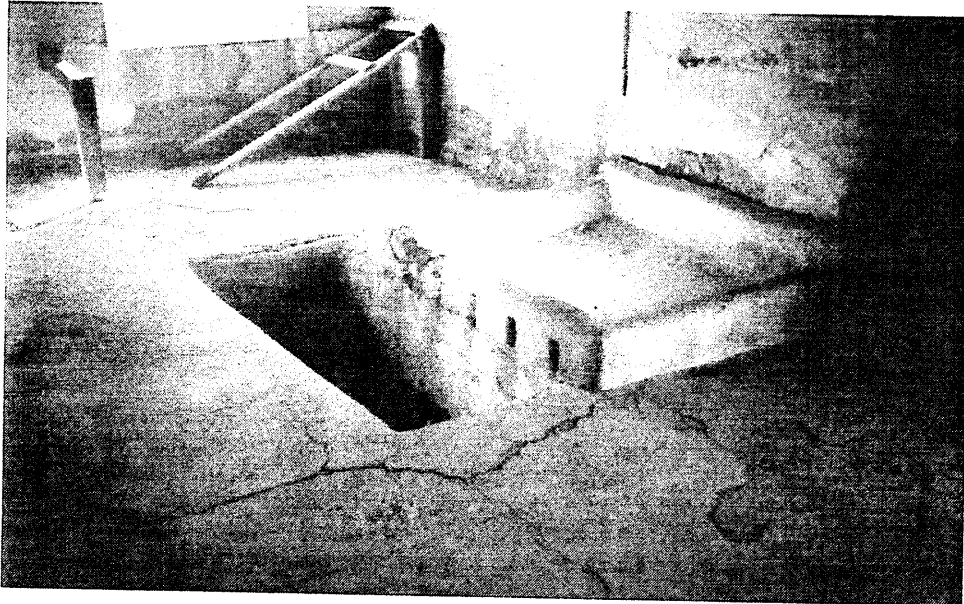


KENTUCKY CAMP
ASSAY BUILDING
INTERIOR DOCUMENTATION



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For the Coronado National Forest
Tucson, Arizona

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FRIENDS OF KENTUCKY CAMP

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KENTUCKY CAMP ASSAY BUILDING INTERIOR DOCUMENTATION

ABSTRACT

The Assay Building is a very important component of this historic site. It represents why this site was built. It is the only building of the five original structures that defines the specific purpose of the site. Based on the ore processing features in this building, it can be assumed that mining was the main reason for establishment of this camp.

There have been attempts by various people, most notable being Lewis Orrell Jr., to determine how this building was actually used to process the ore. Building detail, including walls, floors, ceiling, and it's unique features, may give someone a clue what technique was actually used to process the ore.

The first repair work done to the interior of this building began in March 2002. There was great danger that this and future repair work could have a negative impact on the original surfaces. Jim Britton noting some subtle details present on the wall faces, asked the Forest Service personnel if any documentation had been done. Mary Farrell stated that in 1992, during the P.I.T. project, interior and exterior scale drawings were made showing the major construction features of the building. Mary agreed that the interior should be completely documented before further work was done. Plans were made that the documentation would be done during the July 2004 Mini-P.I.T. project.

Jim and Marie Britton arrived at Kentucky Camp to participate in the Mini P.I.T. on July 25. Marie helped Jim with various measurements. Starting with the small room (E-1) and then moving to the larger processing room (E-2), Britton made a wall by wall examination looking for evidence that would help interpret the use or purpose of various wall and floor features. Britton used the scale drawings made during the 1992 P.I.T. as a reference and for making notes on wall condition changes and feature dimensions. These revised drawings are on file at the NFS office in Tucson.

Since the buildings are not aligned in an exact north south configuration, all directions referred to in this report are "Project" and not magnetic, e.g., the northwest wall will be referred to as the west wall. This is the same method used in the 1990 report entitled "Historic Building Analysis For Kentucky Camp" by Don Ryden.

It is hoped that the documentation provided by this report will serve as a record of how the building interior appears today, 100 years after construction, and to provide some data on it's various features which certainly must have played an important role in the site history.

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KENTUCKY CAMP ASSAY BUILDING INTERIOR DOCUMENTATION

By Jim Britton
November, 2004

INTRODUCTION

Brief history of Kentucky Camp

Kentucky Camp was built in 1904 as the headquarters for the Santa Rita Water and Mining Company. Individual miners had mined this area for years. By 1886, these placer miners had given up and left the area. James Stetson, a mining engineer, convinced George McAneny and a few others to invest in a gold mining venture which would bring water approximately 8 miles from the Santa Rita mountains. Very little mining was actually done after the water system was completed.

In 1905, Stetson was killed in a fall from a hotel window in Tucson. Then McAneny's funds were tied up due to a divorce. He died in 1909. Eventually the site was acquired by Louis Hummel and his family and used as a cattle ranch until the 1960s. In 1989, the site became part of the Coronado National Forest in a land exchange transaction.

In 1991, the Forest Service began stabilization of the buildings. "Friends of Kentucky Camp" a non-profit volunteer organization, was incorporated as part of the Coronado National Forest Heritage Society in 1995, and is now working with the Forest Service to rehabilitate the site.

Historic Use of Assay Building

Building "E" has been referred to as the "Assay Building" due to the unique features constructed in one of its two rooms. Lewis Orrell Jr. a resident of Carefree, AZ. tried to determine how these features were used. Between November 1994 and July 1998 (based on letters in NFS file entitled "The Bundles"), he contacted several knowledgeable mining experts to get opinions on how the processing room might have been used.

There are four masonry features in the "ore processing" room. There is a "pedestal" (Figure 1) next to the west wall, a "platform" (Figure 2) along the north wall, a "pan or tray" with drain holes (Figure 3) along the south wall, and a subfloor rectangle "sump or tub" (Figures 3 & 19) along the front of the "pan". Orrell described, and in some cases, provided photographs of these features to the mining experts. The responses all centered around the pan with the drain holes and the tub into which water and waste material would have flowed.

Based on the responses to Lewis Orrell, here are some possible uses of the pan with holes and the adjoining subfloor tub.

1. Concentrate from sluices may have been brought to this building where it was further concentrated, then refined, by hand operation in the pan.
2. When the hydraulicking was stopped and field sluices cleaned up, the yield at the riffles would consist of free gold and considerable black sand. Material behind the riffles could have been physically removed and placed into buckets. The bucket contents was dumped into a rocker sluice and water would be added as the rocker was operated. Tailings from the rocker would empty into the catch basin or pan. Overflow would drain into the sump tub. Material in the catch basin (pan) may have been run over and over in the rocker to be sure all gold was recovered.
3. Buckets may have been dumped directly into the pan and washed by stirring to have the gold collect in the pan below the five holes which are approximately 1 1/2 inches above the pan base.

James Prudden of Salt Lake City responded to Orrell's request for suggested processing techniques in September 1995. Prudden stated that the tray (pan) was probably a concentrate handling receptacle where final separation of free gold and rock was accomplished. This could have been done with or without mercury; amalgamation would probably be more efficient. The sloping bottom of the tray (pan) and 5 drain holes, whose base is above the bottom of the tray would be suitable for the gold/amalgam to be retained by this catchment lip. Water would be used in either a "batch" or portable hose configuration and the slurry puddled to settle the gold. The rectangle "sump" (subfloor tub) was obviously used as a catchment for the tailing from the holes. The drain pipe at mid-level of this tank (tub) indicated water was likely used in the process. Once the water level in the tank reached to height of the drain pipe the liquid would exit the building through this pipe and dump down the hill side north of the building.

Proposed future use of this building

According to the "Kentucky Camp Historic Site: A Rehabilitation Plan" prepared in January 2004, Building E will become the "visitors' center" with long-term interpretive displays about mining and short-term displays about recreational opportunities in the area."

ROOM E-1

GENERAL ROOM INFORMATION

Walls -

All four walls of this room were mud plastered with a smooth surface equal to the fine smooth plaster seen in the Administration Building (Bldg. D) and Cabin C. A paint or slurry was applied to all four walls. On July 7, 2004, Jim Britton removed a small chip of the surface coating which he examined using a microscope at the Southwest Archaeology Team laboratory in Mesa. He wanted to determine if the grayish surface was the result of human application, such as a slurry or paint, or was it an absorbed stain from the ore processing in the adjacent room.

Under the microscope at the lab, it was determined that the color was in fact a very thin surface layer with no noticeable sand grains. This layer had a well defined interface with the mud plaster. It was an entirely different material. Under high magnification, examples were seen where base plaster material had broken from the surface coating leaving the surface coat extending out from the remaining base plaster. This clearly showed that the coating and the plaster were two separate applications.

Britton concluded that the grayish surface coat was applied by someone after the wall was mud plastered and was not a stain resulting from the ore processing activity. The material used to make the grayish color is not known. Britton stated that it could have been a cement wash applied to the mud surface.

This report will discuss and describe the condition and special features of all interior walls of this building. Any reference to the grayish surface will refer to it as being "paint" or "painted".

Ceiling -

This room had a cloth ceiling. Thin narrow wood molding that held the manta cloth to the rafters are still present next to all four walls (Figure 4). With the manta material missing, the ceiling joists, rafters, stringers, and wood shingles can be seen from below. The original wood is an aged dark color while the replacement pieces put in place in 1991 are a lighter color.

Wire feature - Bailing wire has been spliced to form a long continuous wire. This wire is wrapped around nails that have been placed in the side of the eastern and western most ceiling joists (Figure 23). The wire loosely spans east to west across all five joists, but is only attached to the two joists nearest the walls. It is not known how this had been used. It would not be sturdy enough to hold much weight if it had been used to hang things from.

Joists - The ceiling joists from the large room (E-2) rest on top of the wall that divides the building into two rooms and extend approximately three feet into this room. Each joist is spliced with an approximate overlap of 12 inches (Figure 24).

Floor -

The floor consists of 19 wood boards that are 5 1/8 inches wide and 1 board that is 3 3/4 inches wide. The current boards appear to be original. Some of the floor slopes to a low spot near the center of the room. Wind driven rain enters through the west door and tends to collect in this low area. The wood is in fairly good condition except for one board that has a hole and needs to be replaced.

This wood floor is elevated above the concrete floor in Room E-2. The step down going from Room E-1 to E-2 ranges in height from 4 1/8 inches on the east side of the doorway to 4 3/8 inches on the west side. From Room E-2 it can be seen that the wood floor is supported by various sized pieces of wood.

NORTH WALL of Room E-1

Wall dimensions -

Width - 12 feet, 2 inches (at point 5 feet above floor).

Height - 8 feet 11 1/2 inches (from the bottom of rafter just right of the wall midpoint). The adobe wall extends 4 inches above the bottom of the rafters.

Wall Description -

This wall appears to have been painted a gray or blue/gray color. According to the Munsell Soil Color Charts, the color ranged from 2.5Y N7/0 (the lighter areas) to 5Y 7/1 (the darker areas). According to the Munsell both of these colors are called "light gray." This color was applied to the fine smooth mud plaster.

The fine mud plaster on this wall is in relatively good condition. There are a couple of narrow cracks near the wall center. There are approximately 10 small holes that have been filled with mud. These filled spots range in size from 1 to 5 inches across. The roof above this wall has protected the plaster from erosion, even prior to the 1991 roof replacement. Currently there are no adobe bricks visible on this wall face.

For more detail see the Building "E" scale drawing, No. KC1106A, dated 6/16/92 during the 1992 P.I.T. project and revised by Britton in July 2004, which is on file at the NFS office in Tucson or you can refer to the size reduced copy in the appendix of this report.

Special Features -

Wall shelves -

Prior to "painting" this wall, there appears to have been shelves along the entire wall width midway up between the floor and the ceiling. Shelves are assumed to have been here due to the tan pattern left on the wall (Figure 5). The top of the top shelf was 43 3/4 inches below the ceiling joist while the top of the bottom shelf was 58 inches below the ceiling joist. This tan color matches the color of unpainted mud plaster. The material used for this shelving was 1 1/8 inches thick and resulted in the tan color (Munsell color 10Y 7/3) pattern seen on the wall.

There are three vertical tan stripes; one at each end and one in the center indicating there may have been three shelf supports. These supports would have been necessary since, unlike the shelf construction in the adjacent room (E-2), this wall has no "gringo boards" to support the shelves. The center stripe is basically in the center of the wall. At the point of measurement, the distance between the west vertical stripe and the center one is 69 inches while it is 68 3/4 inches between the center and the east stripe.

The wall surface between the horizontal shelf stripes is approximately 13 inches high. The exact measurement is varied due to the paint not being in a perfectly straight line. In some locations it appears that the paint may have ran behind the shelf where it made contact with the plastered wall surface. The area between these stripes is a dark shade of the gray color (5Y 7/1 on the Munsell Color Chart). The majority of the wall is a varied lighter shade of gray (Munsell Color Chart was 2.5Y N7/0). The extent of the varied lighter gray depends on it's exposure and wear. It can be assumed that whatever was stored on the shelves protected this area from fading. There are no holes in the darker area that would have indicated something had been nailed against adobe wall between the shelves.

The wall surface where the base board once was is the darker shade of gray. The base board, now missing, would have protected the area, from exposure, therefore allowing this 4 3/4 inch high area to retain more of its original painted color.

It is interesting to note that the above mentioned evidence indicates that the shelves were in place prior to painting the wall, while the base board was added after painting.

Initials -

There are two sets of initials carved into the mud plaster (Figure 5). These are located in the dark colored area between the horizontal shelf stripes. They are etched into the mud plaster to a depth of between 1/16 and 1/8 inch. These initials, EL and SM, were apparently etched since June, 1992, since they were not recorded on the 1992 P.I.T. scale drawings.

Geometric wall pattern -

There is a gray (5Y 7/1) pattern surrounded by a much lighter gray (10Y 7/3), located at the bottom right corner of the wall (Figure 6). The lighter gray surrounding this area appears to be a tan color similar to unpainted mud plaster. However, the Munsell charts call it "light gray". It appears something had set against or was attached to the wall and had protected the darker wall finish from fading. The top of the pattern was 36 inches above the floor with the west edge 21 1/4 inches from the east wall. The tallest part of the pattern is 30 inches high at its west edge and has a width of 15 3/4 inches.

WEST WALL of Room E-1

Wall dimensions -

Width - 8 feet, 7 inches (at point 5 feet above floor).

Height - 8 feet, 11 inches (at bottom of rafter at door center).

Wall Description -

This wall has a outside doorway (31 1/4 " x 81 1/8") located near the wall center. The north edge of the doorway is 39 inches south of the north wall and 33 inches north of the south wall.

This wall is in relatively good condition. There are two small eroded areas above the door. Recently rough mud plaster has been applied to these areas as well

a two narrow strips next to the door casing. The base boards are in place on both sides of the door.

For more detail see the Building "E" scale drawing, No. KC1106A, dated 6/16/92 during the 1992 P.I.T. project and revised by Britton in July 2004, which is on file at the NFS office in Tucson or you can refer to the size reduced copy in the appendix of this report.

Special Features -

The south door casing has a hole which runs through the entire adobe wall to the exterior wall face. There is a 1 inch diameter pipe containing four wires running through this hole (Figure 25). The hole is located 8 1/2 inches above the floor and 3 inches north of the south edge of the casing board. This appears to be a remnant of the telephone system used during the mining and perhaps the ranching era.

SOUTH WALL of Room E-1

Wall dimensions -

Width - 12 feet, 8 inches (at point 5 feet above floor).

Height - 9 feet, 1 inch (from bottom of rafter just left of the door to Room E-2).

Wall Description -

This wall has an interior doorway that connects this room with Room E-2. The door opening is 31" x 80 1/2". The center of this wall is in relatively good condition. However, next to the south east corner there is an area approximately one to two feet wide that has deep erosion impacting the adobe bricks. The mud plaster has also been eroded off in various locations near the ceiling and wall base. Melted plaster is seen at various locations where it dried while running down the wall face. A piece of plaster above the door was delaminating from the adobe bricks making it possible to determine that the mud plaster at that point was exactly one inch thick.

For more detail see the Building "E" scale drawing, No. KC1106A, dated 6/16/92 during the 1992 P.I.T. project and revised by Britton in July 2004, which is on file at the NFS office in Tucson or you can refer to the size reduced copy in the appendix of this report.

Special Features -

Manta cloth -

The second ceiling joist east of the west wall sets on the south wall top. Wedged between this joist and the thin narrow wood molding used to hold the manta in place is a very small piece of manta material (Figure 7). Another small piece of manta cloth can be seen at the southeast corner.

The narrow boards or molding strips that held the manta in place measured 3/8 x 7/8 inches. These were nailed to the bottom of the ceiling joists along each of the four room walls using round wire cut style nails (Figure 4). These strips are still in place today along all four walls.

Pipe -

There is a pipe with a 9/16 inch outside diameter and a 5/16 inside diameter protruding into this room a distance of 5 1/2 inches (Figure 8). It goes through the second course of this south wall and is embedded in the platform in Room E-2. It terminates in the platform where it sticks slightly above the surface of the cement feature located at the center edge of the platform (Figure 9).

EAST WALL of Room E-1

Wall dimensions -

Width - 8 feet, 9 inches (at point 5 feet above floor).

Height - 9 feet, no inches (from the bottom of rafter midway between right side of window and the SE room corner). The wall extends 4 inches above the bottom of rafters.

Wall Description -

This wall has a window with an opening measuring 33 1/2" x 60" located 28 1/2" above the floor. The fine mud plaster on the wall has been eroded allowing the adobe bricks to be visible above, below, and along the south side of this window. There is an area approximately two feet wide running from floor to ceiling that still has intact original plaster. Melted plaster is seen at various locations where it dried while running down the wall face.

For more detail see the Building "E" scale drawing, No. KC1106A, dated 6/16/92 during the 1992 P.I.T. project and revised by Britton in July 2004, which is on file at the NFS office in Tucson or you can refer to the size reduced copy in the appendix of this report.

ROOM E-2

GENERAL ROOM INFORMATION

Walls

This is the only lime plastered room at Kentucky Camp. All other rooms were mud plastered using a fine grain sand mud mix to create very smooth wall surfaces.

During the July P.I.T. in 2003, Rodolfo del Castillo experimented with lime plaster along the base of all four walls in this room. He mixed lime, sand, and dirt. Marie, Susan, and Rodolfo applied this lime mix to the eroded basal areas. All of these areas now exhibited some degree of cracking and should be removed. Britton suggested using a mix consisting of only lime and sand at a ration of 1 to 3 or 4. If it is desired to tint the new lime plaster, which will dry very white, muddy water can be used as a stain. Britton demonstrated this technique to both Chris Schrager and Rodolfo.

Ceiling -

The missing or damaged roof components were replaced in 1991 by Forest Service personnel. The original wood is an aged dark color while the replacement pieces are a light color (Figure 10). There is no evidence, such as nail holes in the bottom of the original ceiling joists, to suggest that there ever was a closed ceiling. The rafters, ceiling joists, stringers, and wood shingles can be seen from below.

Large round four inch nails with 7/16 inch round heads were used in constructing the rafters.

Floor -

This is the only non-wood floor in any of the five buildings that make up Kentucky Camp. The floor is made of concrete which is approximately four inches thick. The measurement for this thickness was made at the square floor opening located near the south west room corner. A thin (approximately 1/4 inch) cement mortar cap was later applied over the concrete base. This thin layer is cracking and is missing in many places exposing the rough concrete surface below (Figure 3).

There are two small rectangular holes in the floor along the south wall next to the south west room corner, below where shelves appear to have been. It appears two vertical supports for the shelves were embedded in the concrete floor. Another small square hole is located near this southwest room corner. These features will be discussed in detail below.

The floor mortar most likely was applied at the same time cement was applied to the pedestal and the platform. They have the same texture and according to the Munsell Soil Color Charts they all have the same light gray (5Y 7/1) coloration.

NORTH WALL of Room E-2

Wall dimensions -

Width - 24 feet, 4 inches (at point 5 feet above floor).

Height - 9 feet (at east edge of platform and at the east side of the door to Room E-1).

Wall Description -

This wall has a 31" x 80 1/2" doorway to Room E-1 and one outside window with an opening of 33 3/4" x 60 1/4" located 29 3/8" above the floor. The west edge of the door is located 14 inches from the north west corner of the room. The east edge of the window is 49 inches west of the north east corner.

The lime plaster above the platform is in relatively good condition. There is one crack that runs from the top of the platform to the ceiling. As is the case in all of the other walls in this room, this wall has deteriorated or missing plaster on the three bottom courses. New plaster has been applied to these courses, but it has shrink cracks and should be removed and replastered.

For more detail see the Building "E" scale drawing, No. KC1106D, dated 6/29/92 during the 1992 P.I.T. project and revised by Britton in July 2004, which is on file at the NFS office in Tucson or you can refer to the sized reduced copy in the appendix of this report.

Special Features -

Platform -

The platform is located 38 1/2 inches east of the door way to Room E-1 and 8 feet 6 inches west of the north east corner. It extends 8 feet 5 inches along the north wall when measuring at the top. At the bottom it is 8 ft 7 inches long due to a 2 inch angled base at the east end. The angle is caused by the bottom course extending 2 inches beyond the courses above (Figure 11). The west end has a vertical face. At the east end, against the north wall where all the cement plaster is still intact, the height is 15 inches. The platform depth from the front face to the north room wall is approximately 34 inches. There is a gap between the platform and the wall of approximately 5/8 inches along the entire length.

The east end of the platform is constructed with red bricks (Figures 11 & 12). These red bricks are laid in mud mortar with no lime mortar in the joint voids. These bricks are 3 courses high and are topped with one course of adobe bricks. The red bricks start at the east end of the platform and go 27 inches west and probably go from front of platform to the north room wall. Due to intact cement plaster in this area, Britton could not visually confirm if bricks extend to the north wall face.

There is some evidence that lime was used on top of the platform below the cement plaster. However, cement is seen directly on adobe bricks in some places. It may be that the builders only used the lime to fill in voids and help anchor the cement plaster. The cement plaster ranges from 1/4 to 1/2 inches thick. Most of the plaster on the back half of the platform is still present with cracks.

Pipe Feature

There is a cement feature built into this platform (Figures 9, 11, & 12). It is located between 36 and 48 inches (measurements include the cement plaster) west of the east end of the platform. This feature is shaped like a three sided shallow bowl with a non existent fourth side at the platform front edge. This feature measures 7 3/4 inches front to back and 11 1/2 to 12 inches across the front of the platform. Embedded in, and sticking upward through the concave cement bottom are two small pipes. The west pipe has the following diameters: 9/16 (OD) and 5/16 (ID). The east pipe measures 1/2 inch OD and 1/4 inch ID. It should be noted here that the 1992 scale drawing, KC1106E, originally showed only one pipe. Therefore, I drew in the second one. The two pipes had different diameter measurements. The west pipe matches the diameter of the pipe in Room E-1. It can therefore be assumed that it is the pipe running through the platform and north wall and can be seen extending several inches into Room E-1 just above the wood floor (Figure 8).

Shelf pattern on wall

There is a very subtle or faint pattern extending from the east edge of the window to the north east room corner. There is a stripe pattern which result from color difference with the surrounding wall surface. It is difficult to determine the exact width of the lines. The bottom stripe (possible bottom shelf) is 50 inches above the floor. The middle stripe or stripes appears to be wider (1 1/2" to 1 3/4") than the top and bottom stripes and is located 11 to 12 inches above the bottom stripe. The top stripe or shelf is 11 to 12 inches above the middle one.

WEST WALL of Room E-2

Wall dimensions -

Width - 12 feet, 3 inches (at point 5 feet above floor).

Height - 9 ft 1 inch (from adobe wall top to floor at point next to the south edge of the pedestal).

Wall Description -

This wall is in relatively good condition except for the basal erosion along the entire wall which has caused the lime plaster to deteriorate and fall off. This basal erosion is limited to the bottom three courses. This wall plaster was replaced in July 2003. However due to shrink cracking, it should be removed and replastered using a lime and sand mix without dirt.

Based on comparing the wall condition today to the 1992 P.I.T. scale drawings very little has changed. However, the pedestal built against the wall has suffered loss of plaster from the top and a portion of the front face. Most likely this damage was caused by people hitting it and piling various items of construction material on top of it.

This wall was used to determine current color or the original lime plaster. Based on the Munsell Soil Color Chart it is 5YR 8/2 or pinkish white.

For more detail see the Building "E" scale drawing, No. KC1106D, dated 6/29/92 during the 1992 P.I.T. project and revised by Britton in July 2004, which is on file at the NFS office in Tucson or you can refer to the size reduced copy in the appendix of this report.

Special Features -

Wood Wall Feature

Full dimension gringo boards (2 x 4s) protrude through lime plaster from 1 to 1 1/2 inches depending on plaster thickness. The distances between each 2 x 4

along this wall, are as follows: south west corner to first one is 1' 6 3/4", then 2' 11 1/8", then 2' 11 3/8", then 3' 1/2", and then 1' 1 1/2" to the north west corner. An irregular plaster line runs between each gringo board (Figures 13 & 14). This line is caused by missing or overlapping lime plaster episodes. Britton feels the overlapping pattern of the plaster line suggest the following sequence of construction:

1. Four gringo boards (2 x 4s) were embedded in wall during wall construction. They are located approximately 54 inches above the floor.
2. A 2 x 4 was nailed flat to these protruding gringo boards. Evidence to support this is seen where this 2 x 4 would have met the north and south walls. The north wall lime plaster has an indentation measuring 2 x 4 1/4 inches and the south wall one measuring 2 x 4 inches. This suggests that the 2 x 4 was in place before the wall was lime plastered. There are two square nail holes in the ends of the three southern most gringo boards. The square shape of the nail holes are very clear. The fourth gringo board has three nail holes. The two lower holes are clearly square shaped while the top hole is more rectangular. Perhaps the rectangular hole was caused by some nail movement or a second hole placed next to another hole. These square shaped holes are the only indication that square nails were ever used in this building. All existing nails, even in the original roof construction are large round nails.
3. The upper portion of this wall was lime plastered down to the horizontal 2 x 4.
4. The bottom portion of the wall from the floor up to the 2 x 4 was plastered next. This is determined by the fact that it overlaps the upper plaster behind the horizontal 2 x 4 (Figure 14). The person applying the plaster would not have been able to see the wall face behind the 2 x 4 and to smooth this area with a trowel. According to the Munsell Soil Color Chart this original lime plaster is now 5YR 8/2 (pinkish white).

During a visit to the site in October, 2004, Britton noticed that the north exterior wall of room E-1 has a 2 x 4 nailed to several gringo boards which protrude from the wall. The interior feature described in #2 above would have looked similar to this one (Figure 26).

Shelf impressions

The west ends of two shelves constructed against the south wall abutted the west wall prior to lime plastering. This was determined by the top shelf leaving an indentation or impression in the plaster at the point of contact with the adobe bricks in this wall (Figure 15). The bottom indentation has been covered by lime plaster during previous repair of the basal erosion along this wall resulting in no evidence it ever existed. The top shelf impression was filled in with lime plaster which is very white in color, thus the impression pattern can be determined by the color contrast with the original darker plaster (5YR 8/2). If it wasn't for the single remaining gringo board, there would be no evidence that a second shelf ever existed.

The exact depth of the two shelves can not be determined due to the impression having been filled in. However, based on the pattern of the filled in impression the shelf depth could have been up to 12 1/2 inches. The pattern of the top shelf impression turns downward at the front edge of the shelf which might indicate that there was a wood strip attached to the bottom front edge (Figure 15). However, based on the 1992 P.I.T. scale drawings, the two shelves were 12 inches in depth and there was no strip attached to the front bottom edge.

Adobe Pedestal

This pedestal is constructed against this west wall (Figure 1). It's north side is located 50 1/2 inches south of the north wall. It is 32 inches high and consists of seven courses of adobe bricks. The bricks were laid in a pattern so that they form a 31 1/2 inch square including the cement plaster.

Except for a small piece at the back left corner, all the plaster has broken off the pedestal top exposing the adobe bricks that make up the top course (Figure 16 & 17). This small remaining top piece shows that a thin layer of cement plaster was applied over lime. The exposed top revealed that four bricks each measuring 18 x 12 inches were used to form each course. The four bricks were laid in a pattern that left a center hole which was then filled with adobe mud. There is still patches of lime plaster seen on the top of the pedestal covering portions of the adobe bricks. It appears the entire top may have been lime plastered and then a thin cement plaster applied over the lime.

Approximately half of the plaster on the pedestal front has broken off. Based on the exposed courses, the pedestal was seven courses high. Between each course there is lime mortar which would, at first glance make one assume that the bricks were laid in lime mortar. However, based on close examination of the top course it is obvious that only the outside edges of the joints were filled with lime and that the remainder was mud filled (Figure 17). Why would they use lime in these mortar joints? One scenario might be that the lime was used to fill the outer voids in the mud mortar joints to form an anchor for the cement plaster. Since cement is not as compatible with adobe as it is with lime, the cement would hold to the lime better than to the adobe. The three exposed sides of the pedestal have a thin layer of cement plaster (Munsell - 5Y 7/1, light gray) over the adobe bricks and lime mortar joints. The fourth side was built against the west wall but it is now separating from the wall. At the top there is a gap measuring between 3/8 to 1/2 inch wide the entire width of the pedestal.

SOUTH WALL of Room E-2

Wall dimensions -

Width - 24 feet, 10 inches (at point 5 feet above floor).

Height - 8 feet, 10 1/2 inches (at the west side of the drain pan).

Wall Description -

This wall has a window with a 33 3/4" x 60 1/4" opening located 29 1/2" above the floor and an external doorway that is 30 3/4" x 80 1/4". The east edge of the window opening is located 4 feet 2 1/2 inches west of the east wall. The west edge of the door opening is located 5 feet 1 1/2 inches east of the west wall.

When the 1992 P.I.T. scale drawings were made, there was exposed adobe bricks above the window (4 courses) and the door (4 courses), and 3 courses along the entire base of the wall. Based on repair work done during the March 2002 and July 2004 P.I.T. work days, these exposed areas have expanded to nearly the entire length of the wall. This expanded damage was most likely due to removal of old loose deteriorated plaster while preparing the wall for replastering.

Between the door and the south west corner, there were two shelves built against the wall. These were constructed prior to the room being lime plastered and will be discussed below as a "Special Feature." Another "Special Feature" connected to this wall is the five hole drain pan which also will be discussed below.

The wall surface above where the 5 hole drain feature meets the south wall has been modified and patched at least three times. At some point in time, a cement plaster was applied over the adobe bricks. This probably served as a "backsplash"

and was done at the time the drain pan was built to protect the adobe wall from water used in the ore processing activity.

Later the room walls were lime plastered. Lime plaster was applied over the cement "backsplash", explaining why there is currently evidence of patches of lime over cement in this area. At the midpoint the drain tub there is currently cement plaster covered by lime 17 1/2 inches above the tub top indicating that the "backsplash" would have extended up the wall to at least that point.

For more detail see the Building "E" scale drawing, No. KC1106D, dated 6/29/92 during the 1992 P.I.T. project and revised by Britton in July 2004, which is on file at the NFS office in Tucson or you can refer to the size reduced copy in the appendix of this report.

Special Features -

Five Hole Drain Pan -

The east side of this feature is located along the south wall 7 feet 1 1/2 inches west of the east wall. It appears it was constructed using concrete for the back and two sides while the front used red bricks and concrete to form the five openings. However, there could be red bricks under the top coat of cement. Since these three walls are intact, the inside construction can not be determined at this time. The hole openings measure 2 inches by 4 inches. The concrete was plastered with cement mortar. The round top over the red bricks was formed by applying approximately 1 1/2 inches of cement. Some of this cement had broken off exposing its thickness (Figure 18).

Dimensions:

Length - Outside - 59 1/2 inches, Inside - 50 1/2 inches. All four side walls are approximately 4 1/2 inches wide with rounded tops.

Width - Outside - 47 1/2 inches, Inside - 38 3/4 inches

Based on everyone's best guess, water would have been used in this pan. The inside bottom is approximately 1 1/2 inches below the bottom of the five openings. These openings, formed by two courses of mortared red bricks, would have allowed water to flow into the rectangular cement tub built below floor level (Figure 19). The heavy particles, including gold, would have settled and been caught in the pan behind the 1 1/2 inch high lip below the openings.

The pan slopes down toward the five holes. The sides begin 11 inches high and slant down to 8 1/2 inches at the front. The back of the pan is 13 1/2 inches high against the wall making it 2 1/2 inches higher than where it meets the sides.

The entire concrete pan has detached from the wall leaving an open gap between it and the wall. This gap most likely was caused by erosion of the wall adobe.

Subfloor Tub -

This tub or sump was constructed below the floor surface. It is lined with cement that flares outward at the top. Approximately 60 inches of its south side is attached to the pan feature so that water waste could flow through the five holes into this tub. When the tub filled to a point, the "slime" and excess water would drain through a 4 inch pipe (OD) to the outside of the building (Figure 19). The bottom of the 3 7/8 inch pipe is located 10 1/2 inches below the floor surface. This pipe extends 72 inches beyond the exterior north wall face (Figure 20) where it narrows to 3 3/8" to 3 1/2" at its end.

The tub was partially filled with dirt and stones. Therefore, Britton had to excavate a portion of the fill to verify it had a cement bottom and to get depth measurements.

Dimensions:

Inside Length - $69 \frac{3}{4}$ +/- inches. (The surface is not real smooth)

Width - 25 +/- inches

Depth - $26 \frac{7}{8}$ inches (at one excavated point)

The top flares outward adding 2 to 3 more inches to the dimensions of the opening at the floor surface.

Bench or Shelf Impression

The 2 x 4 support next to the south wall at the south east corner is anchored into the east wall adobe bricks with its top 26 inches above the floor. There is an impression in the south wall that indicates that something was laying on top of the 2 x 4 support and made contact with the south wall before the wall was lime plastered.

Shelf Structures -

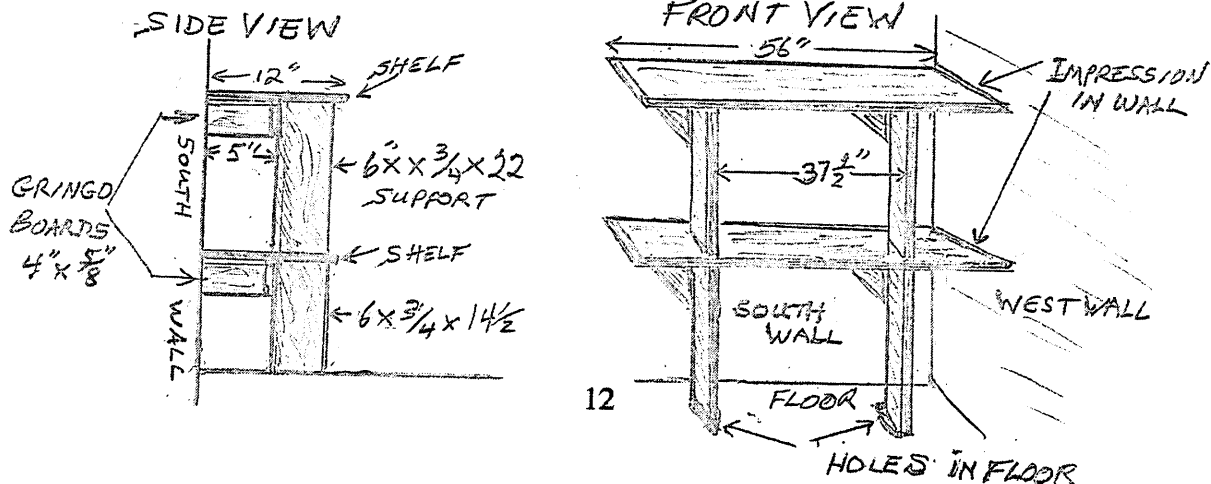
There is evidence that two shelves were constructed against the south wall between the door and the south west corner. Due to previous patching and replastering some of the evidence has been covered over (Figure 15). However, with the features still visible, it is apparent that two shelves were constructed here prior to the wall being lime plastered.

Originally four gringo boards, measuring 4 inches high and $\frac{5}{8}$ " thick, protruded 5 inches out from the wall face. Today, there is only one of these still in place. There are two empty holes where the boards are missing and one hole not visible since being covered by lime plaster (Figure 15). Based on the two open holes, the boards were embedded into the adobes a distance of $5 \frac{1}{4}$ " and 6". It should be noted that it is possible that this hole had been filled with mud sometime prior to the lime plastering. A problem with having many volunteers with varying experience and knowledge work at a site, is that some very important subtle evidence may be obliterated forever.

These four gringo boards would have supported two shelves that were 56 inches long and 12 inches wide. Based on the location of the gringo board still in place and the hole above it, there would have been $22 \frac{1}{2}$ inches between the two shelves. The bottom shelf was $14 \frac{1}{2}$ inches above the floor.

There are two rectangular holes in the floor concrete directly below where the gringo board shelf supports were located (Figure 21). These holes at first appeared to be only impressions in the concrete floor. However, while cleaning the dirt away it became apparent to Britton that there were still remnants of wood in the two holes. The hole nearest the door had wood broken into two pieces at the surface. He was able to remove the portion nearest the wall to get a depth measurement. The wood extended completely through the floor a distance of at least 5 inches below the floor surface.

Shelf Sketch and Dimensions (PROPOSED BY JIM BRITTON)



EAST WALL of Room E-2

Wall dimensions -

Width - 12 feet, 10 1/2 inches (at point 5 feet above floor).

Height - 9 feet 2 1/2 inches (at point at north end of bench).

Wall Description -

This wall has two windows. The window toward the north is 33 3/4" x 60 1/4" while the other is 33 7/8" x 60 1/4". Both are located 29 5/8" above the floor. The 1992 P.I.T. scale drawing shows the wall in relatively good condition except for the same three course high basal erosion present on all of the walls in this room. The top three courses above the windows were plastered in March 2002. Due to major shrink cracking, that plaster was removed in July 2003. According to Chris Schrager (NFS archaeologist), Rodolfo del Castillo replastered it using a lime and sand mix (1 lime to 2 sand) during the July 2004 P.I.T.

There is a bench or shelf feature located along this wall beginning at the south east corner and ending at the south edge of the north window. This length is based on an impression in the wall. This feature is discussed in detail below.

For more detail see the Building "E" scale drawing, No. KC1106D, dated 6/29/92 during the 1992 P.I.T. project and revised by Britton in July 2004, which is on file at the NFS office in Tucson or you can refer to the size reduced copy in the appendix of this report.

Special Features -

Bench or Shelf

There are two wood, 2 x 4, supports still present next to the east wall. Each support consists of a horizontal and a vertical 2 x 4 (Figure 3). The vertical pieces (2 1/8" x 3 7/8" and 2 1/4" x 4") are anchored into the concrete floor. The horizontal pieces (1 7/8" x 3 5/8" and 1 7/8" x 3 3/4") are embedded in the adobe bricks of the east wall. Large round nails that match the nails used in the rafters, were used to attach the vertical and horizontal 2 x 4s. Since the wood dimensions and the nails are similar to or match the rafter materials, it can be assumed this feature was constructed at the same time as the roof. At first Britton questioned the age of the horizontal pieces since their size was less than the vertical pieces. After checking several original rafters, he determined that the smaller 1 7/8 was not too uncommon and came to the conclusion that they were original pieces.

The supports are not set at equal heights nor are they level. The 2 x 4 support next to the south wall is anchored into the east wall with it's top 26 inches above the floor. The west end of this 2 x 4 is supported by a vertical 2 x 4 that is 26 1/4 inches at it's top.

The second support located approximately 79 inches (ranged from 78 7/8 to 79 1/4) north of the south wall is set at a downward angle. At the east wall it is 25 3/8 inches high and at the vertical 2 x 4 support it is 23 5/8 inches high. This difference of 1 3/4 inches in height may be explained if the 2 x 4 extends through the concrete floor and rests on the ground below as was the case with the shelf supports in the south west corner. By not being anchored on a firm base the 2 x 4 could have slipped downward through the concrete floor and caused this height difference.

Marks or impressions in the east and south walls indicate a shelf or bench top was in place prior to the wall being lime plastered. In Figure 3, a frame consisting of four boards can be seen. It is not long enough to span the entire distance between the supports. It therefore, may have been placed there by someone and not been used with the supports. The photo in Figure 3 was taken by Britton in February 1999. The frame work is now missing.

OTHER FLOOR FEATURE of Room E-2

Square Floor Hole

On the floor near the south west corner there is a nearly square hole measuring 6 by 6 1/2 inches in the concrete floor. Inside the hole is a square metal plate measuring 5 3/4 inches square. The metal plate has a 1 1/2 inch lip extending upward on all four sides. There is a round hole in the center of the plate which has a 1/2 lip extending upward. The hole opening measures 2 3/4 inches OD and 2 3/8 inches ID (Figures 21, 22 & 27).

Britton using a 1/4 inch diameter metal probe, inserted it 23 inches straight down by pushing it with his hands and was not able to hammer it deeper. He also pushed and hammered the probe at an angle under each side of the metal plate. The probe penetrated at each angle meaning the hole widens under the plate and floor to some unknown distance. The plate was loose and could be removed, however a large bent nail had been set in concrete to apparently help hold the plate in position. Some type of equipment apparently had set over this opening.

For more detail see the Building "E" scale drawing, No. KC1106E, dated 6/29/92 during the 1992 P.I.T. project and revised by Britton in July 2004, which is on file at the NFS office in Tucson or you can refer to the size reduced copy in the appendix of this report.

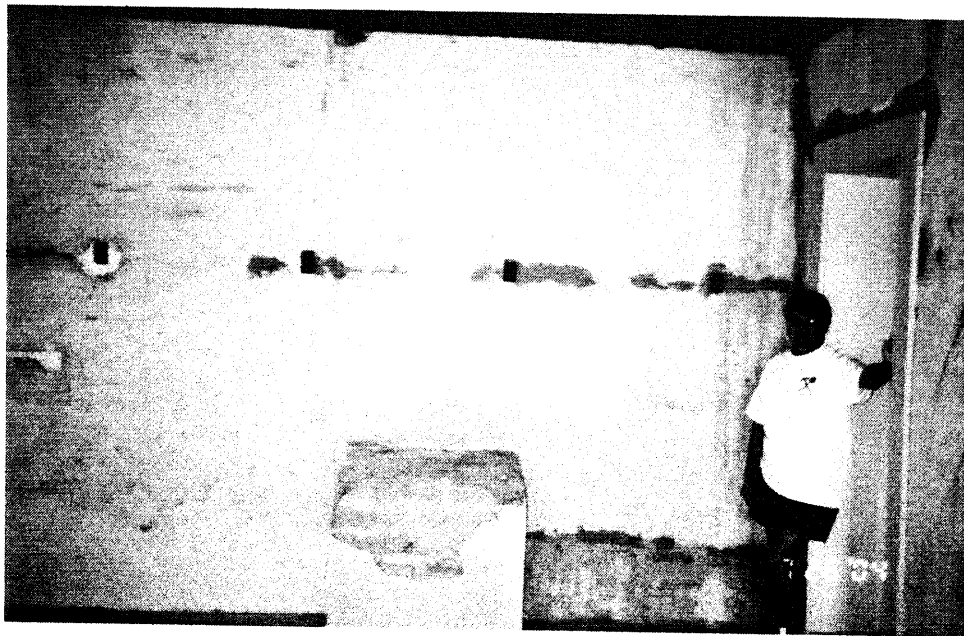


Figure 1 - Pedestal built against the west wall of Room E-2. Note the four 2 x 4 "gringo boards" seen just above head height. Marie Britton is standing in the doorway to Room E-1.

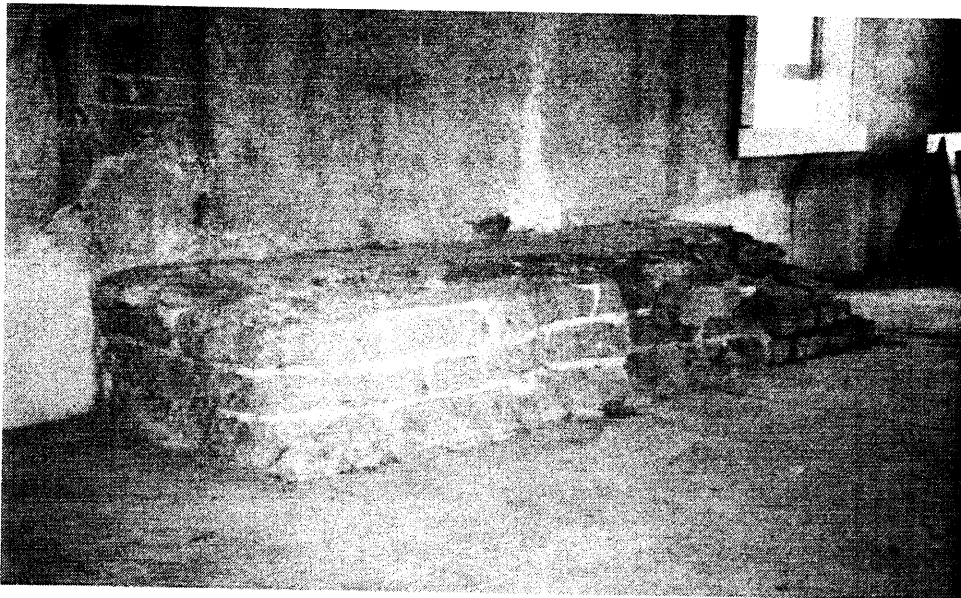


Figure 2 - Platform built against the north wall in Room E-2. Adobe brick construction except for the red bricks at the east end. The bricks were laid with mud mortar. The lime mortar seen here is only at the edge of the mortar joint.

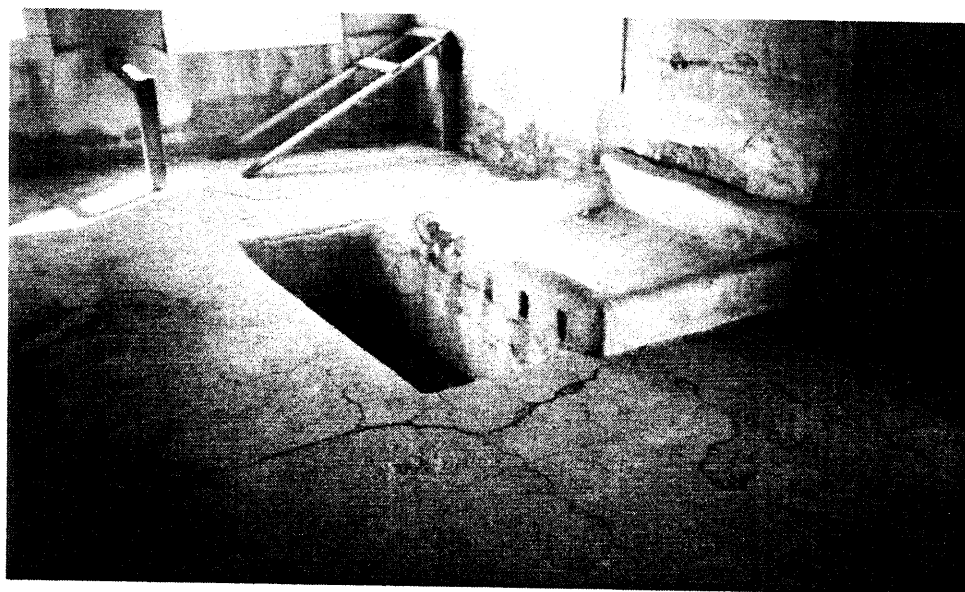


Figure 3 - Five hole drain pan built against the south wall of Room E-2. A subsurface tub is located below to catch the over flow from the pan. In the background next to the east wall is the 2 x 4 supports for a shelf or bench. Note the concrete floor where the top thin smooth cement layer is chipping off.



Figure 4 - This shows the north wall of Room E-1 with the wood trim nailed to the bottom of the ceiling joist. This trim board was along all four walls and had been used to hold the manta cloth in place.

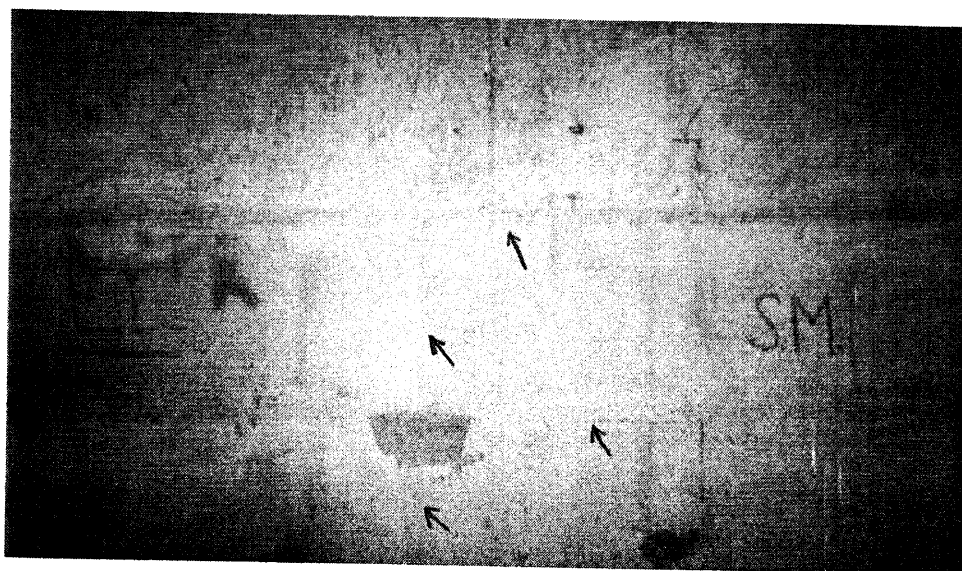


Figure 5 - The two horizontal lines and one vertical line near photo center are mud plaster color and indicate two shelves or something was against the wall before paint was applied. Initials are incised on each side of the center line.



Figure 6 - Geometric wall pattern seen on the north wall of Room E-1. The wood on the right is part of the east wall window.

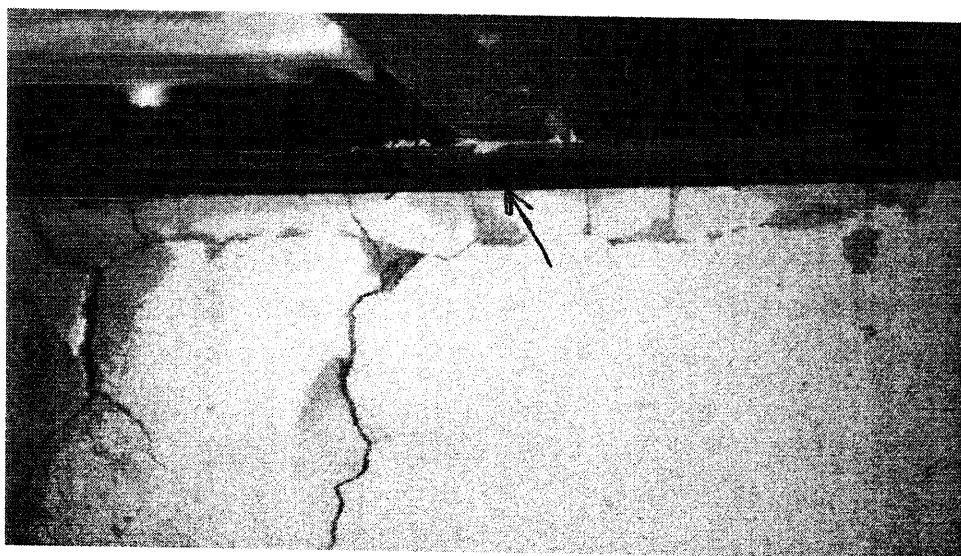


Figure 7 - The piece of white material seen in this photo, between the trim board and the ceiling joist of Room E-1, is a small piece of manta cloth. The cloth was used as a ceiling in place of wood boards.



Figure 8 - This pipe located near the south east corner extends 5 1/2 inches into Room E-1. The other end of the pipe is embedded in the cement feature in the platform shown in Figure 9.

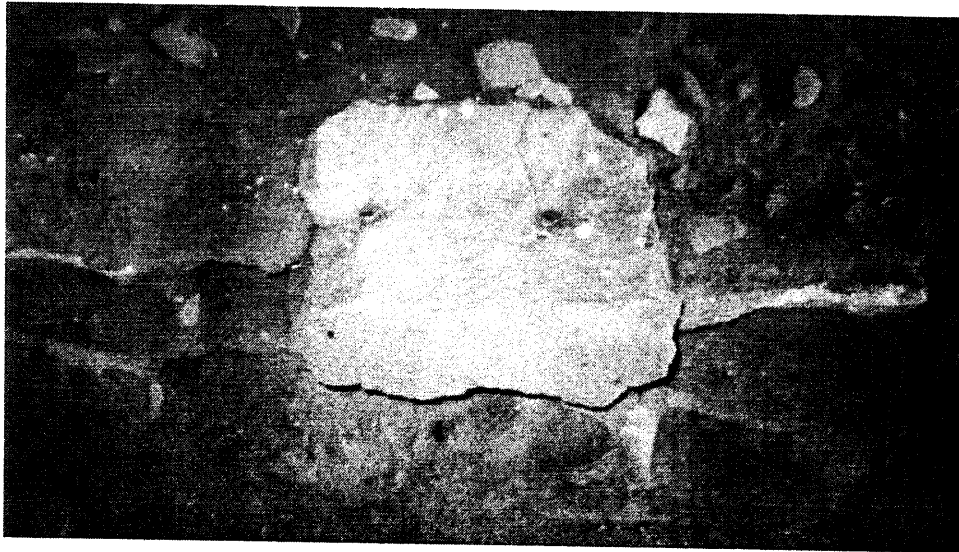


Figure 9 - This cement feature is located in the platform in Room E-2. Two pipes are seen embedded in the cement. The left one extends through the platform and north wall and extends into Room E-1.

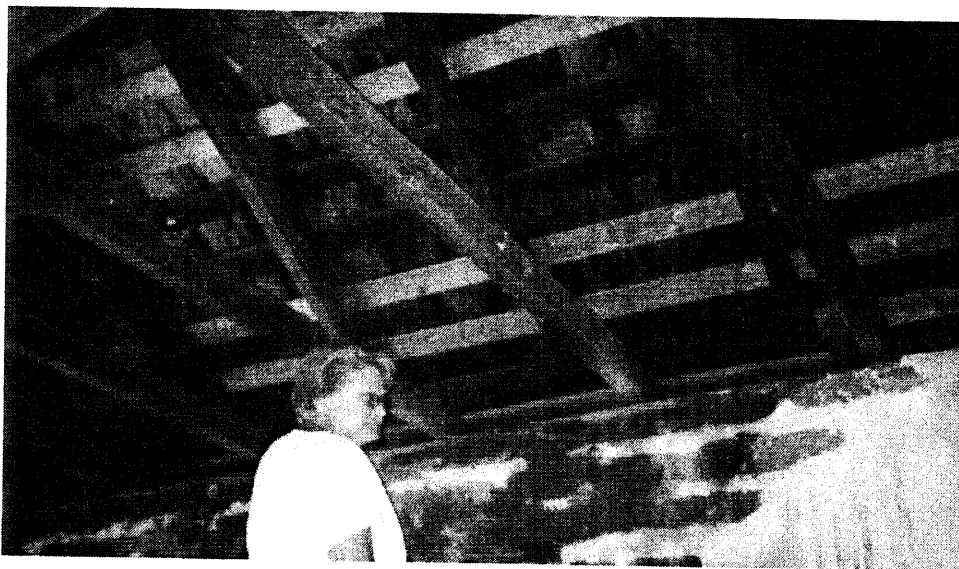


Figure 10 - This photo shows the roof material at the south wall of Room E-2. The original wood is dark in color due to age while the replacement pieces are a light color.

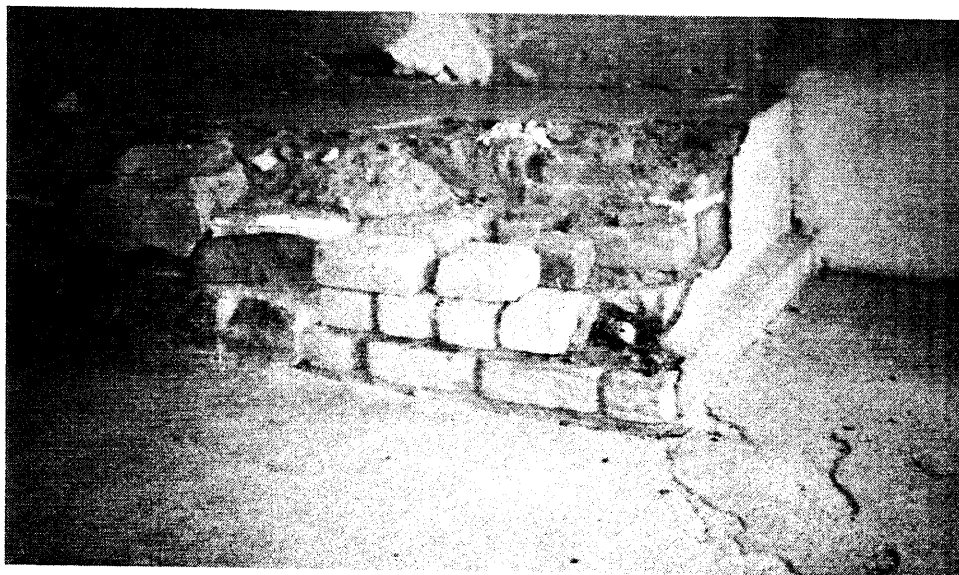


Figure 11 - The platform is 2 inches longer at the bottom than the top. This difference is due to the bottom course of red bricks as shown in this photo. The red brick section is 27 inches across at the bottom course.

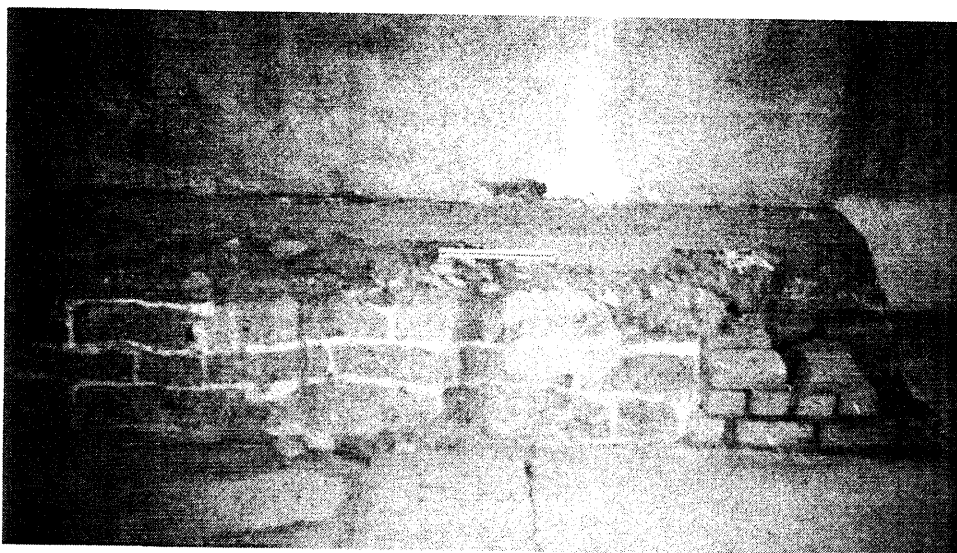


Figure 12 - This photo shows the 8 feet 7 inch length of the platform located along the north wall of Room E-2. The red brick section can be seen on the right side. Only about half the top cement plaster is still in place.

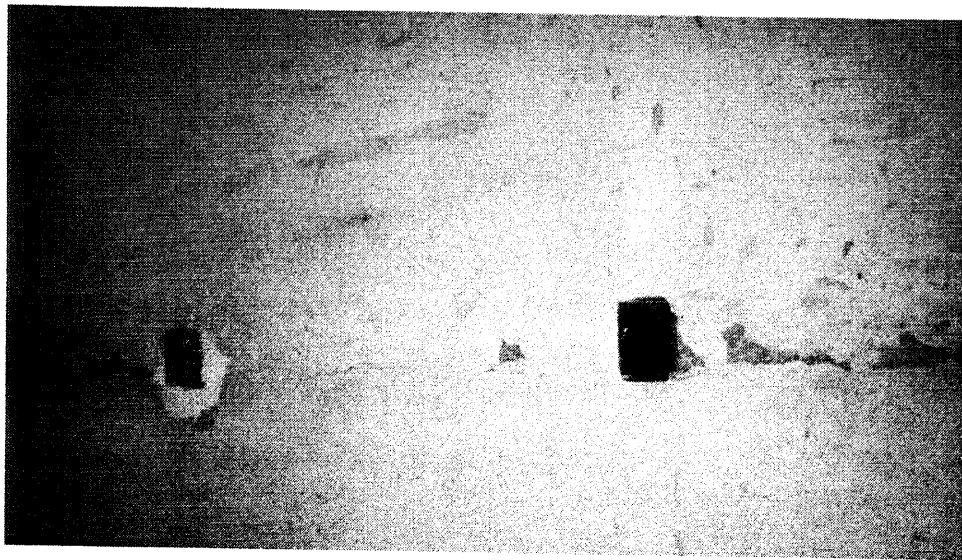


Figure 13 - The ends of two of the four 2 x4 gringo boards located along the west wall of Room E-2. A 2 x4 had been nailed to these ends. The "plaster line" seen between each was caused by not being able to apply the plaster behind the 2 x4 that extended across the entire wall.



Figure 14 - This is a close up of the "plaster line" that appears between each of the four 2 x 4 gringo boards along the west wall of Room E-2. The overlap of the plaster indicates that the area below the 2 x 4s was applied last.

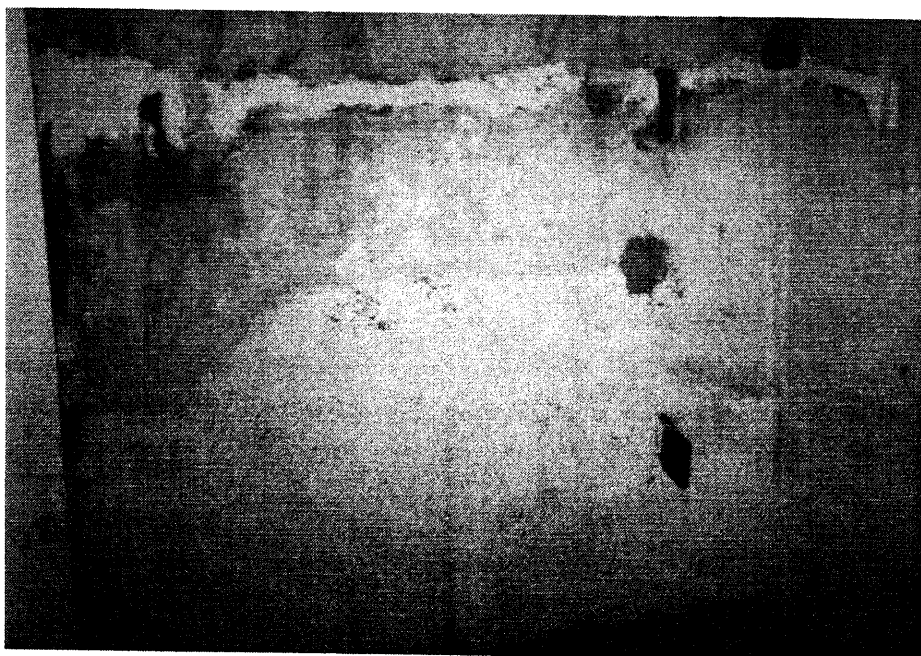


Figure 15 - This photo shows the south and west walls next to the corner of Room E-2. The white line is due to an application of new lime plaster it filled the shelf impression in the original plaster. The two dark slots in the line (see arrows) are holes of missing shelf supports. Only the bottom right shelf support remains. The bottom left hole has been plastered over.

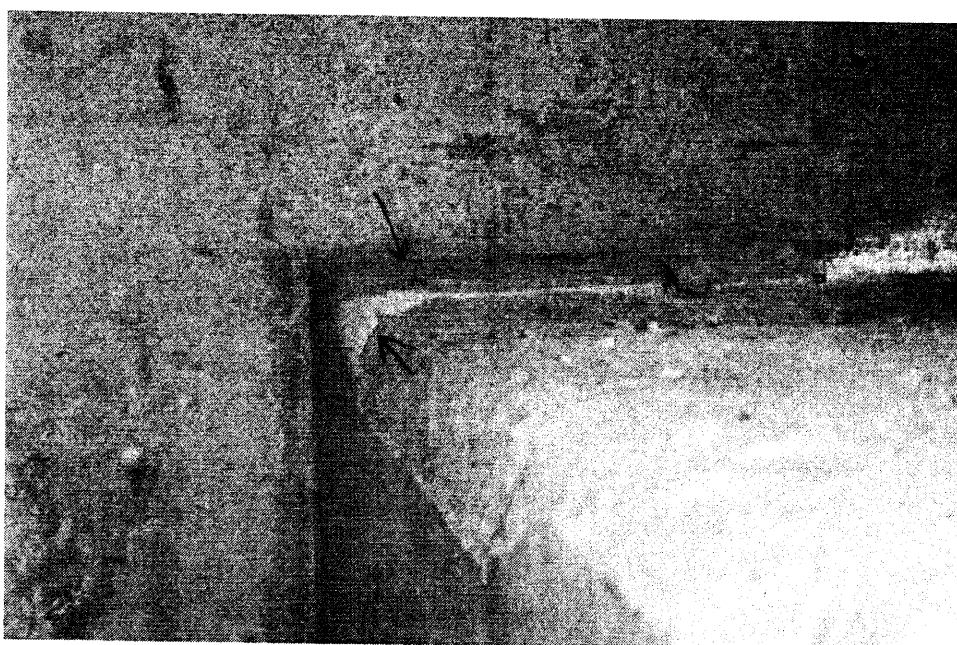


Figure 16 - The only remaining original plaster on top of the adobe pedestal is at the back left corner and is shown in this photo. The top arrow points to the top cement (gray) coat while the bottom arrow points to the whitish lime coat.

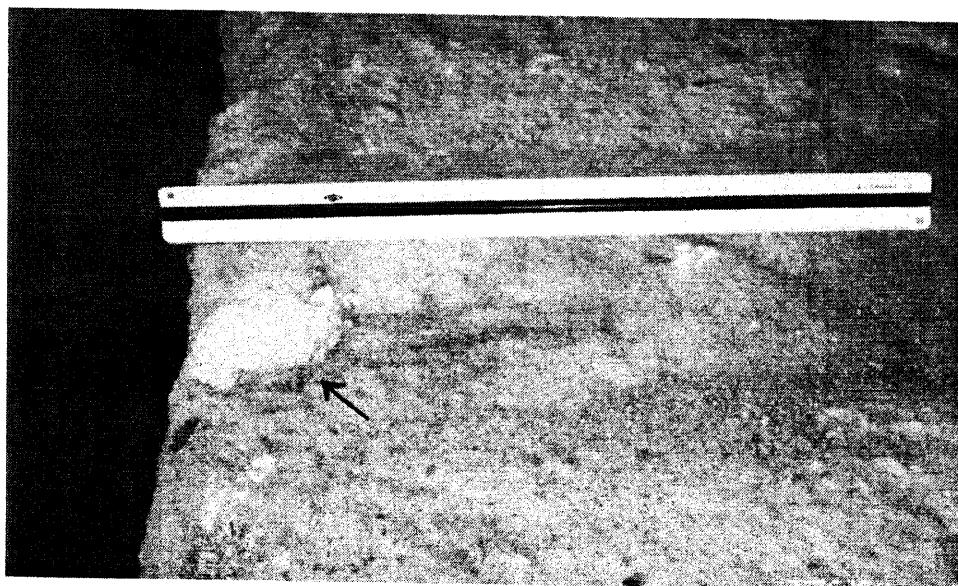


Figure 17 - The top of the pedestal in Room E-2 was constructed with adobe bricks using mud mortar. The outside edge of the mortar joints have lime mortar as seen in this photo at the left edge. The total length of scale is 12 3/4 inches.



Figure 18 - Two of the five drain holes in the processing pan are shown. These holes were formed around red bricks seen in here where the cement has broken off.

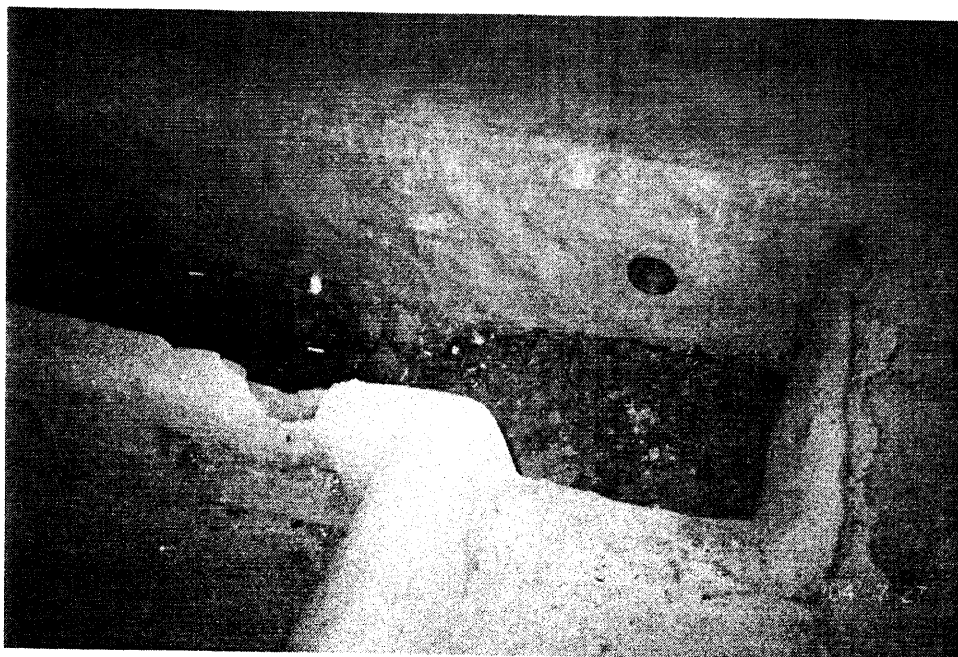


Figure 19 - This view shows three of the drain holes in the pan and the subsurface tub below. The depth of the tub is not seen due to the dirt and stones. The pipe opening seen is the overflow which empties outside the building. (See Fig. 20).

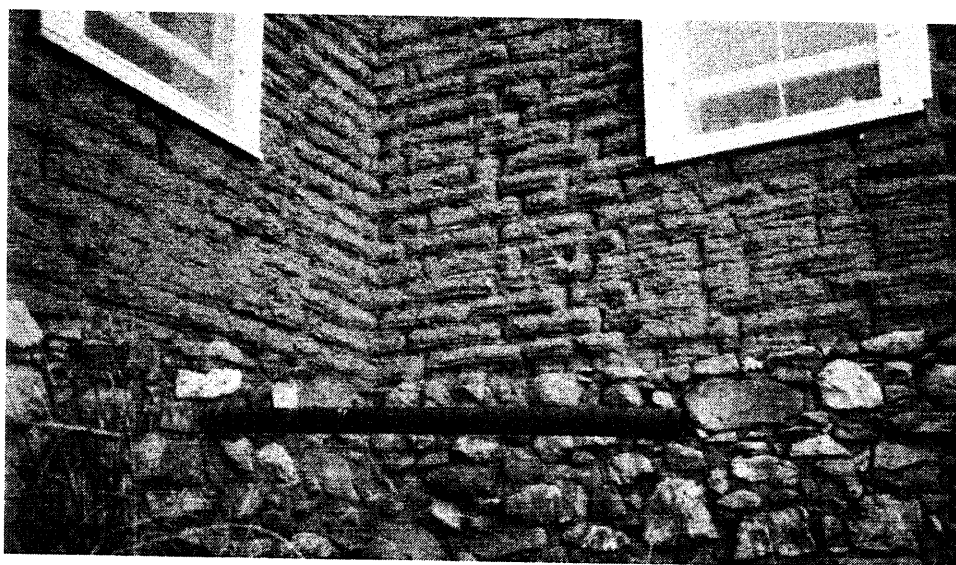


Figure 20 - The tub drain pipe extends six feet beyond the exterior wall face of Room E-2.



Figure 21 - The arrows point to two holes in the concrete floor which held the shelf support boards. This photo also shows the position relationship of the floor holes, the square hole in floor, and the only remaining wood shelf support in wall.

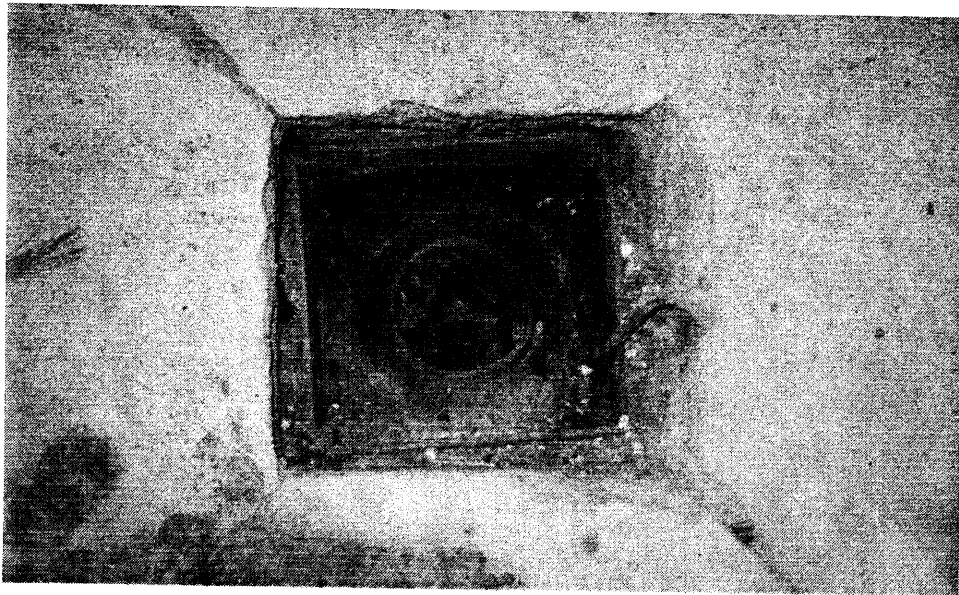


Figure 22 - The square hole in the floor of Room E-2 has a metal plate with a hole in its center. At the right side of the concrete hole is a large nail which apparently was used to hold the plate in place.

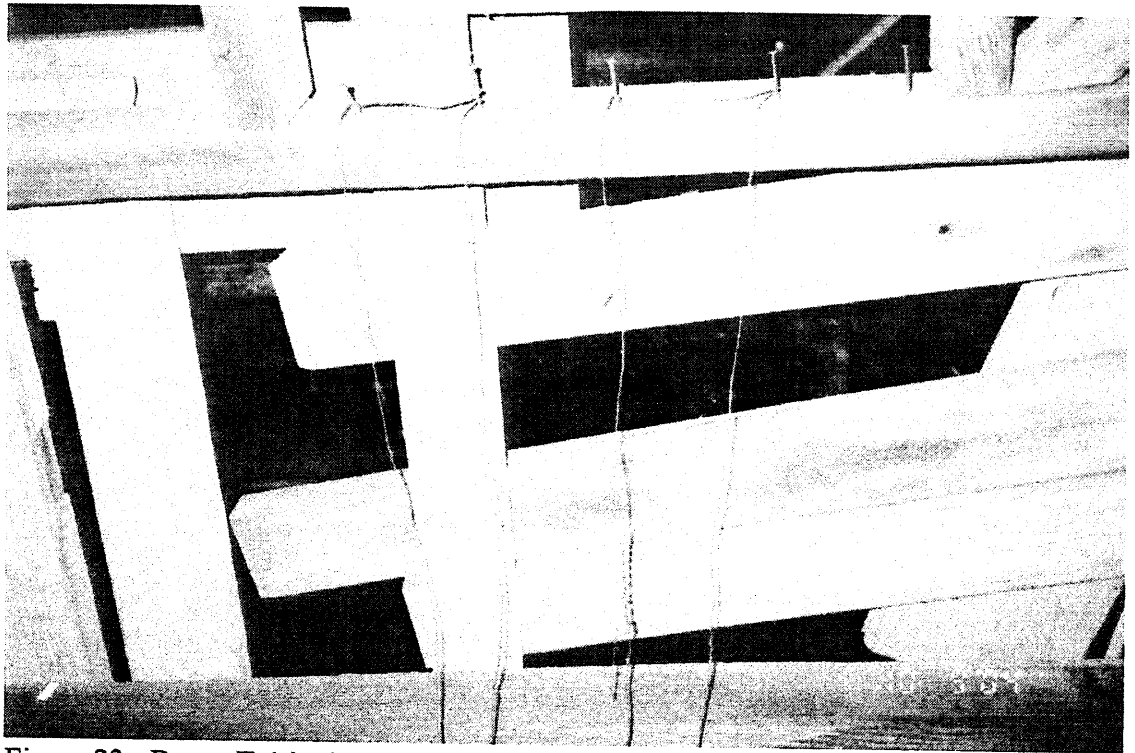


Figure 23 - Room E-1 in Assay Building. Bailing wire attached to nails in ceiling joist. These wires extended across entire room. Loose old lumber is seen stored above the joists.

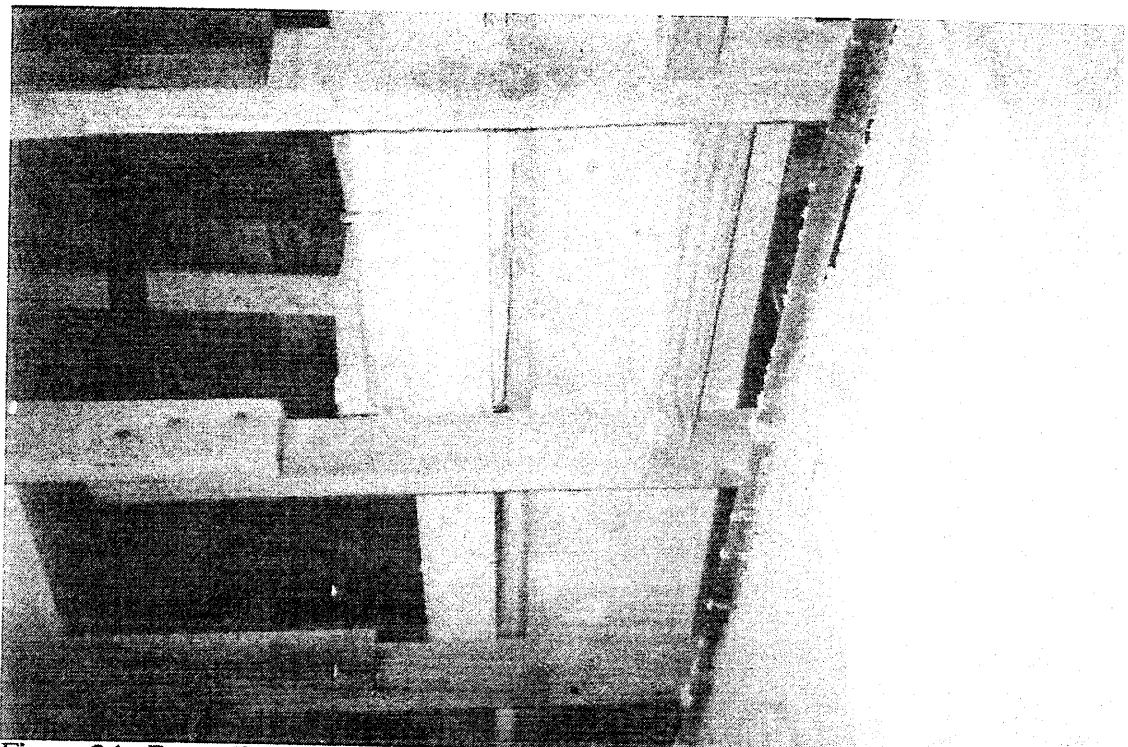


Figure 24 - Room E-1 in Assay Building. Note the 2x4 ceiling joist splices. Dark wood is original.



Figure 25 - Room E-1 in Assay Building.
Telephone wires in door casing.

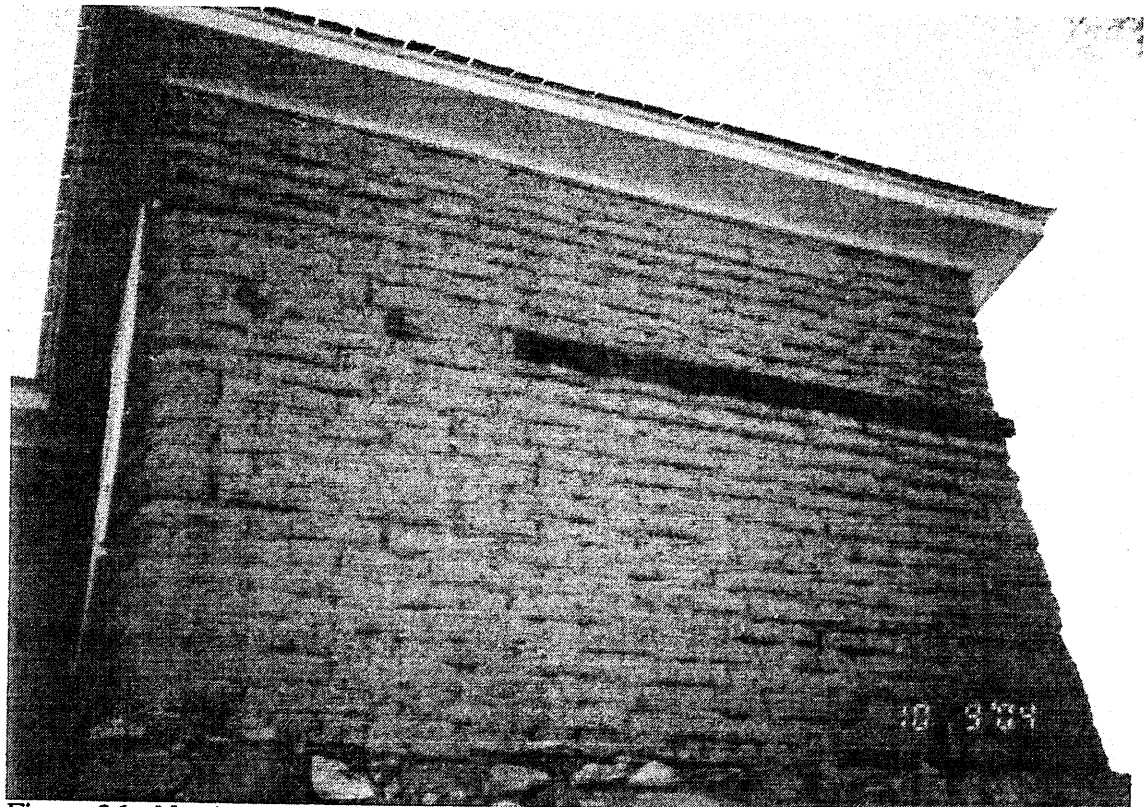


Figure 26 - North wall exterior of Room E-1. 2x4 nailed to gringo boards. This configuration could be similar to the horizontal 2x4 on the west wall of room E-2.

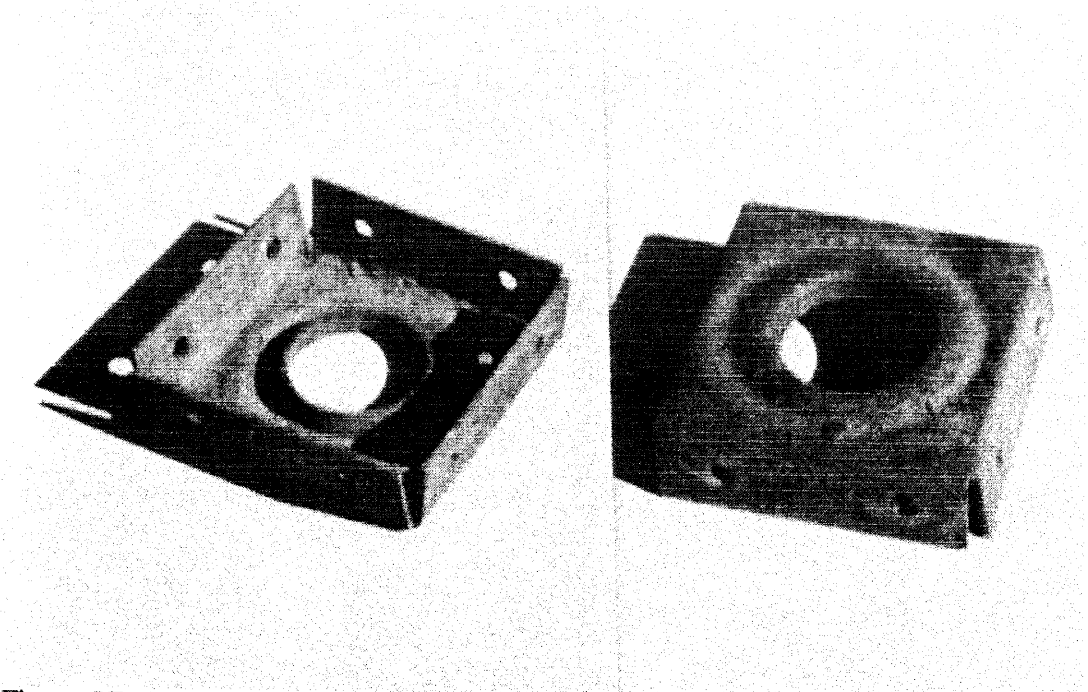
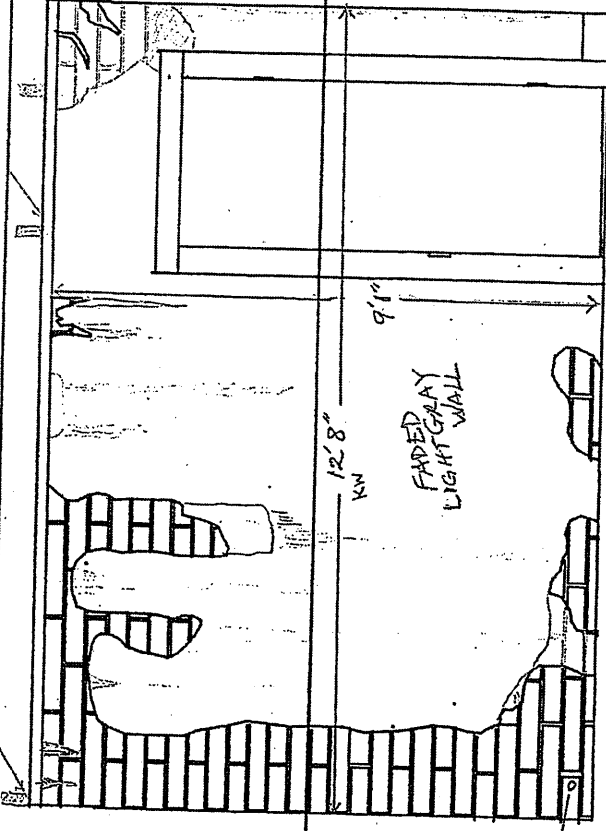
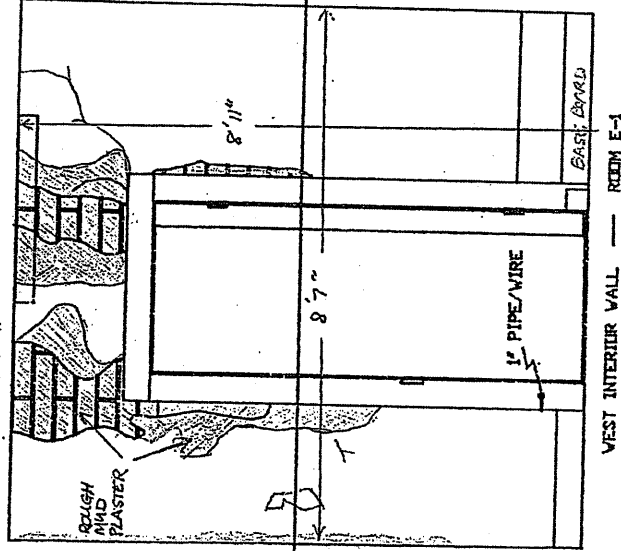
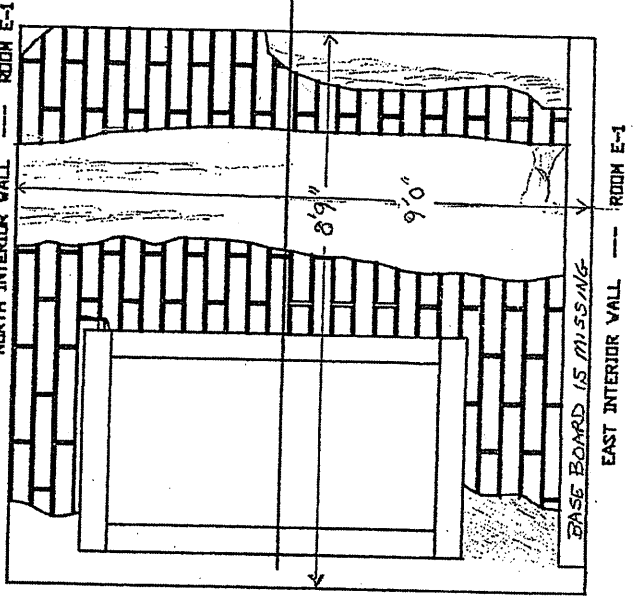
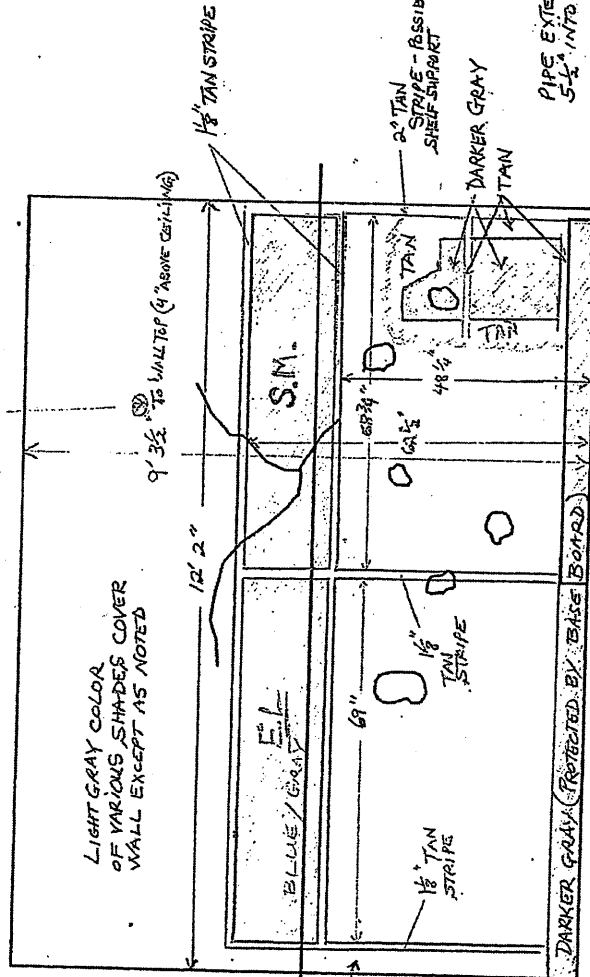


Figure 27 - Top side on left, bottom on right. This metal plate set in the square hole in the floor of room E-2 in the southwest corner.

APPENDIX

⑧ CEILING JOISTS SET INTO WALL TOP
MANTA WOODSTRIP IS NAILED TO BOTTOM
OF JOIST 4" BELOW ABOVE WALL TOP

WOOD $\frac{3}{4}$ " X $\frac{3}{4}$ " NAILED TO CEILING JOIST
TO HOLD MANTA MATERIAL IN PLACE
THERE WAS A SMALL PIECE OF MANTA
BETWEEN THESE JOISTS AND MANTA STRIP.



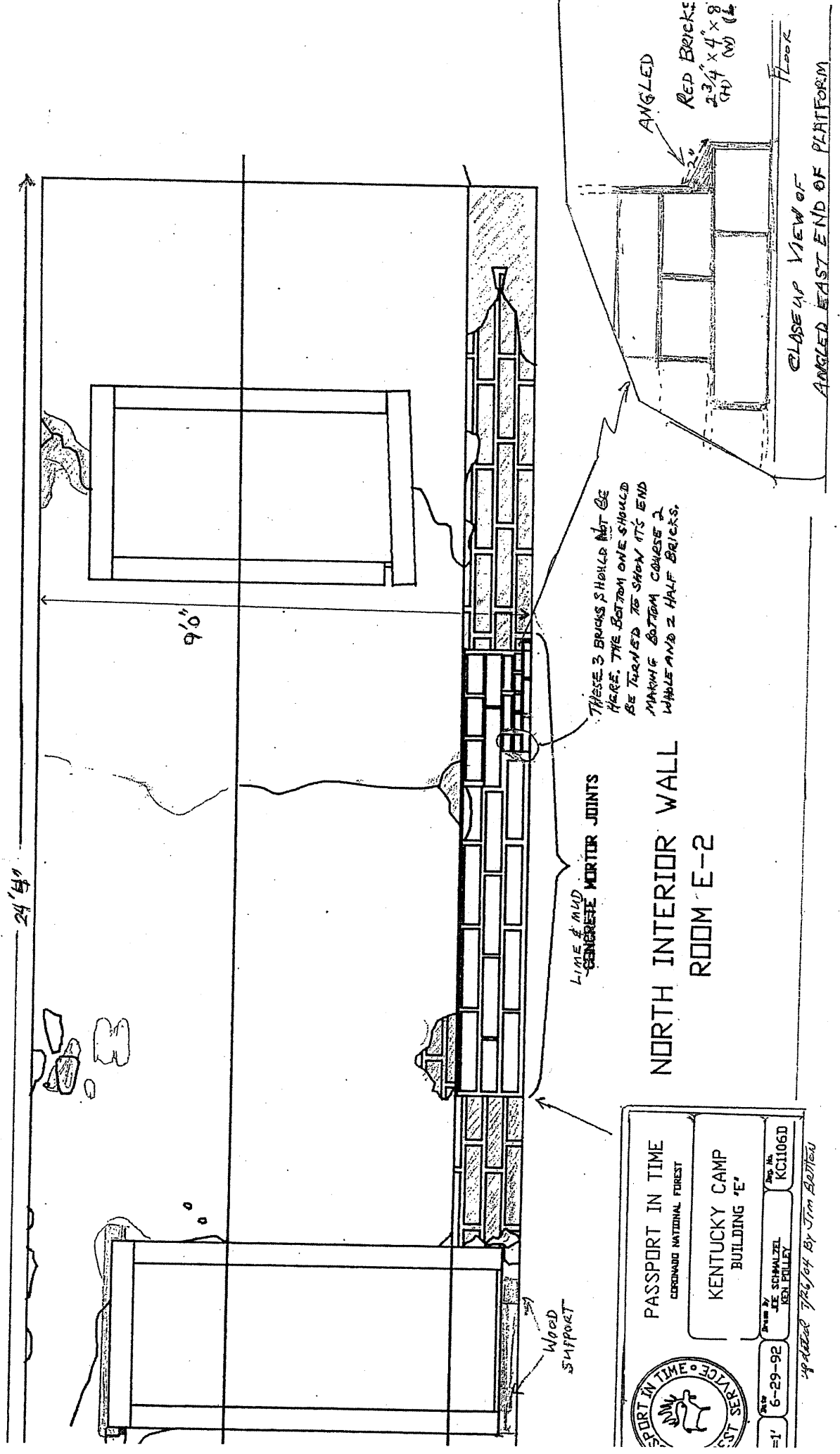
ALL FOUR WALLS SHOW EVIDENCE OF A
LIGHT GRAY COLOR WHERE ORIGINAL PLASTER
STILL REMAINS IN PLACE.



PASSPORT IN TIME
CORNADO NATIONAL FOREST

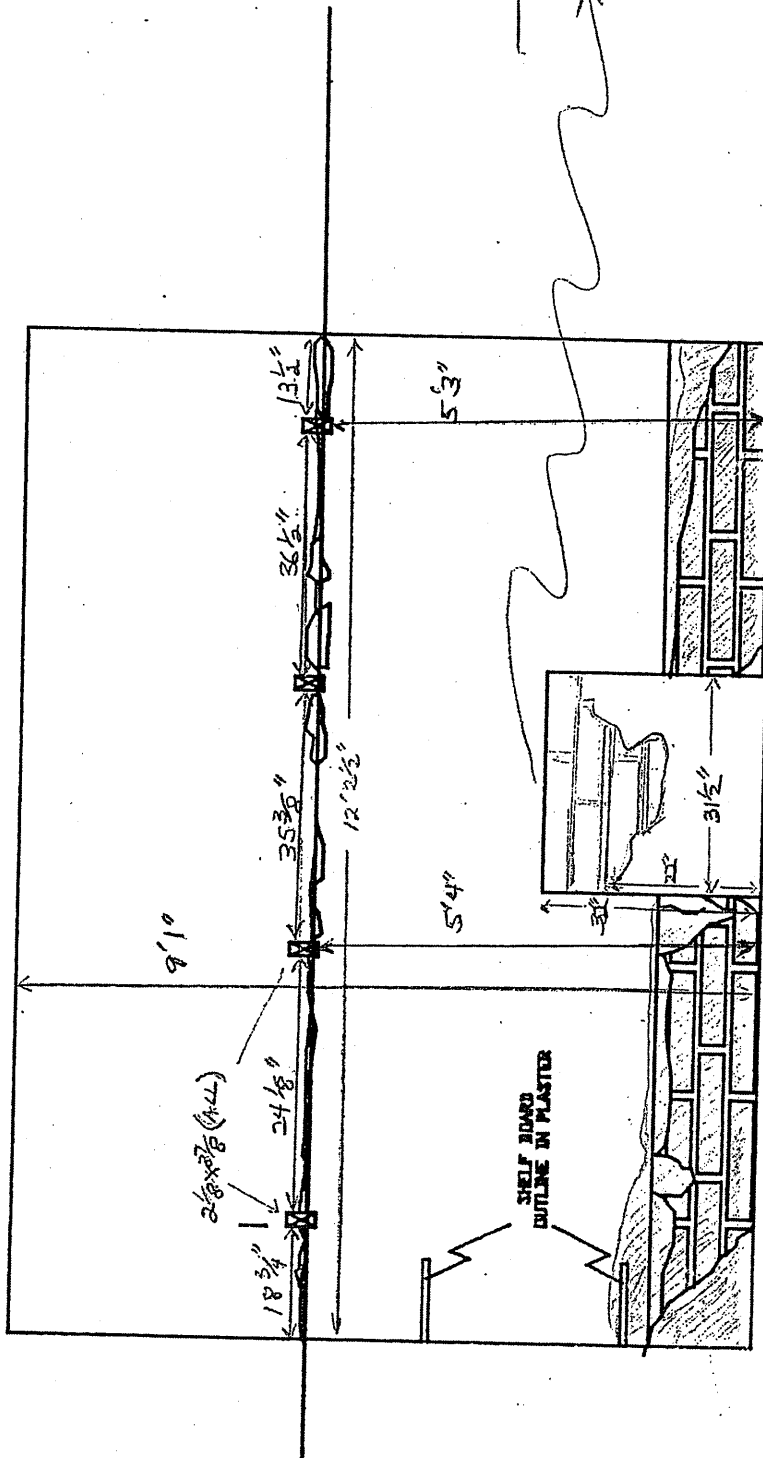
KENTUCKY CAMP
BUILDING "E"

Scale 1/2" = 1'
Date 6-16-92
Drawn By JUE SCHWALZEL
KEN POLLEY
Job No. KCL10657

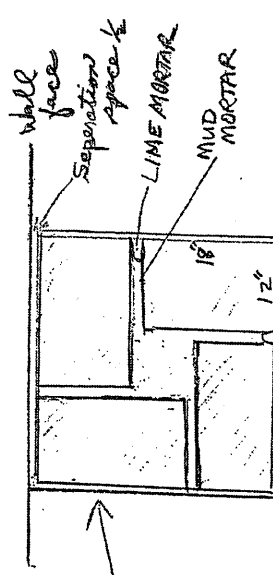


	PASSPORT IN TIME CORDADO NATIONAL FOREST	
	KENTUCKY CAMP BUILDING "E"	
DATE 6-29-92	DRAWN BY JEE SCHWARTZ JEN FULLEY	PROJ. NO. KCI106D

Updated 7/26/04 by Jim Betten



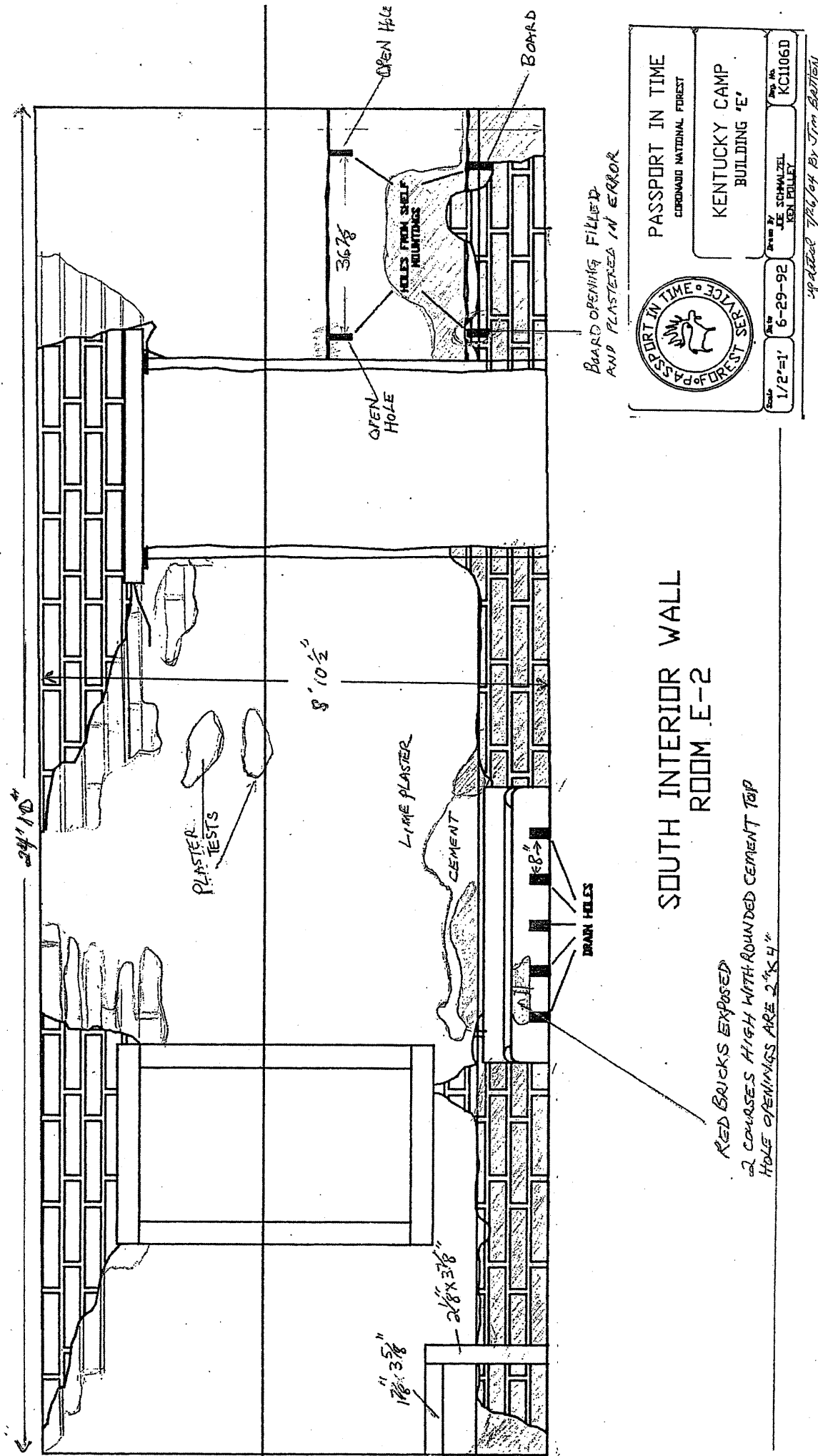
PEDESTAL
PLAN VIEW



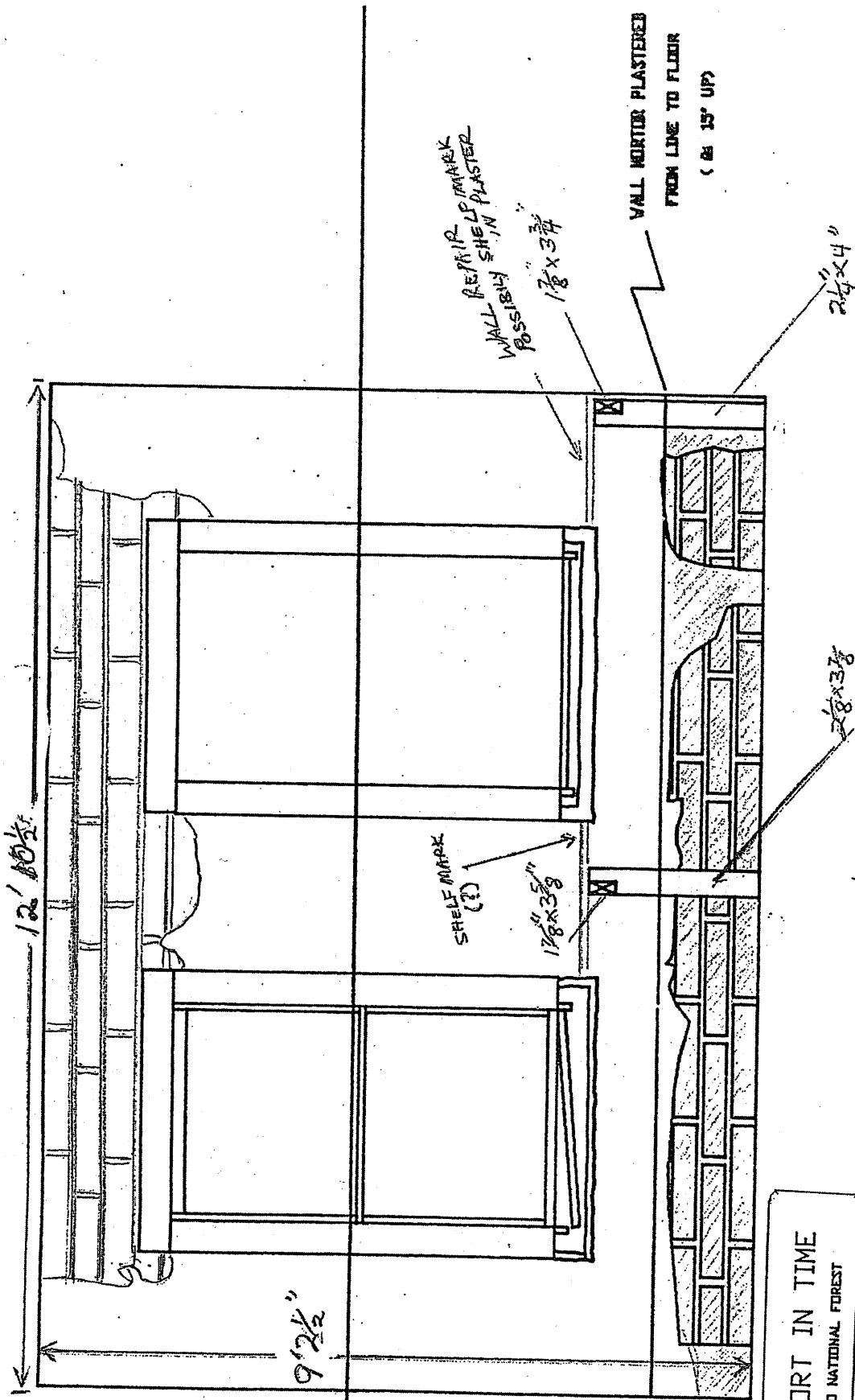
BRICK TOP

		PASSPORT IN TIME CORDAVID NATIONAL FOREST	
KENTUCKY CAMP BUILDING 'E'		Date 6-29-92	By JEE SCHMALZEL KEN POLLEY
Scale 1/2"=1'	Date 6-29-92	Project No. KCI106D	Updated 7/26/94 By Jim Bortwein

WEST INTERIOR WALL
ROOM E-2



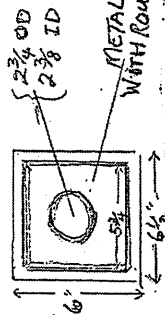
SOUTH INTERIOR WALL ROOM E-2



EAST INTERIOR WALL
ROOM E-2

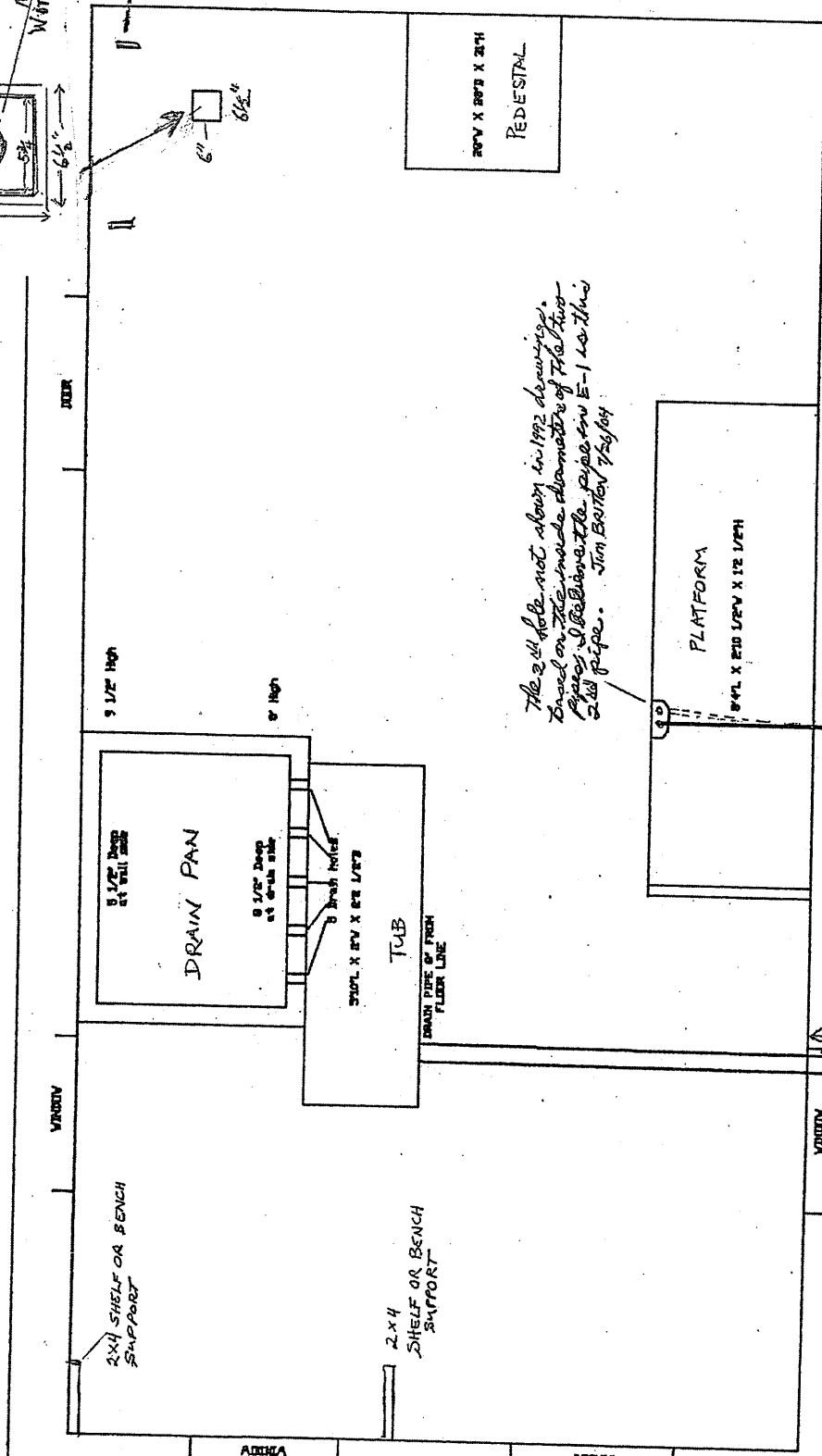
PASSPORT IN TIME CORONADO NATIONAL FOREST	
KENTUCKY CAMP BUILDING 'E'	
DATE 6-29-92	DRAWN BY JEE SCHWALZEL KEN POLLEY
PROJ. NO. KCI106D	

updated 7/26/04 By Jim Beaton



METAL PLATE
WITH ROUND OPENING

IMPRESSIONS
IN CEMENT
FLOOR



The 2 1/4" hole not shown in 1992 drawings.
Based on the inside diameter of the first
piece of pipe in the pipe in E-1 to this
2nd pipe. Jim Batten 7/5/04

SHALL PIPE APPROX 2 1/4"
EXTENDS INTO ROOM E-1

6 FEET OUT FROM
EXTERNAL WALL FACE



PASSPORT IN TIME

CORONADO NATIONAL FOREST

KENTUCKY CAMP
BUILDING 'E'

Scale
1/2" = 1'

Date
6-29-92

Drawn By
JOE SCHWALZEL
KEN POLLEY

Draw No.
KC1106E