NPS Form 10-900 OMB No. 1024-0018 (Expires 5/31/2012)

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NAT. REGISTER OF HISTORIC PLACES
NATIONAL PARK SERVICE

149

United States Department of the Interior
National Park Service

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 if needed (NPS Form 10-900a).**

1. Name of Property

historic name Harry Keith Barn

other names/site number KHRI # 065-199

2. Location

street & number 200th Avenue & M Road (1/2 miles E of Avenue 200 on M Road) ☐ not for publication

city or town Penokee ☐ vicinity

state Kansas code KS county Graham code 065 zip code 67659

3. State/Federal Agency Certification

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

I hereby certify that this X 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 X 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 x local

Patrick Zeltner
Signature of certifying official

2-11-13
Date

DSHPO
Title

State or Federal agency/bureau or Tribal Government

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

Signature of commenting official

Date

Title

State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I, hereby, certify that this property is:

✓ 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:)

for Edson H. Beall
Signature of the Keeper

4.9.13
Date of Action

5. Classification

Ownership of Property
(Check as many boxes as apply)

- [X] private
- [ ] public - Local
- [ ] public - State
- [ ] public - Federal

Category of Property
(Check only **one** box)

- [X] building(s)
- [ ] district
- [ ] site
- [ ] structure
- [ ] object

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

Contributing	Noncontributing	
1		buildings
		district
		site
1		structure
		object
2		**Total**

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

Historic Agriculture-Related Resources of KS

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

Agriculture/Subsistence: animal facility;
agricultural outbuilding

Current Functions
(Enter categories from instructions)

Agriculture/Subsistence: Storage

7. Description

Architectural Classification
(Enter categories from instructions)

Other: Gambrel-Roof Barn; Bank Barn

Materials
(Enter categories from instructions)

foundation: Concrete
walls: Concrete; Wood/Weatherboard
roof: Metal/Tin
other:

Narrative Description

Summary

Location and Setting

The Harry Keith Barn is located south of Penokee in Millbrook Township, Graham County, Kansas. It is situated in the northeast quarter of Section 2, Township 9S, Range 24W and is southeast of the junction of 200th Avenue and M Road. It was constructed in October 1940 on Harry Keith's farmstead, which he had owned since purchasing it from F.G. Brumage in 1920. The impressive gambrel-roof bank barn and adjacent windmill can be seen from the main county road (200th Avenue). The environs of the barn include rolling agricultural fields, century-old cottonwood trees along nearby Brush Creek, and hedge trees. Aside from the barn and windmill, the site of the associated farmstead includes a few remaining outbuildings, but they are not within the boundaries being nominated. The two-story stone farmhouse has been gone for many years, and the barn and remaining outbuildings are now associated with the farmstead located in the northwest quarter of Section 2. (Figure 1)

Elaboration

Exterior

The Keith Barn was built in October 1940 by Harry Keith (1893-1961), his brothers, and neighbors. At the time of construction, it was painted red with white trim and included a painted trotting horse on the west-facing hay door. (Figure 6) It has always had a roof made of tin. The barn is two stories and is built into a hillside allowing ground-level access to the upper and lower floors. The barn is distinguished by its broad gambrel roof, and it includes a one-story rectangular wing with a shed roof extending from the barn's east elevation. The shed roof slopes downward to the north nearly touching the ground. The foundation and lower walls of the barn and wing are constructed of poured concrete. The upper walls are wood framed and clad in horizontal weatherboard. Based on historic photographs and an assessment of the building's materials, the barn and one-story wing appear to have been built at the same time. (Figures 4 through 8)

There are two openings on the barn's **south elevation** – wood sliding doors that provide access to the bottom floor. Engraved in the cement in front of the southwest sliding door is "Oct 1940" noting when the barn was built. The concrete portion of the wall extends to the height of the two doors, which are made of the same horizontal weatherboards that clad the building and mounted to on metal tracks affixed to the exterior of the building above the openings. There was a smaller third opening between the two sliding doors, but this window has been covered with wood or particle board.

The hillside is built up around the **west elevation**, which allows for ground-level access to the second floor hayloft. The concrete foundation is visible, but the majority of the west wall is wood-frame and clad with weatherboard. Centered on this elevation are two openings – a sliding wood door near ground level and above it a large wood haydoor hinged on the bottom that that swings downward. A hay hood extends from the roof, which anchored a hay-fork rope and pulley system. Adjacent to these main doors is a small square hinged door that opens into the enclosed second-story granary.

The **north elevation** of the barn is built into the hillside. The sloping roof nearly touches the ground on this north side. The concrete foundation and wall rise just a few feet out of the ground and there are no openings on this side of the barn.

A one-story rectangular wing obscures the north half of the bottom story of the **east elevation**. There is one rectangular window opening within the concrete wall of the bottom story. The upper story, which is wood-frame and clad in weatherboard siding, includes one opening centered just below the peak of the roof – a double-hung wood window.

Interior

The barn's lower level housed animals and the upper level served as hay and grain storage. The west half of the lower level was used for milking with stanchions for six to eight cows. There is an enclosed hay bin at the northwest corner next to the milking stanchions. This part of the barn has a concrete floor with a manure/urine trough. The stanchions are situated along the barn's west wall, are made of wood, and have hinged head catches. Directly above, hay was dropped through an opening in the floor of the haymow to feed the milking cows. Wood boards along the stanchions show years of wear from animal use.

Along the east wall of this lower section was where horses were housed and fed. The floor is dirt and there are bunks for feed as horses ate from the trough. Some of the bunks have been removed to accommodate storage. Along the north

wall, hang all the horse harnesses that were worn by the working horses. The original tack still hangs there today. An opening in the wall at the northeast corner provides interior access to the east wing.

The upper floor can be accessed from both the exterior and interior. A sliding door on the barn's west side provides ground-level access from the exterior, and a straight-run wood staircase along the barn's east wall allows interior access. The expansive upper floor largely consists of a single open space and was used for hay storage. It has exposed rafters and vertical support beams providing strength for the broad gambrel roof. The rope-and-pulley track system used to move hay remains fixed to the peak of the loft. There is an enclosed wood hay bin at the northwest corner of the loft. The floor is made of heavy lumber that remains in good condition. The flooring along the west wall is removable, which allowed for hay to drop down to the first level to feed the milking cows.

East Wing

Exterior
A one-story rectangular wing extends from the north half of the barn's east elevation. This space housed calves, especially during inclement weather. The wing has a shed roof that slopes downward to the north nearly touching the ground. Like the barn, the foundation and lower walls are constructed of poured concrete and the upper walls are wood framed and clad in horizontal weatherboard.

The only openings on this wind extension are found on the south elevation. There are two wood sliding doors mounted on exterior tracks at either end of the south elevation. Between these doors is a row of openings that can be shuttered from the inside. The openings have hinged doors that swing inward and upward, allowing for hay to be hand-pitched through them into the trough lining the interior south wall.

Interior
This wing can be accessed from both the exterior and interior. An opening in the wall at the northwest corner provides interior access to the bottom-floor space of the main barn. The north and east interior walls are made entirely of poured concrete. The bottom half of the south wall is concrete and the upper portion is wood-framed.

The space includes just one large room, with a wood-frame trough affixed to the south concrete wall. The floor is concrete and has a central urine/waste trough. The north concrete wall has experienced severe cracking and shifting, and there are structural supports in the form of metal poles holding up the roof that are anchored to the south wall via wood framing. The rafters and roof system is exposed, as is the underside of the metal roofing material.

Windmill & Tank *(contributing structure, circa 1940)*
The 30-foot-tall windmill was installed when the barn was built. It is an Aermotor windmill, likely the 702 model, which was first manufactured by the Aermotor Company of Chicago in 1933. It is situated adjacent to the northwest corner of the barn along with a reservoir that holds 4,000 gallons of water.

Integrity
No alterations have been made to the Keith barn since it was built except for painting the tin on top of the barn to prevent rusting and some stop-gap measures to prevent the north concrete wall from buckling. Although the buildings and structures from the associated farmstead are mostly gone and the function of the barn has evolved, the barn retains a high degree of integrity – including its location, design, materials, workmanship, and feeling. The barn and its associated windmill convey the historic function of the farmstead and reflect the workmanship and ingenuity of its mid-20th century rural builders.

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)

- [x] 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.
- [X] 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.

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.

Areas of Significance
(Enter categories from instructions)

Agriculture
Architecture

Period of Significance
1920-1963

Significant Dates
1940

Significant Person
(Complete only if Criterion B is marked above)

N/A

Cultural Affiliation

Architect/Builder
Builder: Harry Keith (& his brothers & neighbors)

Period of Significance (justification)
The period of significance begins in 1920 when Harry Keith purchased the land on which the barn sits. The period extends to 1963, the fifty-year cut-off date established by the National Park Service to provide sufficient passage of time to allow objective evaluation of the historic resource eligibility at the time of its listing. The period of significance includes the barn's date of construction, which is October 1940.

Criteria Considerations (justification)
N/A

Narrative Statement of Significance

Summary

The Keith Barn is nominated to the National Register of Historic Places for its local significance under Criterion A in the area of agriculture and Criterion C in the area of architecture. The barn functioned as a place to house and feed livestock, milk cattle, and store hay, which contributed to Keith's livelihood as a farmer. The building is a unique example of a mid-20th century bank barn, and it is nominated as part of the "Historic Agriculture-Related Resources of Kansas" multiple property submission as an example of the Bank Barn property type. The barn was built in 1940 by Harry Keith, his brothers, and neighbors, and has remained unaltered since its construction.

Elaboration

Graham County was formally organized in 1880. Hill City was selected as the county seat during the first election held on June 1.[1] Five Keith brothers (Alex, James, Henry, John, and George), and many other male electors living in Millbrook and Gettysburg townships, petitioned Graham County in April of 1886 to create Solomon Township with its own voting precinct at the townsite of Fremont.[2] The effort succeeded as future censuses noted the Keiths living in Solomon Township. And, in succeeding years, the Keith brothers owned land in both Solomon and Millbrook townships.[3]

The Keith Barn is located approximately three miles south of Penokee in the northern part of Millbrook Township in Graham County. Penokee is a small unincorporated settlement eight miles west of the county seat community of Hill City. The Union Pacific Railroad passes through both communities, which are situated in the Solomon River valley. Penokee experienced most of its growth and development in the early 1900s, and the 1910 federal census noted 100 people living there. The following year, the railroad established a station agent at Penokee.[4]

The nominated property is bisected by Brush Creek, a tributary of the Solomon River. (See Figure 2) Issues of the *Millbrook Times* newspaper published in the late 19th and early 20th centuries noted a thriving community along Brush Creek, and for many years, an Old Settlers Reunion was held along Brush Creek. The 1922 reunion was advertised as the 45th such event and was likely one of the last.[5] A flyer advertising this event in a local newspaper noted the location of the event was Knouf's Grove and that Harry Keith served on the group's committee on finance.

The quarter section to the west of Keith's barn reflects some of the area's earliest settlement history – primarily in the form of a pioneer cemetery. The Brush Creek community and the cemetery were sometimes referred to as Turnerville – named after the Turner family that settled there. Simeon Turner and his family settled the adjacent quarter section, and they are first noted in the 1879 census of Graham County. Approximately 20 graves have been recorded in the Brush Creek Cemetery, many of the area's earliest residents (Knoufs, Turners, Beeber, Biddle, etc.) No Keiths are buried there as they were not associated with the surrounding property until 1920.[6] (Figure 1)

The Keith family originated in Scotland and was part of a wave of immigrants to western Kansas during the 1870s and 1880s, many of whom were enticed by the Homestead Act and railroad advertisements to settle the western plains. As Kansas geographer and historian James R. Shortridge notes, "Costs and availability of land within the railroad belt and its two flanking zones were paramount to the considerations for potential immigrants to postwar Kansas."[7] The numbers of

[1] Frank Blackmar, Kansas: *A Cyclopedia of State History, Vol. 1* (Chicago: Standard Publishing Co., 1912), 770-772. Transcription accessed online 19 November 2012 at: http://skyways.lib.ks.us/genweb/archives/1912/

[2] *Millbrook Times*, 9 April 1886.

[3] A 1906 Atlas of Graham County notes the five Keith brothers owned land in the Penokee and Morland vicinities. George A. Ogle, *Standard Atlas of Graham County, Kansas* (Chicago: George A. Ogle & Co. Publishers, 1906), 45

[4] Frank Blackmar, Kansas: *A Cyclopedia of State History, Vol. 2* (Chicago: Standard Publishing Co., 1912), 456. Transcription accessed online 19 November 2012 at: http://skyways.lib.ks.us/genweb/archives/1912/

[5] *Millbrook Times*, 23 June 1882; 28 July 1882; 14 August 1885. Hill City New Era, 8 November 1900. People's Reveille, 18 November 1909.

[6] Morland Centennial Committee, *A Centennial History of Morland and Community: February 24, 1881-February 24, 1981* (Wakeeney, KS: World Print, 1981), 58.

[7] James R. Shortridge, *Peopling the Plains: Who Settled Where in Frontier Kansas* (Lawrence: University Press of Kansas, 1995), 74. See also Jim Hewitson, *Tam Blake and Company: The Story of the Scots in America* (Edinburgh, Scotland: Canongate Press, 1993), 36-37.

immigrants from Great Britain never amounted to the much higher numbers of German-Russians in western Kansas. The number of immigrants from Scotland living in Kansas in 1885 was just 2,143 people, totaling only 0.4 percent of the state's population.[8] Between 1880 and 1890, for instance, "only about 4 percent of the total population of the state were immigrants from the British Isles."[9] The settlement of Studley in Sheridan County – just 11 miles west of Penokee – was largely settled by people from Yorkshire, England. These settlers, according to historian Sara J. Keckeisen, "were middle-class Englishmen and women familiar with rural life and agricultural pursuits, who were poor enough that the lure of 'free' homestead land in Kansas was attractive to them but who had enough cash reserves that they could afford to buy seed, stock their farms, and tide themselves over through the lean times…"[10]

Joseph Keith and his family arrived in what is now Graham County in the late 1870s and were noted in the 1880 federal census, which lists Keith as a 65-year-old farmer living in Millbrook Township with his 55-year-old wife Charlotte, and their six grown children (John, James, Henry, George, John, Margaret, and Alex) and one daughter-in-law.[11] John and his wife Alice had nine children – including Harry – and they helped several of them purchase their first farms.[12] Harry was part of the first generation of the Keith family born in the United States. He was born near Morland on November 19, 1893, and was a lifelong resident of Graham County. He owned and farmed this land for 41 years until his death on April 20, 1961 at age 67.[13] Harry, along with his wife Wilma, purchased the nominated property when he was 27 years old, and it has been owned by a member of the Keith family since 1920.

Since the formation of the county in 1880, several people have bought and sold the land on which the nominated Keith barn sits. The purchase of this land was first recorded by the US Land Office at Kirwin when it recorded a homestead receipt for eight dollars paid by Snyder Horton on June 30, 1885 for the northeast quarter of Section 2, Township 9S, Range 24W.[14] Horton and his wife Ellen quickly sold the land for $1,000 to George W. Collins on July 11, 1885, who retained the property until March 26, 1900 when he sold it to George W. Pray. Pray also purchased from Collins the north half of the adjacent Section 1.[15] Pray sold the land to C. A. Fleming on November 7, 1902 for $3,400.[16] On January 1, 1920, C. A. Fleming sold the east half of Section 2, Township 9S, Range 24W to F. G. Brumage for $9,000.[17] In less than a year, Brumage and his wife Pearl sold the property for $12,480 to Harry Keith.[18] Keith was a well-established farmer by 1925 when the Kansas State Census recorded his farm statistics. He operated a 320-acre farm with a mix of crops and livestock. (Table 1)

Personal interviews with Keith relatives suggest the nominated barn was built new in 1940 to replace a smaller shed located several feet to the north.[19] Family members recall that Harry Keith, his family, and neighbors built the barn in October 1940, and this date is etched into the concrete near the barn's southwest entrance. The family has speculated that Harry built a Bank Barn because they were especially useful with regard to the husbandry needs of livestock. Built into the side of a hill and formed with concrete walls, it had higher insulative qualities than all-wood and, as a result, animals remained warmer during the winter and cooler during the summer. Before Harry's son Orval left home for military service during World War II, they were in the cattle business together raising pure-bred registered Herefords, which was the leading herd of cattle in that day. The author remembers Orval (her father) saying the "whiteface cattle" were good milking mothers and had great dispositions. The track and trolley system in the roof of the loft was used to transfer hay from outdoors to inside the barn, and it still remains in the barn today. Orval's daughter Diana provides this account, with the help of her brother Milden, about the process of bringing hay into the barn:

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[8] Ibid., 81.

[9] Sara J. Keckeisen, "Cottonwood Ranch: John Fenton Pratt and the English Ranching Experience in Sheridan County, Kansas," *Kansas History* 14, 1 (Spring 1991): 37.

[10] Ibid., 38.

[11] Ancestry.com and The Church of Jesus Christ of Latter-day Saints. *1880 United States Federal Census* [database on-line]. Provo, UT, USA: Ancestry.com Operations Inc, 2010.

[12] Rosalie Henry of Fairway, Kansas, interview by author. August 2012. Rosalie is John Keith's granddaughter.

[13] *Hill City Times*, 20 April 1961.

[14] Record of Final Receipts, page 298. Register of Deeds, Graham County Court House, Hill City, Kansas.

[15] Book 12-598. Register of Deeds, Graham County Court House, Hill City, Kansas

[16] Book 13-566. Register of Deeds, Graham County Court House, Hill City, Kansas.

[17] Book 46-366. Register of Deeds, Graham County Court House, Hill City, Kansas.

[18] Book 48-497. Register of Deeds, Graham County Court House, Hill City, Kansas.

[19] Grace Keith Gish, interview by author. August 2012. Grace is Harry Keith's daughter and the aunt of current property owner Diana Nickelson. Grace was two years old when her family moved to this farm, and she lived there until her 20s when she married.

> [There was] a rope tied to the back of the 1940 Ford tractor (still in use today) that he [Milden] drove back and forth on the east side of the barn operating the rope attached to the hay hook and trolley system. As the hay hook traveled along the track to the west side of the barn going out the upper door, Dad [Orval] stood on the wagon, pressing the hay hook into the loose hay. As the hook grasped the hay, Milden would pull the rope centered in the middle of the hook, lifting the hay through the upper door and releasing the hay inside.[20]

Before the mechanization of heavy equipment, a McCormick corn binder was used to harvest feed for cattle and is still in the owner's possession today. The 1943 State Board of Agriculture farm statistics for the Keith farm noted just two pieces of farm equipment: a tractor and a combine. (See Table 2) When Orval returned from his service during World War II, the farm operation shifted to new machinery, especially tractors and self-propelled combines replacing wagons and corn binders, which reduced hard, physical labor. Orval bought his first tractor in 1957 which was an 8 N Fordson without a cab, which is still used by his daughter Diana Nickelson. This tractor pulled the hayrack that picked up small alfalfa bales to be stacked in the loft of the barn.

Orval lived with his parents after the war until he married in 1946. Orval and his wife Madeline lived four miles east of Harry and Wilma, and each day Orval traveled to Harry's farm to work. In 1959, Orval and Madeline purchased the farmstead adjacent to Harry and Wilma in the northwest quarter of Section 2. Orval and Harry farmed together until Harry's death in 1961. Orval retired from farming in the 1980s, allowing his daughter Diana Nickelson to take over.

The Keith barn was excellent livestock shelter and hay storage for many years. The day eventually came when the barn was no longer needed for storing hay, or milking cows, or housing horses. Today, the barn is not integrated into the farm's current cattle operation, but is used for storage and educational purposes. Diana welcomes area students and community members to the farm to share her family's stories about farming.

Barn Architecture[21]

The Keith Barn is an example of a Bank Barn, which is a property type described in the National Register MPDF "Historic Agriculture-Related Resources of Kansas" as being

> ...characterized by exterior entrances on two levels. Builders generally achieved bi-level access in one of two ways. Most are built into the side of a hill or bank, which creates a natural ramp that provides access to the barn's second level, usually along the broad side. Builders could also achieve access on land without a natural bank or hill by constructing an earthen or masonry bridge or ramp on one side. On the back side, an exposed lower or basement level is generally reserved for animal shelter.
>
> The second level, which is accessible through a broadside opening on the hill or bridge/ramp side, typically provides space for hay storage. Historically, the broad-side opening allowed farmers to drive wagons filled with loose hay into the upper part of the barn, where they then used hay forks to raise the hay into haymows, which often flanked the wagon bay. Because this unique design allowed farmers to fill the haymow from inside the barn, bank barns did not require hay doors or hay hoods. Once stored in the haymow, hay could easily be transferred through openings or chutes from the upper levels to the livestock area below.
>
> Kansas bank barns are generally two and a half stories high – with some exceptional examples being three and a half stories high. Most bank barns have stone exteriors with wood-framed interiors. However, some are wood framed with horizontal or vertical cladding and stone or concrete foundations. The earliest examples are timber-framed with mortise-and-tenon joints. By the late Nineteenth Century, farmers combined timber-frame construction with balloon framing techniques, sometimes creating hybrids where timbers, which served as structural supports, and other framing members were nailed or braced together. With the exception of a few barns with hipped or gambrelled roofs, most Kansas bank barns have gabled roofs.[22]

[20] Recollections of Milden Keith and Diana Nickelson, as written by Nickelson. December 2012. Notes on file with Cultural Resources Division, Kansas Historical Society.

[21] The information in this section comes from Brenda Spencer and Christy Davis, "Historic Agriculture-Related Resources of Kansas" National Register Multiple Property Documentation Form (Topeka: Kansas Historical Society, 2007), Section F, 46-48.

[22] Ibid., F46-47.

Eighty-five Bank Barns are noted in the Kansas Historic Resources Inventory (Figure 2), 53 of which were recorded during a 2007 survey of 300 agricultural properties in Kansas. Although the survey determined that Bank Barns are common throughout Kansas, "they predominate in the early-settled counties of Eastern Kansas."[23] There are sixteen of these barns in Doniphan County listed in the National Register as part of the "Byre and Bluff Barns of Doniphan County" multiple property nomination. Many early Kansas Bank Barns were built by settlers of Pennsylvania-German heritage, but "the bank design gained favor with farmers of all ethnic backgrounds," and remained popular into the mid-20th century.[24]

It is less common to find a Bank Barn with a gambrel roof and a hay door as is found on the Keith Barn. Less than 10 of the 85 Bank Barns noted in the 2007 survey had these same features.[25]

Not only is the Keith Barn an example of a mid-20th century Bank Barn, it also features the classic gambrel roof so commonly found in Kansas barns. Gambrel-roof barns were designed to maximize hay storage space, and hay was typically carried by a hay hook affixed to hay hood to the second-story loft through a large hay door. What makes the Keith Barn somewhat unique is that it includes both ground-level access to the hayloft where hay could be unloaded from the ground and also a hay door with a track for the hayhook.

The Aermotor Windmill

Adjacent to the Keith Barn is an Aermotor windmill manufactured by the Aermotor Company of Chicago. There is a large tank with a capacity to hold 4,000 gallons of water, which was installed shortly after the windmill was erected. According to the property owner, the windmill pumped water for livestock and a garden that was adjacent to the barn.

The National Register MPDF "Historic Agriculture-Related Resources of Kansas" notes the following about windmills:

> Windmills were essential on Kansas farms, where surface water was scarce. Most farmers, particularly in Western Kansas, relied upon deep wells – and windmills to pump water from them. The earliest wells were dug by hand, until the mid-1880s when steam and horsepower drills eased their labor. The ability to drill deeper wells using efficient powered drills allowed farmers to populate increasingly more arid regions. In the west, windmills pumped water from the wells into stock tanks and domestic tankhouses.[26]

According to author T. Lindsay Baker, the self-oiling Aermotor is "the most common of all the American windmills," and "have been called the Cadillac of the windmills because of their outstanding design and quality of workmanship."[27] This windmill is likely the Aermotor 702 model, which was first manufactured in 1933. Other similar models – the 502 and 602 – had been in production since 1915 and 1916, respectively, but are found much less frequently on today's landscape.

Thomas Perry designed the first Aermotor windmill, which was then named and marketed by his business partner LaVerne Noyes in 1888. The key to this scientifically designed windmill "was its wheel, made from concave sheet steel blades mounted on steel rims and arms...This type of wheel turns much more quickly than the older-style wooden wind wheels – far too quickly to produce a pump stroke for each revolution of the wheel. Consequently, Perry had to find some means of reducing the number of pump strokes in relation to the number of wheel revolutions," and he achieved that with the first Aermotor windmill.[28]

Windmills made of iron and steel had been in limited production since the 1870s, but the gradual transition from wood to metal windmills picked up in the late 1880s and early 1890s with the lowering costs of producing steel. With its "economy of construction," the Aermotor company helped lead the industry into the twentieth century, by which time it "had captured half of the trade in the United States."[29]

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[23] Ibid., F47.
[24] Ibid., F48.
[25] Examples can be found in Pottawatomie County (KHRI # 149-325), Decatur County (KHRI # 039-47), Rawlins County (KHRI # 153-26), Jefferson County (KHRI # 087-421), and Leavenworth County (KHRI # 103-477).
[26] Spencer and Davis, "Historic Agriculture-Related Resources of Kansas" National Register Multiple Property Documentation Form, F72-73.
[27] T. Lindsay Baker, *A Field Guide to American Windmills* (Norman: University of Oklahoma Press, 1985), 116-117.
[28] Ibid., 37.
[29] Ibid., 38.

Table 1: 1925 Kansas State Census – Schedule 2: Agriculture[30]
Harry Keith Farm, Millbrook Township, Graham County, Kansas

Total acres in farm: 320
Acres sown and to be sown or planted for the crop of 1925
- Winter Wheat (Acres sown in fall of 1924): 45
- Corn: 80
- Sorghum (For Seed): 2.5
- Kafir: 2.5

Acres of alfalfa: 12
Acres of native prairie grass pasture: 100
Production, 1924
- Bushels of wheat: 2,000
- Bushels of corn: 800

Dairy production for year ending March 1, 1925
- Pounds of butter made in family: 104

Poultry
- Number of hens (chickens) on hand March 1, 1925: 21 dozen
- Value of poultry and eggs sold during the year ending March 1, 1925: $200

Livestock sold for meat
- Value of animals fattened and slaughtered or sold for slaughter during the year ending March 1, 1925: $253

Livestock on hand March 1, 1925:
- Horses: 4
- Mules: 4
- Milk cows: 1
- All other cattle: 44
- Swine: 2
- Dogs: 1

Table 2: Kansas Agriculture Statistical Roll for 1943[31]
Harry Keith Farm, Millbrook Township, Graham County, Kansas

Section on which farmer lives: NE quarter, Section 2, Township 9, Range 24
Total acres in farm: 320
Acres sown and to be sown or planted for the crop of 1925
- Winter Wheat: 54
- Barley: 20
- Rye: 2
- Sweet Sorghums: 15
- Grain Sorghums: 10
- Sudan grass: 2

Acres of alfalfa: 9
Pasture: 90
Acres of crops harvested in 1924
- Winter wheat: 104
- Corn: 20
- Sweet Sorghum: 15
- Alfalfa cut for hay: 9

Acres of land from which no crop was harvested due to crop failure: 8
Acres of waste land, timber, feed lots, house sites, etc.: 5
Beef Cattle

[30] Ancestry.com. *Kansas State Census Collection, 1855-1925* [database on-line]. Provo, UT, USA: Ancestry.com Operations Inc, 2009.

[31] Kansas Agriculture Statistical Roll for 1943 (Millbrook Township, Graham County). KSHS Archive microfilm number AR00387.

Cattle and calves finished for market and sold in 1942: 35
Milk Cows
Cows milked all or any part of 1942: 9
Brood Sows
Number farrowed or to farrow this spring: 1
Poultry
Chickens raised last year: 400
Turkeys raised last year: 30
Equipment on hand
Tractors: 1
Combines: 1

9. Major Bibliographical Reference

Ancestry.com. *Kansas State Census Collection, 1855-1925* [database on-line]. Provo, UT, USA: Ancestry.com Operations Inc, 2009.

Ancestry.com and The Church of Jesus Christ of Latter-day Saints. *1880 United States Federal Census* [database on-line]. Provo, UT, USA: Ancestry.com Operations Inc, 2010.

Baker, T. Lindsay. *A Field Guide to American Windmills.* Norman: University of Oklahoma Press, 1985.

Birch, Brian P. "Popularizing the Plains: News of Kansas in England, 1860-1880." Kansas History 10:4. (Winter 1987-88): 262-274. http://www.kshs.org/publicat/history/1987winter_birch.pdf

Blackmar, Frank. *Kansas: A Cyclopedia of State History, Vol. 1-2.* Chicago: Standard Publishing Co., 1912. Transcription accessed online 19 November 2012 at: http://skyways.lib.ks.us/genweb/archives/1912/

Gish, Grace Keith, daughter of Harry Keith. Interview by the author, 2010. Notes in possession of author.

Graham County Register of Deeds Records. Graham County Courthouse, Hill City, Kansas.

Henry, Rosalie, granddaughter of John Keith. Interview by author, August 2012. Notes in possession of author.

Hewitson, Jim. *Tam Blake and Company: The Story of the Scots in America.* Edinburgh, Scotland: Canongate Press, 1993.

Hill City Times, 20 April 1961.

Kansas Agriculture Statistical Roll for 1943 (Millbrook Township, Graham County). KSHS Archive microfilm number AR00387.

Keckeisen, Sara J. "Cottonwood Ranch: John Fenton Pratt and the English Ranching Experience in Sheridan County, Kansas." *Kansas History* 14, 1 (Spring 1991): 37-43

Millbrook Times, 23 June 1882; 9 April 1886.

Morland Centennial Committee. *A Centennial History of Morland and Community: February 24, 1881-February 24, 1981.* Wakeeney, KS: World Print, 1981.

Ogle, George A. *Standard Atlas of Graham County, Kansas.* Chicago: George A. Ogle & Co. Publishers, 1906.

Shortridge, James R. *Peopling the Plains: Who Settled Where in Frontier Kansas.* Lawrence: University Press of Kansas, 1995.

Spencer, Brenda, and Christy Davis. "Historic Agriculture-Related Resources of Kansas" National Register Multiple Property Documentation Form. Topeka: Kansas Historical Society, 2007.

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:

__x__ State Historic Preservation Office
____Other State agency
____Federal agency
____Local government
____University
____Other
Name of repository: **Kansas Historical Society**

Historic Resources Survey Number (if assigned): N/A

10. Geographical Data

Acreage of Property Less than one
(Do not include previously listed resource acreage)

UTM References / Latitude Longitude Coordinates (see Figure 9)
(Place additional UTM references on a continuation sheet)

1	Zone	Easting	Northing	3	Zone	Easting	Northing
2	Zone	Easting	Northing	4	Zone	Easting	Northing

Verbal Boundary Description (describe the boundaries of the property
The Keith Barn is located in the Northeast Quarter (NE 1/4) of Section Two (2), Township Nine South (9S) Range Twenty-four West (24W), in Graham County, Kansas. The nominated property includes the Keith Barn, windmill, the land upon which it sits, and a 50-foot perimeter of land, which totals less than one acre.

Boundary Justification (explain why the boundaries were selected)
The nominated property includes that historically associated with the Keith Barn.

11. Form Prepared By

name/title Diana Nickelson, Owner; Assistance from Sarah Martin (KSHS)

organization _____ date _____

street & number 2176 200th Avenue telephone _____

city or town Penokee state KS zip code 67659

e-mail _____

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. see attached

  A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.

- **Continuation Sheets**

- **Additional items:** (Historic images, maps, etc.)

Photographs:

Submit clear and descriptive 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 figure 10).**

Name of Property: Harry Keith Barn
City or Vicinity: Penokee
County/State: Graham County / Kansas
Photographer: Sarah Martin
Date of Photos: 6 November 2012

Description of Photograph(s) and number:
1 of 11 Overall view of barn's south elevation, facing NW
2 of 11 Close-up view of barn's north elevation, facing W
3 of 11 Overall view of barn's north elevation and windmill, facing S
4 of 11 View of west and south elevations, facing NE
5 of 11 Windmill, facing W
6 of 11 Close-up of west elevation showing entrance into second-story hayloft, facing NE
7 of 11 Hayloft interior showing hay storage bin at NW corner and removable flooring along west wall for dropping hay to milk cows below, facing N
8 of 11 Overall view of hayloft interior, facing E
9 of 11 First-story interior, showing stairs descending from loft, facing SE
10 of 11 First-story interior, showing milking stanchions along west wall and hay bin at NW corner, facing N
11 of 11 Interior of one-story wing, facing W

Property Owner:

(complete this item at the request of the SHPO or FPO)

name Diana Nickelson

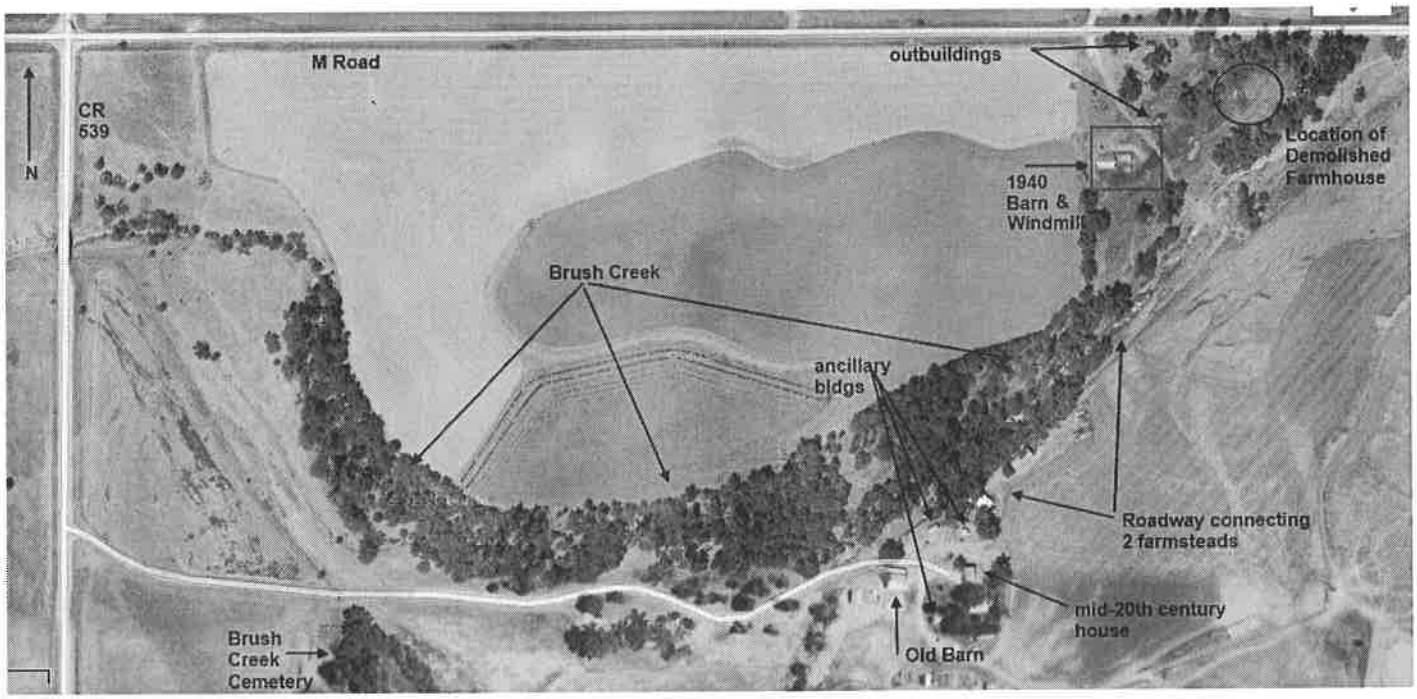
street & number 2176 200th Avenue telephone

city or town Penokee state KS zip code 67659

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 Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

Figure 1:



Aerial Image (Google.com, 2012)
Box indicates nominated barn & windmill.

Figure 2: Map of Bank Barns Surveyed in Kansas
Kansas Historic Resources Inventory, Kansas Historical Society
Online Database accessed 19 November 2012: http://khri.kansasgis.org

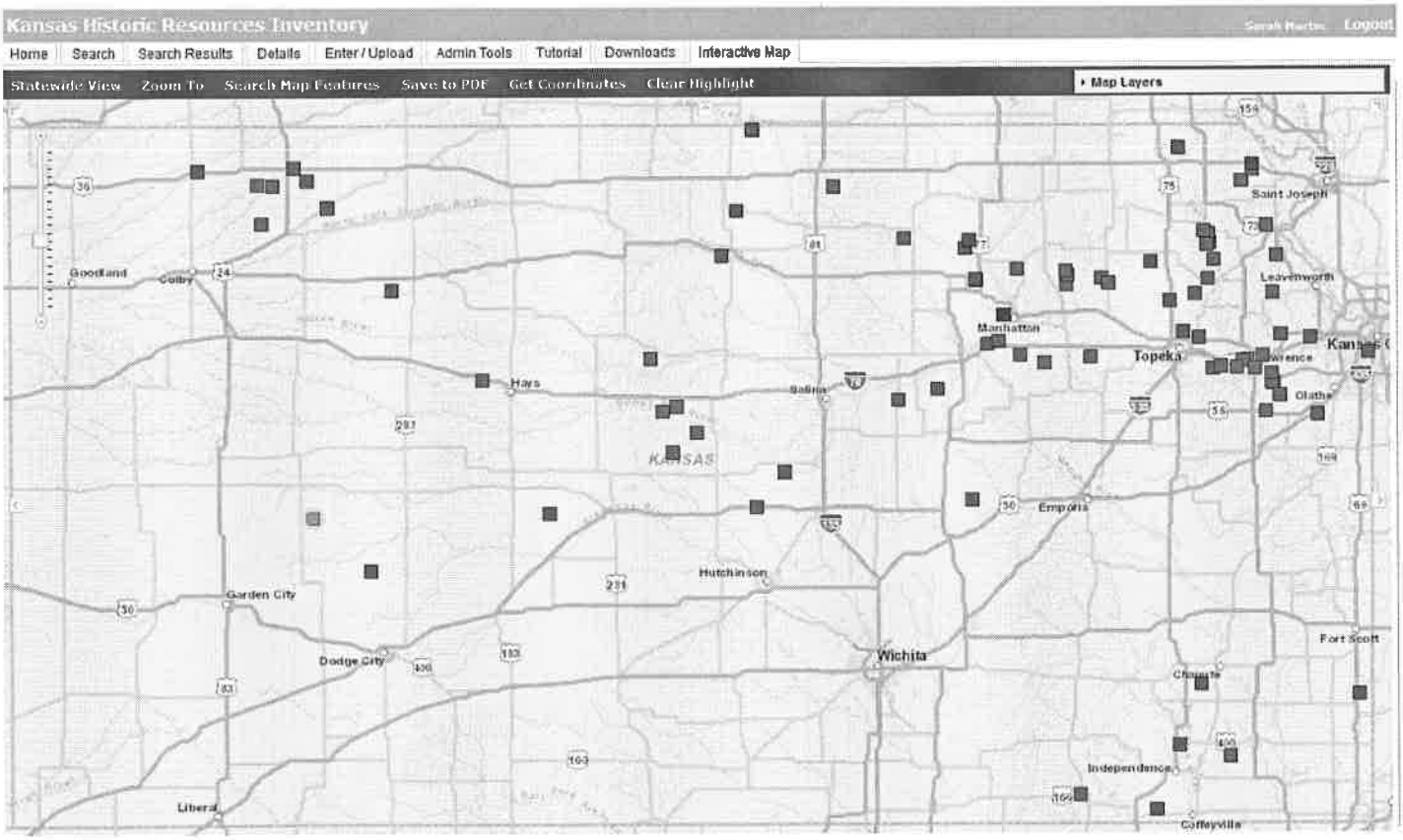


Figure 3: Ogle, George A. *Standard Atlas of Graham County, Kansas.* Chicago: George A. Ogle & Co. Publishers, 1906.

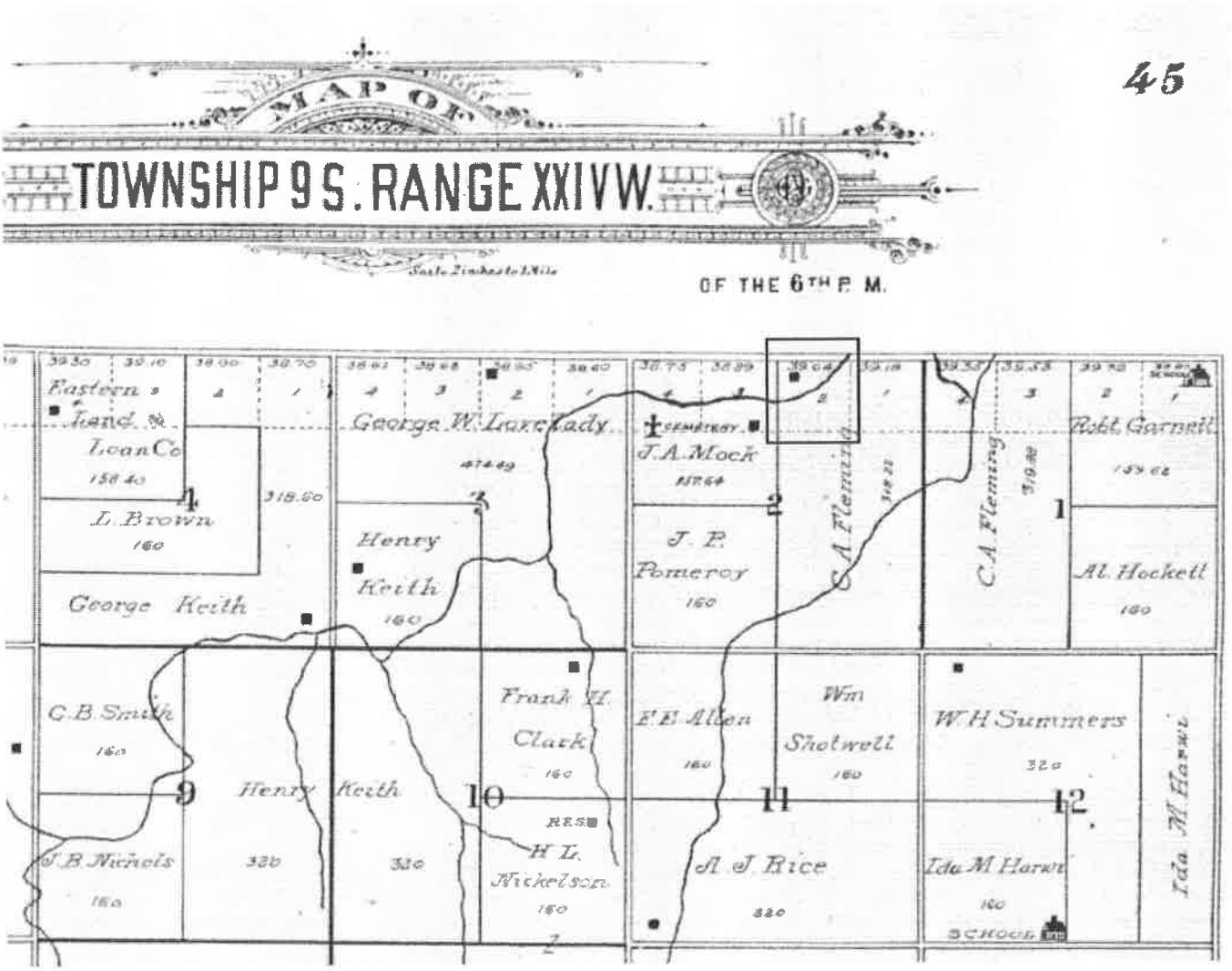


Figure 4: Keith Barn, early 1940s. Photographs Courtesy of property owner Diana Nickelson.

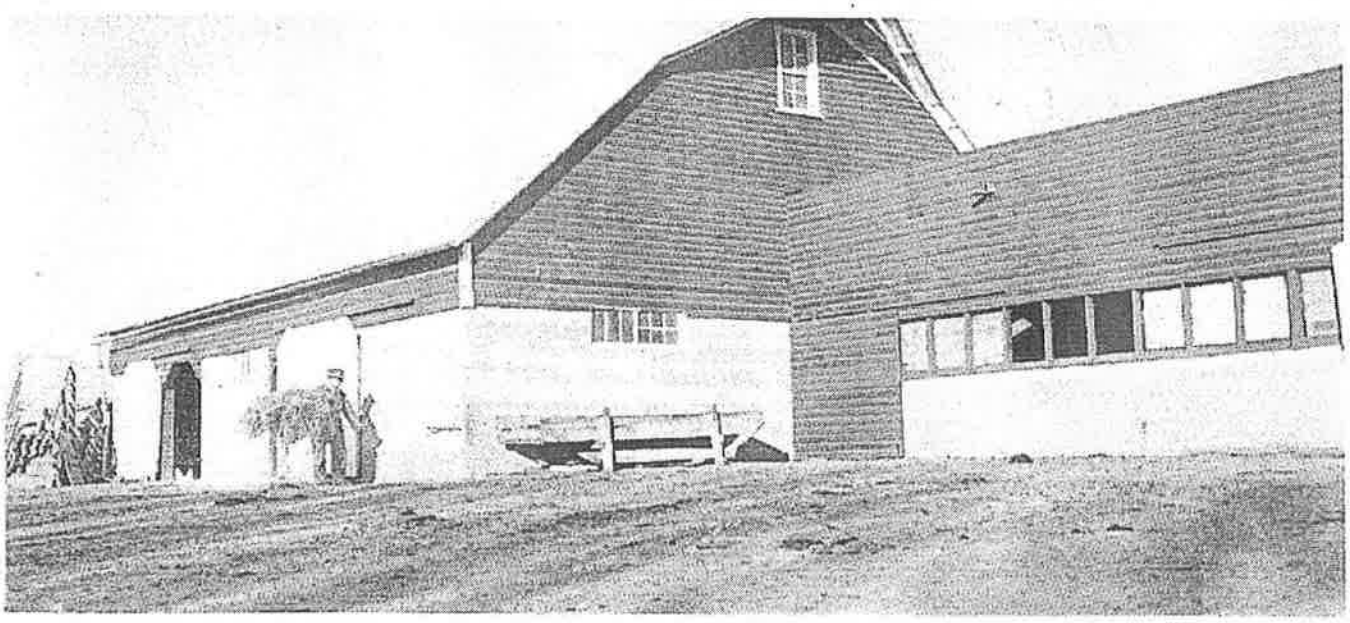


Figure 5: Keith Barn, early 1940s. Photographs Courtesy of property owner Diana Nickelson.

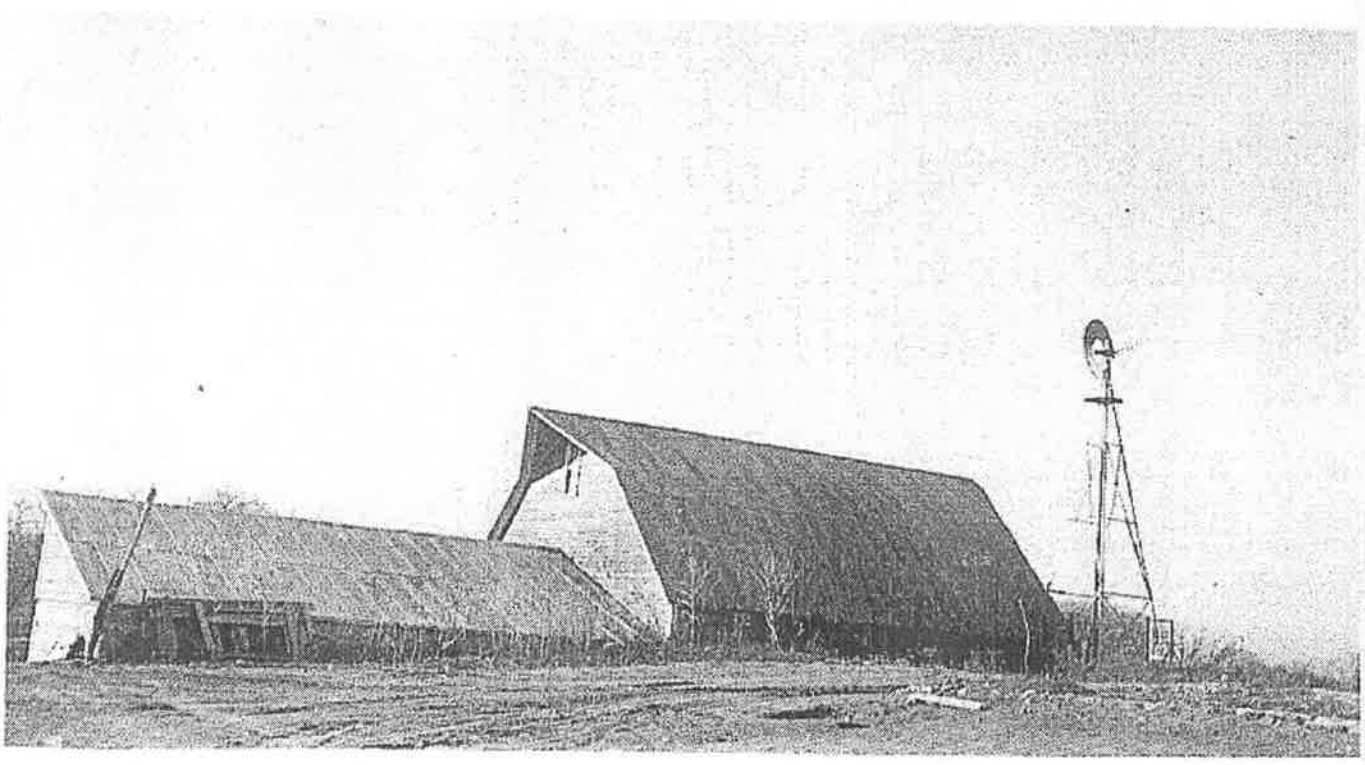


Figure 6: Keith Barn, early 1940s. Photographs Courtesy of property owner Diana Nickelson.

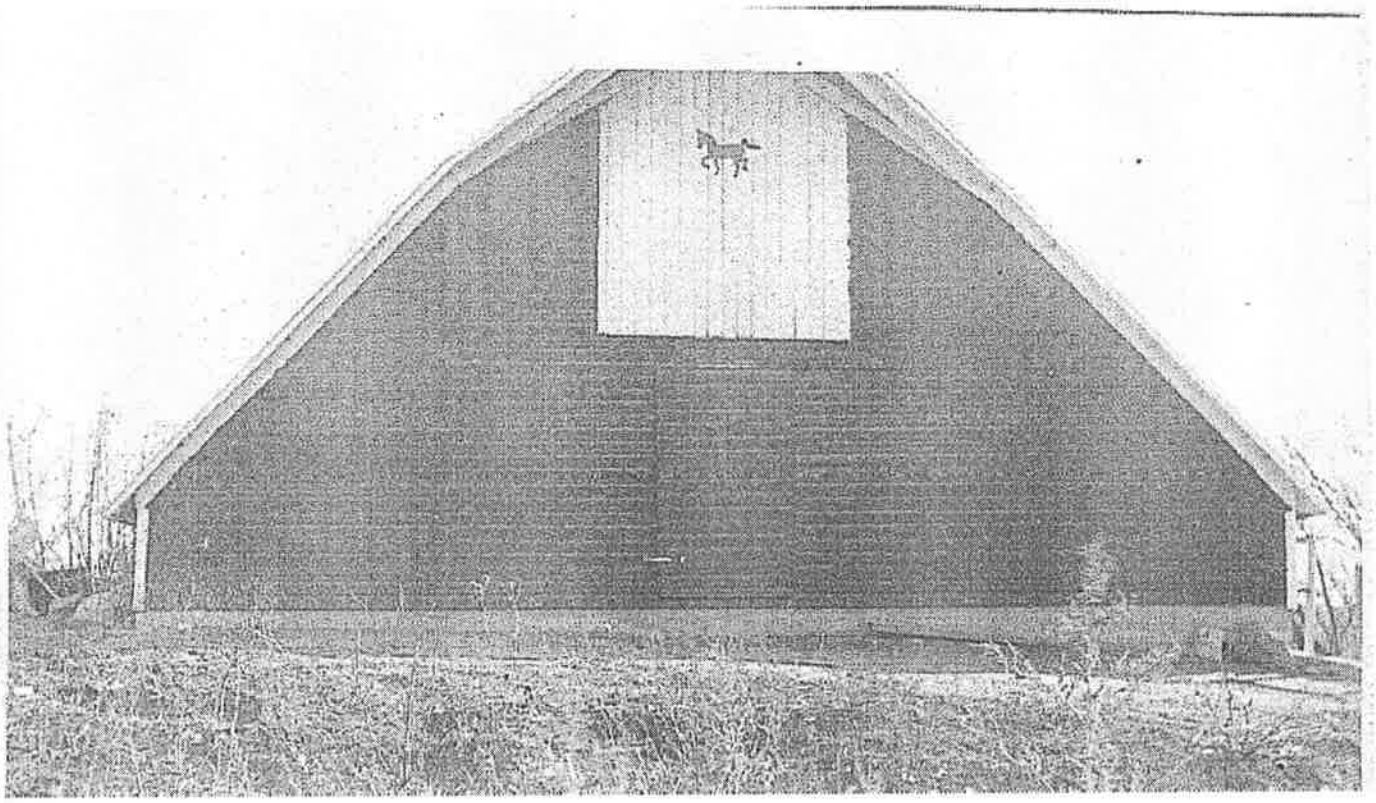


Figure 7: Keith Barn, early 1940s. Photographs Courtesy of property owner Diana Nickelson.

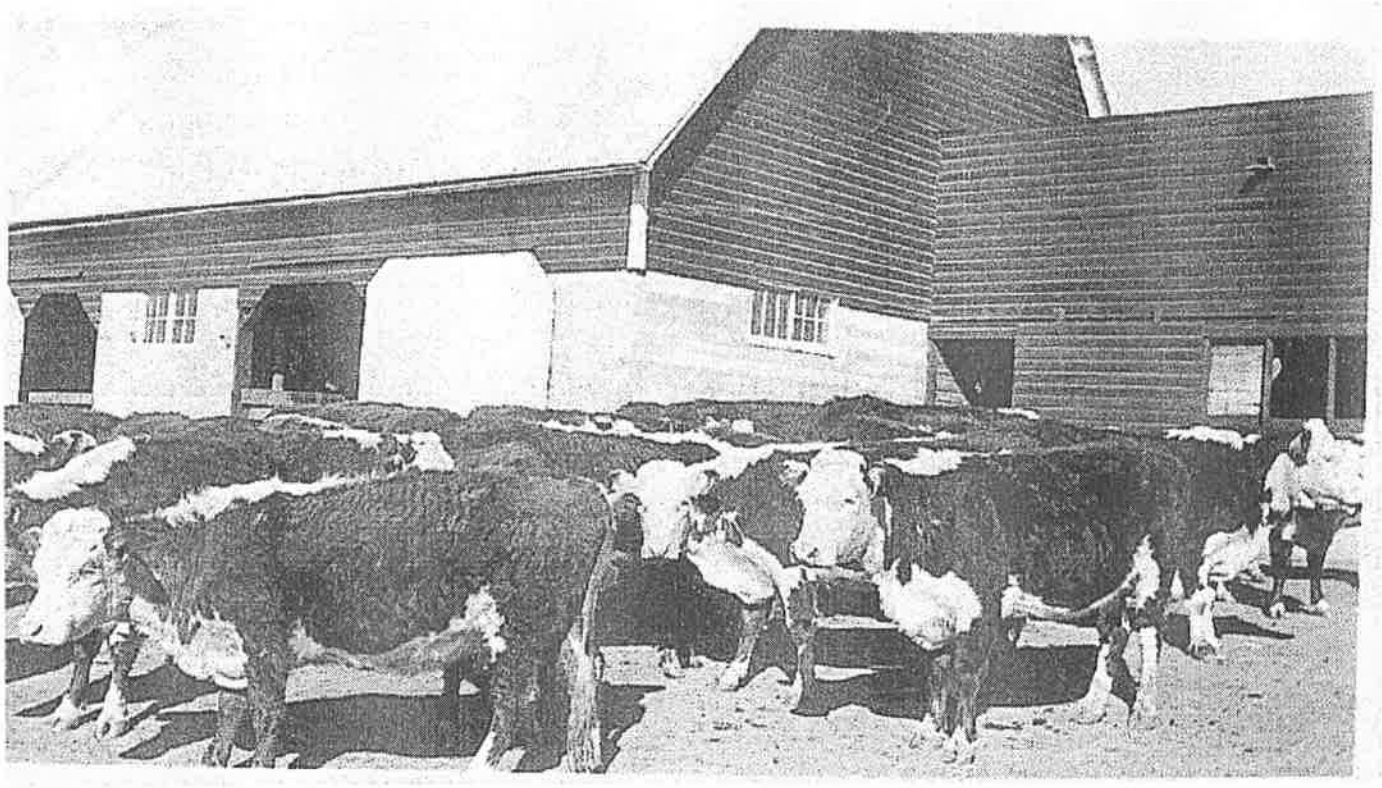


Figure 8: Keith Barn, early 1940s. Photographs Courtesy of property owner Diana Nickelson.

Figure 9

Keith Barn, Graham County, KS
Latitude / Longitude: 39.30487 -99.96775
Datum: WGS84

Figure 10: Exterior Photograph Directions

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