural land is crisscrossed by the Cache and the Blue Beaver Creeks. In order for agricultural goods to reach the rail line or processing centers in Faxon and beyond, those creeks had to be crossed, often more than once. The bridge along NS-247 over Blue Beaver Creek northeast of Faxon was one segment of a vital farm to market link. For almost 85 years, this bridge provided stable, flood-proof, and safe transportation, a monument to the bridge's craftsmanship and design, as well as the forethought of county commissioners.

The territory that would become Comanche County is situated both in the Wichita Mountains and the Red Bed Plains. The region features rolling, grass covered hills dotted by ancient mountains. The West Cache, Cache, and Beaver Creeks drain the region. Historically, the land was home to multiple Native American tribes (Oklahoma Encyclopedia 2014a).

European exploration of the Blue Beaver Creek area began in the seventeenth century. Spaniards came to the area in search of gold. In 1629, Father Juan de Salas traveled to the area from Santa Fe to establish a mission. Additional mining exploration occurred later in the century, and subsequent legends of gold and silver treasure fueled mining booms in the nineteenth and twentieth centuries. The territory was part of the Louisiana Purchase and later, part of Indian Territory. Comanche County was originally assigned to the Choctaw and Chickasaw tribes by the federal government. Later, the federal government leased out the western portion, which was then ceded to the government in 1866. In 1867, the lands were assigned as a reservation for the Kiowa, Comanche, and Apache tribes under the Medicine Lodge Treaty (Oklahoma Encyclopedia 2014a). In 1869, General Philip Sheridan established Fort Sill.

Pressure to open the area to non-Native American settlement began at the end of the nineteenth century. Much of the Kiowa, Comanche, and Apache Reservation was leased by cattle ranchers from Texas. In addition to cowboys, non-Native American settlers in the area included military servicemen, civilian military employees, miners, missionaries, and traders. With increased non-Native American settlement by the above groups, the perception proliferated that the tribes had been given too much land (Southwest Genealogical Society 1985:17-18).

The federal government established the Jerome Commission to negotiate the purchase of "excess" tribal land in southwestern Oklahoma. This three-member commission began negotiations in October 1892 and finished within 3 days. The agreement between the Commission and the tribes allowed for the sale of the "excess" land for \$1.25/acre. As part of the agreement, each registered tribal member was allotted 160 acres. Further, the federal government reserved approximately 400,000 acres of grazing land known as the

"Big Pasture" between Lawton and the Red River. Additional land was eventually set aside to support public schools, expand Fort Sill, and establish a forest reserve in the Wichitas, with the remainder to be open for non-Native American settlement (Southwest Genealogical Society 1985:18). Though tribal leaders signed off on the agreement, there were immediate rumors of fraud and deception on the part of the Jerome Commission. Ultimately, the federal government paid less than \$1.00/acre for the land (Southwest Genealogical Society 1985:17-18).

After the tribal allotments, the federal government prepared for the eventual opening of the land. Ranchers and their cattle were removed, as well as the fences (Southwest Genealogical Society 1985:18). Instead of a land run, however, the federal government opted to institute a lottery, a process that would hopefully be more orderly. Registration took place near Fort Sill and El Reno. At Fort Sill, 29,000 people registered; at El Reno, the number was close to 135,000. An elaborate ceremony took place for the drawing of names. At El Reno, 500 "winners" were called on the first day with 13,000 eventual winners being called over the next several weeks (Southwest Genealogical Society 1985:21).

In December 1906, public pressure to open the "Big Pasture" was successful, and that area was opened for settlement by a sealed bid process. In 1907, the landscape of the county changed dramatically, as approximately half the county's territory was sacrificed to create Tillman County and to add additional acres to the counties of Grady, Jefferson, and Stephens. In 1910, there were more temporary changes to the county when part of Comanche and part of Kiowa County split off to form Swanson County. In 1912, Cotton County was formed from territory in southern Comanche County. The political boundaries of the county have remained the same, however, since 1912 (Oklahoma Encyclopedia 2014a).

Since its establishment in 1869, the military installation at Fort Sill has remained an important part of the local economy. The military base is a major employer and source of revenue, supplementing other important activities, including farming and ranching. Agricultural products in Comanche County include cotton, wheat, corn, oats, hay, and broomcorn. Production in Comanche County and surrounding areas was aided by the establishment of Cameron State School of Agriculture in 1908 (now known as Cameron University). Natural resources, including oil and gas reserves, granite, limestone, and gypsum, are also beneficial to the local economy. Oil and gas fields near Chattanooga, Elgin, Fletcher, and Sterling were discovered in the early 1900s (Faxon Signal 1914; Oklahoma Encyclopedia 2014a).

Although located in a remote area of Oklahoma, Comanche County has long been well connected to the rest of the state and to other regional centers. Historically, important transportation routes in Comanche County included the military roads that connected Fort Sill to Camp Supply, Fort Towson, and Fort Smith. Comanche County was linked to the rest of the state by the Oklahoma City and Western Railroad (which would later become the St. Louis and San Francisco) as well as the Enid and Anadarko Railway (later the Chicago, Rock Island, and Pacific). Comanche County is now linked to other parts of the state and to points in every direction by Interstate 44, US 62, 277/281 (Oklahoma Encyclopedia 2014a).

Blue Beaver Creek runs north to south, eventually feeding into West Cache Creek where it intersects SH-36 east of Faxon. Blue Beaver Creek intersects NS-247 approximately 2.25 miles north of SH-36, just south of the intersection of New Hope Road and just north of E1750 Road. NS-247 is a well-maintained, two-lane gravel road. community of Faxon is located in far southwestern Comanche County. approximately 11 miles west of Interstate 44 on OK-36. Faxon was founded in 1902 and named after US Senator Chester Long's private secretary, Ralph Faxon. The community was linked to other nearby towns in 1903 with the arrival of the Chicago, Rock Island, and Pacific Railway. The local economy has long been tied to farming, particularly cotton. After its founding, Faxon grew quickly and had two cotton gins by 1908. Local businesses included a hardware store, lumber yard, agricultural implements supply, livery, and various dry goods and grocery stores. By 1930, there was a large rail depot, a telephone office, and variety of other businesses. A newspaper operated from 1904 to 1918. Today, however, Faxon is virtually a ghost town. A handful of original buildings remain, including a hotel, a school that closed in the mid-1990s, and a tiny church, but each has been significantly altered. There is only one territorial style storefront remaining that retains integrity. In addition to the remnants of the old commercial area, there are a few houses scattered over several blocks, a smoke shop, and an unmanned post office. At its peak, the population of Faxon reached 500, but by the end of the 1990s, that number had fallen to 134 (Comanche County Historical Society 1958:37; Oklahoma Encyclopedia 2014b). As with other communities, though, early residents of Faxon were eager to invest in good roads. Newspaper articles from 1916 and 1917 carried information on local and regional road improvements (Faxon Signal 1916a, 1916b, 1916c, 1917)

2. Development of the Comanche County, Blue Beaver Creek Pratt Pony Truss Bridge

Comanche County, like much of Oklahoma, is traversed by numerous streams as well as larger rivers and bodies of water. The abundance of this resource has helped bring prosperity to the state, but bridging these bodies of water has long posed a challenge to citizens, municipalities, and the state at large. The earliest attempts at bridge building were largely private, utilizing locally available materials, but such bridges were unreliable, often dangerous, and required constant maintenance. After statehood, road and bridge building maintenance became a county issue and managing miles of roads and countless bridges posed a significant problem for county commissioners.

In the 1910s, the Comanche County Commissioners undertook a number of bridge projects. Rudimentary wooden bridges were frequently damaged by storms, sometimes even washed away completely by flash flooding. In April 1912, the County Commissioners solicited work on two projects, each approximately 100 feet in length. Bids were received from local companies (Western Bridge of Ardmore and N.N. Vernon Bridge Company of Frederick), as well as national companies, including Missouri Bridge and Iron, Blodgett Construction, Vincennes Bridge, Stupp Brothers Bridge and Iron, Midland Bridge, El Paso Bridge and Iron, and Illinois Steel Bridge. In June 1912, the county solicited bids for an additional fifteen bridges. Midland Bridge, Stupp Brothers, El Paso Bridge and Iron, N.N. Vernon Bridge Company, as well as Brookville Bridge, A.L. Greenburg Iron, and J.A. Fisher of Chickasha bid on all or parts of the large bridge project.

On February 3, 1913, the county solicited six additional steel bridges. A contract was let on January 23, 1914, to the Midland Bridge company. During this time period, Stupp Brothers, Midland, and N.N. Vernon Bridge also appear frequently in County Commissioner Proceedings for bridge-related repair work. In September 1915, Comanche County commissioners used emergency powers to solicit repairs on numerous bridges across the county that had been damaged in storms, including several bridges near Faxon (Commissioner Proceedings: September 21, 1915).

On April 24, 1916, Comanche County Commissioners resolved to advertise for bids for the construction of two steel bridges, one of which was located between Sections 4 and 5, Township 1 South, Range 13 West and identified as Bridge #317. This legal description matches the location of the Blue Beaver Creek Bridge on NS-2470 northeast of Faxon. On May 12, 1916, County Commissioner proceedings reflect an estimate by the county engineer for the bridge project to be \$2,376.00. The bids received all exceeded that estimate and were rejected by the commissioners. The engineer was then instructed to make new plans and specifications for the bridge. Bids were again solicited in June 1916. The commissioners eloquently stated that "... it is for the best interest of the County of Comanche and for the convenience of the citizens thereof, that permanent bridges and, (or) culverts should be built ..." (Commissioner Proceedings: June 19, 1916).

The bids were opened June 30, 1916, with the Boardman Company of Oklahoma City beating out Midland Bridge and N.N. Vernon of Frederick with a bid of \$2,265.00 for the project on Bridge #317. Although ODOT records indicate a date of construction for the Blue Beaver Creek Bridge of 1915, there are no Comanche County bridge projects in 1914 or 1915 that were either awarded to Boardman Company or that have the correct legal description to be the Blue Beaver Creek Bridge.

The Blue Beaver Creek Bridge is a notable, early example of a Pratt pony truss built by the Boardman Company of Oklahoma City, Oklahoma. The Pratt pony truss was a popular, early steel truss type bridge built across the state by a multitude of local, regional, and national bridge companies. The bridge type is characterized by its inclined end posts and pin connections. It was most popular in lengths from 50 to 100 feet. According to *Spans of Time*, this bridge type was perceived as "reliable" and "uncomplicated" in the years before World War I and therefore "greatly contributed to improving the early roads of Oklahoma as it did elsewhere" (King 1993).

The Boardman Company first appears in the Comanche County Commissioner proceedings in 1916, but the company would quickly become a significant regional bridge supplier (King 1993). The Boardman Company, named for John R. Boardman, was an Oklahoma City based metal products company. Boardman purchased the Oklahoma City based Wylie Company in 1908, renaming it the Boardman Company by 1910. Boardman transitioned the company from producing primarily agricultural related products to road related and agricultural products, by merging it with another of his purchases, the Imperial Iron and Steel Company of Oklahoma City. Eventually, the Boardman Company would expand its offering even further, catering to the oil and gas industry (King 1993; Marks 2010).

The Blue Beaver Creek Bridge was inventoried as part of the ODOT Planning and Research Division Cultural Resources Program's 1993 assessment of Oklahoma highway bridges by Joseph King, *Spans of Time* (1993). That study examined metal truss bridges as well as concrete and stone arch bridges longer than 20 feet in length built prior to 1955. King determined the Blue Beaver Creek Bridge to be eligible for the National Register of Historic Places, as a notable early example of a Boardman Pratt pony truss. The bridge was not included in the 2007 *Oklahoma Historic Bridge Survey Phase One: A Re-Evaluation of Spans of Time: Oklahoma Historic Highway Bridges* as by the time, it had been removed from its original location. Until recently, its current location was not documented.

PART II. STRUCTURAL/DESIGN INFORMATION

- **A.** General Description: The Blue Beaver Creek Bridge originally carried two lanes of traffic along NS-2470, a dirt road just east of Faxon. The bridge was located on NS-2470 just over approximately 2.25 miles north of State Highway 36. The 98-foot bridge features a single, Pratt pony truss span, 16 feet wide curb to curb. The bridge is pin connected and was constructed of steel milled in Illinois. The top chord of the bridge features beam with lace, as do the end posts. The bottom chord features an eye-bar, as do the bridge diagonals. The verticals are angle with lace. The bridge has a new wooden deck that was installed circa 2002 after the bridge was moved to its new location. The original abutments were not observed as the bridge had been removed prior to field work. Inspection reports indicate that the abutments were concrete and had suffered some settlement over time. Compared to other bridges of the same type, the Blue Beaver Creek Pratt Pony Truss Bridge, in its original location, was "relatively long and high" (Hartley n.d.).
 - 1. Character: The Blue Beaver Creek Pratt Pony Truss design is indicative of its rural setting, period of construction, and early bridge building developments in Comanche County. Although the Pratt pony truss was a common bridge type in Oklahoma and elsewhere, the Blue Beaver Creek example was much longer in length than the average bridge of its type, as well as originally being placed higher above the water than most other Pratt ponies in Oklahoma.
 - **2. Condition of Fabric:** The Blue Beaver Creek Pratt Pony Truss Bridge has been moved from its original location. As part of the relocation, the bridge has a new deck and abutments; however, the steel frame of the bridge is intact and exhibits normal deterioration due to age and exposure to the elements.
- **B. Site Information:** The area immediately surrounding the relocated Blue Beaver Creek Pratt Pony Truss Bridge has sparse residential development. The area is hilly and there is little vegetation. Residences are located within several hundred feet in every direction surrounding the bridge.

PART III. CURRENT STATUS

The Blue Beaver Creek Pratt Pony Truss was found to be structurally deficient and slated for replacement by ODOT in the late 1990s. Under a Memorandum of Agreement with the Oklahoma State Historic Preservation Office (OK/SHPO), the bridge was to be mitigated through HAER Level II documentation. According to communication between the Comanche County

Commissioners and ODOT dated November 1999, the bridge was to be removed and stored on an abandoned right of way of an old alignment of OK-36 east of Faxon. Ultimately, the goal was to utilize the Blue Beaver Creek Bridge and two other bridges that were once part of the OK-36 alignment in a park to be maintained by the City of Faxon. The park never materialized; however, according to Lynn Cobb of ODOT's Division 7 Field Office in Duncan, the bridge was temporarily stored at the County Commissioner yard in Cache. While there, the County Commissioners were approached about relocating the bridge to private property near Meers, Oklahoma. The bridge was moved to the grounds of the Y'Shua Camp approximately 1 mile north and 1 mile west of Meers off OK-115. The bridge is located on a private drive accessed from NW Comanche Drive and Apache Drive. The bridge crosses Medicine Creek, a meandering creek that runs roughly northwest to southeast in this area. Prior to its placement, new bridge abutments were installed. The bridge sits low over the creek.

Although the bridge remains in Comanche County, the area is geographically and geologically very different. NW Comanche Drive and Apache Drive are private, limited access gravel roads providing access, primarily, to residential and recreational properties. Camp Y'Shua is a year-round retreat and conference center, mostly known as an inter-denominational Christian camp for youth from around the state and the country. The camp consists of 160 acres and is funded by private donation and usage fees (Camp Y'Shua 2013).

Unlike the agricultural lands surrounding Faxon, the land around Camp Y'Shua and Meers is rocky and arid and located in close proximity to the Wichita Mountains. Best known today for its food, the community of Meers rose to regional prominence in the first years of the twentieth century. A gold rush occurred between 1901 and 1904 when stories of buried Spanish treasure, coupled with a few scattered mining successes, drew hoards of people to the area. The myths persist today, adding to the allure of the area's natural beauty and abundant wildlife (Oklahoma Encyclopedia 2014a).

PART III. SOURCES OF INFORMATION

A. Primary Sources

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Camp Y'Shua
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1916b	"Good Roads." July 6.
1916c	"Financial Statement and Estimate. July 20.
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Oklahoma Encyclopedia

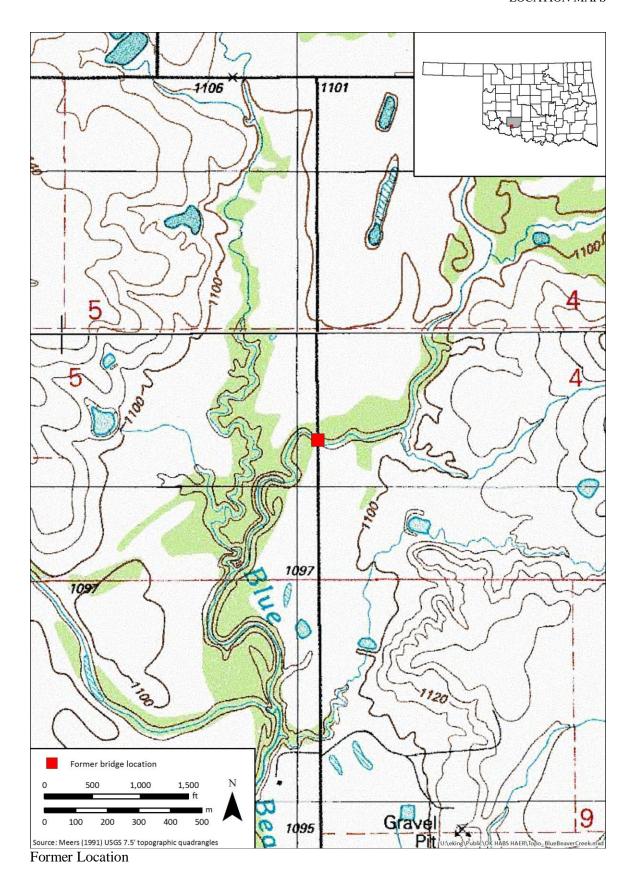
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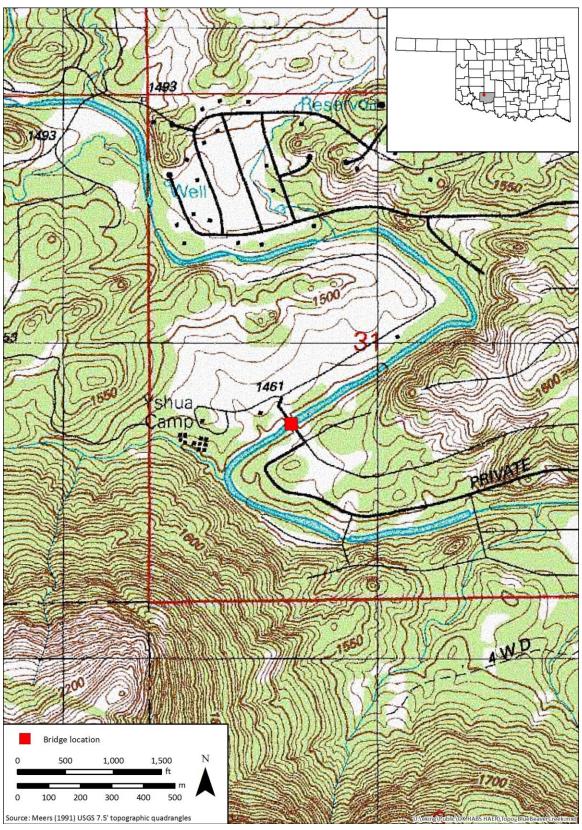
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LOCATION MAPS





Relocation

BLUE BEAVER CREEK PRATT PONY TRUSS Spanning Blue Beaver Creek Faxon vicinity Comanche County Oklahoma JP Number 17575(05) Structure Number 16N2470E1730007 NBI Number 00444

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Kelli Gaston, Photographer, May 2014

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- 2. SIDE VIEW OF BRIDGE, LOOKING EAST
- 3. DETAIL OF BRIDGE AND CONCRETE ABUTMENT

