

Documentation of the

The Danish Brick Barn and The Log Cabin

Researched and written by
Jim Stone



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Credits

I wish to thank all the people that encouraged this project and made this book possible. Jim Wilson had the idea to record all of the information into book form. Evelyn Schlenker, who patiently encouraged, suggested and guided the process of writing this book. Kyle Jensen who allowed time to work on this project by helping to salvage parts from the barn and saving the log cabin, even when time was against him to remove the buildings for his irrigation system. To the members of the Clay County Historical Preservation Commission for their support and guidance. I thank Cleo Erickson for all her research and knowledge of where to find the historical information used in this book. I also thank the members of the Clay County Historical Society for all of their continuing support. In particular, I would like to thank Liz Almlie from the State of South Dakota Historical Society and the State of South Dakota Historical Preservation Office. Liz suggested that I gather as much information on the "Danish Brick Barn", as possible before it was destroyed. Without the additional pictures, measurements, drawings and research, there would not be enough information for a book. I would also like to thank Sarah Chadima, Senior Geologist, with the Geological Survey Program, for all of her research on early brick making and trying to pin point the location of the clay used in making the bricks. In addition, I thank Ron Johnson for the documents he shared from the Danish history museum. Thank you to all the people who graciously shared their photographs. Also I thank my wife Linda, who stood by me and supported me through all of the time and effort devoted to this project.

Preface

This book starts with the history of southeastern Dakota Territory from 1804, when it was still Sioux Indian Territory. It tells a story of treaties, moving the Indians farther west and opening this area to homesteaders. A prominent Yankton Sioux Indian plays a very important role in the process.

This leads to a story and historical records of a Danish family who immigrated to the United States of America. They came to Dakota Territory in 1870 to homestead and start a new life in a country that promised opportunity. This family built a brick barn that survived the 1881 flood and lasted 140 years. The bricks that were used to construct this barn and other structures were produced at a clay pit one and one half miles southwest of this barn. This site produced bricks for at least four barns and four brick homes before 1890. Early brick making was very labor intensive and in undeveloped Dakota Territory this had to be even tougher. A description of early brick making during this time is described in detail, see chapter III.

Also included in the book are histories written by descendents of the Calle Nissen Johnsen family. Some of these histories repeat certain facts, but also contain other important additions to the story of the Calle Nissen Johnsen family and homestead.

In 2009 the farmstead was sold by the descendents of Calle Nissen Johnsen. The new owners decided to install a pivot irrigation system in response to the 2012 drought. The brick barn was in the path of the irrigation system and this barn had to be moved or be demolished. This barn is believed to be the last "Danish" brick barn in the area. The farmstead was placed on the National Historical Register in 1999 with the "Danish" brick barn and the log cabin featured as the prominent buildings. The first part of this book is a record with history, construction drawings, descriptions of how the barn was constructed and photographs of the barn, to preserve a record of a historical barn that is gone forever.

The second part of this book is about the log cabin. Again, there are more histories written by descendents of Calle Nissen Johnsen. Some of these histories will repeat parts already mentioned earlier. Please bear with the stories, as they also contain additional interesting accounts of the early pioneer life.

The log cabin is unique because 12" vertical board siding was installed on this cabin many years ago and later lean-tos were added on three sides. The logs have been protected from the weather all this time and are in very good condition. This part of the book also contains histories, construction drawings, illustrating how the cabin was constructed and photographs to preserve a record of this log cabin.

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I. Introduction: Settling Clay County

"A story repeated over the decades tells of the birth of a baby boy in a Yankton Sioux village and his presentation to a visiting stranger from far away. The stranger, Captain Meriwether Lewis, wrapped the child in the American flag and predicted that he would become a great friend to the captain's countrymen. The young boy grew up to become Padaniapapi, or Struck-by-the-Ree, a Yankton chief well known for his efforts to keep peace with the whites.

According to his gravesite monument at Greenwood, South Dakota, Struck-by-the-Ree was born on 29 August 1804 and died on 28 July 1888. If the marker is accurate, Lewis and Clark were indeed visiting the Yankton Sioux at the time. Although it is not known precisely when Padaniapapi acquired his name, some sources say an Arikara warrior partially scalped him, which could explain both his name and his habit of wearing a fur hat. Struck-by-the-Ree was also known as Strike-the-Ree or in his later years, Old Strike.

Struck-by-the-Ree was a prominent Yankton leader when he attended a council called by Brigadier General William S. Harney at Fort Pierre in 1856. Harney designated the Yankton chief, as the chief of all the Sioux, a common practice among white officials who desired to streamline the treaty making process. In 1858, Struck-by-the-Ree signed the treaty by which the Yanktons ceded much of what is now southeastern South Dakota and agreed to live on a reservation in the present-day Charles Mix County. His efforts to persuade other Yankton leaders (notably Smutty Bear) to accept the treaty and to protect settlers during the United States-Dakota War of 1862 further cemented his reputation as a friend of the whites.

It is too simplistic to regard Padaniapapi solely as a wise old advocate of peace and friendship. By one report, he accepted the 1858 treaty not because he thought it was just, but because he believed that armed resistance to the demands of the whites was futile. In 1865, a government official visiting the Yankton Reservation recorded that Struck-by-the Ree regretted signing the treaty and complained bitterly about the corruption of Indian Office personnel, a common and often justified charge."

Refernces Cited

Stephen S. Witte, "Dakota Images" from *South Dakota History*, Vol 43, no 2 (Summer 2013), pg 176. Copyright © 2013 by the South Dakota State Historical Society. All Rights Reserved. Reprinted with Permission.



Photograph of Struck-by-the-Ree

Photo from South Dakota State Historical Society/State Archives.
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In the 1850's, southeastern Dakota Territory was still the home of Yankton Sioux Indians who had been displaced from the Minnesota and Wisconsin area. Very few whites lived in the area that was to become southeastern South Dakota. Those few whites lived in frontier towns along the Missouri River, serving as steamboat ports by supplying firewood for steamboats and operating trading posts. There also were a few frontiersmen who hunted, trapped and traded with Native Americans.

This was about to change drastically. "The speculative land boom underway by the end of the 1850's focused attention on the region between the Big Sioux and Missouri Rivers as well as western Iowa and northeastern Nebraska. This led to a treaty with the Yankton Sioux on April 19, 1858, and which was ratified on February 17, 1859, whereby the tribe agreed to withdraw to a reservation in what is now Charles Mix County, ceding the rest of their lands to the whites. ("Struck-by-the-Ree" was the chief who signed this treaty for the whole Sioux Nation, see paragraph 3, page 1). The departure of the Yankton Sioux Indians for their new home on July 10, 1859, marks the official opening of Clay County to settlement."

By late 1860, at least seventy-five persons are said to have settled in Clay County. "Most of them occupied the town site of Vermillion and its adjoining lands to the north and east. Norwegian families who crossed over from the Nebraska side preferred the timber area west of Vermillion and started what became generally known as the Lincoln settlement. A few located near the present town of Meckling. Despite all of this activity the migration into Clay County, it must be adjudged small. The speculative land boom had subsided by the end of 1860 and the newly opened Indian lands were not sufficiently alluring."

"The years immediately following 1860 saw little increase in population. Indian troubles broke out in 1862. A preoccupation with the civil war and hard times attributable to severe drought and grasshopper plagues during the middle of the decade greatly hampered the success of the new settlements, even causing many settlers to leave. Little was produced beyond the needs for home consumption because of the absence of railroad facilities. A limited market was occasionally provided by steamboats that stopped on their way up the river to pick up firewood and farm produce for use on the steamboats or for shipments for military posts. Amidst such conditions, few sought homes in Dakota prior to 1868."

"Although economic growth was virtually at a standstill, there was political and social progress. Even if Vermillion did lose out on its aspirations for the capital, it became the seat for a judicial district. The first term of court in Dakota Territory was held in Vermillion in August 1861. It also was the location of the first land office and became the site of the first permanent school house in the Territory in 1864."

"Better times seemed at hand by 1868, drawing attention once again to the infant settlements in the southeastern counties of Dakota Territory. The town of Vermillion took on a new look as its population doubled during the years of 1868 and 1869. At the same time, new settlers were rapidly advancing up the Vermillion Valley, occupying the land along Clay Creek and expanding into the prairie. The federal census of Clay County in 1870 showed a population of 2818. The majority of the new settlers arrived during the three-year period from 1867 to 1870 and the momentum was not to slacken for several years. By 1873, practically all the available government land in Clay County was occupied and that year the Vermillion land office was moved to Sioux Falls that year to accommodate settlers in the upper Big Sioux Valley."

"Playing a prominent part in Clay County boom was the construction of the Dakota Southern Railroad from Sioux City to Yankton in 1872. The tracks reached Vermillion on November 25 and regular rail- service was in motion along the entire line by the following February. Between 1870 and 1875 additional mail service followed, making connections from Vermillion with rural communities that were provided with post offices. These communities included Alsen, Bethel, Bloomingdale, Burbank (called Liberty at first), Glenwood, Greenfield, Lincoln, Lodi, Meckling, Riverside, Saybrook and Star Corner. A few others such as Dalesburg, Komstad and Marshalltown were added later."

References Cited

Clay County Place Names, Clay County Historical Society. Copyright ©1976 by Clay County Historical Society. All Rights Reserved. Reprinted with Permission.

II. History of Calle Nissen Johnsen and Homestead

Calle Nissen Johnsen immigrated to the United States in the 1860's from Scheswig, Denmark. He worked on the railroad in the Chicago area as a horse herder. He also worked on the Transcontinental Railroad. He returned to Denmark to bring his future wife to America. In 1869, he purchased a land patent on 160 acres for $200. Another source states that he purchased a relinquishment on a homestead from a young homesteader. He is listed as the homesteader on the Clay County, Dakota Territory homesteader's map, dated 1884.

Calle Nissen Johnsen was one of the first Danes to settle in this area. Specifically on the southwest quarter of Section 32, Meckling Twp., Clay County, Dakota Territory. By 1894, he owned 460 acres of farmland of which all was connected.

The most distinctive feature of this rural historic site was the clay brick barn, thought to be the only remaining brick barn from the 1870's in the area. The clay was mined 1-1/2 miles southwest of the present farm. The bricks were formed, dried and fired at that site.* The bricks then were hauled by wagon to the barn site. Oral history has it that Calle Nissen Johnsen paid the passage for brick makers and masons to come the United States from Denmark to help build the barn and later the brick house. They worked for Calle to pay off their passage to America and stayed in the area and built at least three other brick barns and at least three other houses. Now only two of the houses still stand.

The Calle Nissen Johnson farm was listed in the National Historical Rigister of Historic Places. The two most important buildings are the brick barn known as the "Danish Brick barn" and the log cabin that was moved to the farmstead about 1870 to 1871.

Julia Sollenberger, the daughter of Dorothy Sollenberger, prepared the paper work to list the farmstead in the National Register on August 5, 1999. Dorothy Sollenberger is a great grand daughter of Calle and Marie Nissen Johnsen. She is also the daughter and the only child of Carl and Mary Hansen, who were grandchildren of Calle and Marie Nissen Johnsen. Carl Hansen farmed this farm and purchased it after Marie Nissen Johnsen died in 1940. Carl left it to Dorothy when he died, who sold it to the present owners in 2009.

This barn and the log cabin were going to obstruct the pivot irrigation system that was being installed on this farm by the new landowner. The structures had to be moved or destroyed in 2013, before the irrigation system could operate. This farm had been in the family since Calle Nissen Johnsen purchased the land in 1869. This farm was owned for 140 years by the family.

References

Hay Country History - A story of the Pioneers of the Gayville and Meckling, South Dakota area. Editor – Mrs. Carl Hansen, wife of Carl Hansen, who was a grandson of Calle and Marie Johnsen.

Adventures of a Pioneer Clay County Family are related - by the late Mary (Johnsen) Sorenson Vermillion Plain Talk, Thursday August 27, 1959.

*Sources from 1980 to present give various locations for the clay source. The article written in early 1900's by Mary (Johnsen) Sorensen, daughter of Calle Nissen Johnsen states that it was located 1-1/2 miles southwest of the farm.

Permission granted on above two references and when used in the rest of this book.

Addendum

Error on the reference of

Hay Country History

This applies to the reference on page 6, 12, 70, 76 and 82 in this book.

Mrs. Carl Hansen was not the editor of this book.
Mrs. Carl (Margaret Miller) was the historian and editor.
She was not related to either the Calle Johnsen or Carl Hansen families.
She did live about one mile from this farmstead.

Following are documents denoting the 1845 census of the family in Denmark, birth certificate and baptismal record of Calle Nissen Johnsen and a copy of the passenger manifest on the immigrate ship "Ocean Queen".

THE DANISH IMMIGRANT MUSEUM FAMILY HISTORY & GENEALOGY CENTER -
Data Transfer Sheet -- compiled by Michele McNabb
Danish Census Transcriptions (ddd.dda.dk), viewed 18 March 2013

(**Bolded** notations refer to immigrant(s); those in red to parents; those in blue to grandparents; those in green to great-grandparents and earlier generations. Underlined individuals are or may be other relatives.)

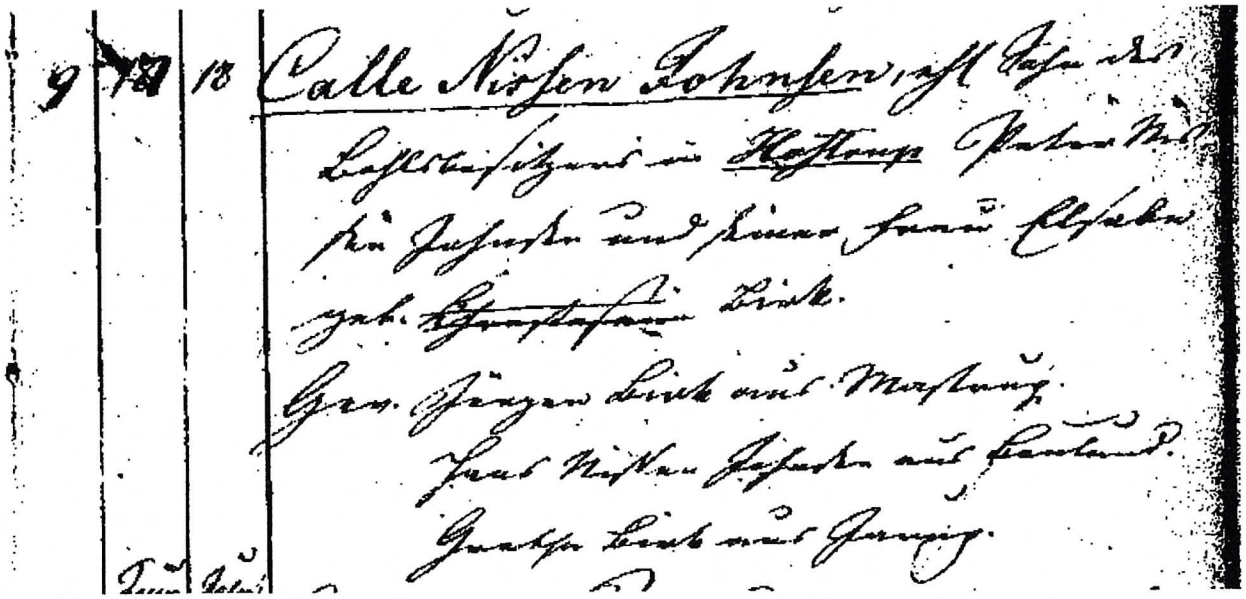
All Persons in the Household

Aabenraa, Sønder Rangstrup, Egvad, Hostrup village, Hufe (farm), 20, 1845 census, C3481

Name:	Age:	Marital Status:	Position in Household	Occupation:	Birthplace:
Peter Nissen Johnsen	40	Gift (married)		Hufner (farmer)	Baulund
Elspe Leck	34	Gift		Seine Frau (his wife)	Mastrup, Hadersleva.
Maren Christensen	10			ihre Kinder (their child)	Hostrup
Maria Christensen	9			ihre Kinder (their child)	Hostrup
Mette Nissen Johnsen	5			ihre Kinder (their child)	Hostrup
Kalle Nissen Johnsen	2			ihre Kinder (their child)	Hostrup
Maria Christensen	70	Enke (widow)		wird von ihm Familienvater unterhalten (supported by the family father)	Hostrup

Danish vital records (source: arkivalieronline.dk; viewed
Egvad Parish, Sønder Rangstrup District, Aabenraa County, parish registers, 1764-1846

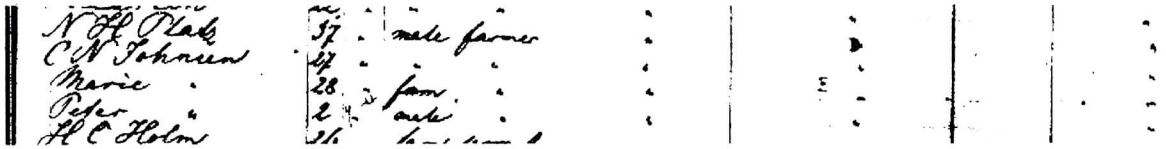
<u>Image #302: birth/baptism Calle Nissen Johnsen, 1843 (German-language record):</u>



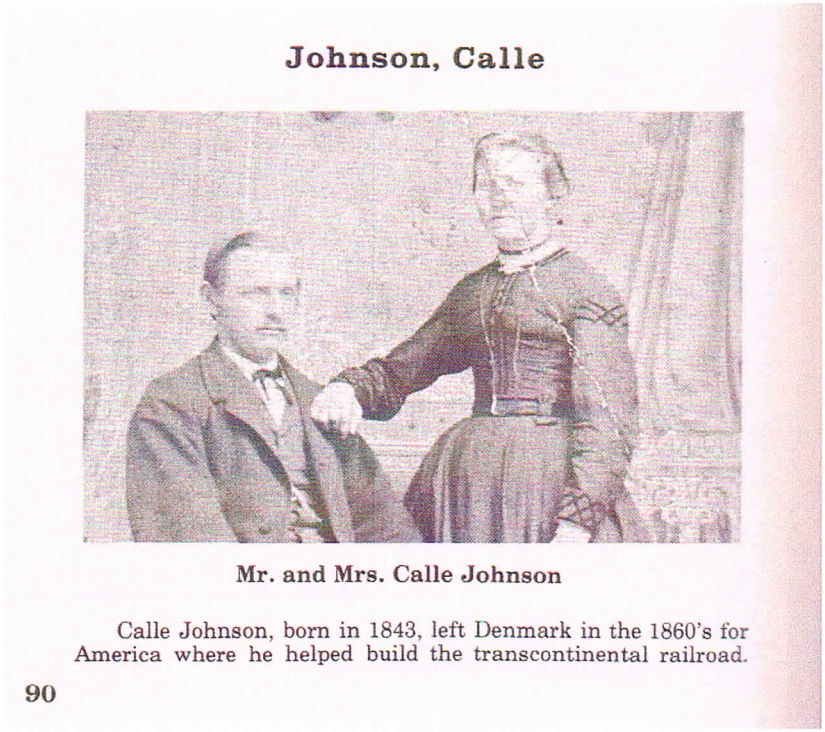
[1843 births] #9: born ~~18~~-17 [May], baptized 18 [June]: Calle Nissen Johnsen, legitimate son of farm-dweller in Hostrup Peter Nissen Johnsen and his wife, Elsabe, née ~~Christensen~~ Birk. Sponsors: Jürgen Birk of Mastrup, Jens Nissen Johnsen, of -?-lund, G-?- Birk of Jernrup(?)

Copy From the Manifest for the "Ocean Queen" May 2, 1870

Name	Arrival Date	Estimated Birth Year	Age	Gender	Port of Departure	Destination	Place of Origin	Ethnicity/
C N Johnsen	2 May 1870	abt 1843	27	Male	Copenhagen, Denmark	United States of America	Denmark	Danish
Marie Johnsen	2 May 1870	abt 1842	28	Female	Copenhagen, Denmark	United States of America	Denmark	Danish
Peter Johnsen	2 May 1870	abt 1868	2	Male	Copenhagen, Denmark	United States of America	Denmark	Danish



III. Hay Country History
A Story of the Pioneers of the Gayville and Meckling, South Dakota Area



Johnson, Calle

Mr. and Mrs. Calle Johnson

Calle Johnson, born in 1843, left Denmark in the 1860's for America where he helped build the transcontinental railroad.

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Calle Johnsen, born in 1843, left Denmark in the 1860's for America where he helped build the Transcontinental Railroad. Then he returned to Denmark. On April 12, 1870, he and Marie Christensen*, who was a goose girl and a dairy maid, joined a small party of friends to leave Copenhagen on an immigrant ship "Ocean Queen" and at the end of 19 days arrived in New York. Marie stayed in New York and worked until her baggage arrived and Calle continued on to Dakota to purchase a relinquishment on a quarter of land in Section 32 of Meckling Township.** They were married by Reverend Emil Christenson and the next morning Marie took stock of her new home; one kettle, one frying pan and a coffee pot, two cups, two plates, two knives and forks, a stove, a bed, a rough table with a bench. Their next home was also a log house, but larger with a lean-to for a bedroom. It also had a board floor and a shingle roof. In this house ten of their eleven children were born. Eight of these children reached adulthood. Hans, Peter, Ella, Katherine, Mary (Sorenson), Helena (Hansen) and Christina (Hvistendahl). This little house still stands, but the family moved into a fine brick house built in the 1880's made from brick fired 1-1/2 miles from their farm. This is where the youngest child was born.

In 1914, Calle passed away and is buried in the Danish Cemetery. Marie stayed on the farm until she moved to Vermillion in 1930. She died in 1940 at the age of 98. In 1933, the brick house was destroyed by fire and grandson, Carl Hansen and his wife, moved back into the old log house, until they could get their modern brick home built. Carl is the son of Pastor Iver Hansen and his wife Helena and had a sister Della (Olson) and two brothers Phil and Milton. Carl and Mary had one daughter Dorothy (Sollenberger).

* Marie (Christensen) Johnsen was born in Hostrup, Denmark, her maiden name was not Hostrup.

**Another source states the Calle Nissen Johnsen purchased a land patent or a relinquishment on the farm in 1869 before he went back to Denmark.

Reference

Hay Country History - A Story of the Pioneers of the Gayville and Meckling, South Dakota Area Editor – Mrs. Carl Hansen, wife of Carl Hansen who was a grandson of Calle and Marie Johnsen

History written by Mrs. Chris Sorensen (Mary Johnsen, daughter of Calle and Marie Nissen Johnsen) Adventures of Pioneer Clay County Family are related, Vermillion Plain Talk, Thursday August 27, 1959.

IV. Early Bricking Making
c. 1850

As written by
Rick Bonomo
2248 Maple Valley Rd
Berlin, Pa. 15530
www.ricks-bricks.com



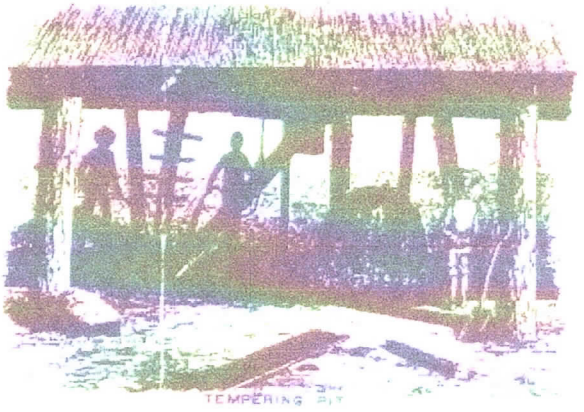
There are five steps to make bricks.

The first step is called **WINNING,** or mining the clay.

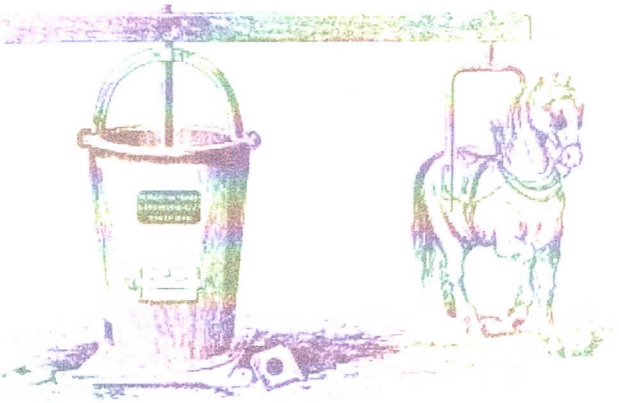


Because the steam shovel was not invented until 1879, early brick makers had to dig for the clay on site with hand shovels. This was done in the autumn. The early brick maker chose his clay by its color and texture and based on his experience. He sought clay that was located just under the topsoil to minimize the hard work of digging it with hand spades. The clay was exposed to the weather so that the freeze- thaw of the winter would break the clay down and allow it to be worked by hand. The winter made the clay soft and removed unwanted oxides.

The second step is **PREPARATION** of the clay, called **TEMPERING** or **PUGGING.**

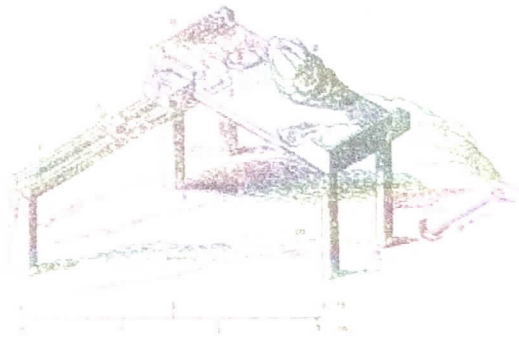


In the spring, the clay was, then able to, be worked by hand. It was necessary to either grind the clay into a powder and screen it to remove stones, or the clay was placed into a soaking pit where it was mixed with water to obtain the right consistency for moulding. It was kneaded with hands and feet to mix all the elements of clay together. This step was called tempering or pugging and was the hardest work of all. In the mid-1800's horse driven pug mills were invented. (Below)



The third step is **MOULDING.**

The assistant brick moulder was called the "clot" moulder and he would prepare a lump of clay and give it to the brick moulder. The brick moulder was the key to the operation and he was the head of the team. He would stand at the moulding table for twelve to fourteen hours a day and with the help of his assistants could make 3500 to 5000 bricks in a day. He would take the clot of clay, roll it in sand and "dash" it into the sanded mould. The clay was pressed into the mould with the hands and the excess clay removed from the top of the mould with a strike, which was a flat stick that had been soaking in water. This excess clay was returned to the clot moulder to be reformed. Sand was used to prevent the clay from sticking to the mould.



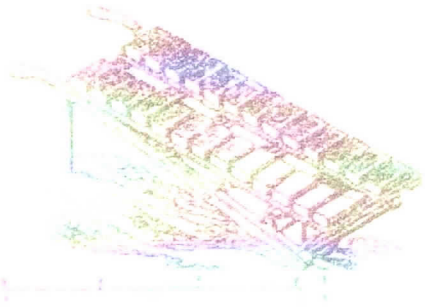
Moulding table shown in Dobson's Book



Brick mould (top) and stock board (below) of the kind used in making bricks in the nineteen century.The stock board could have a stamp to advertise the brick maker.

Single, double, four and six brick moulds were used. The single brick mould had an advantage in that a child could carry it to the drying area. Beech wood was the preferred material for the mould as it was claimed that the clay would not stick to it. The top of the mould was laminated with iron to prevent wear. The brick slid easily out of the mould because it was sanded and these bricks are referred to as "sand struck bricks". The process was also referred to as slop moulding.

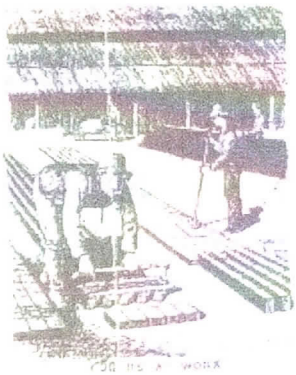
The next person on the team was called an off-bearer. He would walk up to the moulding table, remove the filled mould and take it to the drying area on a pallet or barrow where it would be placed on a level bed of sand. He would then return the mould to the table and wet and sand it to receive the next brick.



Barrow for twenty-six bricks illustrated by Dobson

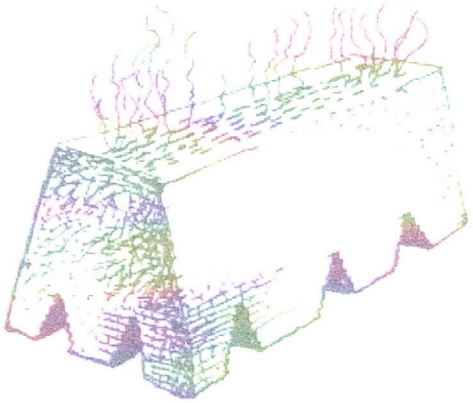
Barrow for twenty-six bricks illustrated by Dobson

The fourth step is **DRYING**.



The moulded bricks were stacked in a herringbone pattern to dry in the air and sun. The moulded bricks were left to dry for two days at which time they were turned over to facilitate uniform drying and prevent warping. During this time, tools called dressers or clappers, were used by "edgers" to straighten the bricks and to obtain a smooth surface. After four days of dry hot weather the bricks were sufficiently hard to allow them to be stacked on end in a herringbone pattern with a fingers width between them to allow further drying. This area was called a hack or a hack-stead and the bricks were covered under a roof or with straw to protect them from rain or harsh sun. After two weeks the bricks were ready to be burned.

The fifth step is **BURNING.**



If fired bricks were on hand, they were used to construct the outer walls of the kiln and the surface was daubed with clay to contain the heat. If no fired bricks were available the kiln was constructed entirely of green bricks, which were stacked in such a way as to act as their own kiln. These kilns were called clamps or scove kilns. Wood and coal were used for fuel.

Even after drying in the air the green bricks contained 9-15% water. For this reason the fires were kept low for 24-48 hours to finish the drying process and during this time steam could be seen coming from the top of the kiln. This was called "water smoke". Once the gases cleared this was a sign to increase the intensity of the fires. If it was done too soon, the steam created in the bricks would cause them to explode. Intense fires were maintained in the fire holes around the clock for a week until temperatures of 1800 degrees F were reached. The knowledge and experience of the brick maker dictated when the fire holes would be bricked over and the heat was allowed to slowly dissipate over another week.

When the kiln was dissembled the sorting process began. If only raw bricks were used, the bricks from the outermost walls, were kept, to be burned again in the next kiln. Some bricks, which were closest to the fire received a natural wood ash glaze from the sand that fell into the fires and became vaporized and deposited on the bricks. These bricks were used in the interior courses of the walls. Bricks that became severely over burned and cracked or warped were called clinkers and were used for garden walls or garden paths.

The best bricks were chosen for use on the exterior walls of the building. Those that were only slightly under-fired had a salmon color and early bricklayers knew that the porosity of these bricks would help to insulate the structure and they were placed on the innermost courses of the wall.

According to representatives from Virginia Lime Works, to protect the under-fired bricks and mortar and to impart a uniform color to the exterior wall surface a "Color Wash" was applied. This consisted of glue sizing, pigment (iron oxide) and potash alum. The mortar joints were painted white.

(Editor's note) - The softness of the brick used on the "Danish Brick Barn" may have been the result of the cottonwood firewood not being able to produce a hot enough fire to fire the bricks properly. If hard wood had been available in sufficient quantities, it would have helped. If coal had been available they would have been even more successful. The quality of the clay may also have been a factor.

References Web Site

http://www.shol.com/agita/thespiel.htm
Dobson, Edward 1850 A Rudimentary Treatise on the Manufacture of Bricks and Tiles, John Weale, London.
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Footnote for
Explanation of measurements used in the construction of structures in this book:

In describing the construction of structures in this book, you will find the sizes of lumber with and without inches. I will attempt to explain this in layman terms. 1x2, 1x4, 1x6, 1x8, 1x10 and 1x12 boards, 2x2, 2x4, 2x6, 2x8, 2x10 and 2x12 dimension lumber and 4x4, 4x6, 6x6 and 8x8 timbers are considered nominal sizes and only use length measurements. (Example 2x4x8') The reason for this is that lumber is cut from a green log, 1" thick for boards, 2" thick for dimension lumber and 4", 6" and 8" for timbers the width is 2", 4", 6", 8", 10" and 12". Then the lumber is dried to 17% to 19% moisture, which causes shrinkage. After being dried, the lumber is planned to 3/4" thick for boards, 1-1/2" thick for dimension lumber and 3-1/2", 5-1/2" and 7-3/8" for timbers. The width is planned to 1-1/2", 3-1/2" and 5-1/2" for 1x2, 1x4, 1x6, 2x2, 2x4 and 2x6. The wider widths 8", 10" and 12" are planned to 7-3/8", 9-3/8" and 11-3/8" and can shrink down to 7-1/4", 9-1/4" and 11-1/4".

It would become very awkward and time consuming to write out (3/4"x3-1/2" x length which is marked as 8' or 12' etc. or 1-1/2" x 3-1/2" x length.) The lumber industry, contractors, carpenters, trades people, engineers and architects all know what a 2x4x 8' or a 2x6x16' means and this makes descriptions a lot simpler. This has been the excepted practice since steam operated sawmills started cutting lumber. The drying and planning came about later as the demand for uniform and dried, stable lumber increased. Special sizes, which are not nominal sizes will use (Example - 8" x 9" x 36', size of hand hewn beams in the "Danish" Brick barn) to specify size.

V. Drawings of the "Danish" Brick Barn

The next four drawings (figures 1, 2, 3 and 4) are drawings of the floor plans and elevations of the "Danish" Brick Barn. The first drawing (Figure 1) is the first floor or ground floor plan. The barn is T shaped. The west wing is 36' wide east to west and 47' long north to south. The east wing connects to the center of the east wall of the west wing and extends 67' east. It is also 36' wide north to south. The plan shows the location of the horse stalls on the south side of the west wing and the granaries in the center 20'on the north side. The 8' areas on the east and west were open and their use is unknown. The east wing shows the location of the 8" x 9" x 36' hand hewn cottonwood beams and the posts supporting these beams. There are also enlarged detail drawings for the brick pilasters in the walls and at the corners.

The second drawing (Figure 2) is for the second floor or the hayloft plan. The plan shows the two rows of 6 x 6 posts that were supported by the beams below and supported 6x6 beams above, which supported the center of the rafters. The 2 x 10 beams from these posts go out to the exterior walls to stabilize the walls and the roof. All of the 6x6 posts are mortised into the beams. The 2x10's are mortised into the posts and are held with hardwood pegs. The east wing was the hayloft. The west wing was hayloft on the south side and remodeled into granaries later. It is now built with milled 2 x 6's and 1 x 8 shiplap. The north side of the west wing was granaries below on the center 18'. There may have been granaries above with haylofts on the west and east 8' because notches for floor joists can be seen in the center 18' of the 8" x 9" x 36' beams. This side has been remodeled with 2x6 milled lumber and 1x8 shiplap. The granaries now go up through the second floor and are 14' deep.

The top of the third drawing (Figure 3) is a cross section of the east elevation of the east wing. This shows the brick walls, and the 8" x 9" x 36' beams and the 6 x 6 posts that support them. It also shows the two rows of 6 x 6 posts in the hayloft, which support the 6x6 beams, which support the center of the rafters. The 2 x 10 braces from the posts out to the exterior wall are shown.

The bottom drawing (also Figure 3) is of the south elevation of the west wing. This shows the brick walls, the 8" x 9" x 36' beams and the spacing of the 6 x 6 posts. The spacing is for five single horse stalls and one double horse stall and a walk alley on the east side. It also shows the two rows of 6x6 posts in the hayloft that support the 6 x 6 beams, which support the center of the rafters. It also shows the added double 2 x 8 milled joists that were added for the granaries.

The fourth drawing (Figure 4) is the north elevation of the west wing. This drawing shows the brick walls and the 8" x 9"x 36' beams and the spacing of the 6 x 6 posts. It also shows the added or remodeled granaries that now go up through the second floor. It also shows the two rows of 6 x 6 posts on the second floor that support 6 x 6 beams, which support the center of the rafters.

Figure 1. First floor plan

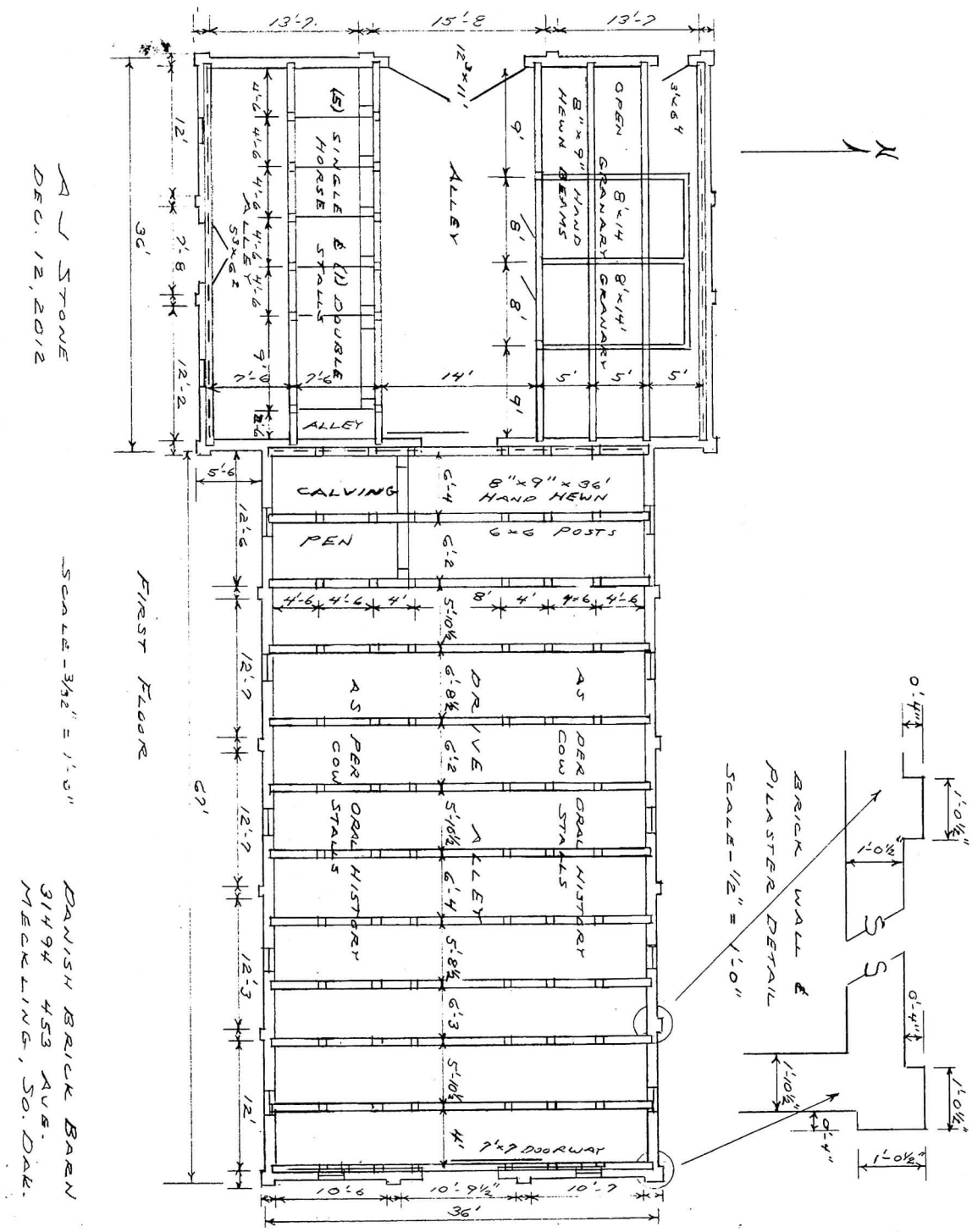


Figure 2. Second floor plan

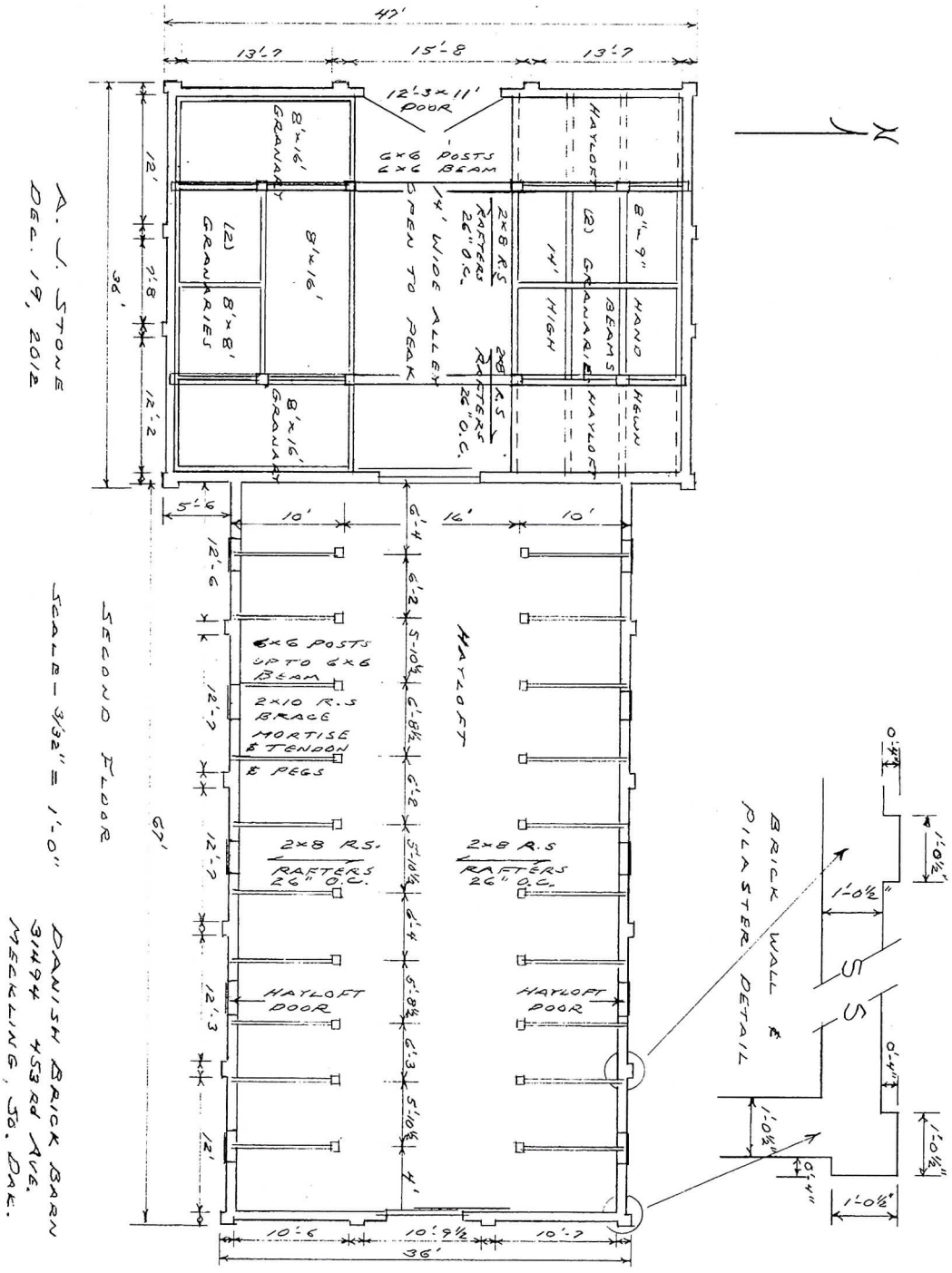


Figure 3. Top drawing; east elevation and bottom drawing; south elevation

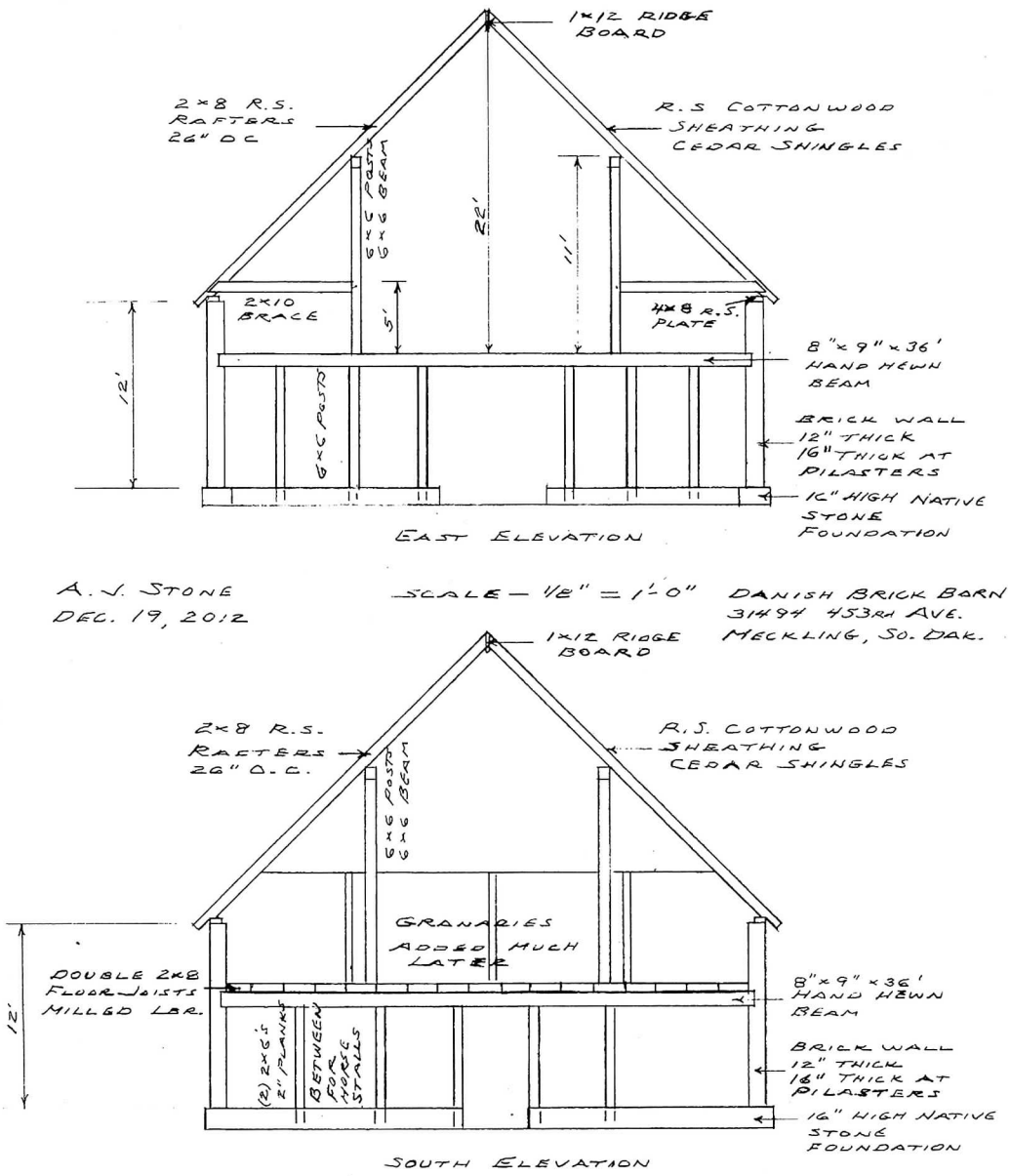
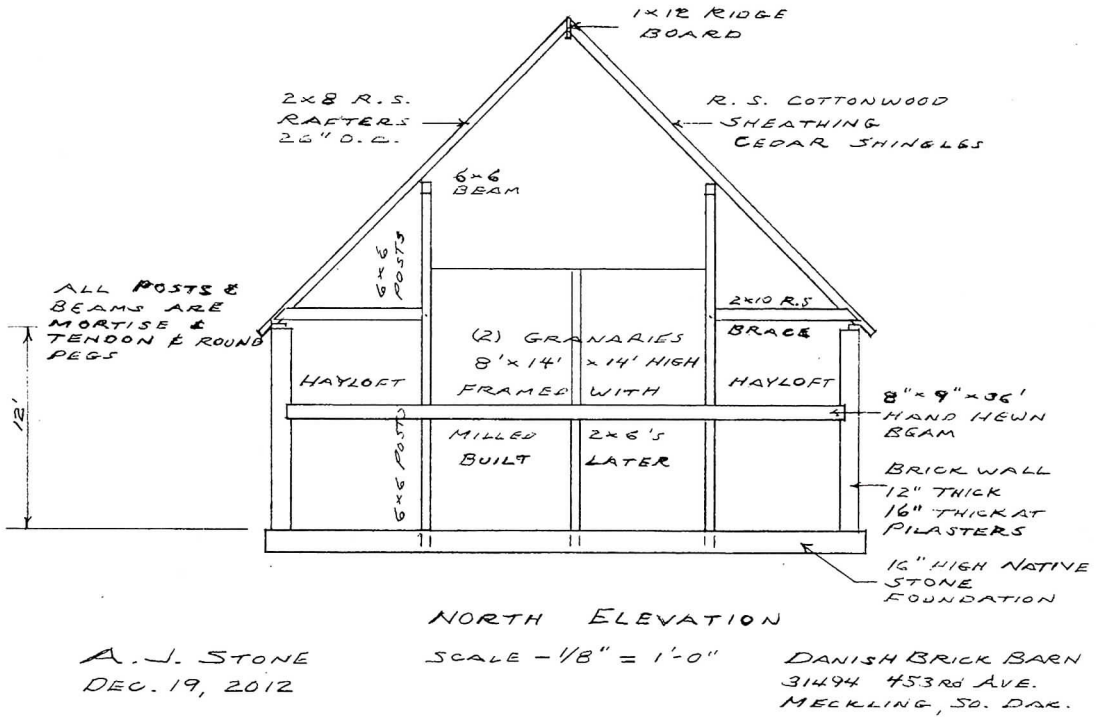


Figure 4. North elevation drawing



VI. Construction of the "Danish Brick Barn"

The most distinctive feature of this rural historic site was the clay brick barn, to date thought to be the only remaining brick barn from the 1870's in the area. With unique walls constructed of clay brick manufactured near the property, work commenced in 1870 and was completed in 1878. Yes, the clay was dug or mined 1-1/2 miles southwest, where the bricks were formed, dried and fired at that site. The brick were then hauled by wagons to where the barn was built. I can't imagine the amount of firewood they must have used to fire that many bricks. The T shaped barn was 47' long (north to south) and 36' wide (east to west) on the west end and a 36' wide (north to south) by 67' (east to west) on the east side. The foundation is red quartzite and granite stone, which is about 1'- 4" above ground level. This stone would have been carried by glaciers and deposited on the bluff and table land to the north. It would have taken countless long trips to haul that amount of stone six or more miles with wagons.

The brickwork is very ornate with soldier brick arches over all door and window openings, except for seven hayloft doors (three doors on the north wall, three doors on the south wall and one door on the east wall all in the east wing of the barn) as the top of the door is down just four courses of brick from the top of the 12' wall. A steel lintel supports these brick. The brick walls have pilasters built into all six corners and four in each of the 67' walls on the east part of the barn. The west side and all of the 36' gable ends each have two pilasters and the corner pilasters.

All of the mortar was sand and lime mortar used on the quartzite and granite rock foundation and the brick walls. An interesting property of sand and lime mortar is that it will reset or cure every time it gets wet. So if any part of the walls or foundation shifts, the mortar will reset when it gets wet. After about 100 years of exposure to wind and moisture it chemically turns back into limestone. *

The hayloft floor in the east 36' x 67'is supported with massive hand hewn cottonwood beams 8" x 9" x 36' long which run north to south the 36' width. Just imagine the size of the cottonwood log to cut out just one of these beams. There are 11 of these beams that are about 6' O.C. (on center) and another beam imbedded in the east wall. These beams were supported with hand hewn cottonwood 6 x 6 posts. The posts are mortised and tendon into the bottom of the beams. The posts have been replaced with rough sawn cottonwood posts, as the bottom of the original posts would have rotted off. There were six posts under each beam, which are about 4' O.C. from the north and south walls, leaving a 12' alley in the center running east to west. On the first floor there were single cow stalls between each row of 6 x 6 posts. It not known if these served as milk cow stanchions or to feed cattle for market. There is one pen with a manger and grain boxes in the southwest corner of the west wing, which is said to have been a calving pen. There is a sliding door to close off the east driveway in the east wing from the west driveway in the west wing.

The hayloft in the 36' x 47' west end has five rows of the massive hand hewn cottonwood 8" x 9" x 36' beams running the 36' width east to west. These beams are 8' O.C. from the south wall and about 5' O.C. from the north wall, leaving a 14' alley in the center, which lines up with the alley to the east. Another 8" x 9" beam is imbedded into the north and south brick walls. These beams are supported by hand hewn cottonwood posts 9' O.C. on the north side and 4'- 6" and 9' O.C. on the south side. Each post is mortised and tendon into the bottom of the beams. There are 5 single horse stalls and one double horse stall on the South side. The wall between the alley and the horse stalls is covered with boards for a solid wall. There are doors with heart shaped finger pulls to open to feed the horses hay and grain.

There are mortise holes 2' O.C. in the bottom of the center 18' of the 8" x 9" x 36' beam which is on the north side of the alley. The 8' on each end of this beam do not have these mortise holes. This may have been a granary or a corncrib under a hayloft on the second floor. There could have been granaries above on the hayloft floor and the reason for the four 8" x 9" beams 5' O.C. plus another beam imbedded into the north brick wall on the north side of the West wing.

The floor joists have been replaced with double milled 2 x 8's and five granaries have been built above on the south side. It is believed that the south side above the horse stalls was a hayloft and the beams supporting were 8' O.C. There are two granaries in the center of the north side, with a 9' space for haylofts on the east and west sides. The granaries on the north have been rebuilt with milled 2 x 6's and 1 x 10 shiplap. The original floor joists have been removed to make the granaries go up through the hayloft floor to make these granaries about 14' high. The beams still are in place.

The 2x8 rough sawn cottonwood rafters are supported in the center of each rafter with one row of 6x6 posts and 6 x 6 beams. The posts are about 6' O.C. in the east wing of the barn. These posts sit on top of the 8" x 9"x 36' beams below and are mortised and tendon into the bottom of the beam above. There is a rough sawn cottonwood 2 x 10 from the top of the 12' high brick wall horizontally to each post and is mortised and tendon into the posts with a round wood peg. The rafters in the west side are supported with four 6 x 6 posts and a 6 x 6 beam running north to south. These posts also set on top of the beams below and are mortised and tendon into the beams with the end posts setting on top of the brick wall. The roof sheathing is rough sawn cotton boards covered with cedar shingles. The first wood shingles would have been cottonwood shingles made locally. The gable ends have horizontal boards for siding. Many of the 2 x 8 rafters measure up to 9" wide and were shaved down with an axe to match about 8" at the 4" x 8" plate on top of the brick wall and above the 6 x 6 beams to keep the roof level.

The barn originally had at least two wooden cupolas on the east wing. There may have been a cupola on the west wing, (see picture at top of page 73). One of the wood cupolas was still

on the floor in the west wing of the barn. The windows were 9" x 9" four light sash over 9" x 9" four light sash. This is called a double hung window and both sashes were moveable for ventilation. The top and bottom sash even had sash bolts to adjust the windows at various heights for ventilation.

References

The Vermillion Plain Talk, Thursday August 27, 1959
Adventures of a Pioneer Clay County Family are Related. By the late Mary (Johnsen) Sorenson. Editor – Mrs. Carl Hansen, wife of Carl Hansen, who was a grandson of Calle and Marie Johnsen

* Interview with Robert Hansen, a very knowledgeable, old masonry contractor from Yankton, South Dakota.

VII. Pictures of the "Danish" Brick Barn



Photo #1 by Jim Stone March 23, 2012

Looking at the southwest corner of the barn. This was one of the first pictures of this barn, before the renter moved out. Note large soldier brick arch doorway in the west wall. The doorway was 12' – 4" wide and 11' tall. The double doors for the large opening swing into the barn. On the south wall of the west wing is a soldier brick arch doorway. This opening was 5' – 3" wide and 6' – 2" tall. The double doors for this opening also swing in. This opening was for the horses to enter or exit the barn. At the north end of the west wall of the west wing there was a simple brick arch doorway. This opening was 3' wide and 6' – 4" tall, with a single Dutch door that also swings in. This was the original walk door into the barn.



Photo #2 by Jim Stone March 23, 2012

Looking at the southeast corner of the barn, note four pilasters on the south wall of the east wing and two pilasters on the south wall of the west wing. Also note the corner pilasters on each corner. Three awning type hayloft doors were on the south and north walls of the east wing and one awning door was on the east wall. That door is partially open, showing hinges at the top, which classifies it as an awning door.

There is no hay track in the hayloft, requiring all the hay to be manually pitched up into the hayloft through these doors. A second person would have to be in the hayloft to pitch the hay back from the doorway. It was a very labor-intensive job.



Photo #3 by Jim Stone March 23, 2012

Looking at the northeast corner of the barn, note four pilasters on the north wall of the east wing. Also note corner pilasters and awning hayloft doors on the north wall and the east wall. The concrete pad just north of the barn is the scale used to weigh livestock and or grain. Carl Hanson weighed grain and livestock for area farmers. This was one way to make sure that the farmer got a fair weight at the local elevator or for livestock. The north side of the roof has been leaking and some of the rafters are rotted out as have some of the huge timbers supporting the hayloft floor.



Photo #4 by Jim Stone March 23, 2012

This photo is looking northeast up into the hayloft of the east wing. There are two rows of rough sawn cottonwood 6 x 6 posts about 10' from the outside wall. The outside wall is tied to these 6 x 6 posts with a rough sawn cottonwood 2 x 10. The cottonwood 2 x 10 is mortised into the 6x6 posts and is secured with a hardwood peg. The two rows of posts go up to the center of the rafters and are mortised into a 6 x 6, which supports the rafters. The rafters are rough sawn cottonwood 2 x 8's. Some of the rafters measure up to 9" wide and you can see where some had to be notched keep the roof level. The sheathing on the roof is also rough sawn cottonwood. The first shingles would have been made of cottonwood by small shingle producers along the river, as a way to supplement their income. They would use short sections of cottonwood stumps to hand split into shingles. A lot of their short sections were from the stumps left when the original tree was cut down.

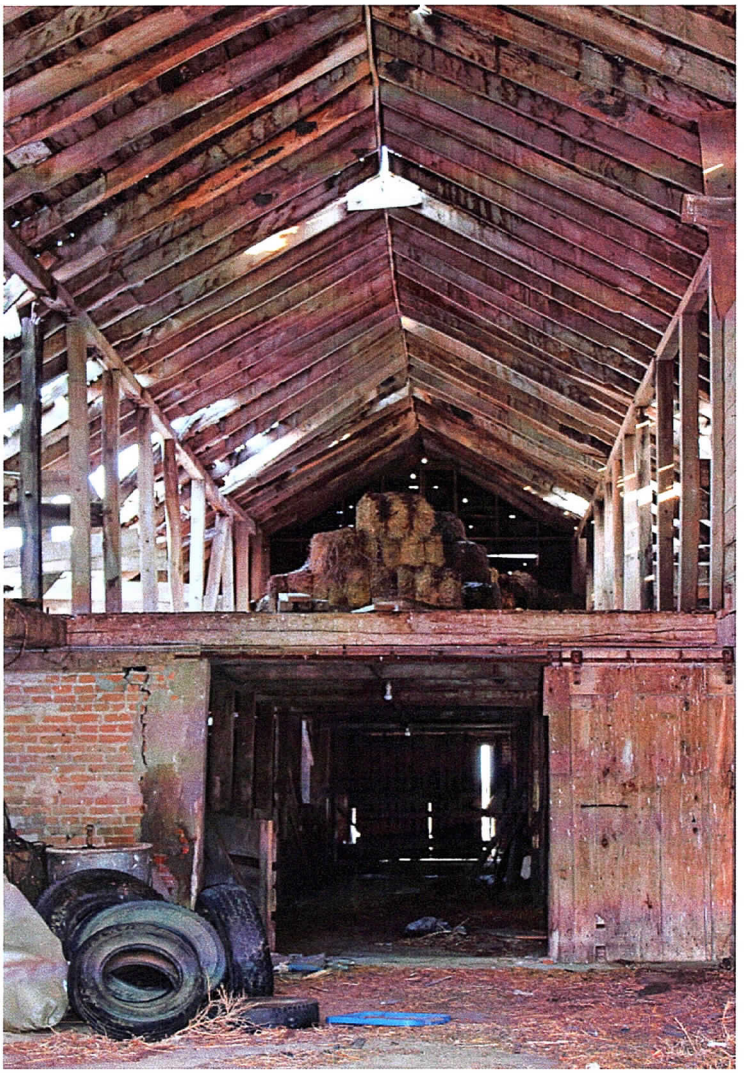


Photo #5 By Kari McKelvey December 25, 2012

Looking east into hayloft and into the east wing, note the massive 8" wide x 9" high x 36' long hand hewn cottonwood beams that support the hayloft floor. These beams are about 6' O. C. Rough sawn cottonwood 6 x 6 posts sit on top of these beams and are mortised into a rough sawn cottonwood 6 x 6 beam above to support the center of rafters on the roof on the east wing.



Photo #6 by Jim Stone March 23, 2012

This photo depicts the first floor looking northwest at the brick arched doorway with in-swinging doors. The granaries on the north side of the west wing have been rebuilt with milled 2 x 6 and 1x8 shiplap. They now go up through the original floor, which was removed, and are about 14' high. The 8" x 9" hand hewn beams are still in place and have the notches where the original floor joists were mortised in. The original 8" x 9" beam is still visible in the above picture, with 2 x 6 studs up to it and 2 x 6 studs above. There are mortises in the bottom of this beam that are 2' on center. They are only in the center 18'of the beam. I do not know what they were for or if it was a way to lock the studs for the original granary so they would not push out from the weight of the grain.



Photo #7 by Dennis Konkler April 6, 2013

This photo is looking east down the 12' wide drive alley in the east wing. Note the 8" x 9" x 36' hand hewn cottonwood beams. The beams are about 6' on center. There are six 6x6 posts mortised into the bottom of each beam. They are 4' from the outer wall and about 4' on center leaving the center 12' for the drive alley. It is said that they were individual stalls for cattle. We do not know if the stalls were for milk cows or for feeding cattle for market. The 6 x 6 posts have rotted off and have been replaced with 6 x 6 rough sawn cottonwood posts.



Photo #8 by Jim Stone March 23, 2012

This photo is looking southeast in the east wing. Massive 8" x 9" x 36' hand hewn cottonwood beams, with 6 x 6 rough sawn cottonwood posts, supporting the hayloft floor. Note the 1 x 12 boards over the beams for the floor in the hayloft. Many of the 6 x 6 posts have been removed. The huge beams are about 6' O. C. in the east wing. The original 6 x 6 posts would have been hand hewn and replaced later with rough sawn posts after the bottom rotted off the original posts.



Photo #9 by Jim Stone March 23, 2012

This photo illustrates the first floor in the west wing, looking southwest, at large brick doorway with in-swinging doors on the west wall. There are 2 x 6 studs with boards, for a solid wall on the south side of alley. There are five single and one double horse stalls on the south side of this wall. There are small doors in this wall to feed horses grain and hay.



Photo # 10 by Kari McKelvey April 7, 2013

This photo looks at the west wall of the west wing. The large 12' – 4" wide and 11' tall soldier brick doorway with in-swinging doors located in the west wall. Note the walk door on the north end of the west wall. It has a simple brick archway with an in-swinging Dutch door. If you look very close you can see the numbers 1 – 8 – 7 – 8 on the brick wall about 8' high. The date 1878 was when the barn was finished. Each number has a hole in it with a heavy metal strap riveted into it. This strap goes back into the wall and is nailed to the side of the 8" x 9" beams with three large hand forged spikes, to hold the brick walls from leaning out. The numbers and the straps are also hand-forged.



Photo #11 by Jim Stone December 12, 2012

This photo is looking at the west wall of the west wing. The double doors are in the closed position. Note the walk door cut into the right side of double doors. The number 8 on the left side of the doorway is the 8 in the date that the barn was finished, 1- 8 -7- 8.



Photo # 12 by Jim Stone December 12, 2012

This photo is on the first floor in the west wing and looking west at doorway, which is 12'- 3" wide x 11' tall and in-swinging double doors in the brick arch doorway. Doors are in the closed position. Note the walk door to enter the barn without opening the large doors, especially in inclement weather. Also note swinging arm at the top that secures the doors in the closed position.

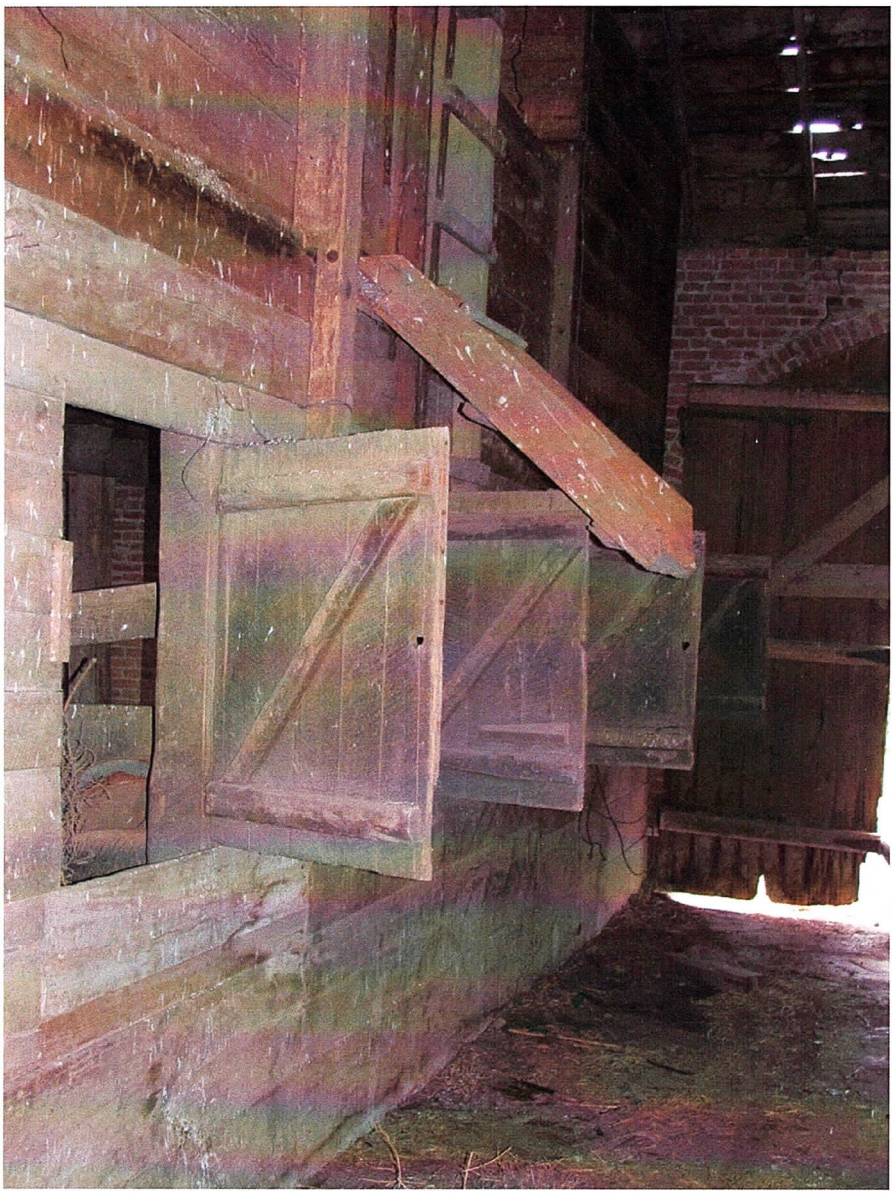


Photo #13 by Jim Stone December 12, 2012

This photo illustrates the feed doors on the south wall of drive alley in the west wing. Horse stalls are behind this wall. The feed doors allowed hay and grain to be placed in the mangers. The chute is from the grain bins above and was used to fill wagons from the overhead bins.



Photo #14 by Jim Stone December 12, 2012

This photo shows a detail of the heart shaped finger pulls in the feed doors. These types of pulls allowed the doors to be opened from the center alley. Hay and grain were placed in the managers through these doors. Also, see photo #9 on page 39, photo #13 on page 43 and photo #34 on page 64 for more examples of these distinctive heart shaped figure pulls.



Photo # 15 by Jim Stone December 12, 2012

This photo shows feed doors to horse stalls at the east end of south wall in the center alley of the west wing. Also note the sliding door to the driveway in the east wing that closed off the east wing from the west wing and prevented livestock from entering the alley in the west wing. This way a wagonload of grain or a hayrack of hay could be stored out of the weather until it could be unloaded. Note the hand-forged hinges on the door to the right. The other doors have the hinges replaced with T-hinges.

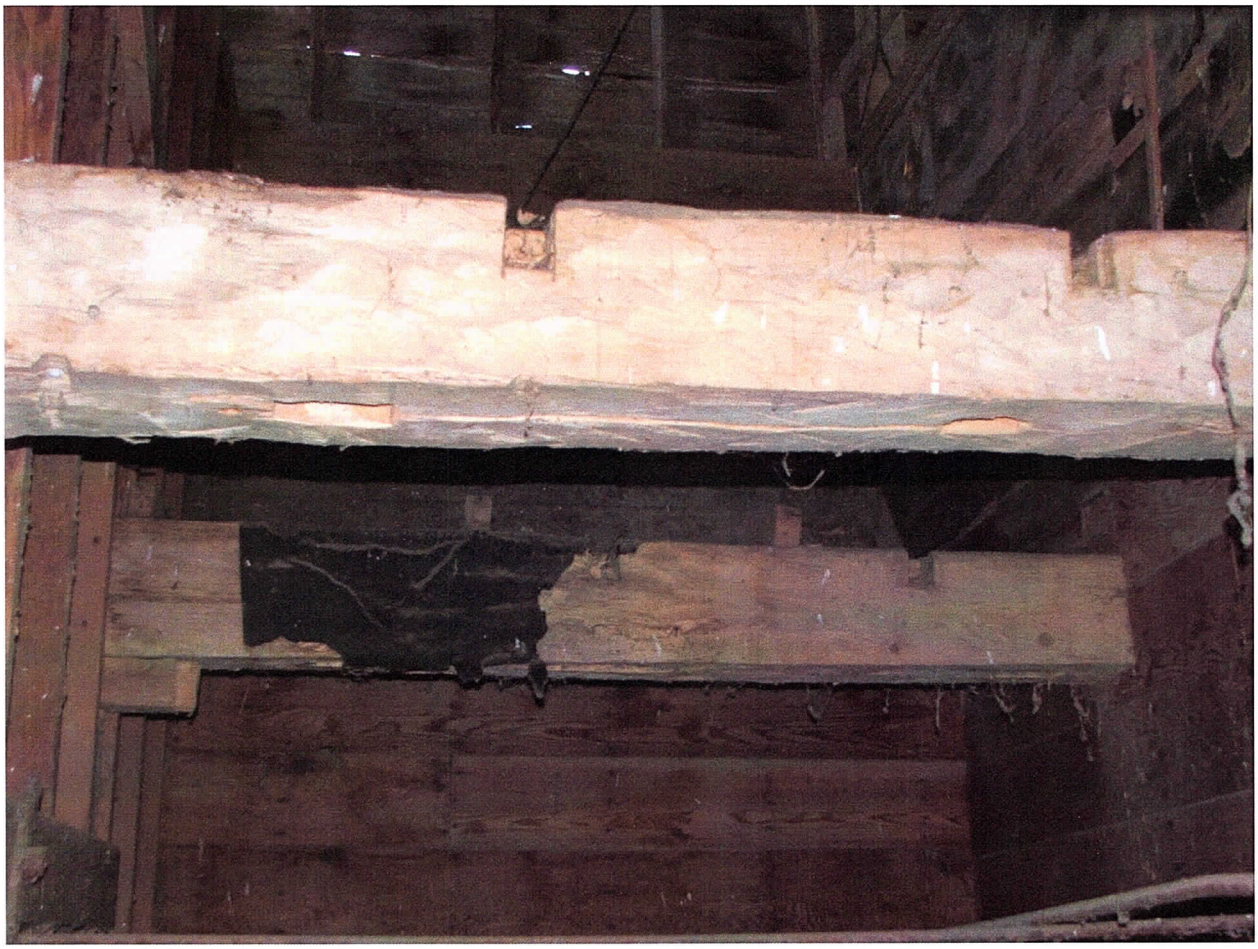


Photo # 16 by Jim Stone December 12, 2013

This photo shows the original 8" x 9" x 36' hand hewn cottonwood beams on the north side of the west wing. Milled 2 x 6 studs and 1 x 8 shiplap were used when the grain bins were remodeled. The notches in the beams were for the floor joists of the original granaries or for the hayloft floor. Note the mortises in the bottom of the beam. These are 2' on center. Their purpose is a mystery.



Photo # 17 by Jim Stone December 18, 2012

This photo looks southeast at the row of rough sawn cottonwood 6 x 6 posts in 10' from the south wall in the hayloft. These posts are about 6' on center to set on the 8" x 9" beams under the floor. Rough sawn cottonwood 2 x 10 mortised into the 6 x 6 and secured with a hardwood peg. The 6 x 6 posts go up to the center of the rafters and are mortised into a rough sawn cottonwood 6 x 6 that supports the rafters.



Photo # 18 by Jim Stone December 18, 2012

This photo is looking south in the hayloft of the east wing and depicts one of the awning hayloft doors, at the top of the 12' brick wall. These doors were used for manually pitching the hay into the hayloft. Another person would have to be in the hayloft to pitch the hay back away from the doorway. Bricks above the doorway are supported with a steel lintel.



Photo #19 by Jim Stone December 18, 2012

This photograph looks north at the south wall of the west wing. The soldier brick arch doorway is 5'– 3" wide and 6' – 2" tall. The double doors swing in. This doorway was used to bring the horses in or out of the barn. The craftsmanship of the wood and the details in this door and frame are excellent, considering that they only had hand tools at that time.

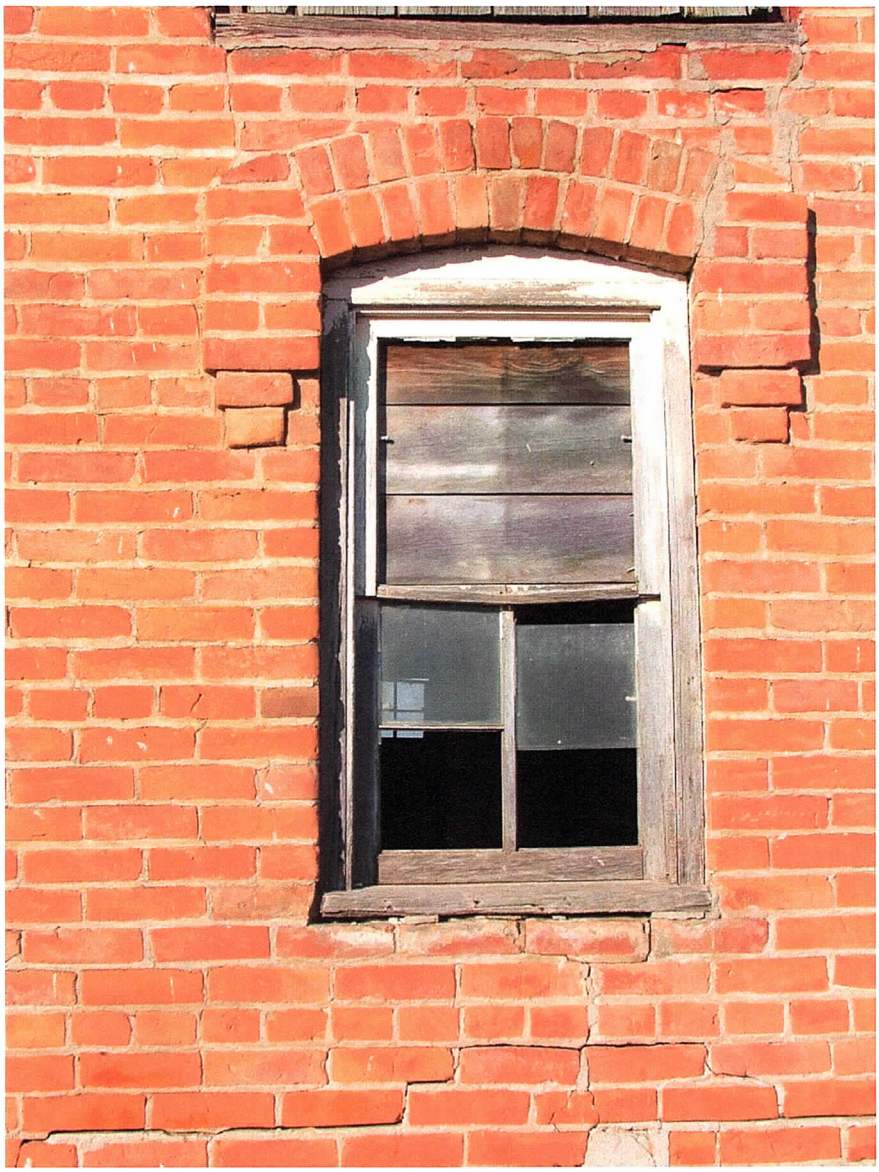


Photo #20 by Jim Stone December 18, 2012

This photograph illustrates a soldier brick arch over window in the south wall of east wing. The window is 9" x 9" glass four light sash over 9" x 9" four light sash making a double hung window. Lower sash could be raised and or the top sash could be lowered for ventilation. Note sash bolts, which allow either sash to be adjusted for height and amount of opening.



Photo #21 by Jim Stone December 18, 2012

This photo shows soldier brick arch window in the south wall of east wing. The awning hayloft door above is for pitching hay into the hayloft.



Photo #22 by Evelyn Schlenker December 1, 2012

This photograph is looking at the west wall of the west wing. The simple brick arch doorway at the north end that measures 3' wide and 6' – 4" tall. The Dutch door swings inward. There may have been glass in the two top sections above the door, which would have provided some light in a dark area of the barn. This was the walk door to enter the barn without opening the large double doors.

The old John Deere corn sheller under the lean-to was owned and used by Carl Hansen. He also shelled corn for the neighbors.



Photo # 23 by Evelyn Schlenker December 1, 2012

This photo shows red quartzite and granite rock foundation is shown under the south wall of the east wing. This rock was actually deposited by glaciers and would have been found north above the bluff on the upland plain and hauled to the site. It had to take a great number of trips to the upland plain with a wagon to move this amount of rock. The upland plain is about 6 miles plus north from this farm.

The rock is mortared with sand and lime mortar, as Portland cement was not available at that time.



Photo # 24 by Dennis Konkler April 6, 2013

This photograph is the west wall of the west wing and shows examples of the names, dates and initials carved into the soft brick.



Photo # 25 by Evelyn Schlenker December 1, 2012

This photograph is looking east in the south side of the west wing. Horse stalls are facing north, on the south side of the 2 x 6 solid wall. Part of the south and east brick wall of the west wing is visible to the right. The opening into the calving pen can be seen in the background. The sliding door to close off the east drive alley from the west drive alley is visible just left of the opening into the calving pen.



Photo # 26 by Evelyn Schlenker December 1, 2013

This photograph is looking east up at the roof framing at the intersection of the east and west wings. Note the two rows of 6 x 6 posts with 6 x 6 beam supporting the rafters. The two holes in the peak of the roof on the east wing are where the two wooden cupolas were located.

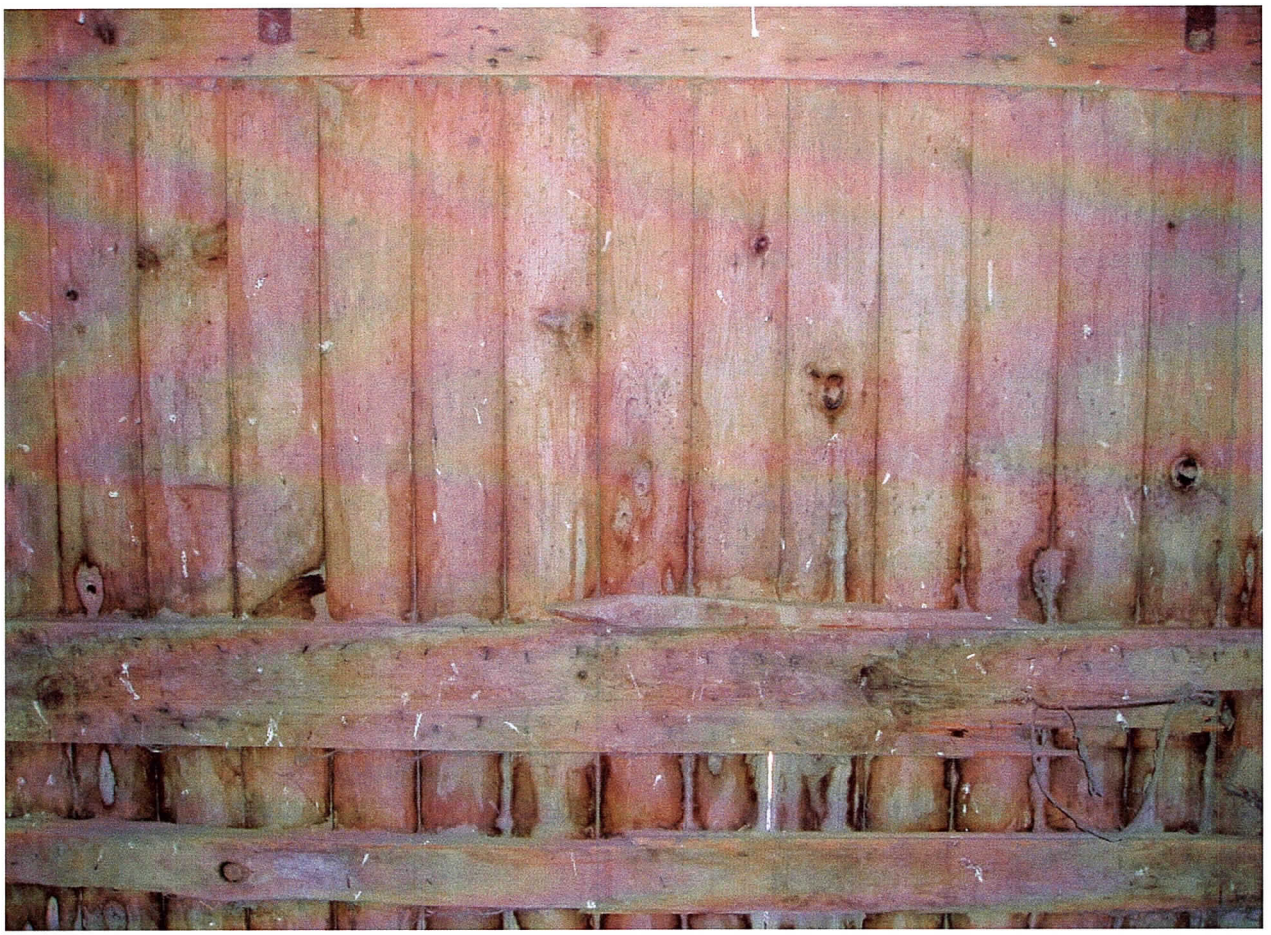


Photo # 27 by Evelyn Schlenker December 1, 2013

This photo shows the inside of the sliding door on the east end of the east wing. The water stains, possibly due to the 1881 flood, have created a very artistic design. It makes for an interesting picture. The sliding door is mounted on a track inside of the brick wall of the barn.

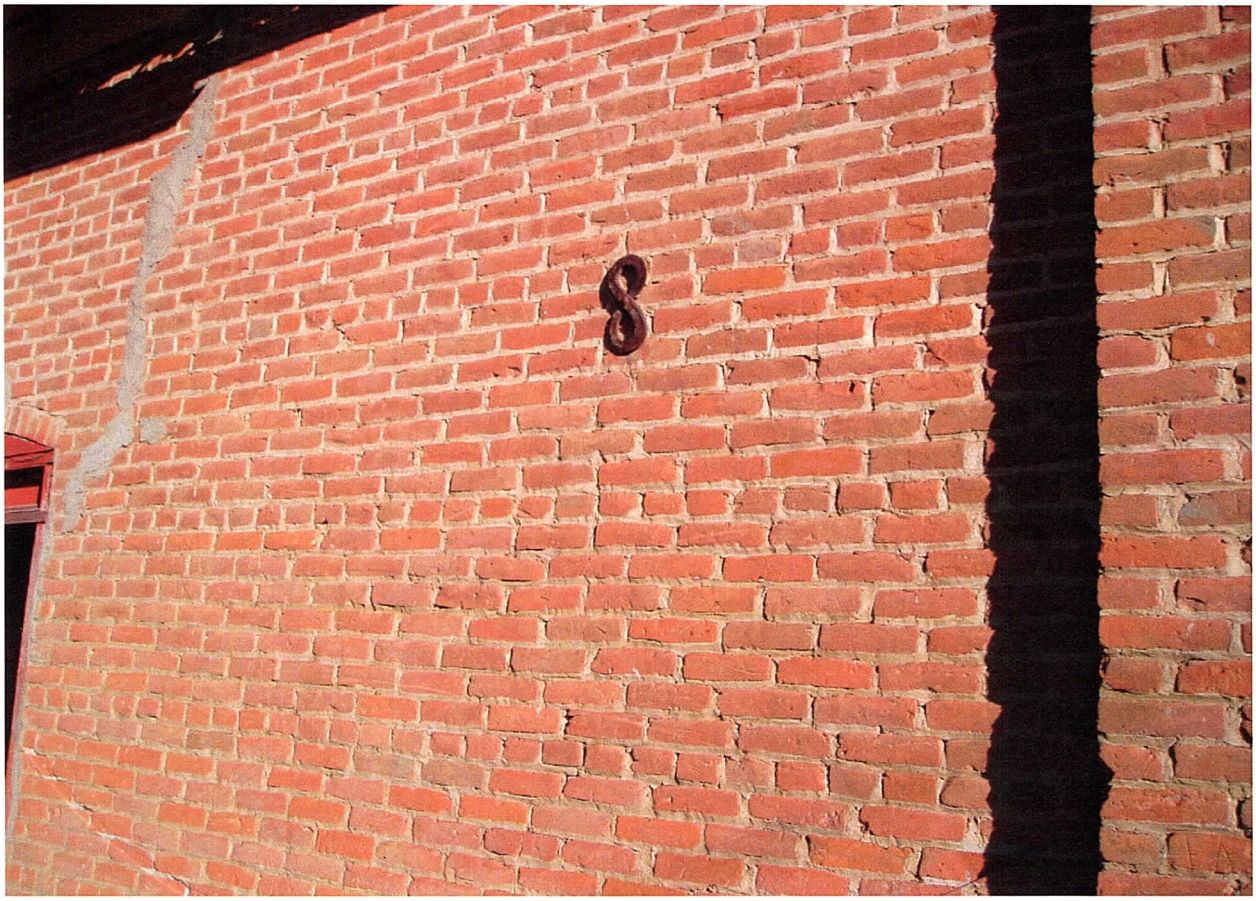


Photo # 28 by Evelyn Schlenker December 1. 2013

Hand forged iron numbers are shown on the west wall of the west wing. The number 8 has a hole in the center. A hand forged heavy iron strap is riveted through the hole and the strap goes back into the brick wall and on to the side of the 8" x 9" hand hewn cottonwood beams in the west wing. The strap is nailed to the side of the beam with three huge hand forged spikes. The beams are set into the brick wall. These beams run east to west in the west wing. This 8 is the 1 – 8 – 7 – 8 in the date that the barn was completed.

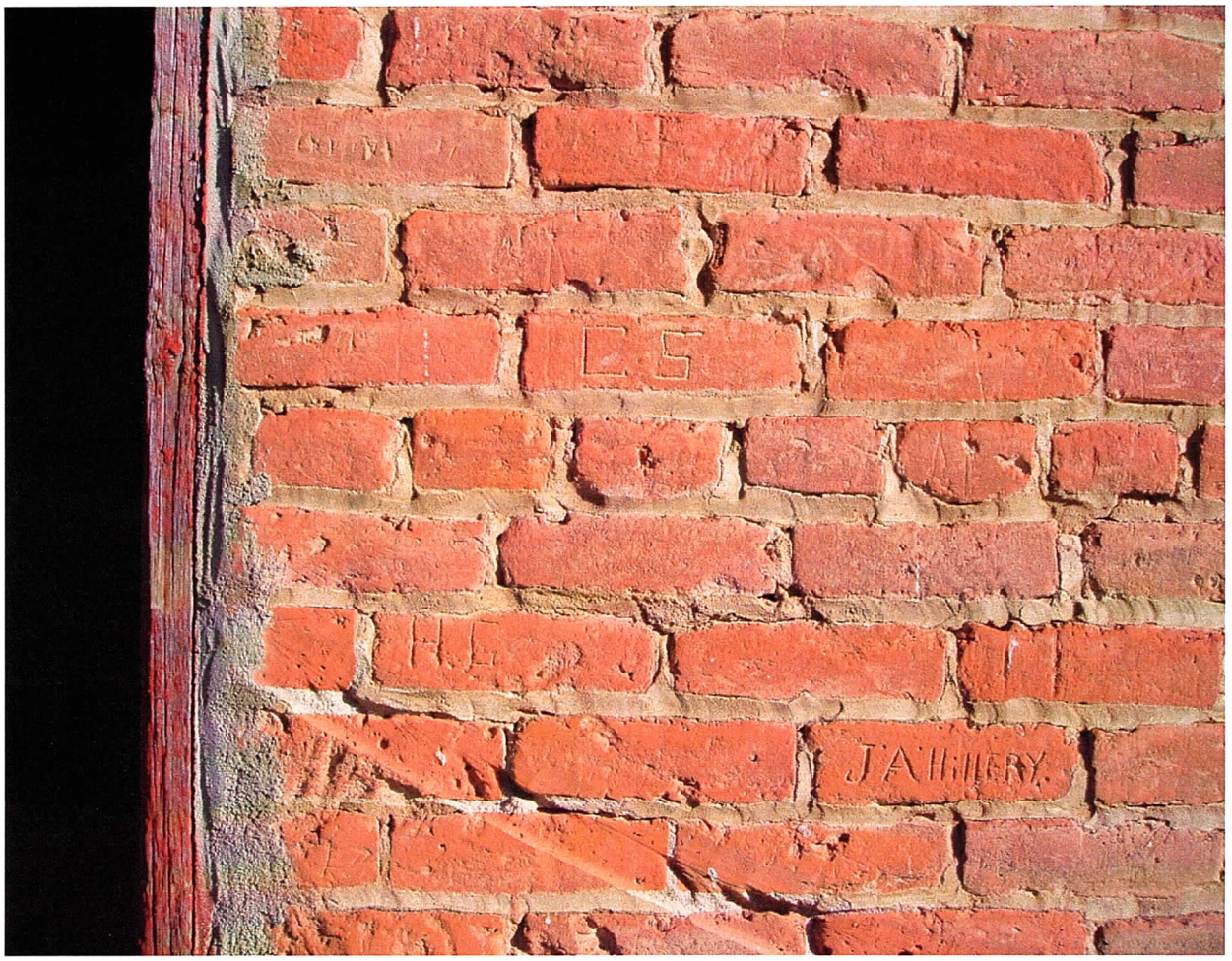


Photo # 29 by Evelyn Schlenker December 1, 2012

This is a photo of the west wall of the west wing, on the south side of the large arched doorway. Additional names and initials were carved into the soft brick.

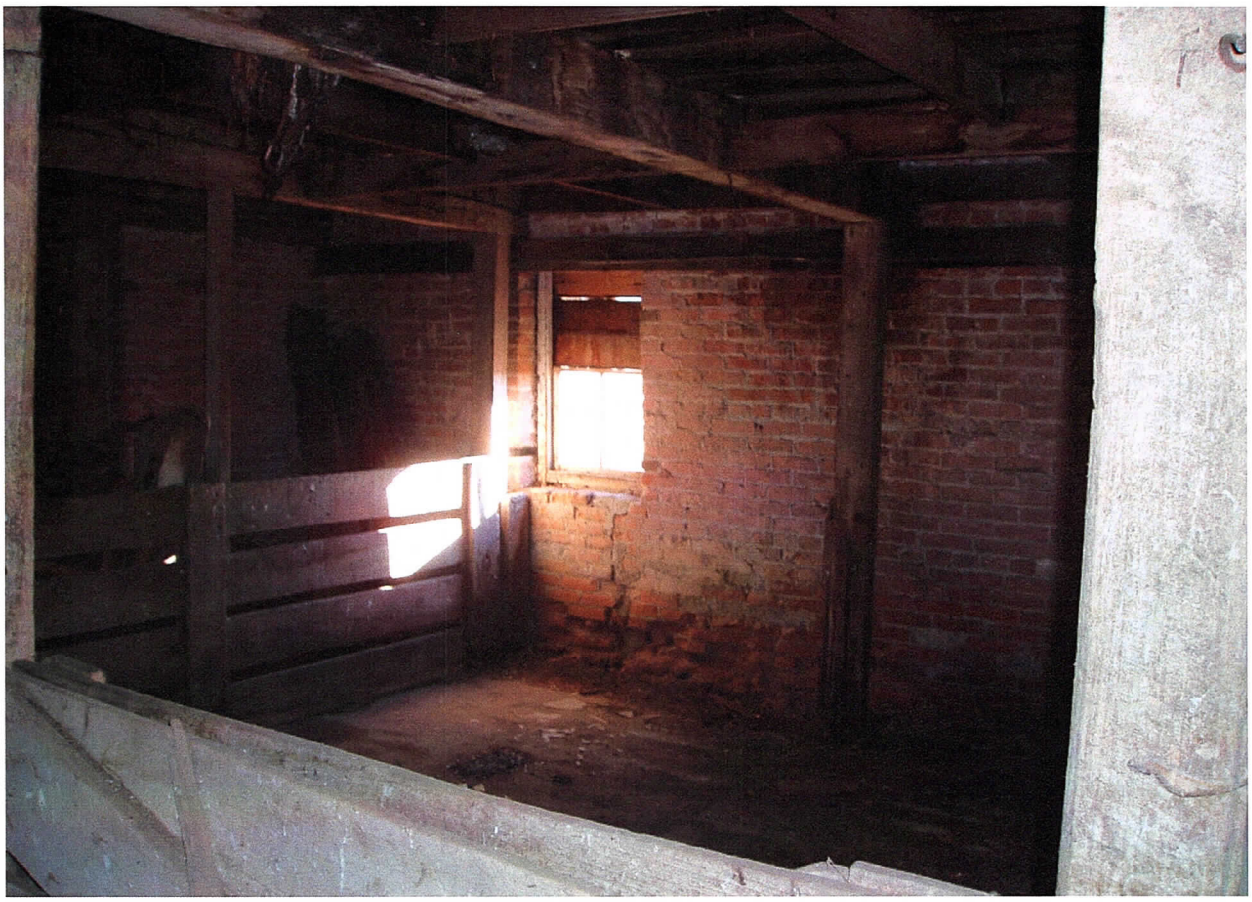


Photo # 30 by Evelyn Schlenker December 1, 2012

This photograph depicts a 12' wide by 11' deep pen, in the southwest corner, of the east wing. This pen has a manger and two grain boxes on the north side. This was said to have been a calving pen. It has an opening into the area where the horse stalls are located in the west wing. A gate closed off this opening.



Photo # 31 by Dennis Konkler April 6, 2013

This photograph of the southeast corner of the east wing indicates where the hogs rubbed an indention into the soft brick. Carl Hansen raised a large number of hogs in this barn in later years. The hogs would rub up against this corner when running around the corner. The wood post was set much later. Note the red quartzite stone, which is very hard, was not rubbed or worn down.



Photo # 32 by Evelyn Schlenker December 1, 2012

This photo shows a hand forged letter "S" with a hole in the center on the south wall of the east wing. A heavy hand forged strap is riveted through the hole in the letter "S". The strap goes back into the brick wall and on to the side of the 8" x 9" x 36' long hand hewn cottonwood beam. This strap is nailed to the side of the beam with three huge hand forged spikes. The end of the beam was set into the brick wall and helped to hold the brick walls from pushing out from the outward thrust of the rafters. Photo #35 on page 65 shows more details of the construction of the letter "S".



Photo # 33 by Evelyn Schlenker December 1, 2012

A photograph of south wall of the west wing showing the gable end above the 12' tall brick wall. The vertical boards above the brick pilasters are covering the posts that support the end of the 6x6 beam, which supports the center of the rafters. 2x6 rough sawn studs from the rafters down to the 4" x 8" sill, frame the gable ends, with boards nailed on horizontally to enclose the gable ends. All three gable ends are similar to this one.

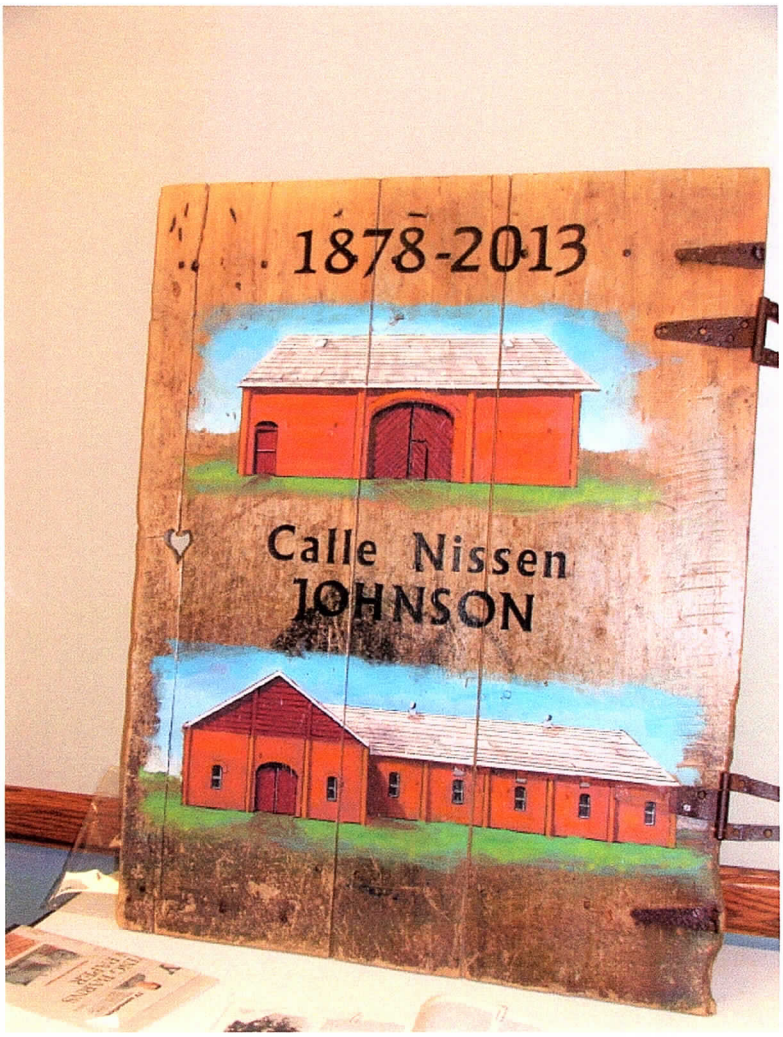


Photo # 34 by Jim Stone October 16, 2013

Ernie Jensen saved three of the doors that were in the south wall of the drive alley of the west wing of the barn. These doors allowed hay and grain to be placed in the horse stalls on the south side of the wall. He hired a local artist, Greg Prehiem, from Irene, South Dakota - to paint this picture of the "Danish" Brick Barn on these savaged doors seen above. He gave one door to Dorothy Sollenberger who is a great granddaughter of Calle and Marie Johnsen, one to Kyle Jensen the owner and Ernie's son and he, Ernie Jensen, is keeping one. This is the door that has the forged hinges. Note the heart shaped finger pull to open the doors.



Photo # 35 by Jim Stone November 7, 2013

This photograph shows the letter "S" from the south wall of the brick barn. This was cut off the end of the one of the hand hewn cottonwood beams and shows the heavy strap and letter still attached the beam. The heavy strap is riveted into a hole in the center of the "S". The strap went back into the brick wall and on to the side of the 8" x 9" hand hewn cottonwood beam. It was nailed to the side of the beam with three huge spikes. The letter "S", the strap and the spikes were all hand forged. The beam was set into the brick wall with one row of brick on the outside of the end of the beam. This strengthened the wall from leaning out, which is caused by the down and outward thrust of the rafters.



Photo #36 By Dennis Konkler April 6, 2013

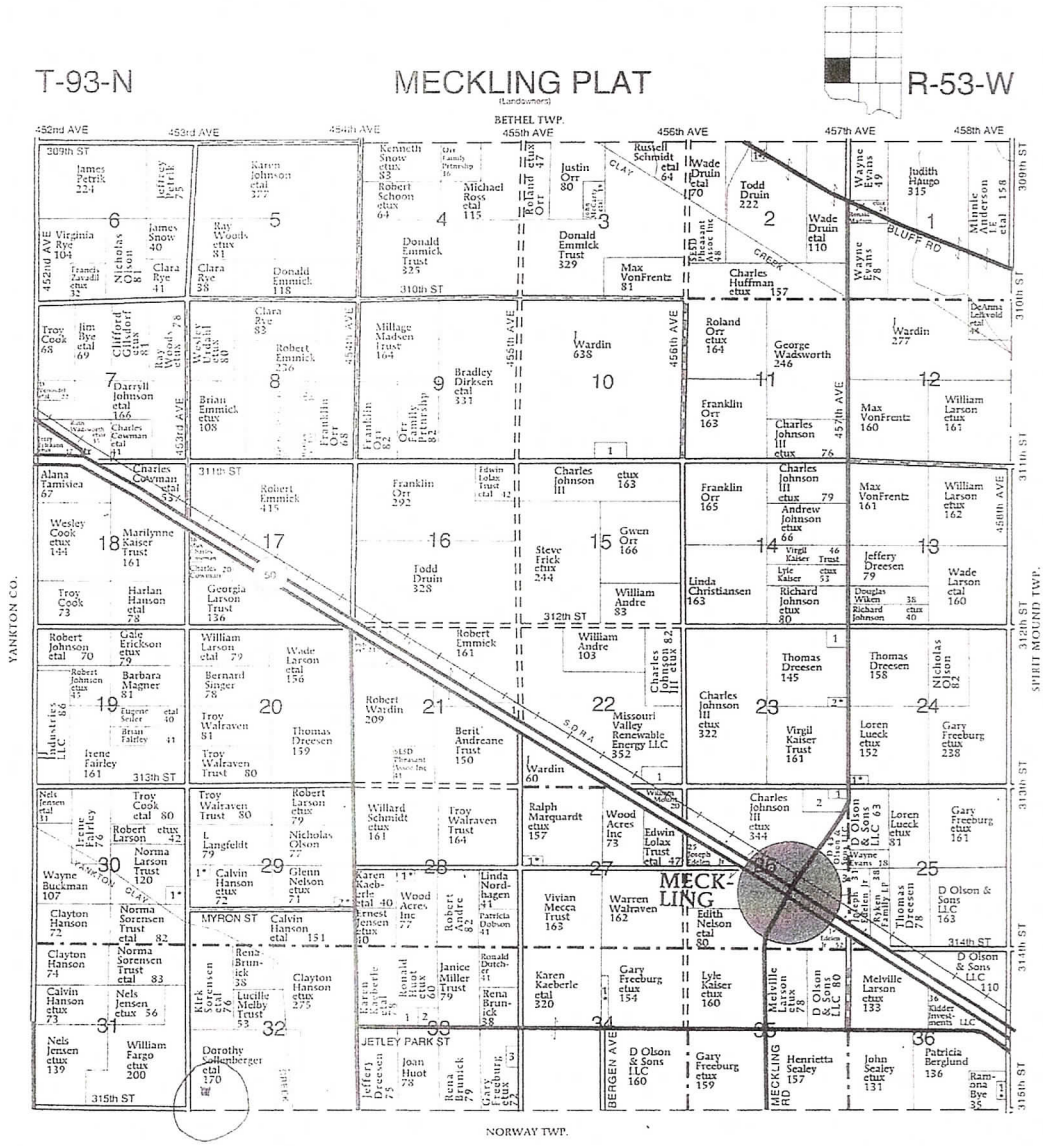
This photograph looks east down the 12' drive alley and into the hayloft in the east wing. The sliding door closed off the 12' east alley from the 14' alley in the west wing and allowed a wagonload of grain or a hayrack of hay to be stored out of the weather until it could be unloaded. With the door closed, livestock in the east wing could not get into the hay or grain.



Photo # 37 by Kari McKelvey April 6, 2013

This photograph is looking southwest at the northeast corner of the barn. Note the pilasters on the north wall and the northeast corner. The lean-to on the north end of the west wing is visible on the right.

Location of the Calle Nissen Johnsen site indicated by hand drawn circle at the bottom of map (Section 32). Map is from a 2011 plat book of Clay County and in the upper right hand corner shows the location of Meckling Township in Clay County.



MECKLING TOWNSHIP

SECTION 2
1. Druin, Donnie 7

SECTION 10
1. Farm Co of Ramsey Co Inc 12

SECTION 21
1. Norris, Debra 6

SECTION 22
1. Barnes Hay & Feed Co 19

SECTION 23
1. Huffman, Bruce 10
2. Johnson, Marty 5

SECTION 24
1. Dutcher, Thomas 6

SECTION 26
1. Vogel, Betty 6
2. Plains Ag Services LLC 17
3. Tichy, Troy 5

SECTION 27
1. Himes, John 6

SECTION 28
1. Hjerstad, Dennis 5

SECTION 29
1. Hirsh, Kent 7
2. Dibley, Jeremiah 7

SECTION 30
1. Long, Jane 9

SECTION 33
1. Larson Hog Farms LLC 10
2. Larson, Eric 10
3. Hanson, David 7

SECTION 34
1. Paulson, Julie 7

SECTION 36
1. Anglin, Joel 5

VIII. Introduction and History of the Log Cabin

I made several trips to get more pictures and additional details of the "Danish" Brick barn. On one of these trips the owner, Kyle Jensen, asked me if I would like to see the log cabin. I said yes, but stated that I was wondering if it had been destroyed because I had not seen any evidence of where it might have been located. Kyle just grinned and said "follow me"! I would have never guessed that the log cabin still existed inside of the building with all of the lean-to's. It was very impressive to see the construction, size of the cabin and the excellent condition of the logs.

The first log cabin on this homestead was probably built by the earlier settler, name unknown, who started to homestead this farm. In 1869 he sold his rights or relinquished his claim for $200.00 to Calle Nissen Johnsen. Calle then returned to Denmark to bring his " bride to be" to America. When they arrived in New York, Marie's personal trunk, with all of her worldly possessions, was not on the ship. Another man in their party, Peter Jorgenson's luggage, also was not aboard. Marie and Peter stayed in New York waiting for their luggage to arrive. Calle and the rest of the party left for the Dakota Territory. Marie found work and in three weeks the luggage arrived. Calle was waiting in Sioux City when Marie and Peter Jorgenson arrived by train. They traveled by oxen and wagon 20 miles the first day. The second day they walked the last 25 miles on muddy roads because it had rained and the roads were so muddy that the oxen were having a hard time just pulling the wagon. This would have been the log cabin that Calle and his "bride to be" came to when she arrived at her new home.

This log cabin consisted of one room with a dirt floor and a sod roof. A sod roof allowed the rain to continue dripping inside long after a rainstorm was past. It is said that you needed an umbrella on the bed to avoid the rain leaking through the roof and to get out of the mud on the dirt floor.

The second log cabin was built at Myron Grove about 1-1/2 miles east of this farm. It was moved to the farm in late 1870 or in 1871. This is the cabin that still stands today and is described in detail. It had a shingled roof and a board floor, which was a great improvement. There were two rooms on the first floor and two rooms in the loft and a lean-to for a master bedroom.

In this home ten of their eleven children were born to Mr. and Mrs. Calle Johnsen. The last child was born in the first brick house, which burned down in 1933. The grandchildren Mr. and Mrs. Carl Hansen, were living in the brick home at this time. They moved back into the old log cabin while the new brick home was built. This new home was also built with brick, but these brick were purchased. This home still stands on the property. While they lived in the old log cabin, they added the lean-to on the east side. This room served as the kitchen. They also added drywall in the original kitchen area. This was nailed directly to the logs. The angle of the

drywall for the stairs to the loft still shows where the stairs were.
In 1947, Carl Hansen remodeled the log cabin into a farm shop and garage to store his tractors out of the weather. He cut an opening into the south wall and installed a 10' x 10' one piece overhead door. The window in this area was moved to the original door opening in the center of the south wall. He also removed the lower part of the center log wall and forged a three-piece steel rod to support the top of this log wall. This log wall supported the ridgepole log and the other two logs that supported the roof and had to stay in place. Carl also removed about 2/3 of the loft floor. The floor joists and the lower center log wall were sawn off flush with the north and south exterior log walls and the ends are still visible. The wood floor was removed at this time and a concrete floor was poured.

At some point in time 1x12 vertical board siding was applied to the exterior walls and a lean-to was added on the west side. Because of the lean-to's and the vertical siding the logs have been well protected from the weather. After 145 years the logs are in very good condition except the bottom row of logs.

The lean-to that served as a bedroom would have been on the east side. It was probably removed when the kitchen was added in the 1930's after the brick home burned. There was a porch roof from the southeast corner of the cabin along the south wall that extended west past the front door on the center of the south wall. This porch roof would have been supported by posts. There may have been a plank porch floor to get up out of the mud before entering the cabin, but there is no evidence of a floor.

References

Hay Country History – A Story of the Pioneers of the Gayville and Meckling, South Dakota area
Editor – Mrs. Carl Hansen, wife of Carl Hansen, who was a grandson of Calle and Marie Johnsen

Adventures of a Pioneer Clay County Family are related - By late Mary (Johnsen) Sorenson
Vermillion Plain Talk, Thursday August 27, 1959

IX. History by daughter, Mary (Johnsen) Sorensen

Adventures of Pioneer Clay County Family are Related

The Vermillion Plain Talk - Thursday August 27, 1959

This interesting account of the arrival of a pioneer family in Clay County, was written by the late Mrs. Chris (Mary) Sorenson. She was the daughter of Mr. and Mrs. Calle Johnsen who came to Dakota Territory in 1870. Two of Mr. and Mrs. Johnsen's children are still living; Hans Johnsen of Isabel, So. Dak. and Mrs. P. C. Hvistendahl of Litchfield, Minn. The author of this history sketch was the mother of Morten Sorensen of Vermillion and Mrs. Caria (Sorensen) Schiegel of Poughkeepsie, N. Y.

Father (Calle Johnsen) and Mother (Marie Johnsen) were both born in Denmark. Father in 1843 and Mother in 1842. They came to America with other friends in April 1870. Father had been working in America for three years, working on the Union Pacific Railroad and then went back and brought Mother and some other friends to America. They left Denmark on the "Ocean Queen". It took 19 days to reach the United States. When they arrived in New York, Mother found the chest containing all her earthly possessions had failed to be put aboard the ship. Another trunk belonging to another member was also missing. Mother and Peter Jorgensen remained in New York, until their luggage came. Father and the rest of the party were to go to Dakota Territory. Mother found work and in three weeks the missing luggage arrived.

In the meantime Father had filed on a claim relinquished by a young homesteader. The claim was in Clay County, thirteen miles northwest of what is now Vermillion. He was at the Sioux City Depot waiting for Mother and Mr. Jorgensen when they arrived. Roads were muddy and but a trail, so they traveled only twenty miles the first day. They spent that first night at the home of an Indian. Here they purchased two cows and tied them behind the wagon. From then on Mother and Mr. Jorgensen took turns walking the last twenty-five miles and prodding the cows, neither dared drive. When at dusk they arrived at a small log cabin, which was to be their new home. They were greeted by a black dog named "Juno".

Calle Nissen Johnsen brought back seeds of pine trees from Denmark, which he planted on the homestead.*

The next morning Mother took inventory of her new home. One room, one window, one door, sod roof, and dirt floor. There was one kettle, one frying pan and a coffee pot. She also found two plates, two cups and saucers, two knives and forks. There was an old stove, a bed and a table made of rough lumber and a bench.

Their first day, May 28, 1870, was spent walking to Rev. Christensen's homestead, two miles south, to be married. Here also was but a one-room sod house and in order not to embarrass the young couple, Rev. Christensen went outside to remove his coat while he put on his robe and collar. They walked back again as husband and wife and near their door stood the red cow named "Squaw" licking a white calf. "Our wedding gift, Marie," said Father.

After the wedding of Calle Nissen Johnsen and Marie Christensen at the home of Rev. Christensen, the reception was held back at the Calle Nissen Johnsen homestead with guests Christian Hansen, Peter Lund and Peter Jorgensen. Refreshments consisted of cookies and "coffee whiskey" that was whiskey in black coffee. **

That first winter Father spent a good deal of his time felling trees that grew along the Missouri River. The logs were for a new house and for fuel. One day while Mother was alone she heard Juno making an unusual lot of noise. Mother was just going to open the door when it was opened from without. Here stood two Indians with hunting knives, a gun and spattered with blood. Mother was frightened but she neither screamed nor fainted. Juno stood at her side. One Indian handed her a piece of paper from his pocket. She looked it over, nodded as if she understood, she could not read a word, nor could he. They then motioned for something to eat. She gave them bread and coffee. The Indians then wanted flour and salt. This she also gave them, hoping that they would leave. Then one returned carrying the heart and liver of an antelope in his hands. These he deposited on the table. Mother's fright vanished when, she saw the reason for their blood-splattered clothing; they had shot an antelope.

That same fall came other guests in the form of a flock of geese. On their way south they were stopping to feed in a nearby field where oats had been harvested. Father was a good shot and had a good gun, but not one bullet. This was a calamity. Mother had brought along a clock carefully wrapped in a feather tick, but in spite of all the pains she had taken to keep it in good condition it refused to tick in this new land. The pendulum had two heavy weights of lead, of these, they made bullets. When everything was ready, Father took a horse he knew did not fear shooting and walked along side of it, to get close to the geese. He pulled the trigger, when the smoke cleared there lay seven geese.

Mother's next home was also log, much like the first, but larger and it had a "lean-to" for a bedroom. It also had a board floor and a shingle roof, a great improvement. Now they did not have to sit on the bed under an umbrella during a rain. In this house ten of her eleven children were born. In 1878, just eight years after they located, they finished building a large brick barn, which still stands. (Demolished in 2013) All the bricks were made and burned 1-1/2 miles southwest and hauled by wagons to build this barn. They were planning to build a brick house in the near future, then came the flood of 1881. Of her eleven children, eight lived to grow up. Mother and Father lived on this same farm, Father passing away in 1914 in the brick house and

Mother continued to live there until she moved to Vermillion in 1930. She died in 1940 at the age of 98. A grandson of Mother and Father, Carl Hansen, now owns and lives at the present Johnsen homestead. He has replaced the brick house, which was eventually built, but the barn is still in use.



This house was built from brick fired on the farm, by the Calle Johnson family in 1882. It burned down in the nineteen thirties and was replaced later by a modern brick home. The log house from which they escaped during the flood still stands.

This is the original brick home built by Calle Nissen Johnsen. It also is built from bricks that were formed and fired at the same clay pit as the barn. The brick barn can be seen in the background.



This house still stands on the original Mortensen farm west of the Danish Church. The porch has been removed and a kitchen added.

18

Another house that was built from bricks manufactured at the site of the clay pit that Calle Nissen Johnsen used to build his barn and his home. This house appears to be larger and would have been built before1900 and this house still stands today. This house is west about 1 mile of the clay pit site, and the Danish Lutheran Cemetery, inYankton County. There is another brick home 2-3/4 miles north and 1 mile west of the Calle Nissen Johnsen farmstead and looks very similar to this home. It is even larger and has separate living quarters for two families. It was another brick home that Calle furnished brick and help to build. This is still standing and used as a home yet today.



Photo #14 Jim Stone October 9, 2013

This is the second brick home built in the 1930's after the first brick home burned down in 1933. The bricks are modern bricks that were purchased. This home still stands on the farm. The Carl Hansen family moved into the log cabin after the fire and lived there while this home was constructed.

References

Hay Country History A story of the pioneers of Gayville and Meckling, South Dakota Area
Editor – Mrs. Carl Hansen, wife of Carl Hansen who was a grandson of Calle and Marie Johnsen

Adventures of Pioneer Clay County Family are Related by Mary (Johnsen) Sorensen
The Vermillion Plain Talk - Thursday August 27, 1959

* A Historical Study of the Danish Immigrants in South Dakota, USD, July 1940
  Thesis by Olga S. Olsen

Calle Nissen Johnson file, Museum of Danish American Genealogy Center, Elk Horn, Iowa

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X. Drawings of the Log Cabin

The next three figures 5, 6 and 7 illustrate the floor plans and a cross section of the second log cabin that Calle and Marie Johnsen lived in. Construction of the log cabin is described in detail in Chapter 10. Only parts of this log cabin remain following Carl Hansen's renovations in 1947 and are shown in the photographs in chapter 11.

The first drawing (Figure 5) is the first floor plan. It is 18' wide and 27' long. A center log wall divides the 10' – 6" east room from the 16'- 6" west room. It shows the full 4" x full 8" smoothed floor joists that support the loft floor.

The second drawing (Figure 6) is of the second floor. This plan shows two rooms that are the same size as the first floor. These rooms were bedrooms. The stairs came up on the north wall in the east room. It also shows the 3" x 4" hand hewn rafters and the three logs that support the roof.

The third drawing (Figure 7) is a cross section of the log cabin. It shows the stacked logs and the three logs supporting the roof and the rafters. It also shows the floor joists for the loft, the 3" x 4" rafters and the rough sawn roof sheathing.

Figure 5. The first floor plan of the log cabin

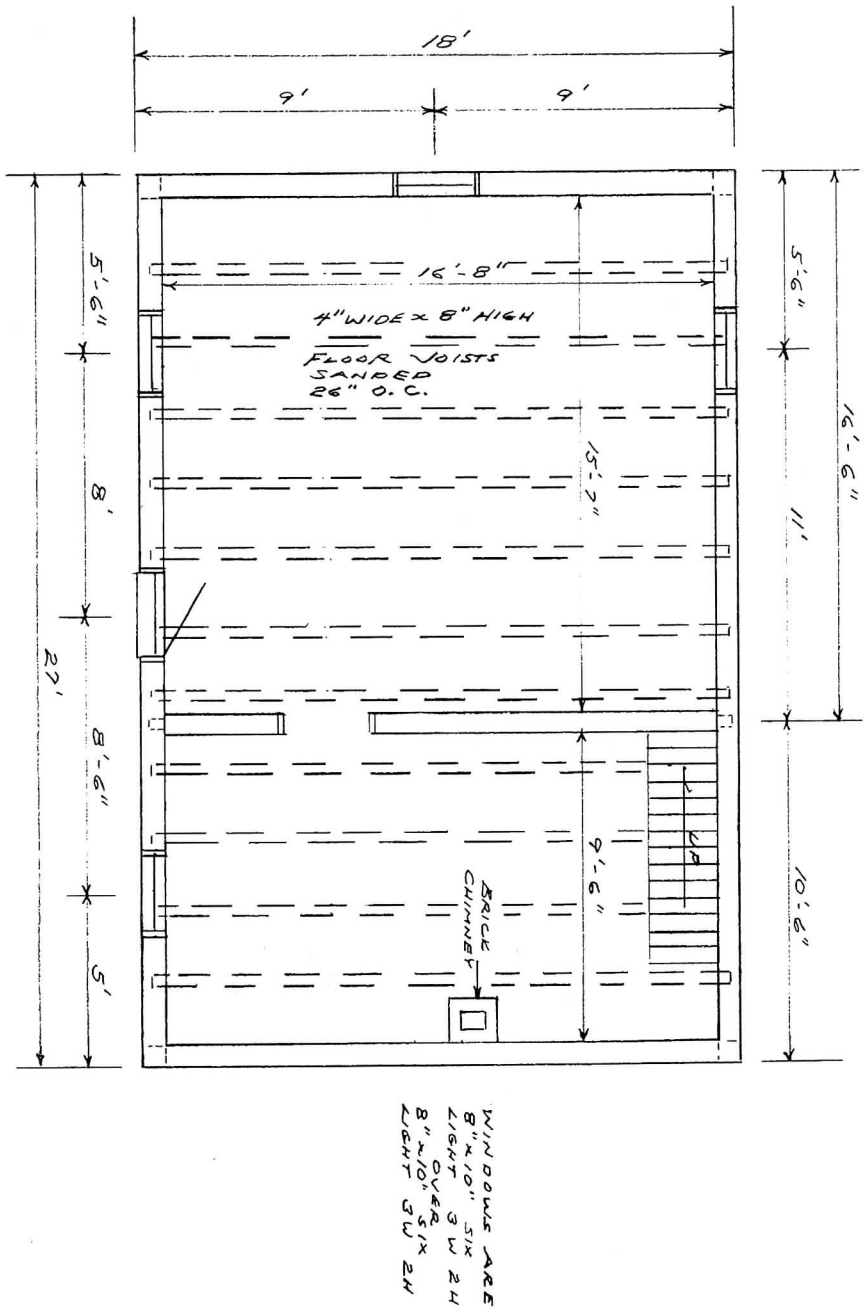
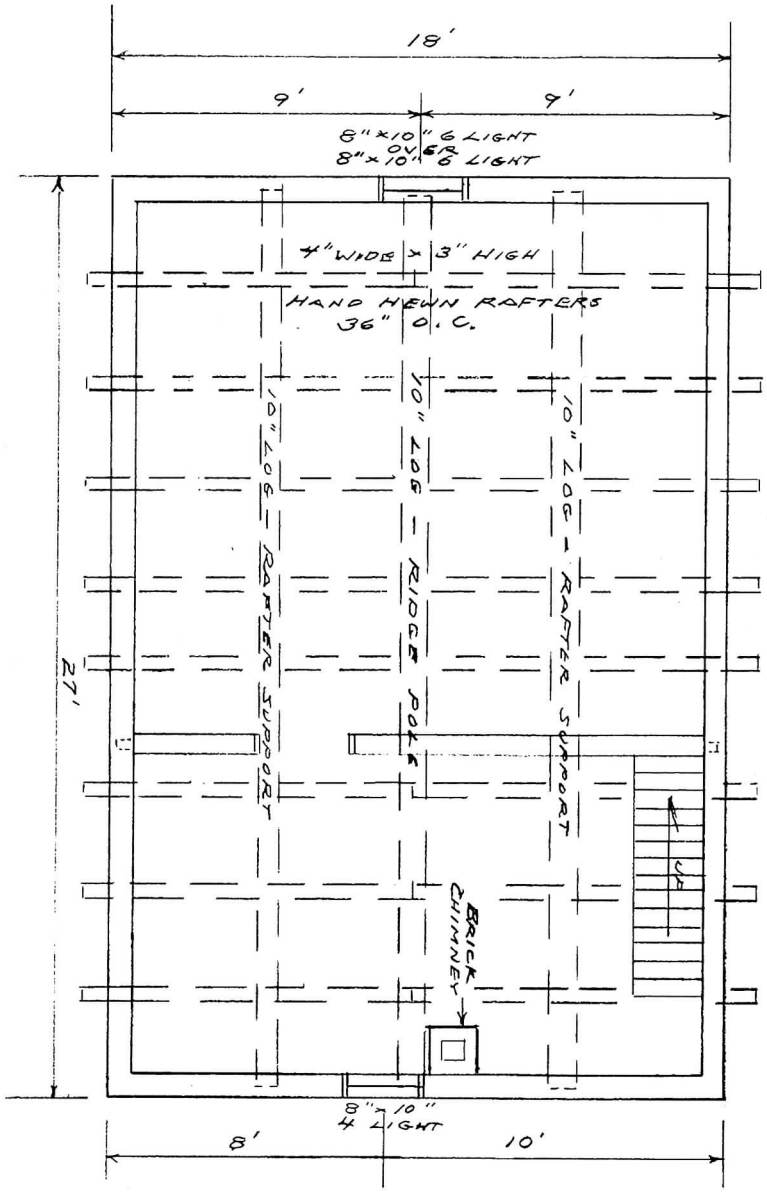


Figure 6. The second floor plan of the log cabin

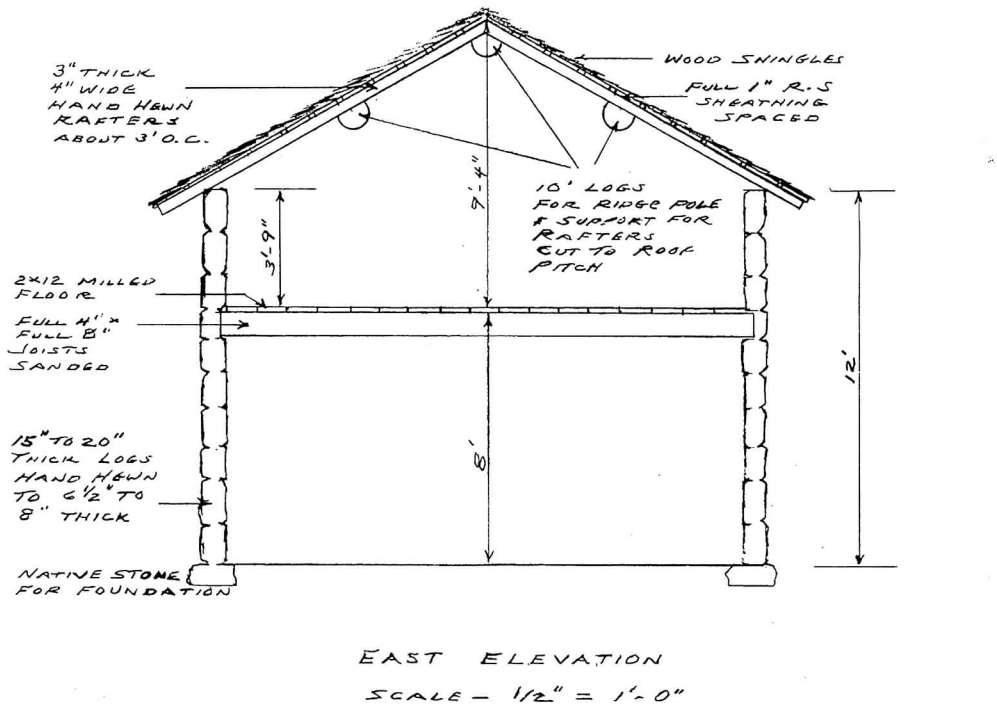


SECOND FLOOR
SCALE - 1/4" = 1'-0"

A.J. STONE
DEC. 20, 2012

CALLE WISSEN JONNSEN
LOG CABIN
31494 453rd AVE.
MECKLING, SO. DAK.

Figure 7. The east elevation of the log cabin



XI. Construction of the Log Cabin

This log cabin is the second log cabin located on this homestead. The first cabin was one room with a sod roof and a dirt floor. The second log cabin, is said to have been built, at Myron Grove about 1-1/2 miles east of this farmstead. Calle Nissen Johnsen had it moved to his farm in about 1870. One record states that it was moved here in 1869. Calle and Marie moved here in 1870 and the first log cabin was only one room. This cabin was moved late 1870 or 1871. The records state the ten of their eleven children were born in this log cabin.

This log cabin is 18' wide, 27' long and with 12' tall sidewalls. The cabin has two rooms on the first floor and two rooms in the loft. There is a log wall that divides the east 10' – 6" from the west 16' – 6". The east room was the kitchen and eating area and the west room was a living room. The logs in the dividing wall are mortised into the north and south walls. They would have to be inserted at the same time as the outer logs were placed. The loft had two bedrooms for the children. There was a lean-to for the master bedroom, which must have been on the east side.

The logs used to build this log cabin appear to have been sawed or split to make a smooth wall on the inside. The logs appear to have been 18" to 20" diameter logs before they were shaped. The outside surface was flattened with an adz, but still shows some of the curvature of the log. The log walls are between 6-1/2" to 8" thick. The corners are full dovetailed to make a very secure, locked corner. A talented craftsman had to have cut the dovetails on various size logs to get them to fit like they fit on this cabin. The gable ends have logs to the peak and also on the dividing wall. The logs have 1-1/4" pegs locking the logs together on each side of windows and the door. The top of the gable ends also have 1-1/4" pegs to hold the logs stable as they rise above the dovetail corners.

There are full 4" x full 8" floor joists 26" O. C. mortised into the logs on the north and south walls to support the loft floor. These joists or beams are smooth and had to be inserted at the same time as the two outside logs were placed. The 4" x 8" joists or beams had to be planed with a hand plane before placing, because some show the slightly round outer curvature of the original log. The floor has been replaced with milled 2 x12's. There is no evidence of what the original floor was.

The roof is supported with three 10" logs. The log that serves as the ridgepole at the peak has the top cut to the slope of the roof both ways. This was done with an adze. The other two 10" logs are about one half way down the roof on each side. These logs are cut to the slope of the roof also. The rafters are 4" x 3" hand hewn logs. The rafters are about 36" on center. The roof boards are rough sawn cottonwood. The first shingles would have been hand split cottonwood shingles. Later these would have been replaced with red cedar shingles.

This cabin had a wood floor on the first floor. It has been removed and replaced with poured concrete in 1947. There is no evidence of how the original floor was constructed or what is was constructed with.

The windows are 8"x 10" six light sash, three lights wide and two lights tall, over 8" x 10" six light sash, three lights wide and two lights tall. This makes a double hung window that can be opened for ventilation. The sash had sash bolts that held the windows open at different heights or locked the sash shut when the window was closed. There were five windows like this, in the living room one on each of the south, west and north walls, one in the south wall of the kitchen and one on the west wall of the loft. There is one smaller window in the east wall of the loft. It was 8" x 10" four light stationary window. The front door was in the center of the south wall. There was a porch roof from the east wall, west about 16' which provided some shelter for the front door. This porch may have had a plank floor to allow the family to get out of the mud before entering the cabin. There is no evidence of a floor.

At some time the living room was lath and plastered and wainscoting was installed on the lower 36". Later they put drywall on the walls of the kitchen area. The loft has always been exposed logs on the interior of the walls.

In 1933 when the first brick house burned down, the grandson of Calle and Marie, Carl Hansen and his wife and daughter, moved back into the log cabin while a new brick home was being built. This was when the lean-to was built on the east side for a kitchen.

In 1947 Carl Hansen remodeled the cabin. He cut a hole for a 10' x 10' one piece overhead door and installed the door so he could drive tractors inside. He used the cabin as a shop and a garage for his tractors. He removed the bottom 10' of the dividing log wall and fashioned a 1" steel rod to support the top of the wall. He also removed about two-thirds of the loft floor on the east side.

We do not know when the west lean-to was built or when the 1x12 vertical siding was installed. The north lean-to was built quite recently.

References

Article written by Mrs. (Mary Johnsen) Sorensen, wife of Chris Sorensen. She was a daughter of Calle and Marie Nissen Johnsen. From the The Plain Talk August 27, 1959.

Hay County History, a story of the pioneers of Gayville and Meckling, South Dakota Area, Editor – Mrs. Carl Hansen, wife of Carl Hansen who was a grandson of Calle and Marie Nissen Johnsen.

XII. Pictures of the Log Cabin

This Chapter Depicts Photographs of Various Views of the Log Cabin



Photo #1 by Jim Stone December 21, 2012

This photograph of the remodeled cabin is looking northeast, this is the south west corner. The log cabin has 1x12 vertical siding, which was applied a long time ago. It has protected the logs from the weather and the only logs that have deteriorated are the logs touching the ground. There was a red quartzite and granite stone foundation with sand and lime mortar under the logs, but the foundation had settled into the soil after all these years. The lean-to on the west was added later and the lean-to on the north was added much later. The lean-to on the east was added in 1933 after the brick home burned and the Carl Hanson family had to move back into the log cabin while a new home was built. The second brick home is still standing today.



Photo 1-A by Jim Stone December 12, 2012 & October 9, 2013

This photograph is looking northeast at the southwest corner. This is a transparent photo over original the photo to show that there is a log cabin inside of this structure! Would have liked to have removed the vertical siding on the south wall and had photo of both the west and south sides in this picture. The house mover suggested that the vertical siding should be left on until the cabin has been moved, as it would help stabilize the whole structure.



Photo # 1-B by Jim Stone October 9, 2013

This photograph is looking northeast at the southwest corner of the log cabin. The west lean-to has been removed and the cabin moved closer to the brick house and out of the path of the pivot irrigation system. This shows the logs that have been inside of the west lean-to all of this time protected from the weather. It is also the photo that made the transparent photo for the previous photo overlay.



Photo #2 by Jim Stone December 21, 2012

This photograph is looking northwest at the southeast corner. This lean-to on the east side was built on in 1933 and used as a kitchen. The Carl Hanson family had moved back into the log cabin after the brick home that Calle and Marie Johnsen built burned down. The brick for the original home were formed and fired 1-1/2 miles southwest like the brick for the barn.



Photo #3 by Jim Stone December 21, 2012

The west wall of the log cabin, inside of the west lean-to, is just like it was when the cabin was built. This photograph is of the northwest outside corner. The logs were dovetailed at the corners and the full dovetail prevented the logs from leaning out. The full dovetail actually locks the end of the logs together.

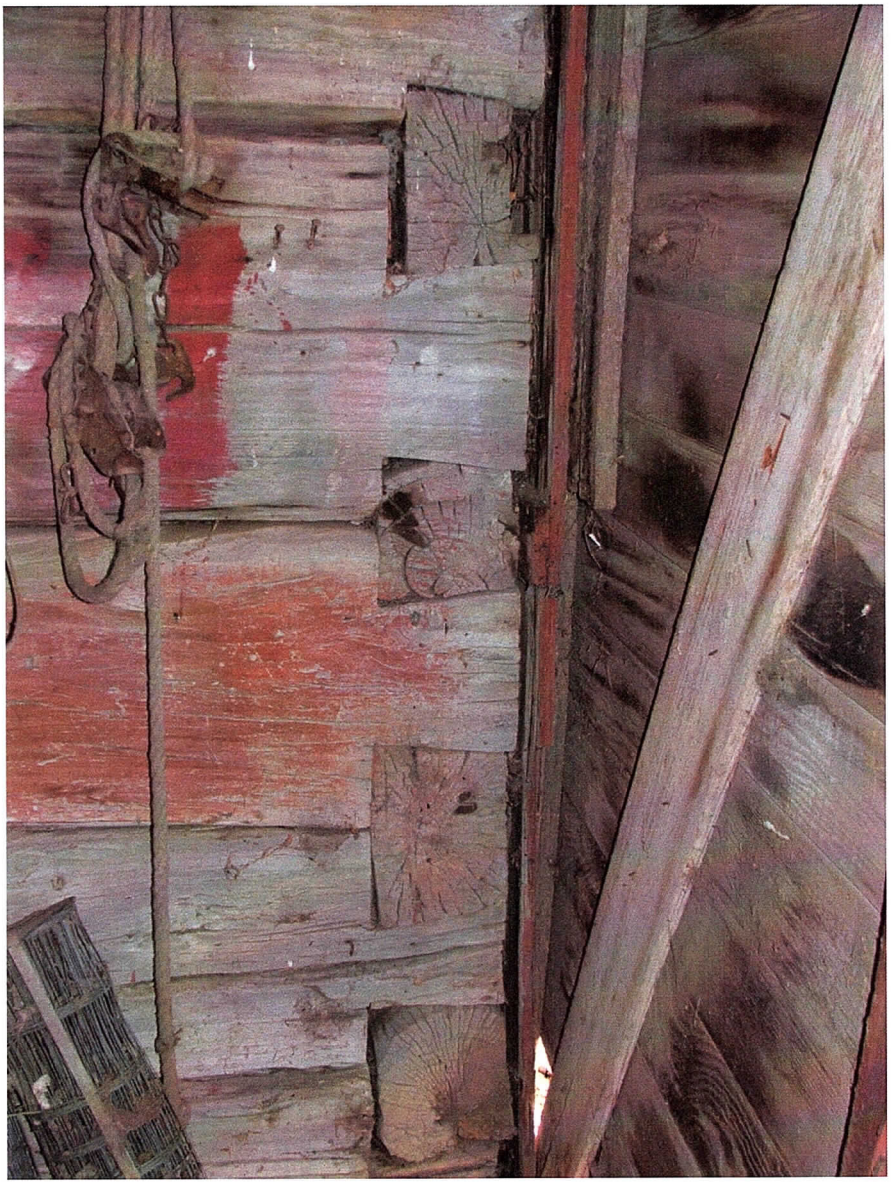


Photo # 4 by Jim Stone December 21, 2012

This photo is inside of west lean-to looking at the southwest outside corner of the log cabin. The logs are hardly weathered and still fit together nicely.



Photo # 5 by Jim Stone December 21, 2012

This photo is still inside of the west lean-to, looking at the southwest outside corner of the log cabin. This view is looking up higher than the last picture. The walls of the log cabin are 12' tall, making the cabin one and one half stories high. The 1 x 12 siding of the south wall of the lean-to is visible in the top right.



Photo # 6 by Jim Stone December 21, 2012

Still inside of the west lean-to, looking at the west wall of the cabin. Notice the 1-1/4" dowel pegs placed between the logs to prevent the logs from moving in or out. The window was removed and the opening lathed over and plastered in the west room of the first floor in the cabin. Notice the lath in the opening on the right and between the logs on the left.



Photo #7 by Jim Stone December 21, 2012

Looking at the north wall of the cabin from the living room. This photo shows the full 4" x full 8" floor joists were mortised in to the north and south walls. The log wall between the living room and original kitchen were mortised into the north and south walls. The floor joists were cut off flush with wall, the dividing log wall between living room and original kitchen were also cut off flush. This was done in 1947 when Carl Hansen remodeled the cabin into a shop and garage for his tractors. The angle on the drywall is the bottom of the stairs going up to the loft. The living room was covered with lath and plaster and had wainscoting up 3' high from the floor. The original kitchen had drywall nailed onto the log walls that Carl Hansen applied in 1933.



Photo # 8 by Jim Stone December 21, 2012

A photograph looking west in the living room at the floor joists and loft that is still in place. The floor joists are smoothed full 4" x full 8" and are mortised into the north and south walls. The floor joists are not milled. They must have been hand planed before they were installed. You can see the rounded edge of the log in some places. The floor has been replaced with milled 2 x 12 planks. There is no evidence of what the original floor was.



Photo # 9 by Jim Stone December 21, 2012

Photograph is from the loft at the west end of the cabin, looking northeast. The top of the dividing log wall that was left to support the roof. A hand forged 1" iron rod goes through the north log wall and across through the south log wall to support this top of the dividing log wall. There is a large washer and a nut on the outside of the log wall so the rod can't pull through. Notice the 10" log that supports the center of the 3" x 4" hand hewn rafters and the 10" ridge pole. Also note the hole for a chimney pipe that would have gone from a stove in the west room of the loft through the east room and connected into the brick chimney on the east exterior wall.



Photo # 10 by Jim Stone December 21, 2012

Looking northeast from the west side of the loft, we notice the 10" log ridgepole that supports the top end of the hand-hewn rafters. Note the rough sawn cottonwood roof sheathing boards. The cedar shingles appear to have been removed on the north side of the roof when the steel roofing was installed. On the south side of the roof the steel roofing is applied over the cedar shingles.



Photo # 11 by Jim Stone December 21, 2012

This photograph is looking west and up at the three-piece hand forged 1" iron rod that supports the top of the dividing log wall. Notice the top of the doorway between the east and west rooms in the loft. The wide piece of steel below the 1" iron rod is the track for the one-piece overhead door that Carl Hansen installed in 1947 when he remodeled the cabin into a shop and tractor garage. You can see the large window in the west gable end wall. All of the windows were 8" x 10" three lights wide and two lights high over 8" x 10" three light wide and two lights high. This made a double hung window that could be opened for ventilation.



Photo # 12 by Jim Stone December 21, 2012

This photograph is looking up and east at the east wall of the cabin. The brick chimney for stoves was built from brick made 1-1/2 miles southwest of the farm. This may be the second chimney. The window in the loft is the only window that is an 8" x 10" four light stationary window. Notice the finished wall on the first floor and the exposed logs in the loft.



Photo # 13 by Jim Stone October 9, 2013

This photograph show an exterior view of a window on the west wall of the west room in the loft. It consists of 8" x 10" six light sash, three lights wide and two lights tall over 8" x 10" six light sash, three lights wide and 2 lights tall, making a double hung window that can be opened for ventilation. Windows had sash bolts to secure the window at several heights.

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