4-1-1973

Archaeology at the Peter Whitmer Farm, Seneca County, New York

Dale L. Berge

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A number of important historical events took place on the Peter Whitmer farm which pertain to the growth of the Church of Jesus Christ of Latter-day Saints. It was here that a substantial part of the Book of Mormon was translated by Joseph Smith, Jr., where some of the first baptisms of the Church were performed, and in particular, where the Church was organized on 6 April 1830.

The Peter Whitmer farm site is located at a point 0.7 miles southeast of longitude 42°52′30″ and latitude 76°52′30″. It is within the Fayette Township of Seneca County in the state of New York. There are several long, narrow, glacial lakes in this area which are known collectively as the Finger Lakes. The farm is situated near the north end of Seneca Lake between Cayuga and Seneca Lakes. The site is approximately 28 miles directly south of Lake Ontario of the Great Lakes. From Waterloo, New York, the Peter Whitmer farm is 2.1 miles south-southeast of the center of Waterloo where State Routes 96 and 20 intersect.

On the farm there now stands a large frame structure which appears to have been modified several times through the years (Figure 1). The older, and central section of this house of the Greek Revival architectural style, is clearly evident because of its hand-hewn timbers and square nails. This two-story structure faces south and has four large pillars which

*Dr. Berge is an assistant professor of archaeology and anthropology at Brigham Young University, and serves also as the Project Archaeologist for Nauvoo Restoration, Inc.
Figure 1. Front view of the present frame house (1969).

Figure 2. Excavation of the log house remains in 1969.
lend support to the front-porch roof. A one-story wing extends west of the main section which has been modified and extended to meet the individual needs and desires of various owners. A new east wing was being added at the time of excavation in 1969.¹

The Peter Whitmer property was purchased by the Mormon Church in 1926. Many prominent Church members in the past thought that the frame house was where the Church was organized, while others thought the organization took place in a log house mentioned in historical documents. This difference of opinion has lasted for many years. James H. Moyle made the following statement which illustrated the confusion that prevailed on this subject: "There they all lived for months in a three-room house, if you believe the Church was organized in the old home, or in the six-room house, if you believe the Church was organized in the new home..."²

Dr. Richard Anderson, College of Religious Instruction, Brigham Young University, has been engaged in extensive historical research pertaining to the Peter Whitmer Farm.³ The data accumulated leave little doubt that the Church was organized in a log house on the farm. The purpose of the archaeological investigation was to determine the location of this log house (Figure 2).

Historical documents reveal that the log house was one and one-half stories high and estimated to be approximately 20 feet by 20 feet or possibly 15 feet by 20 feet. These dimensions may have been the size of the main downstairs room. As late as 1888 remnants of the logs once part of the home lay on the site. Just when the log house was destroyed is not known, but it is assumed to have been prior to the above account of 1888.⁴ According to William L. Powell (personal communication), some of the structure's logs and roof remained on the property as late as 1959.

Mr. William L. Powell of Roy, Utah, was caretaker of the Peter Whitmer farm from 1946 to 1952. During this

²James H. Moyle, "A Visit to David Whitmer," The Instructor, vol. 80, no. 9 (September 1945), p. 403.
⁴Ibid., p. 19.
time he discovered the foundation of a structure located about 30 to 50 feet from a large barn which stood on the property up to 1959. At the time, he would load his wagon with hay and come down a lane to the west of the barn, where he would make a sharp turn into the large, double doors of the barn. As Mr. Powell continued to bring the hay into the barn, he began to uncover some cobble stones which seemed to be the outline of some type of structure. He and his son removed the remaining soil and unearthed a foundation 20 by 30 feet. The longer length of the house ran north and south with the west foundation wall being situated 50 feet from the barn. The foundation proved to be relatively shallow being 6 to 8 inches deep. The stones were oval cobbles, probably from a stream bed, and measured, on the average, 4 by 6 inches. The stones were buried two across and two deep.

The shallow foundations are not indicative of the support which one would expect for a heavy brick or stone structure. In this case, this foundation probably supported the log house since some of the actual logs were in the area. The ground in this part of New York state retains its moisture considerably, and stones were probably placed under the logs for drainage. This helped to preserve the logs which would have decayed from moisture had they lain directly on the ground.

ARCHAEOLOGY

The archaeologist usually has to conduct extensive excavations in areas where no foundations are visible on the surface and when little historical information is available. This was not the case with the Peter Whitmer farm site. Enough information was derived through historical research that an approximation of the site location was established. In addition, the actual discovery of foundation stones nearly 25 years ago provided more accurate data in determining where we should excavate for remnants of the log structure.

The stratigraphy of the excavated area proved to be relatively simple due to several years of plowing. The plow zone was 0.8 feet below the surface at which point a layer of dark brown clay was encountered. All artifacts were recovered from the plow zone while the dark brown clay was void of artifacts and undisturbed from the time it was deposited.
through natural means. Any intrusions into the dark brown sterile soil would have been detected by changes in texture, composition and color.

A wide variety of artifact types were recovered from the site. A total of 2,084 individual items were collected during the archaeological investigation. The following descriptions are representative of the material remains unearthed at the Peter Whitmer farm site.

**DRAINAGE TILE**

**Hexagonal Tile.**

The ground in the vicinity of where the log house stood was once drained by means of drainage tile. The amount of red tile found numbered 404 specimens which represents 19.3 percent of all the artifacts. The hexagonal tile from the Whitmer excavation is a dull, dark-red color on the surface. The paste and surface are the same color which may have been changed from the original clay color by oxidation during the firing process. The tiles are hexagonal outside and round inside with an outside diameter of 2 1/2 inches and inside diameter of 2 inches (Figure 3).

Tile drainage in the state of New York, as well as in America, was begun in 1838 by John Johnston. The first tiles were manufactured in a horseshoe pattern at the Whartenby Tile Factory in Waterloo, New York, a few miles north of the Whitmer farm. The clay soil in this area is such that it retains much of the rain or irrigation water which in turn can destroy crops. Tile was used to drain off excess water to keep roots from rotting from too much moisture. This process helped crops produce in greater volume.

This tile could not have been used by Peter Whitmer since hexagonal tile didn't come into existence until the 1850s, and continued to be manufactured until about 1900 or 1910. All tile specimens were found in a confined area and around the log house location. Possibly it was used to drain the slight rise of ground around the house after the Whitmers had sold the property. The advantage of the hexagonal tile

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6Ibid., pp. 235-240.
Figure 3. Hexagonal tile.

Figure 4. Horseshoe tile.
was that it would not roll out of place as would some round tiles.  

_Horseshoe Tile._

A second type of drainage tile unearthed is of the Horseshoe type. The 128 drainage tile fragments of this style represent 6.1 percent of the total artifacts. In cross section, these tiles are similar in shape to that of a horseshoe, hence the name (Figure 4). The paste of Horseshoe tile found at the Whitmer site is a light red-orange color.

Striation along the sides of the tiles indicate that they had been manufactured by the extrusion method. Apparently different machines were used to mold these tiles. There are indications of the difference of these machines along the edges of the tile where there are different rim configurations. Some of the rims are straight, while others have slight lips of different shapes.

_CERAMICS_

_Earthenware._

Earthenware is pottery made from natural clays producing natural-colored pastes, such as red, yellow, white and gray. Four types of earthenware are distinguished from the Peter Whitmer farm. These are Redware, Yellowware, Stoneware, and Whiteware. Vessel forms were not determined since the sherds were fragmented and unrestorable.

Redware: This type of ceramics is identified primarily by its red paste which looks like porous red brick in texture and color. However, it may vary according to the physical properties of the natural clay and firing techniques.

1. Brown-glazed Redware has a red paste with a dark brown glass-like glaze. The glaze is thick in areas adjacent to relief scroll designs on the sherd. The upper surface relief areas appear lighter due to less glaze covering the surface while to the side the glaze is thicker and darker.

2. Glazed-interior Redware has a brick red paste which is very porous. The outer wall of the vessels of this type have no surface treatment while the interiors are covered

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with a dark-brown lead glaze or a light-brown or mottled light-green lead glaze.

(3) Salt-glazed Redware has a dark-brown glaze on the interior and exterior surfaces. The surfaces have been lightly salt-glazed to produce a slightly glossy surface. It does not have the glass-like surface of regular glazes; rather the surface is uneven like the surface of an orange. The paste is an orange-red color similar to the above described types.

Salt-glaze is an alkaline glaze produced by sprinkling salt on the vessels while they are in the kiln. When the kiln is at its maximum temperature, the salt is applied which, when volatilized, produces a coating of soda-glass. Salt glazes were used at least by the turn of the eighteenth century and by 1750 were widely used by Staffordshire potteries on stoneware. The early pieces were a drab shade of white.

Yellowware: Pottery sherds of this type were characterized by their yellow to buff-colored pastes. Clear glazing on the surface of the vessels emphasized the yellow color of the paste.

Buff Yellowware found at the farm has a clear glaze over the buff to yellow-colored paste. The glaze is covered with little pits which gives the surface the appearance of an orange rind. The interior has been painted dark brown and has a plumbiferous glaze.

Stoneware: Vessels of Stoneware pottery are fired at high temperatures to vitrify the natural clay. The paste becomes very hard and turns a gray color. The paste looks like gray stone, hence the name. Stoneware from the Whitmer farm has a very light buff to light gray paste. The surface has been painted white and glazed with a clear alkaline glaze. The light colored paste is extremely hard and looks much like light limestone.

Whiteware: The paste of all whiteware types ranges from dirty white to brilliant white. It is vitreous and nonporous, which gives greater strength to the wall and, therefore, requires less wall thickness compared to some soft paste earthenwares. Whitewares are divided into two general categories—

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*Hodgson, Willoughby (Mrs.), *How to Identify Old China* (G. Bell and Sons Ltd., 1912), p. 25.
plain and decorated. Plain Whitewares do not have any additional above-surface decoration to the body other than a glaze. Decorated Whitewares have been additionally decorated with colored transfer prints, or hand painted. Most of the Whiteware sherds from the Peter Whitmer farm are Ironstone pottery.

The manufacture of Ironstone was begun in 1813 by Charles Mason. He used a combination of iron slag, flint, Cornwall stone and oxide of cobalt. The earlier vessels are thicker and have a more yellow tint to the paste.

A total of 58 Whiteware sherds were unearthed from the site. This number represents 2.8 percent of all artifacts recovered during the excavation. Whitewares of the types described were made of fine, dense clay and fired at high temperatures.

Plain Whitewares include the following types: Cream-colored type, White type, and Pearl type.

(1) Cream-colored Whiteware ceramics are characterized by its slight yellow hue which gives it a creamy white color. The sherds in this collection are from a small restricted cup (Figure 5a) and a non-restricted flaring bowl.

Ceramics with a cream-colored body have been produced since the beginning of the eighteenth century. The first types had to be covered with a white slip and glazed until a whiter paste could be produced around 1720. Salt-glazed stoneware was gradually replaced as the cream-colored type grew in popularity.

(2) White Whiteware has an almost pure white surface treatment. When compared to Cream-colored type or Pearl type, the distinct white of this type is readily obvious. The paste is vitreous white and after the biscuit has been fired, the only surface decoration needed is clear glazing to emphasize their pure white color. The sherds of this type are from small non-restricted, outflaring plates or bowls, possibly soup bowls.

(3) Pearl Whiteware was developed by tinting the Cream-

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colored or White types with cobalt which produced a pale bluish-gray surface color. It was perfected in 1779 by Josiah Wedgwood, who was the first manufacturer of this variety of Whiteware, which by the nineteenth century was imitated by many companies. Pearl type is coated with a colorless glaze and used mainly for table service.14

The sherds from the Peter Whitmer site are fragments of large, outflaring soup bowls and cups (Figure 5b). The bowls have a relief design molded into the biscuit prior to firing and glazing.

Decorated Whitewares include these sherds which have been decorated with transfer prints or by hand painting. These types include Transfer type, Painted type, Featheredge type, and Banded type.

(1) Transfer Whiteware ceramics usually had a design in one color; the most common color was blue. John Sadler and Guy Green invented the process of transfer-printing in 1752. It was not long before factories had the equipment to transfer-print their ceramics. The first vessels were transfer-printed in black, which was soon followed by dark blue. Variations of color were made possible by the use of thin-line shading in the early 1800s. These lines produced dark and light shades. Tone variations were improved after 1810 by the combination of lines and stipple.15

During the second half of the eighteenth century, black, blue, pink or brick-red on glaze transfers were popular. Late in the century, a brown and purple were added. Underglaze colors for printing of black, cobalt blue, brown and red were popular after 1880, but great quantities of blue vessels were used after 1810. Later a green and mulberry were added.16

Transfer Whitewares found at the Whitmer farm consist of four varieties: Blue, Purple, Brown and Green.

(a) Blue variety consists of plates and a bowl printed in floral motifs and scenes (Figures 5c-e). One blue sherd is a common decorative motif called Old Blue, which has a dark blue background with flowers in negative white (Figure

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14Hughes, Picture History, p. 121.
15Ibid., p. 148.
5f). Other blue transfer-printed sherds are a lighter blue with stipple or line and stipple shading.

Very popular during the early nineteenth century was the Willow Pattern, a pseudo-Chinese motif. Very dark blue vessels of this pattern were favored by the American market between 1815-1830.

(b) Purple variety is a harsh purple color made late in the eighteenth century. The single sherd of this variety is a fragment of an outflaring bowl with a floral motif (Figure 6a).

(c) Brown variety sherds are shaded by stipple around a small floral motif. These sherds were part of an outflaring bowl (Figure 6b).

(d) Green variety has a portion of a possible structure in design. It is made by dots without shading of the design with lines or stipple (Figure 6c).

A common type of rim decoration used over the span of the nineteenth century commonly found in sites of this time period was featheredging (Figure 6d). One sherd of a featheredging plate was found at the Peter Whitmer site.

Many vessels have rims painted with one or more bands while the center may have been transfer-painted or hand-painted with some design. One rim sherd was recovered which had a blue band along its rim (Figure 6e). It appears to have been part of a small outflaring bowl.

Two different types of hand-painted Colored Whiteware were unearthed in the log house area. These are Onglaze Polychrome type and Underglaze Polychrome type.

(1) Onglaze Polychrome ceramics are painted by hand on the surface of the glazed vessel (Figure 6f). The paint has to be applied after the firing of the glaze because such high temperatures are reached to vitrify the glaze, that some paints exposed to such temperatures would volatilize and disappear if applied prior to glazing.

The painted design does not reflect light like the smooth surface of the glaze does, and is in slight relief above the glaze.

Hand-painted pottery does not have the precise detail as found on transfer-printed or decaled vessels. The designs are not shaded and the brush strokes of the designs are clearly
Figure 5. Whiteware pottery.

Figure 6. Whiteware pottery and pipe.
visible. The sherds of this type are painted in a floral motif along a band.

(2) Underglaze Polychrome sherds have a floral motif; red flowers with blue leaves. The design is hand painted underneath the glazed surface. The brush strokes can be seen in the design of the leaves which seem to be painted in one stroke of the brush. The brush is controlled by pressure to narrow or widen the design. The designs are not outlined or stippled as in transfer-printed or decal-printed vessels.

The boldly painted Whiteware appeared on the market from 1810 onwards. These vessels were painted in bright enamel colors to appeal to the working class. There was a great potential at that time for producing dinner services for the newly created industrial middle class.

Porcelain

Porcelain differs from Earthenware and Stoneware in that the clay is translucent and vitrified due to the extreme high temperatures at which it is fired. There are three main types of porcelain: hard-paste, soft-paste and glass. Glass porcelain is a mixture of kaolin clay and silica.

Hard-paste porcelain is made from white kaolin clay and fusible felspathic stone. On a fresh brick the paste is fine-grained, compact, and non-absorbent. All Chinese porcelain is this hard-paste type, and is the true "China" which is a term denoting its place of origin and too often misused when applied to all types of tableware.

Porcelain cannot be scratched with a knife; rather, the knife will leave black marks on the porcelain. Usually any decoration on porcelain is placed over the glaze since it would burn off at the extreme temperature in which the body is fired. The paste will appear uniform from the surface to surface because of the vitrification of the clay at high temperatures. The surface becomes non-absorbent due to the fusing that takes place during firing.

The importing of Chinese porcelain by England reached its climax between 1760 and 1780. After this, it gradually declined due to improvement of English porcelains, which are soft-paste types. In addition, the Chinese had shipped

\[\text{Ibid.}, \ p. \ 9.\]
such large quantities that the market was flooded. Trade to the United States increased around 1800. The technology of making porcelain was not fully developed in the United States prior to 1900.

The porcelain from the Whitmer farm site is the hard-paste type porcelain. Most of the pieces are from a bowl decorated in a floral motif over the glaze (Figure 6g).

Clay Pipes.

Three fragments of white clay pipes were unearthed but none had manufacturer's marks. Two pieces were small, while the other was the fragment of a pipe bowl (Figure 6h).

GLASS

The early history of glass manufacturing in the United States is directly connected with that of England. English bottles, such as corboys and flasks filled with whiskey, were sent to the colonies. American glass manufacturing was discouraged in order to maintain a reliance on the "Mother Country." These early bottles were free blown.

The first American glassmakers arrived in Jamestown in 1608 but this industry was short-lived. It was not until 1739, when Caspar Wistar of Salem County, New Jersey started a glasshouse, that glass manufacturing was a successful enterprise in the United States.

After the American Revolution, strict controls were no longer exercised on industry. Many glasshouses were started and several new manufacturing techniques were developed. The most important plants, which opened shortly after the Revolution, were that of the Stanger Brothers in 1781 in Glassboro, New Jersey; the Pitkin Glasshouse in 1783 in Connecticut; and, John F. Amelung's New Bremen Glass Works at Fredericktown, Maryland in 1784.

During this period of American history, people were proud of their newly formed country and extremely patriotic, as is revealed by the enormous quantities of historical flasks sold between 1820 and 1870. The most popular was the

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American eagle design, while second in sales was the George Washington flask.

With the glass industry in full bloom, diversification began to take place and new inventions produced to satisfy the demands of consumers. The bottles of this period were formed by open molds in which only the body was molded. The neck and finish had to be shaped by hand.

A common feature on ordinary utility bottles up to 1860 were "pontil" marks. This mark was found on the base of bottles and consisted of an area somewhat circular, rough, and sharp where a glass rod had once been attached to maintain control while hand-making the finish or spout. At times, some attempt was made to polish the sharp mark off.

There was little concern over the color of glass until food-stuffs began to be bottled. Then people desired to see what was in the bottle, so glass had to be made lighter. Dark olive-green, or black glass, was common up to 1860. It began to be replaced by clearer and lighter-colored wares after the patenting of John Mason's fruit jar in 1858.

**Clear Glass.**

Most of the 272 fragments of clear glass from the Whitmer site date to the late nineteenth and early twentieth centuries. Of this total there was one whole bottle, one bottle handle, 14 finish fragments, 6 fragments of Mason Jar tops, 25 base pieces, 18 plate glass pieces, one piece of pressed glass, and 206 body fragments. Practically all of the clear glass were bottle fragments.

The pressed-glass plate fragment has a wall thickness of three-tenths of an inch. The pressed-glass technique was developed in the 1820s, and at this time the wall was thick-producing a heavy plate. The earliest pressed plates range from one-fourth to one-half inch thick.20 The fragment found at the Peter Whitmer farm site is similar to an early plate illustrated by McKearin (1966, plate 133, no. 1). The most distinguishing factor of the fragment is the heart motif along the rim of the dish (Figure 7a).

The whole bottle found during the excavation is a small rectangular medicine bottle (Figure 7b). It stands 2 7/8

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Figure 7. Clear glass.

Figure 8. Bottle finishes and bases.

Figure 9. Bottle finishes and bases.
inches high; 1 3/16 inches long; and 3/4 inches wide. On the shoulder is the mark "355" and on the base is "38 7" or "3B 7." The bottle was made in an Owens automatic bottle machine, as indicated by mold marks on the base and the mold seams which extend to the sealing surface of the finish. The finish has a screw thread 3/32 of an inch apart and a bore of 7/16 of an inch. The cap is made of plastic and on the inside is a capital "B" in a circle. The cap tightens securely to a collar below the threads.

This bottle is relatively modern since the Owens machine was invented in 1903. The capital "B" in a circle is the trademark of the Brockway Glass Company, Brockway, Pennsylvania, founded in 1907.

The various bottle finishes manufactured of clear glass are of three basic types: (1) threaded; (2) pressure seals; and, (3) cork stopped. The threaded closures appear to be pieces of a Mason jar (Figure 7c) and a catsup bottle (Figure 7d). Both have continuous mold seams up to the sealing surface, indicating manufacture by the automatic bottle machine.

The pressure-sealed bottle's finishes are of the lightening type (Figure 7e) and Sure Seal type (Figure 7e-f). The lightening closure seals the lid—in this case a glass lid—securely down over the outside rim of the finish. A wire lever is used to put pressure on the lid to seal it down tight. To release pressure all one has to do is lift the wire lever. The Sure Seal closure was invented in 1908. The glass container was sealed by crimping the lid over the outside of the finish and over a glass edge. When removed, the crimped edge buckled and could not be resealed.

The cork-stopped bottle's finishes were manufactured with an automatic bottle machine also. They appear to be medicine bottles (Figure 8a-b), and possibly a shoe-polish bottle (Figure 8c).

The recovered bottle bases are oval, rectangular, octagonal, and round in shape. Approximately half have the characteristic indented ring produced by the Owens Automatic Bottling Machine. The octagonal base is the bottom of a catsup bottle marked with an embossed "7" (Figure 8d). It is impossible to determine what types of uses the other bottles may have had. All of the clear glass bottles seem to date to the turn of the twentieth century or later.
Light-Blue and Light-Green Glass.

Six percent of 126 fragments of the artifacts unearthed at the site belong to this category. The following types of light-blue and green glass were found: 5 bottle bases; 5 bottle finishes; 2 tumbler rims; 2 electric insulator fragments; 2 Mason jar lid pieces; 55 pieces each of plate glass and bottle bodies.

The five bottle bases span a considerable length of time. The newest is that of a "Carbona" bottle (Figure 8e). The next two samples representing an earlier time period are light-blue and mold-brown. One is rectangular with an indented circle in the middle. The other is 14-sided with no distinguishing features or marks. The oldest base is from a round bottle which has a distinct pontil mark (Figure 8f).

Two of the five finishes represent early twentieth century types (Figure 9a). One is a small orifice bottle, possibly for medicine, and the other is a fruit jar. Another is a crudely made mold type finish (Figure 9b) and one was manufactured by folding the lip over the outside of the finish (Figure 9c).

Rim and body fragments of a light-blue pressed-glass tumbler were found. It was decorated with parallel symmetrical arches (Figure 9d).

Dark-Green Glass.

Dark-green glass is represented by 25 sherds of what was probably an olive-green wine bottle.

Dark-Brown Glass.

Dark-brown glass fragments were mostly body parts, but there was one finish (Figure 9c) and one base (Figure 9f). This glass dates to the late nineteenth and early twentieth centuries.

Nails

Square Cut Nails.

Towards the end of the eighteenth century and into the early nineteenth century, over a hundred patents pertaining to cut nails had been applied for.21 Artifacts from the Peter

Whitmer farm consisted of 217, or 10.4 percent, square nails. Most of these, or 182 to be exact, were either broken, or so badly corroded with rust, that their size could not be determined. Of the remaining 35, there were 5 40d nails (Figure 10a), three 20d nails (Figure 10b), fifteen 12d nails (Figure 10c), eight 9d nails (Figure 10d), and four 4d nails (Figure 10e). The larger nails, including the 9d through 40d nails, are probably framing nails for the walls, floor and roof. The 4d nails were very likely used for lathe work, if present, and shingling.

The presence of both framing and shingling nails suggests that there was some type of structure on this location. If this were a dump, one might expect a greater diversity of the nail sizes which are found on a farm.

**Round Wire Nails.**

The wire nail business had its beginnings sometime before 1875, but it was not until 1895 when the manufacturers of wire nails formed an association that the wire nail began to grow in popularity.22 Several different sizes of wire nails were found at the Whitmer farm site. There was one 60d nail (Figure 11a), one 40d nail (Figure 11b), fourteen 20d nails (Figure 11c), nine 16d nails (Figure 11d), ten 12d nails (Figure 11e), forty-one 9d nails (Figure 11f), six 7d nails (Figure 11g), one 4d nail (Figure 11h), and six 3d nails (Figure 11i). Included in this category are four flat-head roofing nails (Figure 11j).

Wire nails represent 7.1 percent of the total artifacts recovered. Sixty of these were so badly oxidized that their size could not be determined accurately. A greater number of round wire nails were less corroded than square nails, possibly because the square nails were exposed to corrosion in the ground longer than the round nails.

**Staple Nails.**

Staple nails are U-shaped, and are used for nailing wire or fencing to a post. Sixteen staple nails were recovered representing three different sizes (Figure 10f-h). Only one example of each of the larger and smaller of these three sizes was found.

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22Ibid., pp. 48-49.
Figure 10. Square nails and staple nails.

Figure 11. Round nails.
A great many fragments of wire were retrieved from the site. Most of this wire was highly deteriorated by oxidation. In all, 306 pieces of wire were counted, while 32 fragments were distinguishable as wire types.

Six sections of Burnell's Four-Point wire were included among the wire found (Figure 12a). This type of wire was "patented on June 19, 1877, by Arthur S. Burnell of Marshalltown, Iowa."

"Probably this is the most successful of the four-point, double-strand varieties of barbed wire. Each of the barbs 'passes over a strand of the cable, then between its strands—wherefrom the points of the wire project as from a center.' This wire might be referred to a 'four-point-two around, two between and opposite.'"

The wire was made by the 'Iowa Barb Wire Company,' sometimes called 'Iowa Barb Fence Company,' and sometimes also 'The Barb Steel Wire Company.' Home office was in Marshalltown, Iowa, and branch offices were in Johnstown, Pennsylvania, and New York City."

Another early variety of barbed wire found at the site is a type called "The Winner" (Figure 12b). Patented on 24 November 1874, by Joseph F. Glidden of De Kalb, Illinois.

"This simple barb twisted into a double-strand wire was known even in the nineteenth century as 'The Winner.' It was winner in the long litigation over priorities, and was winner too in sales competition. Modern styles of domestic barbs differ little from the Glidden invention."

Other varieties of wire were found but the material was so fragmented and badly rusted that identification was impossible. These types included a single strand wire that is similar to the Jayne-Hill barbed wire (Figure 12c-d). This type was "patented on April 11, 1876, by William H. Jayne and James H. Hill of Boone, Iowa."

"The single four-point wire barbs of this patent were applied to single strands 'in such a way the (U) bend of each piece . . . (locked) between the arms of the other piece . . . clamping each other firmly and securely to the said fence."

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24Ibid., p. 244.
Figure 12. Wire and bolts.

Figure 13. Cartridges, shotgun shells, gun flint and button.
wire, and leaving four points projecting in opposite directions.' 

Several wire loops were unearthed which belonged to a type of mesh fence wire held together by wire loops. The wire loops were placed at the cross sections of the wire.

CARTRIDGES

In addition, several cartridge shells were found which included .38 S&W (Figure 13a), .32 S&W (Figure 13b), and .22 shells (Figures 13c). Shotgun shells included 16 gauge and 10 gauge sizes.

Both .22 cartridges are of the rimfire type while the .32 and .38 cartridges are the external centerfire types. The internal centerfire cartridge was first made in the late 1850s and ceased to be produced in the early 1890s. The external centerfire cartridge became popular around the 1860s, particularly in the British Army. Rimfire cartridges were first introduced in 1845 and used on the Flobert BB Cap .22. Smith and Wesson developed a .22 Short in 1857.

"REM-UMC" appears on both the .32 and .38 cartridges. The Union Metallic Cartridge Company was founded in 1867 and merged with Remington Arms Company in 1902. Three shotgun shell cases had this mark also (Figures 13g and h). The other shotgun shell case is marked "Winchester," which is the mark of the Winchester Repeating Arms Company founded in 1866.

ANGLE IRON

The angle iron consisted of two right-angled pieces of metal probably used for securing and strengthening corners.

OTHER METAL ARTIFACTS

A variety of metal objects were recovered, most of which were badly rusted and broken in small fragments. These objects consisted of carriage bolts (Figures 12e-i), spikes, strap metal, can fragments, and slag.
Figure 14. Miscellaneous metal.
There is a wide range of items of which only one was found. There were 56 such objects in this category. Included among these were chains, bricks, a brass button (Figure 13j), a valve handle (Figure 14a), a metal ring, a knife blade (Figure 14b), a harness buckle (Figure 14c), a hook hanger (Figure 14d), wagon parts, a hook end (Figure 14e), an oar lock (Figure 14f), a tire iron, a U-bolt, a clay marble, a mower blade (Figure 15a), a hammer head (Figure 15b), a large hoop (Figure 15c) and a pitchfork spike (Figure 15d).

MISCELLANEOUS

In this category are included such objects as battery posts, coal, cement, gun flints (Figure 13i), and shells.

There were 110 bones and 22 teeth found at the Whitmer farm site. The bones represented a variety of animals, possibly including horses, pigs, sheep and birds. Also, there was a completely articulated dog burial found.

SUMMARY

In the area excavated, a little over 83 percent of the artifacts recovered were found within the confined area where the stone foundation was discovered. The distribution of cobble stones (foundation stones), drainage tile and coal was restricted to this same area (Figure 16). The artifacts were limited in space to the foundation area as seen in Figures 17a and b. A cross-section along a north-south line reveals that there was a heavy concentration of artifacts in the log cabin area while those areas north and south diminish in quantity to relatively no artifacts. The squares along an east-west line reveal the same phenomenon. This heavy concentration of artifacts illustrates that some type of human activity took place in this confined area.

Of the 2,084 artifacts unearthed at the site, few would be out of place in a habitation area. Objects such as wagon parts, a pitch fork spike, a mower blade and such, may belong more in a barn than in the living area, but on the other hand, the abundance of pottery, glass and other artifacts suggests that this area was not a barn or some type of shed. Likewise, this was probably not a trash dump since there is a uniformity of household items recovered, rather than a cross section of artifacts representing a broader perspective of farm life.
Figure 15. Metal artifacts.
In summary, the artifacts suggest that it is more likely that the area in question was a habitation area than a barn, corn crib, or trash dump. Very little dating information is available from the artifacts to be specific as to the periods of actual occupation. Most of the artifacts that could usually be used for tight dating control were so fragmented that only a very general time range could be established. The artifacts date from the early nineteenth century into the twentieth century. Some of the artifacts, like the bottles with mold seams over the rim, date to the twentieth century, while the one with a pontil mark was used in the first half of the nineteenth century. The square nails could date to most of the nineteenth century and the round nails to after the turn of the present century.

CONCLUSIONS

There are three sources from which to establish the approximate location of the log house where the Church of Jesus Christ of Latter-day Saints was organized. These are (1) the historical accounts; (2) the description of the caretakers along with the actual discovery of a foundation; and, (3) the archaeology.

The historical accounts of the 1820s and 1830s plus those recorded by interviews with persons at later times who remembered events on the farm, and by diaries of later visitors to the site, give a fairly clear description of the type of structure in which the organization took place. Through the years, several Mormons have returned to the Peter Whitmer farm and have been shown the site of the log house by various owners and caretakers. These early investigators indicate that the location of the site ranges from south to south-west of a large barn. Even though the barn was destroyed in 1959, there was enough data available to determine the location of the barn and, therefore, the approximate site of the log house.

The second source of information was provided by one of the caretakers himself, William Lee Powell, who had farmed the land after the Church had purchased the property. He was the resident farmer between 1946 and 1952, and discovered a foundation and recorded its precise location from fixed points on the farm. The stone alignment formed a rectangle 20 by 30 feet.
Figure 16. Horizontal distribution of certain artifacts.

Figure 17. Percentage of artifacts across the site.
These two sources provide us with a suggestion of what Peter Whitmer's log house looked like. It was one and one-half stories high, probably 20 by 30 feet overall, with one room 20 by 20 feet and one room 10 by 20 feet on the ground level, with stairs leading to an attic-loft.

The purpose of the archaeological excavations was to substantiate the historical sources by locating the site of Peter Whitmer's log house. Even though the foundation had been removed, the artifacts recovered from the site were distributed in such a way that they outlined the location of the site. The various types of artifacts, whether studied individually or as a group, were confined to a specific area. Remnants of foundation stones, nails, glass, wire, pottery, tile, and other artifacts were distributed in an area approximately 30 by 40 feet and in nearly the same area pointed out by Mr. Powell. As our trenches were excavated away from the area, the artifacts, including cobble stones, dramatically disappeared. Some type of structure must have occupied this location. If it had been a barn, corral, corn crib, tool shed or some other type of farm structure, one would expect a completely different assemblage of artifacts than was unearthed. We found fragmented pieces of bottle glass, ironstone and porcelain dishes, shell cartridges, drainage tile, square nails, and coal. Most of these artifacts reflect domestic use.

There is one problem which cannot be answered: If the log house was torn down before 1888, why do artifacts dating to after this date appear at the site? There are probably many plausible explanations, but none which are conclusive. It does not seem that the location of these artifacts distributed in the exact location of earlier artifacts was arbitrary. Possibly the building was not completely destroyed since remnants of it were still present in 1959. Maybe it was used later than 1888, or at least a portion of it.

If this log house is ever restored it might look like the one described by Willers in 1880.31 It would be a structure constructed of approximately 40 logs notched at the corners to strengthen the walls. The floor would be made of hand-hewn lumber. Overhead would be cross beams and rafters hand-

sawn roofboards covered with either a split-shingle roof or bark roof. There would be an open fireplace with a big pole and trammel, while alongside was probably a bake-oven. The thick log walls would most likely be plastered with mud to keep out the cold.

Furniture and equipment which adorned the cabin might consist of wooden hooks, from which were suspended flint lock rifles, a shot gun and a musket. Along with these weapons there would be a shot powder-horn, bullet-pouch, and shot-bag. Shelves would contain plates and platters and cups of pewter, and pottery of various types. In a corner there would be a wooden water-bucket with a gourd for drinking water. In the fireplace would hang iron pots and kettles for cooking. Also, bake kettles, skillets and spiders, a gridiron, a toasting iron, ladles, skimmers, a toasting fork, fire dogs or andirons, and a heavy shovel and tongs would be present. There might be a wooden bread trough for kneading bread dough, along with a braided straw bread-basket. In another part of the house there could be a flax wheel and hatchel, and perhaps bed-warming pans. From the beams there might hang strings of dried apples, pumpkins, or other food stuffs.

It is hoped that the Mormon Church will maintain the present house as an information center to describe the events that took place on the Peter Whitmer farm. The log house should be constructed as it was originally built, as it would be a thrilling and educational experience if the visitor could also open the door to the log house and step into the year 1830.