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United States Department of the Interior
National Park Service

National Register of Historic Places
Multiple Property Documentation Form

This form is used for documenting multiple property groups relating to one or several historic contexts. See instructions in *How to Complete the Multiple Property Documentation Form* (National Register Bulletin 16B). Complete each item by entering the requested information. For additional space, use continuation sheets (Form 10-900-a). Use a typewriter, word processor, or computer to complete all items.

XX New Submission ____ Amended Submission

A. Name of Multiple Property Listing

GUAM'S *HOTNO* (GHPI No. 66-00-2277)

B. Associated Historic Contexts

(Name each associated historic context, identifying theme, geographical area, and chronological period for each.)

Outdoor Ovens from the Spanish Period to modern times on Guam

C. Form Prepared by

name/title **Darlene Moore, archaeologist**

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city or town **Barrigada** state **GU** zip code **96921**

D. Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR Part 60 and the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation. (See continuation sheet for additional comments.)

Signature of certifying officials:

LYNDA BORDALLO AGUON DATE 9/30/10
Guam (State) Historic Preservation Officer
DEPARTMENT OF PARKS, RECREATION, AND HISTORIC PRESERVATION
State or Federal Agency or Tribal government

JOSEPH W. DUENAS DATE 9.30.10
Director

I hereby certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

Signature of the Keeper — Date of Action: 12/3/2010

Table of Contents for Written Narrative

Provide the following information on continuation sheets. Cite the letter and the title before each section of the narrative. Assign page numbers according to the instructions for continuation sheets *in How to Complete the Multiple Property Documentation Form* (National Register Bulletin 16B). Fill in page numbers for each section in the space below.

E. Statement of Historic Contexts

Four outdoor ovens (*hotno* in Chamorro after the Spanish term for oven, *horno*), built in the 1940s and 1950s retain characteristics of the oven type originally introduced by the Spanish to Guam at some point during the Spanish Colonial Period (A.D. 1668 to 1898). The *hotno* represents one aspect of the wide range of social/cultural adaptations that occurred in the Chamorro culture as a result of Spanish colonial practices in the Mariana Islands. The ovens are a tangible reminder of some of the changes that took place in the Chamorro subsistence strategies with respect to food preparation and consumption beginning with the Spanish Period. The ovens also represent technological changes in oven building practices over time.

Guam's *hotno* is similar to the Spanish *horno* in that the walls of the vault (either "beehive" or "barrel-shape") store heat generated by a fire built within the chamber. After the oven is hot enough, the ashes are swept out, the foods are placed in the chamber, the openings are closed, and the foods bake, or roast, by the heat given off by the oven walls as they cool.

Originally these stone and brick ovens were probably built to provide the foreigners living on Guam after A.D. 1668 with bread and other foods prepared in ways that were familiar to them. Over time the Europeans taught the Chamorros, who were already familiar with the concept of cooking foods using hot rocks, how to build and use the introduced ovens. The Chamorro traditional earth-oven, *chahan,* involved cooking food (such as yams) on heated stones in a pit that had been dug into the ground.

The foods cooked in the *hotno* included bread (made from corn and later wheat flour), biscuits made from grated coconut and tapioca, arrowroot or cycad flour, *essok* (dried breadfruit), breadfruit, and meat from animals introduced by the Spanish (including pigs, chickens, turkeys and goats). During the Spanish Period, the ovens at the Spanish governor's residence were used to prepare some of the dishes served at the banquets hosted by the various governors for visiting dignitaries including ship's captains and officers.

Over time the ovens and the foods prepared in them became incorporated into the Chamorro social system. By the First American Period (1898-1941), owning an oven was an indication that the owner had the resources to acquire the materials to build one. The *hotno* could be used to prepare foods for a family's meal, or in the case of *essok*, process traditional foods that could be stored for future use. During the First American Period, baked breads, cookies, cakes, and roasted meats (particularly pigs) from the *hotno* were sold in family-owned bakeries, and/or served at large gatherings, such as the Chamorro traditional obligatory social events (i.e. village fiestas, weddings, christenings, and similar gatherings).

Often, but not always, it was the men who collected the firewood and heated the ovens while the women prepared the food to be baked or roasted. If the oven was to be used for light baking, such as bread or cookies, dried coconut fronds provided the fuel. When pigs were to be roasted, heavier wood was burned. While the fire was burning in the oven vault, care had to be taken to position the fuel so that the walls heated evenly. Different food types were cooked separately, although several kinds of meats could be cooked at the same time. Many of the ovens could roast four pigs in a single event.

E. Statement of Historic Contexts (continued)

Most of the ovens were destroyed during WWII. After the war, the ovens were re-built in much the same style, using similar construction techniques, and some of the same pre-war materials. In some cases, new construction methods and materials were incorporated as they became available. While most of the ovens are now in ruins, the tradition of building and cooking in them has not been completely lost. For example, at least two ovens built in the 1990s are still used.

While Guam's *hotno* is similar to the adobe *horno* of the American southwest, the construction materials differ. On Guam the squarish or rectangular *hotno* bases were built using local stones (shaped limestone blocks or coral rocks collected from the beach) and mortar made from a mixture of lime and sand. Although Chamorros traditionally made lime (*afok* in Chamorro; Topping et al. 1975:278) by burning limestone or coral rocks until they were reduced to powder, it was not used to construct stone and mortar structures prior to the arrival of the Spanish.

Based on some of the older *hotno* ruins, originally the beehive or barrel-shaped vaults were made using red clay bricks, thin pieces of red clay tiles, and mortar. The literature review indicates that at various times clay bricks and tiles were made on Guam; they also were brought in from the Philippines and elsewhere. When heat-resistant bricks became available on Guam, they replaced the red clay bricks. After WWII, concrete was sometimes used to build the base and corrugated tin fashioned the form to hold the concrete. Hollow concrete blocks also were used to build some bases, and metal strips and angle iron were used to reinforce the openings and roofs of the vaults.

Gradually, due to a combination of factors, *hotno* use declined on Guam. Part of the decline was due to the fact that more people entered the job market and thus had less time to devote to food preparation. At the same time, they had more money to spend on purchasing commercially prepared foods, or arranging commercial venues for their social events. Another factor in the oven-use demise was the post-war availability of gas and electric stoves that required much less time and effort to produce the desired food products. Generally, everyone agrees that baking or roasting in a *hotno* is hard work. However, most people still agree that pig roasted in an outdoor *hotnu* tastes much better than pig roasted in a gas or electric oven.

F. Associated Property Types

Guam's Outdoor Ovens (*hotno*) comprise a group of structures that through time shared a similar form and function, although variations occur within this property type due to technological advancements that occurred within the more than 300-year long period of time (A.D. 1700-2000) that the ovens were built and used. The ovens contributed to transformations in the Chamorro subsistence patterns and, in the case of family-owned and operated businesses (bakeries and stores), the development of small commercial enterprises. Most of the ovens in this group were originally built near a family residence, as part of the covered outside kitchen area (*kusina* in Chamorro; Topping et al. 1975:274).

Although a *hotno* could stand alone, generally it was part of a household's outside cooking area which was a

covered working and cooking space that could include a *lusong* (traditional stone mortar), a raised hearth, a barbecue area, a sink for washing and cleaning, and a counter with a *metate* and *mano* (introduced by the

F. Associated Property Types (continued

Spanish) for reducing corn, rice, or other plant products (tapioca, arrowroot, and cycad nuts) to home-made flour.

One reason that the ovens were sheltered was to keep them dry. Rain falling on a hot oven could cause it to crack. Ovens had to be used fairly frequently in order to stay dry. If one sat unfired for too long, the walls absorbed moisture and the oven would not bake efficiently. When the oven was new, or damp, a series of small fires would be built inside the chamber over a period of several days to dry the oven before a big baking or roasting event took place.

People acquired or collected the necessary materials and built their own oven, or they engaged someone who was known for their oven-building skills. The overall plans are similar. Each oven consists of a vault built on an elevated squarish or rectangular base. The vault floor is paved with heat-resistant bricks. Each vault has a main opening and a back vent. Each base extends out for a distance in front of the main opening, and this extension has a groove, or trough, that serves to catch the ashes and coals as they are scraped out of the chamber through the main opening. In some cases, the extension also has a landing where foods can be set before going into, or after coming out of, the vault. Each vault tapers toward the roof. The exterior surface of each vault is finished with a coat of plaster (lime based). However, there is considerable variation among the individual structures with respect to orientation, size and height, wall thickness, size of the landing, and the size of the main opening.

One of Guam's ovens, the Sella Bay Spanish Oven (66-02-1008), was placed on the National Register of Historic Places in November 1974. Its original date of construction remains unknown. Dressed coral blocks and heat-resistant bricks were used in its construction. The brand name stamped on some of its bricks is TCARR. TCARR bricks were made by the Tomas Carr & Son Company in Newcastle, England from 1827-1918. How and when these bricks arrived on Guam is not known. One could speculate that they arrived as ballast on whaling ships that visited Guam in the mid 1800s.

The four ovens in this multiple property submission are listed below. A NPS Form 10-900 is enclosed for each one.

1. Baza *Hotno*, Yona. Built in 1951-52 using concrete poured into a form made from sheets of corrugated tin, heat-resistant bricks, and metal strips. Associated with a pre-WWII concrete *bodega* (house foundation) and water catchment. Formerly the oven was part of a covered outdoor kitchen area. Currently stands in the open. Good condition.

2. Paulino *Hotno*, Inarajan. Built about 1947 using coral rocks and mortar placed in a corrugated tin frame to build the base, and heat-resistant bricks and red clay tiles for the walls and roof of the vault. Originally it was part of a covered outdoor kitchen area at the *lancho* (small ranch). Currently stands in the open. Cracked.

3. Quan *Hotno,* Piti. Built in the late 1950s or early 1960s using concrete, or concrete blocks covered with cement to build the base. The oven vault is built of heat resistant bricks and mortar finished on the exterior with a coat of plaster or cement. It was part of a covered outdoor kitchen area that also includes

F. Associated Property Types (continued)

a concrete sink and counter. Currently stands in the open. Damaged.

4. Won Pat *Hotno*, Sinajana. Built in the 1940s using heat-resistant bricks, as part of an outdoor kitchen area that included counters and storage cabinets. Currently stands in the open. Cracked.

The four properties are significant under Criterion C as they share a common function and they have a common architectural style which includes similar materials, proportions, and construction methods.

The four properties are significant under Criterion D because they have the potential to yield important information about the specific construction techniques and materials used to build them, and through detailed study they could provide physical information about the kinds of foods prepared in them and/or how subsistence practices changed over time. The ovens meet registration requirements because of their traditional form and function. They retain a significant degree of stylistic integrity. In most cases the integrity of their association and feeling is bolstered by the presence of nearby houses that indicate they were once an integral part of a family's outdoor kitchen area and were readily accessible to family members who used them for baking breads and pastries and for roasting meats.

G. Geographical Data

The geographical area for each of the four properties includes a small portion of each privately owned lot. The lots are located in four different villages or districts on Guam. In each case, the size of the property within each lot is less than 25 square meters. The village/district representation includes, Yona (Baza *Hotno),* Inarajan (Paulino *Hotno*), Piti (Quan *Hotno*), and Sinajana (Won Pat *Hotno*).

H. Summary of Identification and Evaluation Methods

The multiple listing of Guam's *hotno* is based on an archival review and inventory survey project conducted by Darlene Moore of Micronesian Archaeological Research Services and Rlene Steffy, an Oral Historian who served as a consultant, under the auspices of the Guam State Historic Preservation Office. The inventory identified 20 properties. The properties were located by contacting the present and/or past mayors of each village, long-time residents, and local archaeologists to gain information about possible site locations.

Individual property owners then were contacted to gain permission to access the private property for the purpose of documenting the ovens and interviewing the owners and/or family members. The ovens were measured and photographed, computerized inventory forms were completed, and locations were noted on USGS topographical maps. When possible, family members were interviewed to gain information about the oven's builder and its past use. Oral histories were compiled. This work was conducted on a part-time basis

from February through July, 2008.

In spite of our best efforts to locate all of the remaining ovens on Guam, the possibility remains that other ovens will be identified in the future. They can be evaluated and added to this multiple listing later. Of the 20 properties identified during this project, four were selected for submission to the National Register based on the

H. Summary of Identification and Evaluation Methods (continued)

similarity of their style and function, the availability of information about them, their age, condition, and permission from the owners.

Sixteen of the 20 identified properties are not included in this nomination. One, the Sella Bay Oven (66-02-1192), was placed on the National Register in 1974. Two are located on military lands and they may be added in the future. Four are too recent. Five are not included because their vaults collapsed leaving only the base more or less intact. Four are not included because the owners have not been contacted, or they are unwilling to have their ovens listed.

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http://calbricks.netfirms.com/brick.tcarr.html

Interviews

March 2, 2008. Darlene Moore, interviewer. Teresita Baza Rosario, owner of the Baza *Hotnu,* Yona.

March 27, 2008. Rlene Steffy and Darlene Moore, interviewers. Judy Flores, former Executive Director of *Gef Pago* Park, Inarajan.

March 27, 2008. Rlene Steffy and Darlene Moore, interviewers. Jaime Paulino, owner of the Paulino *Hotnu,* Inarajan.

March 28, 2008. Rlene Steffy and Darlene Moore, interviewers. Mary Lou Mafnas Valencia, part owner of the Cruz *Hotnu*, Barrigada.

April 2, 2008. Rlene Steffy and Darlene Moore, interviewers. Tomasa Cruz Salas, sister of the former owner of the Cruz *Hotnu* in Barrigada. The interview took place at the Salas residence in Mangilao.

April 2, 2008. Darlene Moore and Rlene Steffy, interviewers. Gil and Stella Sablan, owners of the Chaco *Hotnu,* Agat.

April 6, 2008. Rlene Steffy and Darlene Moore, interviewers. Ed Crisostomo, son of Jesus Meno Crisostomo

who built the *Gef Pago* Park *Hotnu*, demonstrated its use. His wife, Lou, made the bread which was baked in the heated oven.

I.Description

The Paulino *hotno* is located on the inland (south) side of Bear Rock Lane, the dirt track that leads from Route 4 to the easternmost Paulino family house facing Agfayan Bay. To reach the oven, walk inland at a point along the track which is about 15 m west of the third concrete power pole. The oven is about 20 m south of the track and 10-15 m west of the excavation for the now abandoned fish pond.

The oven was built about 1947 for Jaime Paulino's mother and grandmother by Jesus Meno Crisostomo of Inarajan (the same man, now deceased, who built the *Gef Pago* Park oven in 1992). At the time, the Paulino family lived in Inarajan but they had a *lancho* (small ranch)at this location where they had a covered outdoor cooking area. Now the oven stands in the open in a stand of tangan-tangan brush.

The Paulino *hotno* is a modern interpretation of an oven form that was introduced to Guam by the Spanish during the Spanish Colonial Period (A.D. 1668-1898). Although the construction materials used to build the ovens changed over time, the oven style retained the same basic shape.

The oven has an east/west orientation with the opening facing to the west. The base is 1.85 m long, 1.68 m wide, and about .80 m tall. The base is made of coral rocks and mortar. It was built in a corrugated tin frame that left horizontal impressions on the exterior surfaces. There is a .60 m long, .45 m wide, .80 m tall extension of the base on the left side of the opening. The portion of the extension that formerly continued across the front of the oven has collapsed leaving a remnant that is about .27 m wide and .57 m tall. The floor of the vault and its lower walls are built of heat resistant bricks. Five courses of bricks are visible on the vault interior, and they form vertical walls that are about .40 m tall and .24 m thick. Above this point the walls begin to taper toward the rounded roof. The upper walls and roof are built of alternating layers of red clay tiles and mortar. The vault exterior has a smooth finish. The top of the oven is 2.15 m above ground surface. The main opening is .35 m wide by .40 m tall, and it is braced across the top by a metal strip. The vent in the back wall is .80 m above ground surface, and it has a diameter of .06 m.

According to Jaime Paulino (72 at the time of the interview), his mother and grandmother baked *pan tosta, pan mamis* (dinner rolls), and wedding cakes in the oven. They sold some of their baked goods in their Inarajan store. They also baked slices of breadfruit (*essok*) and roasted pigs.

The oven is in relatively good condition although the trunks of several trees now threaten it. They should be removed.

I. Description

The Won Pat *hotno* is located on the southeast side of the vacant lot between 114 and 126 Mansanita Ct., Sinajana. Access to Mansanita Ct. is from Bienvenida Ave. The oven is in an area overgrown with coconut palms, breadfruit tree, papaya, tangan-tangan, banana, and taro. Cupboard and counter remnants from an old outdoor kitchen can be seen near the oven.

The Won Pat oven was probably constructed in the 1940s. Senator Judith Won Pat's mother used the oven for the family. When Judith's father won the congressional race and the family left for Washington D.C., the neighbor, Mrs. Herman Crisostomo, used the oven to bake professionally and she sold her baked goods to the Chode Store in Anigua.

Judith remembers that when her family used the oven, tangan-tangan wood was the fuel. Besides baking bread, her mother roasted meat from cows, pigs, deer, and chicken. As a child, Judith sometimes hid in the cold oven.

The Won Pat *hotno* is a modern interpretation of an oven form that was introduced to Guam by the Spanish during the Spanish Colonial Period (A.D. 1668-1898). Although the construction materials used to build the ovens changed over time, the basic oven style was retained.

The rectangular oven base measures about 1.60 m long by 1.30 m wide. The base, built of rough limestone rocks and mortar, is about .55 m tall. The oven vault is built of heat resistant bricks. The top of the vault roof is about 1.20 m above the vault floor. The vault walls are .15 m thick and finished on the exterior with a smooth coat of cement or lime plaster. The opening faces to the southwest. The top of the main opening has broken, it now measures .80 m tall by .40 m wide. The base extends out for a distance of .30 m across the front. It forms an elevated landing on the right that measures .30 by .45 m. To the left there is a trough to catch the hot ashes and coals as they are swept from the chamber. There is a vent in the back wall, but access to the back of the oven was blocked.

Two types of heat resistant bricks were used to build the vault floor, walls, and roof. Standard sized bricks lined the floor and made up the lower walls. Words stamped on these bricks included MEX-KO, MIZZOU with FB-13 below, and ACORN. Small bricks (.22 m long, .23 m wide, by .04 m thick) were used in the vault's upper walls and roof. The debris and vegetation should be cleared from this structure and efforts should be made to preserve it.

I. Description.

To reach the Quan *hotno*, turn south from Marine Corps Drive on J.C. Tuncap Street and take the first right turn on J.C. Santos St. The oven is located on the west side of the yard of the first house (tin) on the right. The oven is part of an old kitchen area that once included, in addition to the oven, a concrete and brick barbecue and an elevated concrete sink. A circular concrete water catchment is located nearby. Vegetation includes seedless breadfruit, mango, and pickle trees. According to David M. Fejeran, his father built this oven for the Quan family in the mid 196s.

The Quan *hotno* is a modern interpretation of an oven form that was introduced to Guam by the Spanish during the Spanish Colonial Period (A.D. 1668-1898). Although the construction materials used to build the ovens changed over time, the oven style was retained.

The oven's rectangular base has an overall length of 2.05 m by 1.37 m wide, and it is .64 m tall. The base appears to have been built of concrete, or concrete blocks covered with cement. The oven vault is built of heat resistant bricks and mortar and is finished on the exterior with smooth cement. The flat top of its domed roof rises 1.32 m above the chamber floor. The vault walls are about .13 m thick. Two different kinds of bricks were used to build the vault. Standard heat resistant bricks form the lower walls. Words seen on some of these bricks include WELLSVILLE with SAVAGE below, and MEX-KO with FB-1317 below.

The upper walls were built using smaller bricks that are about half as thick as the standard size. They measure about .23 m long, .25 m wide, and .04 m thick. The main opening faces to the north. Now it is broken, but originally it measured about .50 m square. In front of the opening there is .43 m wide extension that forms a landing on the inland (left) side. A trough to catch the ashes exits to the right.

This oven has a slightly different venting system. It consists of a concrete column that is attached to the back of the oven, and it serves as a chimney. The column exterior is about 1.03 m long, .47 m wide, and it has a maximum thickness of .24 m. The base of the column is raised .40 m above ground surface. The top of the column ends .60 m below the top of the dome. The top of the column has an interior vertical shaft that measures .15 m wide and .23 m long. This opening leads to the vent in the back wall of the vault.

This oven is surrounded by debris that should be removed. Although it has some cracks and the opening has broken, it is in fairly good shape and efforts should be taken to preserve the feature along with the concrete sink and barbecue.

I.Description

The Baza *hotno* is located on the north side of the concrete house north of Teresita's house which is located at the end of Beatrice Baza Road, a dirt track west of As Baza Road on the south side of Balajadia St. in Yona. The oven sits on a large concrete slab that once was roofed as part of an outdoor kitchen. The oven is part of a structural complex that includes the concrete east of the high tide line in the family's well kept yard. Several concrete homes and other outbuildings belonging to various members of the family are located in the area, but the oven stands alone in the yard under some large mango trees. Nearby vegetation includes an avocado tree, coconut palms, betelnut, and a kapok(*Ceiba pentandra*)tree.

The oven was originally built in 1952 as part of the family's outdoor kitchen(*kusina* in Chamorro). At that time it was protected by a tin-roofed shelter. This oven was last used in the 1980s.

In addition to having an oven, many outdoor kitchens on Guam had a place to store fuel, a barbecue area, a hearth area for boiling or steaming foods such as rice and roots (yams and taro), a sink area for food preparation and clean-up, and a *metate* or stone mortar for grinding corn and other foods. There is a stone mortar on the property, it is situated in the open about 30 m east of the oven, near the end of the street.

The Chaco *hotno* is a modern interpretation of an oven form that was introduced to Guam by the Spanish during the Spanish Colonial Period (A.D. 1668-1898). Although the construction materials used to build the ovens changed over time, the oven style retained the same basic shape.

This oven has an east/west orientation with the main opening facing to the east (inland). The oven consists of two parts, a base and a vault. The base measures 1.50 m long by 1.50 m wide and it is .48 m tall. It appears to be built of limestone blocks that have been shaped and fitted together. The floor, walls, and roof of the oven vault are built of heat resistant bricks. A single brick measures about .24 m long, .12 m wide, and .095 m thick. Seven courses of bricks form the vault's vertical lower walls. Above that point, which is about.80 m above the vault floor, the walls begin to taper toward the rounded roof. The top of the vault is 2.0 m above ground surface. The walls are about .13 m thick, and their exterior surfaces are plastered with cement, or a lime/sand mixture. In places the plaster is 1.5-2.0 cm thick. separately. In other words, breads or pastries would not be baked along with meats, but different kinds of meats could be roasted at the same time. To heat the oven, the fire burned inside the chamber until the inside bricks turned white. Then the chamber was cleaned out and whatever was going to be baked or roasted was placed inside. The main door was closed and the back vent was stopped. Sometimes the trunk of the banana plant was trimmed to use as a "cork" to stop the back vent.

One of the foods that the family prepared in the oven was breadfruit. After baking the slices were placed in biscuit tins where they could be stored for a time. Hard bread (*pan tosta* in Chamorro) was also baked in the oven. Sometimes the family took orders from other families for roasting or baking; there was a charge for this service. The oven could hold four pigs at once.

This oven is in good condition, it retains its sense of place and character.

I. DESCRIPTION

To reach the Chaco *hotno* turn right from Route 2 on to Chalan Josen Milagro St. Follow the street to its end at the Gil and Stella Sablan house. The oven stands in the yard seaward (west) of the house. The oven is located about 20 m east of the high tide line in the family's well kept yard. Several concrete homes and other outbuildings belonging to various members of the family are located in the area, but the oven stands alone in the yard under some large mango trees. Nearby vegetation includes an avocado tree, coconut palms, betelnut, and a kapok (*Ceiba pentandra*) tree.

The oven was originally built in 1952 as part of the family's outdoor kitchen (*kusina* in Chamorro). At that time it was protected by a tin-roofed shelter. This oven was last used in the 1980s.

In addition to having an oven, many outdoor kitchens on Guam had a place to store fuel, a barbecue area, a hearth area for boiling or steaming foods such as rice and roots (yams and taro), a sink area for food preparation and clean-up, and a *metate* or stone mortar for grinding corn and other foods. There is a stone mortar on the property, it is situated in the open about 30 m east of the oven, near the end of the street.

The Chaco *hotno* is a modern interpretation of an oven form that was introduced to Guam by the Spanish during the Spanish Colonial Period (A.D. 1668-1898). Although the construction materials used to build the ovens changed over time, the oven style retained the same basic shape.

This oven has an east/west orientation with the main opening facing to the east (inland). The oven consists of two parts, a base and a vault. The base measures 1.50 m long by 1.50 m wide and it is .48 m tall. It appears to be built of limestone blocks that have been shaped and fitted together. The floor, walls, and roof of the oven vault are built of heat resistant bricks. A single brick measures about .24 m long, .12 m wide, and .095 m thick. Seven courses of bricks form the vault's vertical lower walls. Above that point, which is about .80 m above the vault floor, the walls begin to taper toward the rounded roof. The top of the vault is 2.0 m above ground surface.

The walls are about .13 m thick, and their exterior surfaces are plastered with cement, or a lime/sand mixture. In places the plaster is 1.5-2.0 cm thick. The main opening in the vault measures about .50 m square. A .50 m wide by .50 m tall extension of the base is located across the front of the oven. On the right side of this extension there is a .50 m wide platform, or landing. In front of the main opening there is a .30 m wide groove, or trough, that gradually slopes to the left until it reaches ground surface. The purpose of the trough was to catch the ashes when the oven was swept out. There is a vent in the vault's back wall. It is located .70 m above the vault floor and it has a diameter of .12 m.

The oven is in fairly good condition although several cracks have developed. It retains its character and integrity.

I.Description

Originally this oven was owned by Maria Cruz Mafnas on another piece of property near the present Army National Guard complex. When the U.S. military took over the family property after WWII, she saved the materials from the first oven and had it rebuilt in its present location. As one travels north on Route 16, the oven is located about 20 m east of the yellow bus stop situated on the right side of Route 16 just south of the Army National Guard complex. It is located in the family's yard and is surrounded by ornamental plants. Breadfruit, betelnut, and mango trees grow nearby. Mr. Jose Fejeran of Piti built the present oven, which was repaired in the 1960s by Maria's husband and their daughter Mary Lou. The oven was last used in the 1990s.

The Cruz *hotno* is a modern interpretation of an oven form that was introduced to Guam by the Spanish during the Spanish Colonial Period (A.D. 1668-1898). Although the construction materials used to build the ovens changed over time, the oven style retained its same basic shape.

The oven base measures 2.10 m long, 1.62 m wide, and .60 m tall. It is built of concrete blocks. The elongated vault measures 2.10 m long, 1.60 m wide, and 1.60 m tall. The vault walls begin to taper toward the flat top about .60 m above the vault floor. The flattened top measures about 1.06 m long by .75 m wide. The exterior surface is smoothly finished. The vault's walls are .25 m thick and built of heat resistant bricks and thinner red clay bricks. Inside the vault nine alternating courses of bricks and mortar are visible. Above these are five courses of thinner red clay bricks and mortar.

The main opening measures about .50 m on a side and its inner edges are reinforced with pieces of angle iron that measure about .10 m wide. The diameter of the back vent is .08 m. The vent is about 1.10 m above ground surface, at the point where the vault begins to narrow. The base extends out in front of the main opening for .60 m and it is .64 m tall. Within this extended platform there is a hollow space in front of the opening. The space measures. 50 m long and .18 m wide.

Mary Lou Mafnas Valencia, daughter of Rita Cruz Mafnas, said her mother was a *panadera* (Chamorro for baker) and she did a lot of baking in the present oven, for the family as well as others. People often ordered cookies and special cakes. The *pan rosa* (bread)that she made was sold at the Happy Mart store in Barrigada. In addition to the baking, her mother and father(both deceased now) were well known for their delicious roasted pigs.

Mary Lou said that wood from shipping pallets was sometimes burned to heat the chamber. When the oven was hot enough, the ashes were swept out and saved to use as fertilizer. Sometimes a few coals were left inside to maintain the temperature.

When the oven needed to be repaired in the 1960s, Mary Lou helper her father gather the materials. At that time, they purchased some heat resistant bricks and these were incorporated into the oven.

This oven retains its character and its sense of place.

I. Description

The Flores Oven is located in Agana Heights, on Matcella Dr., just south of its intersection with Chalan Makahana. The oven is six meters east of Matcella Dr. According to the Agana Heights Mayor, Paul McDonald, the oven is owned by Eddie Flores, who now lives in Albuquerque, New Mexico. Family relatives are currently living in his house and in the house next door. According to an inscription on the oven, Ben Flores built it for Mrs. Tenorio in March 1946. The Flores *Hotno* is a modern interpretation of an oven form that was introduced to Guam by the Spanish during the Spanish Colonial Period (A.D. 1668-1898). Although the construction materials used to build the ovens changed over time, the oven style retained the same basic shape.

The barrel-shaped oven has an east/west orientation, and its main opening faces to the west. The base measures 2.20 m long, 1.70 m wide, and 2.40 m tall. The .60 m high base is built of bricks, tiles, limestone rocks, and cement. The walls and roof of the vault are built of tan, heat resistant bricks and red clay bricks that are covered on the exterior with a coat of cement or lime plaster. On the inside of the vault eight alternating courses of bricks and mortar are visible. Some of the bricks are laid on their narrow side rather than in the usual flat position. Some of the heat resistant bricks are stamped with the words WELLSVILLE and SAVAGE. Red clay bricks were used in the upper wall/roof construction. About .90 m above the vault floor, the .25 m thick walls taper toward the domed top.

The main opening is .65 m high by .55 m wide. The vent in the back wall is located about 1.60 m above ground surface, and it has a diameter of .08 m. An "L"shaped platform extends out from the base in front of the main opening. The long leg is .88 m long by .48 m wide, and it is .63 m high. The right side of the extension is broken, but it had a trough to catch the ashes.

The oven is in fairly good condition, it retains its character and integrity.

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: COVER DOCUMENTATION

MULTIPLE NAME: Guam's Outdoor Ovens (Hotno) MPS

STATE & COUNTY: GUAM, Multiple Counties

DATE RECEIVED: 10/18/10 DATE OF PENDING LIST:
DATE OF 16TH DAY: DATE OF 45TH DAY: 12/03/10
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 64501093

REASONS FOR REVIEW:

APPEAL:	N	DATA PROBLEM:	N	LANDSCAPE:	N	LESS THAN 50 YEARS:	N
OTHER:	N	PDIL:	N	PERIOD:	N	PROGRAM UNAPPROVED:	N
REQUEST:	Y	SAMPLE:	N	SLR DRAFT:	N	NATIONAL:	N
NEW MPS:	Y						

COMMENT WAIVER: N

___ACCEPT ___RETURN ___REJECT_____DATE

ABSTRACT/SUMMARY COMMENTS:

The cover documentation provides an excellent overview of the history of outdoor baking ovens in Guam during the historic period. The documentation provides solid guidance for the identification and evaluation of historic properties associated with these themes. The Guam Outdoor Ovens represent a rapidly disappearing property type associated with long-standing cultural traditions of the Chamorro. The context is based on a comprehensive survey initiative that including both oral history and on-site investigations that led to the identification of several extant oven (hotno) resources widely dispersed across the island. The dispersed nature of the documented resources and their diversity of forms highlight significant aspects of their creation and use over an extended period, and underscore significant areas for future research regarding such subjects as the availability of construction resources and food staples, subsistence strategies, dietary changes, economic advancements and the persistence of cultural traditions.

RECOM./CRITERIA Accept Cover Documentation

REVIEWER Paul R. Lusignan DISCIPLINE Historian

Phone_____Date 12/3/10

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the National Park Service.

GUAM'S *HOTNO* (OUTDOOR OVEN) MPS
Guam, GU

National Register of Historic Places - Return Comments:

The nominations outlined below, part of the Guam's *Hotno* MPS, are being returned for technical and substantive reasons.

While the nominations document what appear to be eligible examples of the Outdoor Oven property type outlined in the Guam's *Hotno* MPS cover document, the Guam SHPO does to wish to pursue actual listing or determinations of eligibility at this time. In each case the owners of the property were either not in support of listing, or resided outside of Guam and were not contacted for their comment. At such time as the owner's objections are removed, or the SHPO determines that the documentation should be forwarded to the Keeper for a formal determination of eligibility, the documentation can be appropriately certified by the SHPO and resubmitted to the National Park Service. In each case revisions to the documentation, as noted below, should be made prior to resubmission. These changes are consistent with the changes made to nominations for the four oven properties listed under the MPS in 2010.

Copies of the documentation will be retained by the NPS as supporting information for the Guam's *Hotno* MPS context.

JINASPAN OUTDOOR OVEN, Yigo, Guam

Certification

All submissions to the National Register must have a fully completed State/Federal Agency Certification section, including citations for level of significance and whether or not the property reflects a nomination or a determination of eligibility. [The appropriate level of significance for the outdoor oven property type is State. The current documentation does not support a national level of significance for the ovens as there is insufficient context related to the broader national themes of U.S. ethnic history or technology.]

Location

The appropriate State Code is: GU. The appropriate County Name and County Code is: Guam/10

Significance

The appropriate areas of significance should read: Ethnic Heritage-Pacific Islander, Archeology/Historic-Non-aboriginal, Architecture, and Social History.

The Period of Significance and Significance Dates should read: c. 1918-1930.
[The Period of Significance must relate directly to the resource being nominated and cannot predate the construction of the resource. While information obtained from the site might add to the understanding of a broader period, the period of significance selected must reflect the point at which the resource actually attained the characteristics which qualify it for listing in the NR.]

CRUZ OUTDOOR OVEN, Barrigada, Guam

Certification

All submissions to the National Register must have a fully completed State/Federal Agency Certification section, including citations for level of significance and whether or not the property reflects a nomination or a determination of eligibility. [The appropriate level of significance for the outdoor oven property type is State. The current documentation does not support a national level of significance for the ovens as there is insufficient context related to the broader national themes of U.S. ethnic history or technology.]

Location

The appropriate State Code is: GU. The appropriate County Name and County Code is: Guam/10

Significance

The appropriate areas of significance should read: Ethnic Heritage-Pacific Islander, Archeology/Historic-Non-aboriginal, Architecture, and Social History.

The Period of Significance and Significance Dates should read: c. 1945-1965.
[The Period of Significance must relate directly to the resource being nominated and cannot predate the construction of the resource. While information obtained from the site might add to the understanding of a broader period, the period of significance selected must reflect the point at which the resource actually attained the characteristics which qualify it for listing in the NR.]

FLORES OUTDOOR OVEN, Agana Heights, Guam

Certification

All submissions to the National Register must have a fully completed State/Federal Agency Certification section, including citations for level of significance and whether or not the property reflects a nomination or a determination of eligibility. [The appropriate level of significance for the outdoor oven property type is State. The current documentation does not support a national level of significance for the ovens as there is insufficient context related to the broader national themes of U.S. ethnic history or technology.]

Location

The appropriate State Code is: GU. The appropriate County Name and County Code is: Guam/10

Significance

The appropriate areas of significance should read: Ethnic Heritage-Pacific Islander, Archeology/Historic-Non-aboriginal, Architecture, and Social History.

The Period of Significance and Significance Dates should read: c. 1946.
[The Period of Significance must relate directly to the resource being nominated and cannot predate the construction of the resource. While information obtained from the site might add to the understanding of a broader period, the period of significance selected must reflect the point at which the resource actually attained the characteristics which qualify it for listing in the NR.]

CHACO OUTDOOR OVEN, Agat, Guam

Certification

All submissions to the National Register must have a fully completed State/Federal Agency Certification section, including citations for level of significance and whether or not the property reflects a nomination or a determination of eligibility. [The appropriate level of significance for the outdoor oven property type is State. The current documentation does not support a national level of significance for the ovens as there is insufficient context related to the broader national themes of U.S. ethnic history or technology.]

Location

The appropriate State Code is: GU. The appropriate County Name and County Code is: Guam/10

Significance

The appropriate areas of significance should read: Ethnic Heritage-Pacific Islander, Archeology/Historic-Non-aboriginal, Architecture, and Social History.

The Period of Significance and Significance Dates should read: c. 1952.
[The Period of Significance must relate directly to the resource being nominated and cannot predate the construction of the resource. While information obtained from the site might add to the understanding of a broader period, the period of significance selected must reflect the point at which the resource actually attained the characteristics which qualify it for listing in the NR.]

If you have questions regarding these comments, please contact me directly at the number or e-mail listed below.

Paul R. Lusignan, Historian
(for) Keeper of the National Register
(202) 354-2229
Paul_lusignan@nps.gov

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HOTNUN SANHIYONG

GUAM'S OUTSIDE OVENS

by

Darlene R. Moore
and
Rlene Santos Steffy

Prepared for

Department of Parks and Recreation
Guam Historic Preservation Office
490 Chalan Palasyo
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Micronesian Archaeological Research Services
A Guam Non-Profit Educational and Scientific Corporation
P.O. Box 22303, Barrigada, Guam 96921

August, 2008

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We want to thank all of those who shared with us their time and their memories concerning the building of, and the baking and roasting in, the outside ovens. Their generous contributions greatly enhanced the project. First we recognize Mr. Patrick Lujan, Historic Preservation Officer of the Guam Office of Historic Preservation (OHP), Parks and Recreation Department, for directing the project under National Park Service support, and the OHP staff for their assistance.

We especially thank Eddie (whose father built the oven) and Lou Crisostomo of Inarajan who demonstrated the *Gef Pago* Park Oven for us on April 6, 2008. It was a wonderful experience and the bread was delicious. We also thank the current Executive Director of *Gef Pago* Park, Bobbie Mantanona for permission to use the oven and Judy Flores, former Executive Director, for sharing with us specific details about its construction and use in the 1990s.

The following people provided support for the project and/or significant information about the ovens and where they could be found: Lynda Bordallo Aguon, Anthony Babauta, Joseph Barcinas, Joseph Torres Barcinas, Peter Barcinas, Rosanna P. Barcinas, Nito Blas, Paul Callaghan, Art Carbullido, Juan Duenas Castro, Ron Castro, Buck Cruz, David DeFant, Marie dela Rosa, Barbara Eggleson, David Mafnas Fejeran , Juan Eustaquio Garcia, Cathy Gault, Maria Concepcion Gayle, Betty Gayle, Lourdes Torres Leon Guerrero, Lynn Leon Guerrero, William Hernandez, Terresita Chaco Ishizaki, Steve Kasperbauer, Alejandro Blas Lizama, Paul McDonald, LaVonne Guerrero Meno, Lourdes Nededog, Jaime Sugiyama Paulino, Tom Perez, John Peterson, Joe Quinata, Carmen Frances Quintanilla, Teresita Baza Rosario, Gil and Stella Sablan, Tomasa Cruz Salas, Frederica Flores Santos, Robert J. Steffy, Maile Ana Steffy, Spencer A. Steffy, Mary Lou Cruz Valencia, Victor Valencia, David Welch, Joan Wozniak, Debbie Cruz Whitman, Sandra Yee, and Speaker Judith Teresa Won Pat.

For technical support we thank Rick Schaefer who provided the GPS coordinates, Dan Mosier of California who assisted with identifying the brick brands, Rosalind Hunter-Anderson of New Mexico who forwarded a copy of Karl Gurcke's book on brickmaking, and for editing assistance Judith R. Amesbury and Tara Perez-Steffy.

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Introduction

On February 6, 2008 the Guam Historic Preservation Office of the Dept. of Parks and Recreation contracted Micronesian Archaeological Research Services to complete an inventory of the Outside Ovens, *Hotnun Sanhiyong*, on Guam. The scope of work included locating, clearing, photographing and documenting the ovens, recording oral history about the ovens and their use, reviewing the existing archival information, completing Guam Inventory Site Forms, and preparing nominations to the National Register of Historic Places. The project director and archaeologist was Darlene R. Moore; the oral historian was Rlene Santos Steffy. Intermittent field work, archival review, interviews, compilation of the information into the technical report, and completion of the appropriate site forms were accomplished during the period from February 28, 2008 through July 2008.

It is not known precisely when during the Spanish Period (1521-1898) the beehive ovens (*hotno or hotnu* in Chamorro, *horno* in Spanish) were first constructed on Guam, but over time they were incorporated into the social system and eventually owning one became a status symbol. They were used during the Spanish Period, through the First American Period (1898-1941), the Japanese Occupation and World War II (1941-1945), and for a time after the war. Gradually, due to a combination of factors, their use is declining. Part of the decline probably is due to the fact that as more people enter the job market they have less time to devote to food preparation. At the same time, they have more money to spend on purchasing commercially prepared foods or arranging commercial venues for their traditional obligatory social events. Another probable factor in the oven-use demise is the eventual post-war availability of gas (butane and propane) and electric stoves that require much less time and effort to use. As a result, most of the outdoor ovens are now in ruins and many members of the younger generation have never tasted anything prepared in a *hotno*. However, this tradition of cooking has not been completely lost. One Merizo family uses their oven, built in 1991, to roast pigs for various family gatherings (see below). Another oven, built in 1992 at *Gef Pago* Park, Inarajan, is used to demonstrate to tourists and locals how the oven was once used (see below).

The oven is just one of the many items introduced to Guam during the Spanish Period (A.D. 1521-1898). For example, corn, the stone *metate* and *mano* that were used to grind corn, the *comal* (*kommat* in Chamorro; Topping et al. 1975), a flat clay or iron griddle used to cook the corn tortillas (*titiyas* in Chamorro; Topping et al. 1975), cacao, and tobacco were also introduced along with the stone building technique, *mamposteria*, clay tiles (*teha* in Chamorro; Topping et al. 1975), clay bricks (*ladriyu* in Chamorro; Topping et al. 1975), pigs, deer, and other quadrapeds. While this list of introductions is by no means complete, it is the *hotno* that is of concern in this paper.

First the information gathered during the background review is presented. Following that section are the descriptions of the seven previously identified and recorded ovens, followed by the descriptions of the thirteen ovens that were identified and recorded during this project. Some oral history information gathered during the field work is included with the oven descriptions. The transcriptions of the interviews conducted by Rlene Steffy follow in the oral history section of the report.

Efforts to locate the ovens began with contacting the various village mayors and talking about the project with various people including the staff at the Guam Historic Preservation Office, the staff at the Guam Preservation Trust and the Micronesian Area Research Center, archaeologists from the various consulting firms (IARII and PHRI), as well as a variety of other individuals. Although efforts were made to locate all of the remaining ovens on the island, it is possible that in the future additional features will be identified.

Background Review

The review of the historic literature indicates that the Spanish may have introduced two kinds of ovens to Guam; a kiln to bake clay tiles and bricks (for buildings, forts, bridges, and ovens) and for firing clay pottery vessels, and the *hotno* to bake and roast different kinds of foods. Possibly a single oven form served more than one of these functions as the oven at Sella Bay is said to have been "used for firing pottery and the baking of breadfruit" (Reinman 1974; Guam Historic Preservation Plan 1976:77). But it is also possible that the kilns built to fire the bricks, tiles, and pottery were larger than those used for cooking. References were found in the literature to roof tiles "baking" in 1672 (Lévesque 1997[10]:76), the roofing tile factory being refurbished in 1747 (Lévesque 1999[14]:29), the islanders making bricks and lime, and working as masons in 1772 (Lévesque 1999[14]:608), and a pottery and tile kiln being built in 1828 (Thompson 1947:106). Only the ruins of the most recent tile factory kiln, built in 1939, have been positively identified by archaeologists (Hunter-Anderson and Moore 2000:29-32).

While it is not known when or where the first *hotno* was erected on Guam, initially they were probably built to prepare foods for the European, Mexican, and Filipino (Lévesque 1997[10]:74) foreigners (primarily colonial administrators, military troops, priests and lay assistants) who lived on Guam after 1668. By then ovens had been introduced by the Spanish to many places in the "New World" including Mexico and the southwest United States. Versions of other European oven styles were introduced to Hawaii and the Americas as well (see Adams 2006; Costello 1998; Wegars 1991). In Hawaii, the Portuguese introduced a brick oven that was used to bake "Portuguese" bread (Adams 2006). In the southwest U.S. the introduced ovens had a "beehive" or domed shape, were built of adobe, and are now known by the Spanish term *horno.* This oven form is still used by American Indians and others to bake bread (Peterson and Nightengale 1993). Baking bread was one of the main uses of the ovens in Europe, but there they were also used to prepare casseroles, pies, roasts and cakes (http://www.history-magazine.com/bread.html; http://clayworkswoodfiredovens.com.au/wfo-history.html). On Guam the ovens were, and still are, used for baking and roasting.

The type of oven introduced to Guam is similar to the *horno* in that the walls of the vault store heat generated by a fire built within the chamber. When the oven walls are hot enough, the ashes are swept out and the goods are placed in the chamber to bake or roast by the heat given off by the walls as they cool (http://www.williamrubel.com). This is known as retained heat cooking (http://fornobravo.com/pizza-oven-resources/pizza_oven_glossary.html).

Two basic oven shapes are present on Guam, the smaller domed or beehive vault which is set on a squarish base and the larger half-round barrel vault that is set on a rectangular base. According to a Pizza Oven Glossary (http://www.fornobravo.com/pizza-oven-

resources/pizza_oven_glossary.html) the barrel vault type of oven is effective for large scale baking or roasting, but it takes longer to heat and requires more fuel than the smaller beehive vault, which is more fuel efficient.

When the Europeans arrived on Guam they attempted to plant wheat for their bread, but this crop did not flourish (de la Corte 1970). Due to the humidity, it was not easy to store the imported wheat grain or wheat flour that was brought for them by the galleons (Lévesque 1999[14]:594, 605, 607). While they could not bake the kind of bread they had eaten at home, they adapted. Corn crops flourished (de la Corte 1970) and by the late 1700s the soldiers assigned to the garrison were said to have ploughed, sowed, and harvested the crops which supplied them with rice and "bread" made from corn (Lévesque 1999[14]:609). They also ate "biscuits" (Lévesque 1999[14]:594, 605). The term "biscuit" included pieces of traditional Chamorro foods including baked or toasted breadfruit (Lévesque 1999[14]:594, 605) known as *essok* in Chamorro (Topping et al. 1975:62), and pieces of baked dough (Barratt 2003:107 provides the Chamorro term *apighighi*) made from a mixture of grated coconut and arrowroot (*gapgap or gabgab*) or cycad (*fadang*) flour. These foods, as well as meat from the newly introduced animals (including pigs, chickens and turkeys) could be prepared in the *hotno*.

References to ovens being used in food preparation were found in the observations recorded by visitors to the island in the late 1700s and 1800s. These accounts contain information about the practice of preserving breadfruit by drying slices of it in the "oven" or the sun (Lévesque 1999[14]:605, 637; 2000[16]:510, 517). The reports of the Freycinet expedition that visited Guam in 1819 describe the Chamorro traditional earth-oven (*chahan* in Chamorro; Topping et al. 1975) cooking method that utilized heated rocks in a pit to cook foods and noted that "[s]ince the Spaniards have been constructing ovens in the European style, though, (Plate 68), those have come to be preferred" (Barratt 2003:109).

Plate 68 (Barratt 2003:328) shows a "European style" oven situated under a wooden pole shelter with a pitched thatch roof (Photo 1). The exterior surface of this oven appears smooth and finished so that it is not possible to gain information about the materials used to build it. However, the expedition accounts note that there were at the time of the Freycinet visit stonemasons on the island who built the ovens and installed the tile roofs on stone buildings (Barratt 2003:176). From this it could be inferred that stone blocks and clay bricks or tiles were among the materials used in the construction of the *hotno* built around that time.

The oven illustrated in Plate 68 is being heated for a baking event (Barratt 2003). The oven consists of two parts, a hip-high square or rectangular base or platform with a narrow extension, or oven landing (http://fornobravo.com/pizza-oven-resources/pizza_oven_glossary.html), along one side and an upper vault that has a stepped configuration with an arched opening. A tray of items, apparently waiting to be baked, is resting on the landing. Flames are visible inside the arched opening, three pieces of wood extend out of the opening, smoke obliterates the top of the oven, and the wooden door that secures the opening while the goods are baking, is leaning nearby. A long pole, possibly used during the heating or baking process, is leaning against the structure. A man is shown there too, suggesting that men participated in oven preparations.

Photo 1. On the left is an outside oven being heated for a baking event during the Freycinet visit (after Lévesque 2002:108; Barratt 2003:[Plate 68]).

The Freycinet accounts do not indicate the location of the illustrated oven, but it could be Hagåtña since that was the expedition's base during their three-month long visit to the Marianas (Barratt 2003:xv). The *Palacio* (the Spanish Governor's headquarters) in Hagåtña had at least to ovens; both were repaired in 1823 (Driver 2005:85).

By the beginning of the First American Period (1898), when the U.S. took over the administration of Guam (Rogers 1995), some private homes in Hagåtña had ovens. For example, when W.E. Safford purchased a house in Hagåtña to live in during his assignment to Guam in 1898, there was a "dome-shaped" oven on the property that his Chamorro housekeeper used to bake his bread (Safford 1910:34). According to Safford, the housekeeper made excellent bread using imported flour from the U.S. and fermented coconut "toddy" as the leavening agent (Safford 1910:21, 240). At that time, a 100 lb barrel of the imported flour could be purchased in a local store for $13.00 (Safford 1905:136). Shortly after he purchased the Hagåtña property, another Chamorro woman who had had an arrangement with the previous oven owner asked if she could continue to use the oven for baking bread and "toasting" breadfruit (Safford 1910:38).

The process of "toasting" breadfruit in an outdoor oven is described by Joaquin Flores Sablan (1990:145).

> "In preparing the breadfruit, she peeled each one and sliced it lengthwise about two inches in thickness and then placed the slices in metal trays. With the outside oven duly heated by burning coconut fronds, husks, and shells, she removed the ashes and all other

impurities and placed the trays side-by-side in the oven with its door tightly shut for over twelve hours. The breadfruit prepared as *essok* would be as crispy and crunchy as the saloon pilot or crackers, and could be eaten by dunking in breakfast beverages such as coffee, milk, or tea, somewhat like the Continental breakfast served in airplanes today. It also could be stored in airtight containers for future use by grinding it into flour to make hotcakes and pastries."

A description of baking in an oven, probably a *hotno* since the reference is to an oven not a wood-burning cook stove, is contained in a journal written by Jesus C. Barcinas in 1938-1939 (Thompson 1947:311-340). Bread, cakes, cookies and pies were being baked for a wedding feast (*fandanggo* in Chamorro; Topping et al. 1975) in Merizo. Since the family of the bride did not have an oven, they used one belonging to another family in the village. Barcinas indicates that men gathered the fuel to heat the oven and he states that "[e]very time the oven is used the owner is paid three loaves of bread" (Thompson 1947:338). The groom's family was also making festive preparations and Barcinas reports that in this case the baking was done "in the oven of the groom's stepfather" (Thompson 1947:338).

During the First American Period Hagåtña had several bakeries and bake shops that were operated by Chamorro and Japanese families (Garcia, pers. comm. 2006; Hunter-Anderson and Moore 2006:7). Juan Eustaquio Garcia, born in 1924, grew up in Agana. His father was from Arizona and his mother from Guam. Garcia remembered the names of several of the prewar bakeries in Agana; the Eustaquio bakery (Our Home Bakery), the Dainty Bakery (run by the Rosario Family), the Dejima Bakery, and other bake shops run by the Perez, Calvo, Toves, Gay and Chance families.

The Eustaquio bakery had an outdoor oven that was used to bake the goods which Garcia delivered on his bicycle. Garcia said the oven was located by the first house on the south (inland) side of O'Brien Drive as one travels west from Route 4. Garcia indicated that this house once served as the Eustaquio Bakery; it is now in ruins, abandoned and overgrown with weeds and vines. Our investigations around the house in 2008 revealed considerable rubble, but no oven nor oven remnants were recognized.

Before WWII and for a time after, there were ovens and bakeries in other villages as well. Tony Babauta (pers. comm. 2008), former Mayor of Agat, said that his mother had an oven in Old Agat before the war; it no longer exists. Tony remembered that when he was young, it seemed that at least one family in every clan had an oven that other members of the extended family could use. Tony recalled that his mother baked breadfruit and cookies in their oven. When asked about the kind of flour that was used to make the cookies, Tony said that before and during WWII flour wasn't always readily available. Then the cookies [*rosketti* in Chamorro] were made from home-made flour.

Parts of three different kinds of plants commonly found on Guam: tapioca (*Manihot esculenta*, *mendioka* or *mendocca* in Chamorro), arrowroot (*Tacca leonlopetaloides*, *gapgap* or *gabgab* in Chamorro), and cycad (*Cycas circinalis*, *fadang* in Chamorro) can be used to make flour. However, Tony recalled that making the flour from any one of these plants is a time consuming process that includes going to get the plant parts, processing them, which involves cutting or grinding and washing the pieces numerous times often over a period of several days,

drying the meal, and finally grinding it by hand to make the flour that could then be used to make several different types of foods. Before WWII a stone *metate* and stone *mano* were often used to grind the meal into flour (Safford 1910).

Frank Mendiola, who was farming in Barrigada in 2000, was a young teenager during the Japanese occupation, and he remembers that before the war many families were scattered throughout the Barrigada farming area where they operated farm plots (Hunter-Anderson et al. 2001:53). Some families in this area were considered better off than others because they had brick and mortar outdoor ovens and/or concrete water catchments. Frank said that one of the uses of the ovens was to dry breadfruit, which once dried, could be stored for future use.

One of the reasons that families with ovens and catchments were considered more comfortable than others is that they had the means to acquire the materials and make arrangements for the skilled laborers necessary to build these structures. Furthermore, they had the funds to purchase the ingredients necessary to make the breads and pastries (Frederica Santos, pers. comm. 2008). They could sell or barter their baked goods and they could receive payment for letting someone else use their oven. At the very least, owning an oven meant a family had a way to "toast" and store enough breadfruit to see them through rough times.

According to a College of Agriculture leaflet (Lujan 1978), once dried the breadfruit could be used three different ways. It could be eaten as biscuits, it could be cooked with meat, or it could be ground into crumbs, mixed with grated young coconut and sugar and made into balls.

An article in the Islander Section of the Pacific Daily News (Naputi 1982:4-5) provides additional details about the more recent *hotno* construction techniques and use. In 1982, the owner of one oven, Joaquin Ada of Leyang, Barrigada, was 72 years old. He had his oven built in 1967 by Canada, Barrigada resident Tun Juan Ungacta. According to Naputi (1982) the Ada oven was 6 feet long by 6 feet wide and it stood about 3 feet high. The dome had a cast iron door that measured about one foot square. The inner walls of the dome were built of heat resistant bricks, and the exterior plaster was made from lime, cement, sand and water. Ada said that before he could have the oven built, he had to "get the materials from other people" whose ovens either had been destroyed by typhoons or were no longer being used (Naputi 1982). According to Joaquin's daughter, Maria Ada Santos (pers. comm. 2008), the Ada oven was damaged during the 1993 earthquake and they tore it down in 1997.

The Naputi (1982) article indicates that the wood the Adas used to fuel the oven was scrap lumber that was picked up or given to them. To heat the oven, the wood was pushed through the opening and ignited. The fire burned for two to three hours. When the bricks on the oven's inside walls were white, the temperature was considered hot enough. Then the embers and ashes were scraped out through the opening with a steel rake and the oven's interior was swept clean with a long *tangan-tangan* branch with leaves. The food to be baked or roasted then was placed inside and the door closed. The Ada oven could hold four 50-pound pigs, but it was also used to roast other kinds of meat like beef roast, turkey, or ham. Generally it took about three and a half hours to roast a pig.

Because of the time and energy it took to collect the fuel, bring the *hotno* to temperature, clean out the coals and embers, and bake or roast the food, the Ada family used the oven only when large quantities of meats or pastries were to be roasted or baked (Naputi 1982).

Most people said that pigs roasted in the traditional way in the outdoor oven taste much better than pigs roasted any other way. Many older Chamorros fondly recall memories of the wonderful aromas associated with the ovens owned by their families or located in their villages. As young children, they knew when the goods would be finished baking, and they were on hand shortly after the baked goods were removed from the oven to see if there were any edible rejects or morsels that might be distributed to them (Marie Dela Rosa, pers. comm. 2008). Because of the possibility of getting burned, usually children were not encouraged to play around the *hotno* while it was in use. Since family owned ovens were commonly used to prepare food for parties and large gatherings, some of the fond memories associated with the ovens are, no doubt, related to happy family celebrations and good food.

Generally the *hotno* was part of the household's outdoor kitchen (*kusina* in Chamorro; Topping et al. 1975:274), a covered working and cooking space. One reason the ovens were sheltered was to keep them dry. If rain fell on a hot oven, it could crack (Judy Flores, pers. comm. 2008). Ovens had to be used fairly frequently in order to stay dry. If one sat unfired for too long, the walls absorbed moisture and the oven would not bake efficiently, and/or cracks developed. When the oven was new or damp, a series of small fires would be built inside the chamber over a period of several days to dry the oven before a big baking or roasting event took place.

Previous Archaeological Research

Prior to this project, seven ovens (four beehive vaults, one barrel-shaped vault, and the remains of two bases) had been recorded in the existing archaeological reports and/or on the site inventory forms on file at the Historic Preservation Office. The three beehive ovens include 1) Chaco Spanish Oven in Agat (Site No. 66-02-2139), 2) Sella Bay Spanish Oven in Umatac (Site No. 66-02-1008), 3) Jinapsan Spanish Oven in Yigo (Site No. 66-08-1192), and the Cocos Island Parking Lot Oven in Merizo (Site No. 66-06-1222; Henry et al. 1991). The oven with the barrel-shaped vault (Site No. 66-08-PN06) is located near the MSA on Andersen Air Force Base (Yee et al. 2004). One of the two oven bases (66-04-1696) is located in Barrigada (Hunter-Anderson et al. 2001:A-87) and the other (66-04-Ant 6) is located in North Finegayan in Dededo (Welch 2008).

The construction materials used in two (Jinapsan and Andersen) of these is similar. Limestone rocks (some possibly shaped) and mortar were used to build the bases, red clay bricks formed the vault floor and lower portions of the vault walls, and thinner red clay tile pieces and mortar were used to build the upper walls and roof of the vault. On the other hand, heat resistant bricks were used in the construction of the vault floors and lower walls of the Chaco, Barrigada, North Finegayan, Merizo, and Sella Bay ovens. Descriptions of the six ovens follow.

Chaco *Hotno*, Agat (66-02-2139)

According to the Inventory Data Form on file at the Guam Historic Preservation Office completed in 2007, the oven is located about 20 m east (inland) of the high tide line in the well kept yard of the Gil and Stella Sablan family, Chalan Josen Milagro St., Agat. Several concrete homes and other outbuildings belonging to various members of the family are located in the area. The oven is located on the sand flat under some large mango trees. Nearby vegetation includes an avocado tree, coconut palms, betelnut, and a kapok tree (*algidon de Manila* in Chamorro; *Ceiba pentandra*, Stone 1970:418). GPS coordinates for the oven are Northing 13° 21′ 50.3″; Easting 144° 38′ 84.2″. The oven was built about 1952 and was last used in the 1980s. Once it was protected by a tin roof shelter, now it is in the open (Photo 2).

Photo 2. Chaco Oven, Agat.

The oven has an east/west orientation with the main opening facing to the east (inland). The base measures 1.50 m long by 1.50 m wide, and it is .48 m tall. It appears that the base is built of shaped limestone blocks. The floor, walls, and roof of the oven vault are built of heat resistant bricks. A single brick measures about .24 cm long, .12 cm wide, and .095 cm thick. Seven courses of bricks form the vertical lower walls of the vault. Above that point, which is .80 m above the vault floor, the bricks are offset to allow the walls to taper toward the rounded roof. The top of the roof is 2.0 m above ground surface. The walls are about .13 m thick, and their exterior surfaces are plastered with cement or a lime/sand mixture. In places the plaster is 1.5-2.0 cm thick. The main opening measures about .50 m square. A .50 m wide by .50 m tall extension of the base is located across the front of the oven. On the right side of this extension

there is a .50 m wide platform or landing. In front of the main opening there is a .30 m wide groove in the extension that gradually slopes to the left until it reaches ground surface. The purpose of this groove is to catch the ashes when the oven is swept out. The back vent is located .70 m above the vault floor and it has a diameter of .12 m.

This oven is a post-war interpretation of an earlier oven form that was introduced to Guam during the Spanish Period. This oven was built in the 1950s and is in fairly good condition, although several cracks have developed. It retains its character and integrity. Presently on the Guam Site Inventory, this oven is recommended for nomination to the National Register of Historic Places as part of a Multiple Property Registration.

Sella Bay *Hotno*, Umatac (66-02-1008).

According to the Inventory Data Form on file at the Guam Historic Preservation Office, completed in 1974, the ruins of this oven are located 20 m east of the shoreline and about 25 m south of the Sella River and the Spanish Bridge (built of stone). The oven is built on a rectangular base that measures 2.3 m by 2.7 m and is .60 to 1.1 m tall. The base was constructed of dressed limestone blocks and mortar. The dome of the oven has collapsed, but it is estimated that its original height was about 1.0 m. The diameter of the vault at the base is 2.3 by 2.1 m. The vault floor and lower walls were constructed of heat resistant bricks. Pieces of red clay roofing tiles formed the upper walls and roof.

A June 3, 2008 inspection of the oven revealed that the oven base measures 2.65 m (N/S), 2.60 m (E/W) and is .50-.55 m tall. The base was built of shaped limestone blocks and coral rocks and mortar. The base extended out for about .55 m west (seaward) of the vault's main opening (which faced to the west). A large dressed limestone block measuring .70 m long, .52 m wide, and .20 m thick forms part of the oven landing on the right side of the opening (Photo 3).

Photo 3. View of the right side of the oven base and lower vault wall. The camera is facing east. Note the large dressed limestone block that forms a portion of the oven landing. The machete is leaning against a portion of the intact wall. The machete is .58 m long.

Heat resistant bricks pave the vault floor and also were used to form the vault's lower walls. A single heat resistant brick measures .23 m long, .11 m wide, and .06 m thick. Letters noted on some of these bricks form the word TCARR (Photo 4). The TCARR bricks were made by the Thomas Carr & Son company in Newcastle-on-Tyne, England from 1827-1918 (Gurcke 1987).

Photo 4. Heat resistant brick with impressed letters on its surface – TCARR.

The intact portion of the .24 m thick wall on the right side of the vault is .52 m tall (above the base). Four courses of heat-resistant bricks can be seen in the lower wall on the right side of the main opening (Photo 5). The upper portion of the wall is built of red clay tiles and mortar. The tile fragments are quite large and some have finished edges and a slight curve, which could indicate that they were roofing tiles. One large fragment measures .22 m long, .15 m wide, and .01 m thick. Fragments of flat, thicker tiles were also seen and various pieces measured were .02, .03, and .035 m thick. One end piece of a flat red clay tile (possibly a floor paver), with three finished edges, measures .12 m wide and .035 m thick. Identifying marks that could indicate where the tiles were made were not observed.

This oven is an interpretation of a form that was introduced to Guam during the Spanish Period. The date of the oven's construction remains unknown. The Sella Bay Spanish Oven (66-02-1008) is part of the Sella Bay Archaeological Site (66-02-0125). Both the oven and the archaeological site were placed on the Guam Register of Historic Places Inventory in September 1974. The site and the oven were placed on the National Register of Historic Places in November 1974. No archaeological research has been completed at the sites.

Photo 5. Close up of the right side of the Sella Bay Oven vault showing the brick and tile construction techniques. The camera is facing southeast.

Jinapsan *Hotno* (66-08-1192)

According to the Guam Register of Historic Places Inventory Data Form completed in 1987 and on file at the Office of Historic Preservation, this oven is located in the Jinapsan area at the north end of Guam. The oven (66-08-1192) is on the Jinapsan archaeological site (66-08-0014). The Jinapsan site, which includes latte sets and prehistoric midden deposits, was placed on the National Register of Historic Places on December 1974. To reach the oven, travel west on Beach Road from the west end of Tarague Beach. The oven is on the right side of the track on property that belongs to the estate of the Santiago de Castro family. It is situated on the sand flat about 50 meters inland of the high tide line. GPS coordinates for the structure are lacking. The oven opening faces to the east.

Originally the base, built of rocks and mortar, was more or less square and measured about 2.10 m on a side (Photo 6). Due to cracks and areas of collapse, now the front measures 2.7 m, the rear measures 2.12, and the sides 2.12 m and 2.15 m. The oven has an overall height from ground level of 2.2 m. The upper surface of the .78 m tall base was finished with a layer of red clay bricks. The oven's beehive-shaped dome, or vault, was built in the center of the solid base, leaving a narrow platform on all sides. The vault was built of red clay bricks and tiles and lime mortar. The dome is 1.42 m tall and its maximum diameter, at the point where it rests on

the base, is about 1.35 m. There are two openings, the main door and the back vent. Originally the main opening was arched, and it has a maximum width of .60 m. The square vent measures .07 m on a side.

According to the existing site form, a door made of *ifil* wood was used to close the main opening when the oven was in use. Frederica Santos (pers. comm. 2008), a 75 year-old woman who remembers using other ovens, said her mother used to put a damp gunny sack on the inside of the wooden door for their oven to keep it from getting too hot and catching fire during baking events.

The Jinapsan oven was built by Don Santiago de Castro at the end of the 1800s or the beginning of the 1900s primarily for the family's use. A photo thought to date to sometime between 1918-1930 was recently for sale on e-Bay (Steffy pers. comm. 2008, see below). The oven continued to be used through WWII. It is now in fair condition.

Photo 6. Jinapsan Oven in the early 1980s.

This oven is an interpretation of an earlier oven form that was introduced to Guam during the Spanish Period. This oven was built in the early 1900s, or late 1800s, and has partially collapsed. Even so, it retains its character and integrity. Although the oven is on a prehistoric National Register site, it is recommended for nomination to the National Register of Historic Places as part of a Multiple Property Registration.

Andersen AFB *Hotno*

This oven is located on Andersen Air Force Base, near the southeast corner of the munitions storage area (MSA) (Yee et al. 2004:57). Additional research is required to verify the family name of the people who lived this area prior to WWII. The UTM coordinates are E270522.598m, N1504100.409m (Yee et al. 2004:112-114, 147-148).

The rectangular base is about 3 m long (N/S) and 1.5 m wide. Originally the top of the vault may have been more than 1.50 m tall (Yee et al. 2004:34). Now, due to roof collapse, it is only 1.43 m above ground surface. The oven base, constructed of limestone rocks and mortar, measures about .54 m high (Photo 7). The exterior of the barrel-shaped vault measures 1.67 m long, 1.43 m wide, and about .80 m tall. The base is longer than the vault and it forms a 1.0 m wide bench/working space at the front and a .29 m wide bench at the rear. The front bench has a trough-like depression in front of the opening. The interior floor of the dome has a single layer of red clay bricks that measure .09 m wide, .07 m thick and .20 m long. The .15-.20 m thick side walls are built of flat and curved pieces of thin red clay tiles and mortar. The average thickness of the tiles is about .01 m. The dome walls are finished on the exterior with a layer of the thin tiles covered with a .02 m thick layer of mortar or plaster. The front opening has collapsed , it opened to the south. The round vent in the rear is located about .40 m above the oven base, and it has a diameter of 8 cm.

Photo 7. The MSA Oven on Andersen Air Force Base, (taken fromYee et al. 2004).

While the construction date for this oven remains unknown, it was built prior to WWII. The Guerrero water catchment (Site No. 66-08-1344), located some distance south of the MSA oven, was built in 1925 (Yee et al. 2004). This catchment, and the pre-war ruins of the Torres farmhouse, located west of the catchment (Yee et al. 2004:55), indicate that local families were using the area during the First American Period, if not before. Use of the area probably continued through the Japanese Occupation.

Yee et al. (2004:148) recommended that the MSA oven be nominated to the Guam and National Registers under Criteria C ("embody the distinctive…method of construction") and D ("likely to yield information important in prehistory"). It may also qualify under Criteria A

This oven is an interpretation of an earlier oven form that was introduced to Guam during the Spanish Period. This oven is in fairly good condition, although it has partially collapsed. It retains its character and integrity. Presently on the Guam Site Inventory, this oven appears eligible for nomination to the National Register of Historic Places as part of a Multiple Property Registration. However, prior to listing it on the National Register, additional efforts should be made to gather more oral history.

Cocos Island Parking Lot *Hotno*, Merizo (66-06-1222)

The Merizo oven, located in the rock wall terrace of the parking lot for the Cocos Island Ferry, on the inland side of Route 4, was documented in 1991 (Henry et al. 1991). At that time the vault was intact (Photo 8). The base of the dome was 2 m in diameter and it was 1.3 m high. Its exterior surface was coated with plaster. The arched opening faced seaward. It was built in 1939 by Manuel Charfauros. Citing Alma Van der Velde, a former resident of Merizo, Henry et al. (1991) described the oven as large enough to hold four pigs or many loaves of bread, cakes, and cookies; but its main use was to turn breadfruit into "hardtack".

Photo 8. The oven in the Cocos Island Ferry Parking Lot in 1991, taken from Henry et al. 1991.

Only the ruins of this oven now remain in the center of the inland parking area for the Cocos Island Ferry, Merizo. The GPS coordinates are N 13°16'06.5"; E 144°39'97.0".

The partial wall of the oven vault remains standing (Photo 9). The walls are about .20 m thick. The exterior section of the standing wall is about .85 m tall (above ground surface); it is about .55 m tall on the inside. The oven floor and the lower portion of the dome wall were built of tan colored heat resistant bricks. Three courses of bricks are visible in the standing wall section. Some of the bricks had letters stamped on their broad surface, however no complete words could be made out. The bricks forming the wall were broken in half so that they measured about .11 m wide, .07 m thick and .10 m long. In the vault wall above the bricks, six alternating courses of flat, thin red clay tiles and mortar are visible. The flat tile pieces measure about .15 m wide, .03 m thick, and .15 m long. Three courses of alternating curved tiles and mortar are visible above the flat tile courses. The curved tile pieces measure about .14 m wide, .02 m thick, and .24 m long. A thin cement or lime plaster was applied to the exterior surface of the vault wall. A .10 m tall piece of iron is embedded in the ground on the exterior (east?) side of the oven wall.

Photo 9. Cocos Island Ferry Parking Lot Oven ruins. The machete is .58 m long. The camera is facing east.

Letters were noted on the surfaces of some of the broken heat resistant bricks, but no whole names were identified. The letters on the bricks appear to represent at least three different manufacturing companies. The GIE seen at the right end of one brick could stand for the Carnegie Brick and Pottery Co. of Carnegie, California. This company made bricks from 1902-1911. Another right half brick had the letters …GREEN with …RE D.P. below. A left end of another brick had the letters L. F with LOU below. Possibly LOU would have spelled Louisville.

Barrigada *Hotno* (66-04-1696)

The Barrigada oven base is located in GLUP Parcel N5A, south of Route 8 on land that the federal government recently returned to the government of Guam (Hunter-Anderson et al. 2001:A-87). To reach the site turn south from Route 8 on to the dirt track at the top of the low rise east of the P.C. Lujan Elementary School. Follow the track in a southerly direction for about 250 m. At that point the oven base is in the jungle about 31 m west of the track. The GPS coordinates are N644707.539, E351112.333.

The rectangular concrete block base measures about 2.5 m long (N/S), 1.7 m wide and its upper surface is .83 to .90 m above ground surface. The top surface is broken and irregular, exposing the heat resistant tan bricks and the red clay bricks that had been embedded in the concrete mortar to form the floor for the oven vault. Some of the bricks had markings on them such as MUNRO, and WELLSVILLE with the word SAVAGE below (Hunter-Anderson et al. 2001:A-88-A-89). Decaying wooden posts seen in the ground near each corner of the base suggest that this feature was once situated under a protective roof.

This feature has lost its integrity and is not eligible for nomination to the National Register of Historic Places.

North Finegayan *Hotno* (66-00-ANT6)

This oven base (Site No. 66-00-ANT6) was identified during an archaeological survey conducted by IARII in 2007 (Welch 2008). It is located on Navy property and its GPS coordinates are on file with the Navy.

The rectangular base measures 1.72 m long (E/W) by 1.2 m wide and .50 m high (Fig. 1). It is built of limestone rocks, fragments of broken red clay roof tiles, and mortar. Red clay bricks and heat resistant bricks form its upper surface and would have lined the vault floor. Some heat resistant bricks are stamped with the words THE DENVER FIRE CLAY C0., HI FIRE. The Denver Fire Clay Co. made bricks from 1918-1942 (Mosier, pers. comm.. 2008). The vault walls have collapsed, but the rusted metal door frame (.65 m tall and .565 m wide) remains in an upright position on the west end of the base. Bricks, brick fragments, pieces of tiles, and a broken metal teapot are on the ground next to the oven base (Welch 2008). Based on the oven's condition and the heat resistant bricks, it was probably built during the First American Period (1898-1941).

This oven has lost its integrity. It should be placed on the Guam Inventory. Due to its deteriorated condition, it may not be eligible for nomination to the National Register of Historic Places.

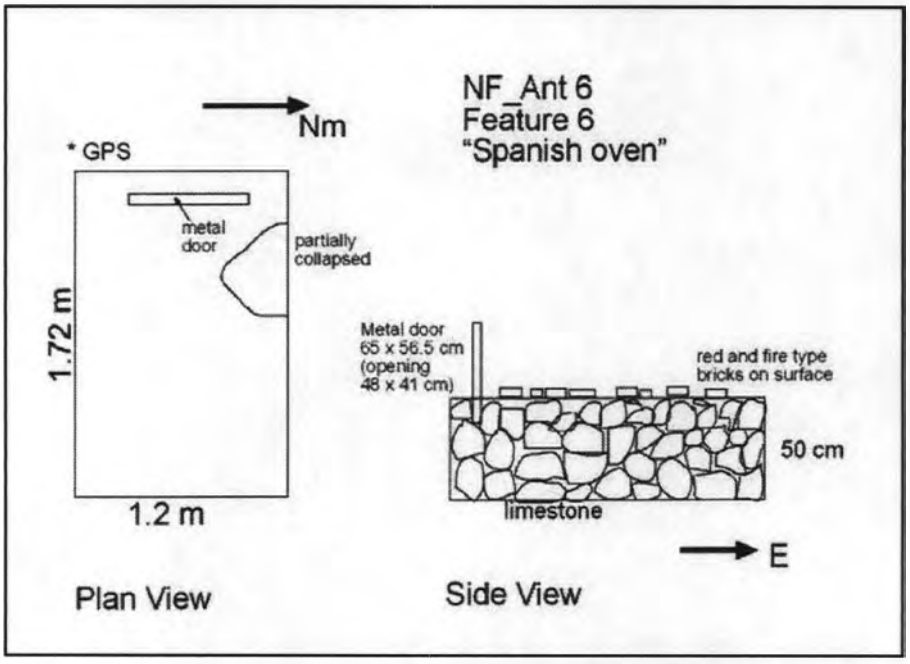

Figure 1. Drawings of the ruins of the North Finegayan Oven (taken from Welch 2008).

Summary

In this small sample of seven outdoor ovens both "beehive" and "barrel" shaped vaults are represented. Guam Inventory Site Forms are on file for most of these ovens. A Multiple Property Listing National Register Nomination form will be completed for the Jinapsan *Hotno*.

Results of Field Work

Thirteen previously undocumented ovens were recorded and information about them was gathered during the project. The work was completed intermittently from February through July 2008. The information follows, the ovens are listed in alphabetical order.

Baza *Hotno*, Yona

The Baza Oven is located on property owned by Teresita Baza Rosario and Ben Rosario. To reach the oven travel in a southeasterly direction along Balajadia Road, take the second turn to the left on As Baza Road, make a right turn on to Beatrice Baza Road and follow the track to the end at the Baza property. The oven is located on the north side of Teresita's son's concrete house. It sits on a large concrete slab that once was roofed as part of an outdoor kitchen. The oven is part of a structural complex that includes the concrete *bodega* of Teresita's parents' house and a concrete water catchment, both built prior to WWII. These features are located just east of the oven. The GPS coordinates for the oven are N13° 24' 222"; E 144° 46' 065".

The oven measures 2.08 m long, 1.46 m wide and 1.67 m high (vault has flat top). The base is about .60 m high and the elongated vault is about 1.0-1.07 m tall. On all four exterior

walls of the concrete base, impressions of horizontal corrugations are visible. It appears that the base was formed by pouring concrete into a form made from sheets of corrugated tin. At the front of the oven, there is a .80 m high extension that extends .52 m out from the base, and it is .16 m wider than the left side of the base. On the three remaining sides of the oven, the base and the vault's lower walls have the same dimensions. In the front extension there is a .23 m wide gap that continues to the concrete floor. The purpose of this space was to accommodate the ashes when they were scraped out of the opening after the oven had been brought to temperature.

The walls and roof of the vault are about .25 m thick, and the exterior surfaces are plastered. The vault was built of bricks and mortar; 12 courses of bricks can be seen on the inside, extending from the oven floor to the flat ceiling. Letters can be seen on the surface of some of the exposed heat resistant bricks used to construct the walls of the oven vault. The word PEERLAC with the number 53-317 below was noted on the surface of the bricks. PEERLAC bricks were manufactured by the Laclede-Christy Clay Products Co., Missouri, in 1938.

The main opening of the oven is .52 m tall by .49 m wide, and three of its outside edges are reinforced with sturdy pieces of angle iron that measure about .10 m on a side. The circular back vent has a diameter of .10 m. The flat top of the dome measures 2.05 m long by .91 m wide. Inside, on the underside of the roof, a metal framework consisting of two long pieces and two cross pieces is exposed. The ends of four angle irons are visible on the oven back. This framework probably lends strength to the vault roof. The bricks forming the roof are incorporated into this framework and plastered over on the inside (Photo 10).

Photo 10. Baza Oven, Yona. The camera is facing south, the photo rod is 1 m long.

The Baza Oven was built in 1951-52 to replace an earlier oven that was destroyed during WWII. Teresita's grandmother, Teresa Cepeda Baza, had it built by Tun Vicente Flores, a Yona carpenter who was well known at the time for his superior construction skills. Teresita thought that her grandfather would have purchased the construction materials used to build the oven. Teresita's mother, Beatrice Cepeda Baza, used the oven when she was alive, but it has not been used in recent years. The present oven was built in order to prepare food for the son's (Teresita's brother) wedding. The Baza family was industrious; they worked hard and saved in order to build the oven and water catchment. They also had a car. Mr. Baza, a farmer, did not drive, so they had to engage a driver. Crops raised on the Yona property included coconut, banana, taro, sweet potato, corn, yam, tangerine, mango, avocado, and breadfruit.

One of the foods the family baked in the oven was breadfruit. Slices of baked breadfruit were then placed in biscuit tins where they could be stored for a time. Hard bread (*pan tosta* in Chamorro, Topping et al. 1975) was also baked in the oven. Sometimes the family took orders from other families for roasting or baking; there was a charge for this service. The oven could hold four pigs at once.

Teresita said that if the oven was going to be used for light baking, such as bread or cookies, dried coconut leaves were used as fuel to heat it. When pigs were to be roasted, heavier wood was burned. Different food types were cooked separately. In other words, breads or pastries would not be baked along with meats, but different kinds of meats could be cooked together. The fire was allowed to burn inside the chamber until the inside bricks turned white. Then the chamber was cleaned out and whatever was going to be baked or roasted was placed inside. The main door was closed and the back vent stopped. Sometimes the trunk of the banana plant was trimmed to use as a "cork" to stop the back vent.

This oven is in good condition; it retains its sense of place and character. It should be placed on the Guam Inventory. This oven is recommended for nomination to the National Register of Historic Places as part of a Multiple Property Registration.

Carbullido *Hotno*, Agat

The ruins of the Carbullido oven are located in Agat on the seaward side of Route 2, behind (southwest of) the old gas station that has been converted into a church. The church/gas station is situated across the street from the KimChee Store. The oven is situated about 50 m inland from the high tide line within a fenced area now owned by Arthur Carbullido Toves. Coconut palms, banana plants, guava, *tangan-tangan*, and ferns grow within the fenced area. Trees on the property include mango, ironwood, and pago. The GPS coordinates for the oven are N 13° 23' 242"; E 144° 39' 612". The point was taken about 5 m west of the oven.

Only the oven base is present, the vault has collapsed, but the bricks and mortar are still present (Photo 11). The base has an east/west orientation that measures 2.50 m long by 2.40 m wide, and .50 m high. The base was built in a corrugated tin frame that was filled with large to small coral beach rocks and mortar. On the exterior surface, where the mortar remains intact, remnants of the horizontal corrugations of the tin are visible. The main opening faced to the east (inland). An "L" shaped extension is located across this side of the base, below the opening. It

is about .30 m wide across the front where it slopes down to the ground surface to the left. This is where the ashes would fall to the ground. The platform, or landing, on the right (north) side is 1.20 m long, .90 m wide, and .50 m tall, creating a flat work space. The vault floor and walls were built with heat resistant bricks. The lower portions of the walls consisted of at least eight courses of bricks laid so that their long axis had a north/south orientation (at a right angle to the long axis of the oven), forming a wall that was .23 m thick (the length of a single brick). A loose brick measured .23 m long, .12 m wide, and .07 m thick. The name MEX-KO with FB –1713 below was noted on several of the bricks. A section of the back wall remains standing, it is .95 m tall (above the vault floor). MEX-KO bricks were manufactured by the A.P. Green Fire Brick Co., Missouri, from 1929-1942 (Gurcke 1987).

In 1993, Ernestina Carbullido, a resident of Agat who has since passed, was interviewed and she recalled that there was an oven in Agat where her family fired bricks that were to be used for building houses (Moore et al. 1995:16). It is not clear whether she was referring to this Carbullido oven or another structure. Joe Quinata (pers. comm. 2008), the Executive Officer of the Guam Preservation Trust, and a resident of Umatac, remembers that the Carbullido family used this large outdoor oven in the 1960s to bake a very tasty bread that could be purchased from the Carbullido store in Agat.

This oven is in poor condition and it has lost its integrity. It should be placed on the Guam Inventory. It is not recommended for nomination to the National Register of Historic Places.

Photo 11. Carbullido Oven, Agat, vault collapsed. Camera facing west. Note the corrugations on the left-front corner of the base.

Concepcion *Hotno*, Tamuning

To reach the lot where this Tamuning oven was located, turn right from West Espiritu St. to M. Sgt. David Camacho St. The property is the second lot on the right side, next to a three story building, Grand Condominium, that is located on the corner. A large tree (*Calophyllum inophyllum*) grows in the northwest corner of the lot. The oven was located in the yard, about four meters east of the southwest corner, next to a high concrete block wall. At the time the oven was recorded and documented in 2007, the vault had collapsed and the oven base was badly cracked. The oven was built in the 1950s and was demolished in 2007 when the Gayle family sold the property. At that time, the bricks were donated to *Gef Pago* Park (Betty Gayle, pers. comm. 2008).

The base was made of concrete mixed with commercially prepared coral gravel. Horizontal impressions of the boards used to build the wooden frame to hold the wet concrete were visible on the exterior surfaces of the oven base. The base was 1.55 m long (E/W), 1.15 m wide, and .45 m tall. The lower walls of the vault were built of heat resistant bricks and the upper walls and roof were built of red clay tiles (Photo 12). The vault was a little smaller than the base, leaving narrow ledges around three sides. The vault measured about 1.15 m long by .85m wide. Its walls were about .15 m thick. Individual bricks measured about .24 m long, .12 m wide, and .07 m thick. The names of three different manufacturers were noted among the different bricks: ALAMO, LOUISVILLE, and MEX-KO. According to Gurcke (1987), the ALAMO AND MEX-KO bricks were manufactured in Missouri, and the LOUISVILLE brick was manufactured in Kentucky. The tiles were about .02 m thick and slightly curved. The tile pieces were about .15 m long and .07-.08 m wide. No whole tiles were seen.

Photo 12. Ruins of the Concepcion Oven in Tamuning in 2007 shortly before it was demolished. The camera is facing southeast. The photo stick is one meter long.

Joaquin Perez Concepcion built this oven in the 1950s on the property in Tamuning. According to his daughter, Maria Concepcion Gayle (pers. comm. 2007), a teenager when her father built the new oven for the family's use, her father was born in 1887, served for 20 years as a firefighter in the U.S. Navy, and retired before WWII. After his retirement, he became a farmer. Before WWII the family lived at Aleguas, a suburb of Piti near the area that is now known as Polaris Point, where they had a huge outdoor oven situated under its own shelter to protect it from the elements. This oven was destroyed during the war. After the war the family had to relocate to Tamuning where the new oven was built, using some newly purchased material and some of the bricks and tiles salvaged from the old oven. Maria recalled that her mother, Maria Quitugua Concepcion, baked bread, toasted breadfruit, and roasted pigs in the Tamuning oven. Maria remembers that her father gathered tangan-tangan wood to heat the oven while her mother mixed the dough for the bread. Generally, it was pieces of young tangan-tangan that were burned to heat the oven. Other times, pieces of "old" tangan-tangan wood were made into charcoal to use in the charcoal irons. Maria said her mother used the oven about once a week. Neighbors also used it.

This oven is a post-war interpretation of an older type of oven that was introduced to Guam some time during the Spanish Period. Although the construction techniques changed over time, the ovens continued to be used up to recent times. Since this oven has been demolished, it is not eligible for nomination to the National Register of Historic Places.

Cruz *Hotno*, Barrigada

The Cruz oven is located on property owned by Dolores Concepcion Cruz, of Radio Barrigada. Originally this oven was owned by Maria Cruz Mafnas on another piece of property near the Army National Guard complex located just north of the property (east of Route 16). When the U.S. Navy took over the family property in the area, now known as Radio Barrigada, she saved the materials from the first oven and had it rebuilt in its present location after WWII. Mr. Jose Fejeran of Piti built the present oven. It is located in the family's yard and is now surrounded by ornamental plants. Breadfruit trees, betel nut, and mango trees grow nearby. This oven is located about 20 m east of the yellow bus stop located on the right side of Route 16 as one travels north, just south of the Army National Guard complex. The GPS coordinates are N 13° 28' 41.9"; E 144° 48' 41.5".

The oven base measures 2.10 m long, 1.62 m wide, and .60 m tall. It is built of concrete blocks that measure about .39 m long, .19 m wide, and .09 m tall (Photo 13). The elongated dome measures 2.10 m long, 1.60 m wide, and 1.60 m tall. The dome walls begin to taper toward the flat top about .60 m above the vault floor. The flattened vault roof measures about 1.06 m long by .75 m wide. The exterior surface is finished with smooth cement.

The vault's .25 m thick walls are built of heat resistant bricks and thinner red clay bricks. Inside the oven, nine alternating courses of heat resistant bricks and mortar are visible. Above these are five courses of thinner red clay bricks and mortar. The main opening measures about .50 m on a side and its inner edges are reinforced with pieces of angle iron that measure about .10 m wide. The diameter of the circular back vent is .08 m. The vent is about 1.10 m above ground surface, at the point where the dome begins to narrow. The base extends out in front of

the main opening for .60 m and it is .64 m tall. Within this extended platform there is a hollow space in front of the main opening. The space measures .50 m long and .18 m wide. Apparently its purpose was to hold the ashes as they were swept out of the oven prior to baking or roasting.

Photo 13. Cruz Oven, Barrigada. The camera is facing southeast. The photo stick is one meter long. Note that the oven base is constructed of cement hollow blocks.

Tomasa Cruz Salas (pers. comm. 2008), born in 1916 and a sister of Rita Cruz Mafnas, knew about the Cruz oven and ovens in general. She lived in Hagåtña before the war, and when she was growing up her family had a very small oven at 134 San Ignatius St. During the war they lived on their Barrigada *lancho* (small ranch) located near what is now the Army National Guard complex, where they also had an oven. She described how to build the ovens and how to use them. They used to make lime, and she said that they collected certain limestone rocks, placed them on wood, covered the rocks with dried coconut fronds, and lit a fire. When it finished burning, a pile of lime was left, and it was covered so it wouldn't blow away or get wet. The family sold some of the lime. Lime mixed with ash and sand was used for the mortar when an oven was built. When they made the oven vault, they used pieces of bamboo to frame the arch or dome. During the Japanese occupation she made *bibenka* (Topping et al. 1975) from *fadang* flour. *Bibenka* is a bread pudding and it was baked in the oven. When she made cakes and cookies with home-made flour, she used a little *tuba* to help them rise.

Mary Lou Cruz Valencia, a daughter of Rita Cruz Mafnas, said her mother was a *panadera* (Chamorro for baker, Topping et al. 1975) and she did a lot of baking in the present oven, for the family as well for others. People often ordered cookies, special cakes (prune,

carrot, and velvet), and the *pan rosa* she made was sold at the Happy Mart store in Barrigada. In addition, her mother and father (both deceased now) were well known for their delicious roasted pigs.

Wood from shipping pallets was sometimes burned to heat the chamber. When the oven was hot enough, the ashes were swept out and saved to use as fertilizer. Sometimes a few coals were left inside the chamber. When the oven needed to be repaired in the 1960s, Mary Lou helped her father gather the materials. At that time they purchased some heat resistant bricks from one of the construction companies, Perez Brothers or Black Construction Co. she wasn't certain, and these were incorporated into the oven. The oven was last used in the 1990s.

Perez Brothers Construction Co. is a local business that sells concrete blocks and other building materials. According to Tom Perez (pers. comm. May 2008), whose father started the business in the early 1950s, in the past they may have purchased locally lots of heat resistant bricks, along with other excess materials, from Navy Surplus, and then sold the materials in their store. Tom does not recall that their business ever ordered shipments of heat resistant bricks from off-island. Tom thought it likely that the Navy was the source of most of the heat resistant bricks used in the ovens, although other businesses such as Oceanic Lumber and the former Chamorro Mart in Dededo, may have sold them in recent times. Early in the First American Period the naval administration invited Atkins Kroll to start a business on Guam (Sanchez 1988:112). They began operations in 1914 and sold corrugated roofing, lumber, and other construction materials (Sanchez 1988:112). Some of the fire-resistant bricks used in the ovens prior to WWII may have been purchased from this company.

Tom (pers. comm. 2008) recalled that formerly there was an oven in Barrigada, located behind (east of) the recently renovated Barrigada Fire Station. In the late 1950s his family often stopped there on their way home from church to purchase *potu* (rice cakes) that had just come out of the oven. This oven has been demolished.

The Cruz oven was once part of the family's outdoor kitchen. Now the open area supports many ornamental plants. The oven retains is character, and it is recommended for listing on the Guam Inventory of Sites and for nomination to the National Register of Historic Places.

Fejeran *Hotno*, Piti

The Fejeran Oven is located on J.M. Tuncap St., in the side yard (ocean side) of the third house on the left as one travels inland from Marine Corps Drive. Several large breadfruit and mango trees grow in the yard and shade the oven. The property is owned by the Fejeran family, and the oven was built by Jose Fejeran (deceased) in 1970. GPS coordinates for the oven are N 13° 27' 830" E 144° 41' 627". The point was taken on the shoulder of the street about 20 m west of the oven.

The oven base, built of two courses of hollow concrete blocks, measures 1.70 m long (N/S), 1.50 m wide, and .37 m tall (Photo 14). A single concrete block measures .40 m long, .20 m wide, and .09 m thick. The top of the oven vault rises 1.35 m above the base. The vault walls

and roof are about .14 m thick and they are built of heat resistant bricks. The vault's exterior surface is finished with a coat of lime or cement plaster. The main opening faces to the south, and it is .55 m tall by .52 m wide. Its edges are finished with strips of metal. The back vent is .88 m above ground surface and it has a diameter of .08 m. The base forms a small, .45m wide by 1.25 m long extension in front of the opening. The right side is partially covered by a metal sheet to form a landing. The left side of the base is only .20 m wide.

Photo 14. Fejeran Oven, Piti. Camera is facing northwest. The photo stick is one meter long.

This oven is in good condition but it is too recent to be nominated to the National Register. It retains its character and integrity. It should be placed on the Guam Site Inventory.

Flores *Hotno*, Agana Heights

The Flores Oven is located in Agana Heights on Matcella Dr., just south of its intersection with Chalan Makahna. The oven is in the front yard, six meters east of Matcella Dr. Its GPS coordinates are N 13° 27′ 81.2″, E 144° 44′ 79.5″. According to the Agana Heights Mayor, Paul MacDonald, the oven is owned by Eddie Flores, who now lives in Albuquerque, New Mexico. Family relatives are currently living in his house and next door. According to an inscription on its surface, Ben Flores built the oven for Mrs. Tenorio in March 1946 (Photo 15).

The barrel-shaped oven has an east/west orientation and its main opening faces to the west. The base measures 2.20 m long, 1.70 m wide, and the oven is 2.40 m tall (Photo 16). The .60 m high base is built of bricks, tiles, limestone rocks, and cement. The walls and roof of the vault are built of tan, heat resistant bricks and red clay bricks. The exterior surface is coated with

cement or lime plaster. On the inside of the oven, eight alternating courses of bricks and mortar are visible. Some of the bricks are laid sideways (on edge) rather than in the usual flat position. About .90 m above the vault floor, the .25 m thick walls begin to taper toward the domed top. Red clay bricks were used in the wall/roof construction. A whole heat resistant brick measures .20 m long, .095 m wide, and .06 m thick. Some of the bricks have two words stamped on one side of their broad surface—on one the upper word is WELLSVILLE and the lower word is SAVAGE. These words are similar to those on the bricks observed at the Barrigada oven base (Hunter-Anderson et al. 2001). The words indicate brick type and/or place of manufacture. WELLSVILLE bricks were manufactured by the Wellsville Fire Brick Co., Missouri, from 1927-1942 (Gurcke 1987). The floor of this oven vault is covered with ashes and debris.

Photo 15. Inscription on the landing of the Flores oven.

The main opening, facing to the west, is .65 m high by .55 m wide. The back vent is located about 1.60 m above ground surface, and it has a diameter of .08 m. An "L" shaped platform extends out from the base in front of the main opening. The long leg of the platform (left side of the oven) is .88 m long by .48 m wide and it is .63 m high. The right side of the platform is broken, but there is a hollow space extending into the platform from the right. The

Photo 17. View of oven base (Flores 2, Agana Heights). The camera is facing northwest. The photo stick is one meter long.

This oven has lost its integrity. It should be placed on the Guam Inventory and efforts should be made to collect its history. It is not eligible for nomination to the National Register of Historic Places.

***Gef Pago* Park *Hotno*, Inarajan**

This oven was built in 1992 by Jesus Meno Crisostomo (deceased) of Inarajan. Mr. Crisostomo also built the shrine which stands in front of the Inarajan Church. The oven is located under a wooden shelter at *Gef Pago* Park. The base measures 1.30 m long by 1.25 m wide and .60 m tall. The base is built of coral and limestone rocks and mortar. The vault walls are built of heat resistant bricks, clay tiles, and mortar. They are about .10 m thick. The exterior surface of the vault is plastered. The oven's overall height is 1.70 m. The main opening is .35 m wide and .40 m tall. There is a .60 m wide by .60 m high extension of the base in front of the main opening. This extension has a groove with a maximum width of .30 m. When the ashes are swept from the oven, they fall into the groove and can be swept away or collected to be used.

Judy Flores (pers. comm. 2008), the former Executive Director of *Gef Pago,* was responsible for collecting some of the materials used in the building of the oven and she was present when it was built. She said Jesus asked her to purchase lime rather than cement because ordinary cement can't be used in oven construction because it doesn't withstand the heat. She also purchased unglazed red clay tiles and standard heat resistant bricks. She was told that rain falling on a hot oven can cause cracks, that is why most ovens were sheltered and why the *Gef Pago* bakers didn't want to bake on rainy days. Judy said using the oven to bake bread is really a lot of work.

Eddie Crisostomo (pers. comm. 2008), Jesus's son, operates the restaurant at *Gef Pago* Park. He used to help his father build ovens and he knows about oven construction and oven use. When his father was laying the bricks for the vault walls it was necessary to lay them from the inside. That is when Eddie would hand his father the building materials. Sometimes it took several days to build the vault walls, because one or two brick courses would have to dry before another course (offset to form the tapered dome) could be added. Eddie also said that after an oven was finished, it had to set for three or four days. Then for three or four more days small fires would be built inside the chamber to make certain that the walls were dry. Eddie made a broom (*eskoba* in Chamorro; Topping et al. 1975) out of a plant (*eskobiya* in Chamorro; Topping et al. 1975) that he collected from the wild (Photos 18-19). Brooms made from this particular plant traditionally were used to sweep out the hot coals and ashes from the oven once it had been heated. According to Topping et al. (1975) this plant is a species of the "sida" family.

Photo 18. Eddie Crisostomo holding the *eskoba* which he made to use to sweep the ashes out of the *Gef Pago* Park oven .

On April 6, 2008, Eddie and his wife, Lou, demonstrated heating the oven, mixing the bread, and baking it in the oven. About 1:00 pm Eddie started the fire inside the oven. The fuel consisted of dried coconut leaves, dried coconut husks, and dried sections of bamboo, split vertically. The bamboo lengths were a little shorter than the oven interior. While the fuel was burning, both the main opening and the back vent were open. About every 15 minutes or so, Eddie used a metal pole (*dekka* in Chamorro, Topping et al. 1975) with a special fitting on one end so that he could push, or pull, the burning material to position it. While the fuel was burning, he said it was important to make certain that the oven walls heated evenly. More fuel was added as necessary to keep a fire burning. After about an hour, the oven was hot enough. Since the bread wasn't yet ready, Eddie maintained the temperature by adding small amounts of fuel to keep red coals glowing inside the chamber. The mortar between the bricks turned white,

and the bricks turned red hot. The outside surface of the oven was hot to the touch, and the air around the oven was hot.

Photo 19. *Gef Pago* Park *Hotno* with the *pala* (wooden paddle) leaning against the side of the oven and the wooden door braced shut.

After the fire in the oven had started, Lou mixed the dough for the bread. It sat for an hour while it rose, and about 2:15 pm Lou kneaded and shaped the dough into balls and put them into pie tins. The dough had to rise again for 30-45 minutes.

About 3:45 pm Eddie pulled the ashes out of the oven and swept the oven's interior using the *eskoba.* Then a damp mop, was used to clean the chamber floor. This served to settle the dust and ashes inside the chamber. About 4:00 pm the pans of bread were placed into the chamber using the long-handled wooden paddle (*pala* in Chamorro, Topping et al. 1975:161), the metal door was secured using a length of wood to prop it shut, and the back vent was stopped with a wad of tin foil. After about 10 minutes, Eddie opened the door to check on the rolls. They had just begun to brown. He propped the door shut again, and waited another five to six minutes. When he checked again, the rolls were done and the pans were removed from the oven with the *pala*.

A banana leaf, cut from a nearby plant, was placed in the hot oven until it wilted slightly. Then it was taken out and set on the table. The rolls were removed from the pans and placed on the leaf. A coating of sugar water was sprinkled over the tops of the rolls, and then everyone present helped him/herself to a serving. After sampling the tasty bread, it is easy to understand why the ovens continued to be used for such a long period of time.

Judy Flores recalled that there were previously at least two other ovens in Inarajan. The base of one, the **Cleto Paulino Oven**, located across the street (south) from *Gef Pago* Park, is still there. The base measures about 2.00 m by 1.50 m square and .60 m tall. A few bricks remain on its upper surface. This oven has lost its integrity. Nothing of the other one remains.

Judy's husband grew up in the village and he remembers that when the aroma of baking bread floated through the village it was a signal that loaves of freshly baked bread would soon be removed from the outdoor ovens and they would be sold in the village bakeries. He was then given money and told to go get in line.

Since the *Gef Pago* Oven was built in 1992, it is too recent to be nominated to the National Register of Historic Places, but it is a wonderful resource for the community and the island. It illustrates the old style techniques of oven construction and it can be used to demonstrate how meat was once roasted, and bread and pastries were once baked.

Merizo *Hotno*

Besides the Charfauros Oven, now in the Cocos Island Ferry Parking Lot in Merizo (see above), there was at least one other oven in Merizo (Paul Callaghan, pers. comm. 2008). It was located on the seaside of the highway, near the Merizo post office. According to Paul, who owned the property in the 1980s, this oven had a beehive shape and it was set on a rectangular base. It is no longer there. Peter Barcinas (pers. comm. 2008) said that Paul's former property is the second house past the post office going toward the church. A small stream is located on the church side of the property.

One of the most recent ovens to be built on Guam is owned by Joseph and Lee Barcinas of Merizo. Joseph (pers. comm. 2008), who has a background in construction, built the concrete oven in 1991, about the same time that he built his house in the Pigua area of Merizo. This oven, located in the back yard of the Barcinas' residence, which is at the end of Mansapit Lane, is used mainly to roast pigs, and sometimes orders are taken to roast pigs for parties (Photo 20).

Photo 20. Barcinas Oven in Merizo, built in 1991 and still used for roasting pigs. The camera is facing northwest. The photo stick is one meter long.

space is .16 m wide and .48 m long. Apparently its function was to catch the ashes as they were scraped out of the oven after it had been heated.

Photo 16. Flores Oven, Agana Heights. The camera is facing north. The photo stick is one meter long.

This oven is in fairly good condition and retains its character and integrity. It should be listed on the Guam Inventory and it is recommended for nomination to the National Register of Historic Places as part of a Multiple Property Registration.

Flores *Hotno* (2), Agana Heights

Only the base of this oven remains in the front yard of 141 Fonte Drive in Agana Heights. It is north, and across the street from a two-story structure owned by the Artero family. Its GPS coordinates are N 13° 25′ 09.1″; E 144° 44′ 73.5″. According to Mayor of Agana Heights, Paul McDonald, this oven is on property also owned by a family named Flores.

The base measures 2.32 m long, 2.13 m wide, .57 m high. It was built of limestone rocks or concrete blocks and cement mortar and covered with a smoothed layer of cement plaster (Photo 17). Four courses of blocks are visible in the side of the base. Based on the smooth surfaces noted on the upper surface of the base, the oven dome was smaller and would have measured about 1.80 m long by 1.45 m wide, leaving a .30 m-wide platform around three sides of the vault. Across the front of the base there was a .60 m high "L"-shaped platform that extended out from the base for about .40 m. The long left leg extends out from the base .87 m by .48 m wide. The right side of the platform is broken, but there is a hollow space, about .18 m wide that extends in from the right side for a distance of about 1.22 m. Apparently this hollow was designed to catch the ashes as they were swept from the oven floor.

His oven is built in the "beehive" style with a round base. The interior diameter at the vault floor is about 1.60 m, the walls are about .16 m thick. The exterior diameter at the base is about 1.92 m. The overall height of the oven from the ground surface to the top of the dome is 1.77 m; .40 m of that is the concrete base. The main opening measures about .60 m by .60 m, and it is fitted with a hinged iron door. On the back side of the dome, about 1.0 m above the ground, there is a small square vent that measures about .15 m on a side. Extending out from the base in front of the door is a small rectangular concrete platform, or landing, that measures .54 m wide, .83 m long, and .40 m high. A slot extending from the right side of this platform is .22 m wide and about .50 m long. When the oven is hot enough, the ashes and coals are swept from the oven floor into this slot.

This oven is too recent to be nominated to the Guam Site Inventory and the National Register of Historic Places.

Paulino *Hotno*, Agfayjan Bay, Inarajan

The Paulino Oven is located on the inland (south) side of the dirt track that leads from Route 4 to the easternmost Paulino family house facing Agfayan Bay. To reach the oven, walk inland at a point along the track which is about 15 m west of the third concrete power pole from the highway. The oven is about 20 m south of the track and 10-15 m west of the excavation for the abandoned fish pond. The GPS coordinates are N 13° 15' 978"; E 144° 44' 402".

The oven has an east/west orientation with the opening facing to the west. The rectangular base is 1.85 m long, 1.68 m wide, and about .80 m tall (Photo 21). The base is made of coral rocks and mortar. It was built in a corrugated tin frame that left horizontal corrugations on the surfaces of the exterior walls. There is a .60 m long, .45 m wide, .80 m tall extension of the base on the left side of the opening. The portion of the extension that formerly continued across the front of the oven has collapsed leaving a remnant that is about .27 m wide and .57 m tall.

The lower part of the oven vault has the same measurements as the base, its top is rounded. The overall height of the oven is 2.15 m. The vault walls are .24 m thick. The main opening is .35 m wide by .40 m tall, and it is braced across the top by a metal strip. The back vent is .80 m above ground surface, and it has a diameter of .06 m. The floor of the vault and its lower walls are built of heat resistant bricks. Five courses of bricks are visible and they form vertical walls that are about .40 m tall. Above this point the walls begin to taper toward the rounded roof, and they are built of alternating layers of red clay tiles and mortar. The oven exterior is smoothed with lime plaster.

This oven was built about 1947 by Jesus Meno Crisostomo of Inarajan (the same man who built the *Gef Pago* Park Oven) for the Paulino family (Jaime Paulino, pers. comm. 2008). At the time, the Paulino family lived in Inarajan village but they had a *lancho* at this location. Jaime Paulino (72 at the time of the interview) said his grandmother and his mother used the oven and some of what they baked was sold in their Inarajan store. They baked *pan tosta* and *pan mamis* (dinner rolls) as well as wedding cakes. Jaime's favorite memory of food from the oven was the baked breadfruit (*essok*).

Photo 21. Paulino Oven, Inarajan. Camera is facing east. The photo rod is one meter long.

This oven is in fairly good condition and it retains its character and integrity. It is recommended that the two *tangan-tangan* trees that presently threaten the structure be removed. This oven should be recorded on the Guam Inventory and it is recommended for nomination to the National Register of Historic Places under Criteria C ("embody the distinctive characteristics of a type of construction") and D ("likely to yield information important in history").

Formerly there were ovens in Inarajan village proper, the Paulino family had one there. An oven base is still visible in the yard across the street (south) from *Gef Pago* Park. The base measures 1.5 m by 2.0 m and it is .60 m high. Bricks are visible on its surface. No photo was taken and no information gathered. This oven has lost its integrity.

Quan *Hotno*, Piti

To reach the Quan Oven, turn south from Marine Corps Drive to J.C. Tuncap Street and take the first right turn on J.C. Santos St. The oven is located on the west side of the yard of the first house (tin) on the right. The oven is part of an old kitchen area that once included, in addition to the oven, a concrete and brick barbecue, an elevated concrete sink, and a circular concrete water catchment. Nearby vegetation includes seedless breadfruit, mango, and pickle trees. The GPS coordinates are N 13° 27' 841"; E 144° 41' 600". This oven was built in the mid-1960s by Jose Cruz Fejeran of Piti.

The rectangular base has an overall length of 2.05 m by 1.37 m wide and .64 m tall (Photo 22). The base appears to have been built of concrete, or concrete blocks covered with

cement. The oven vault is built of heat resistant bricks and mortar and is finished on the exterior surface with a layer of cement or plaster. The flat top (.50 by .17 m) of its domed roof rises 1.32 m above the chamber floor. The vault walls are about .13 m thick. Two different types of bricks were used to build the vault floor, walls, and roof. The large ones measure about .23 m long, .12 m wide, by .065 m thick, the smaller ones measure about .23 m long, .12 m wide, by .04 m thick. The words seen on some bricks included WELLSVILLE with SAVAGE under it and MEX – KO with FB – 1317 under it. Bricks with those brands were manufactured in Missouri by the Wellsville Fire Brick Co. (1927-1942), and the A.P. Green Fire Brick Co. (1929-1942) (Gurcke 1987).

Photo 22. The Quan Oven, Piti. The camera is facing south.

This oven has a slightly different venting system. It consists of a column that is attached to the back of the oven, and it serves as a chimney (Photo 23). The column exterior is about 1.03 m long, .47 m wide, and it has a maximum thickness of .24 m. The base of the column is raised .40 m above ground surface. The top of the column is .60 m below the top of the dome. The top of the column has a vertical shaft that measures .15 m wide and .23 m long. This opening leads to the vent in the back wall of the vault.

Photo 23. View of the vent system on the back of the Quan Oven. Segments on the photo rod are 10 cm long.

This oven should be listed on the Guam Inventory. Since it was built in the mid-1960s it is too recent to be nominated for listing on the National Register of Historic Places.

Won Pat *Hotno*, Sinajana

The Won Pat Oven is located on the southeast side of the vacant lot between 114 and 126 Mansanita Ct., in Sinajana. Access to Mansanita Court is from Bienvenida Ave., northwest of the Sinanaja Church. The oven is in an area overgrown with coconut palms, breadfruit tree, papaya, tangan-tangan, banana, and taro. Remnants of an old outdoor kitchen can be seen near the oven. The GPS coordinates are N 13° 27' 726"; E 144° 45' 242". This oven was built in the 1940s and last used in the 1980s.

The rectangular oven measures about 1.60 m long by 1.30 m wide (Photo 24). The base, built of rough limestone rocks and mortar, is about .55 m tall. The oven vault, built of heat resistant bricks, rises 1.20 m above the chamber floor. The walls are .15 m thick and plastered on the exterior surface. The opening faces to the southwest. The top of the opening has broken, it now measures .80 m tall by .40 m wide. The base extends out for a distance of .30 m across the front. This extension forms an elevated (.55 m) work space, or landing, measuring .30 by .45 m on the right side (facing the oven). In front of the opening and extending to the left is a linear depression or groove, about .18 m wide that catches the hot ashes and coals when they are swept out. There is a back vent, but access to the back of the oven was blocked.

Two types of heat resistant bricks were used to build the vault floor, walls and roof. The large bricks measure .23 m long, .12 m wide, and .08 m thick. The small bricks measure .22 m long, .12 m wide, by .04 m thick. Words and numbers stamped on the surfaces of some of the larger bricks include MEX–KO, MIZZOU with FB – 13 below, and ACORN.

Photo 24. Won Pat Oven, Sinajana. The camera is facing northwest.

The brick brands MEX-KO and MIZZOU were manufactured by the A.P. Green Fire Brick Co., Missouri (Gurcke 1987). The brand ACORN was manufactured by Pacific Clay Products or Pacific Sewer Pipe Co., California (Mosier pers. comm. 2008).

This oven should be recorded on the Guam Inventory and it is recommended for nomination to the National Register of Historic Places under Criteria C ("embody the distinctive characteristics of a type of construction") and D ("likely to yield information important in history"). It retains its integrity and its sense of place.

Summary and Discussion

The twenty ovens described during this project are distributed across 12 of Guam's 19 villages (Table 1; Figure 2). Eighteen of them are on private property, and two (Andersen and North Finegayan) are on military property. Seven were previously documented and thirteen were identified and documented during this project.

Table 1. Distribution of ovens by village.

Village Name	Oven Name
Agana Heights	Flores (good) Flores (base only)
Agat	Carbullido (collapsed) *Chaco (good)
Barrigada	*Barrigada (base only) Cruz (good)
Dededo	*North Finegayan (base only)
Inarajan	Gef Pago Park (good, 1992) Jaime Paulino (good) Cleto Paulino (base only)
Merizo	Barcinas (good, 1991) *Cocos Island Ferry Parking Lot (collapsed)
Piti	Fejeran (good) Quan (good)
Sinajana	Won Pat (good)
Tamuning	Concepcion/Gayle (destroyed)
Umatac	*Sella Bay (collapsed)
Yigo	*MSA Andersen AFB (fairly good) *Castro/Jinapsan (fairly good)
Yona	Baza (good)

*previously documented

With the exception of the oven in the Merizo parking lot, the general construction style of the ovens is similar. Each oven consists of a vault built on a free-standing squarish or rectangular base. In the case of the Merizo oven, apparently the rock-lined terrace formed its base. The vault floors all are paved with bricks. Each vault has a main opening and a back vent. Each base extends out for a distance in front of the opening, and this extension generally has a groove, or trough, that serves to catch the ashes and coals as they were scraped out of the chamber through the main opening. Each vault tapers toward the roof. The exterior surface of each vault is finished with a coat of plaster (lime based).

Although the construction style is similar, there is considerable variation in the oven sample. For one thing, the length, width, and height of the bases are variable. The smallest base (*Gef Pago* Park) measures 1.25 m by 1.30 m by .60 m tall. The longest base is 3.0 m by 1.5 m wide (MSA/AAFB). Another large base (Sella) measures 2.65 m by 2.60 m by .60 m tall. The shortest base rises .38 m above ground surface (Fejeran). The tallest base is .80 m above ground surface (Paulino). Overall heights of the vaults vary from 1.60 m above ground surface (Cruz) to 2.40 m above ground surface (Flores). Vault wall thicknesses vary from .09 m (Fejeran) to .25 m (Baza, Cruz, and Flores).

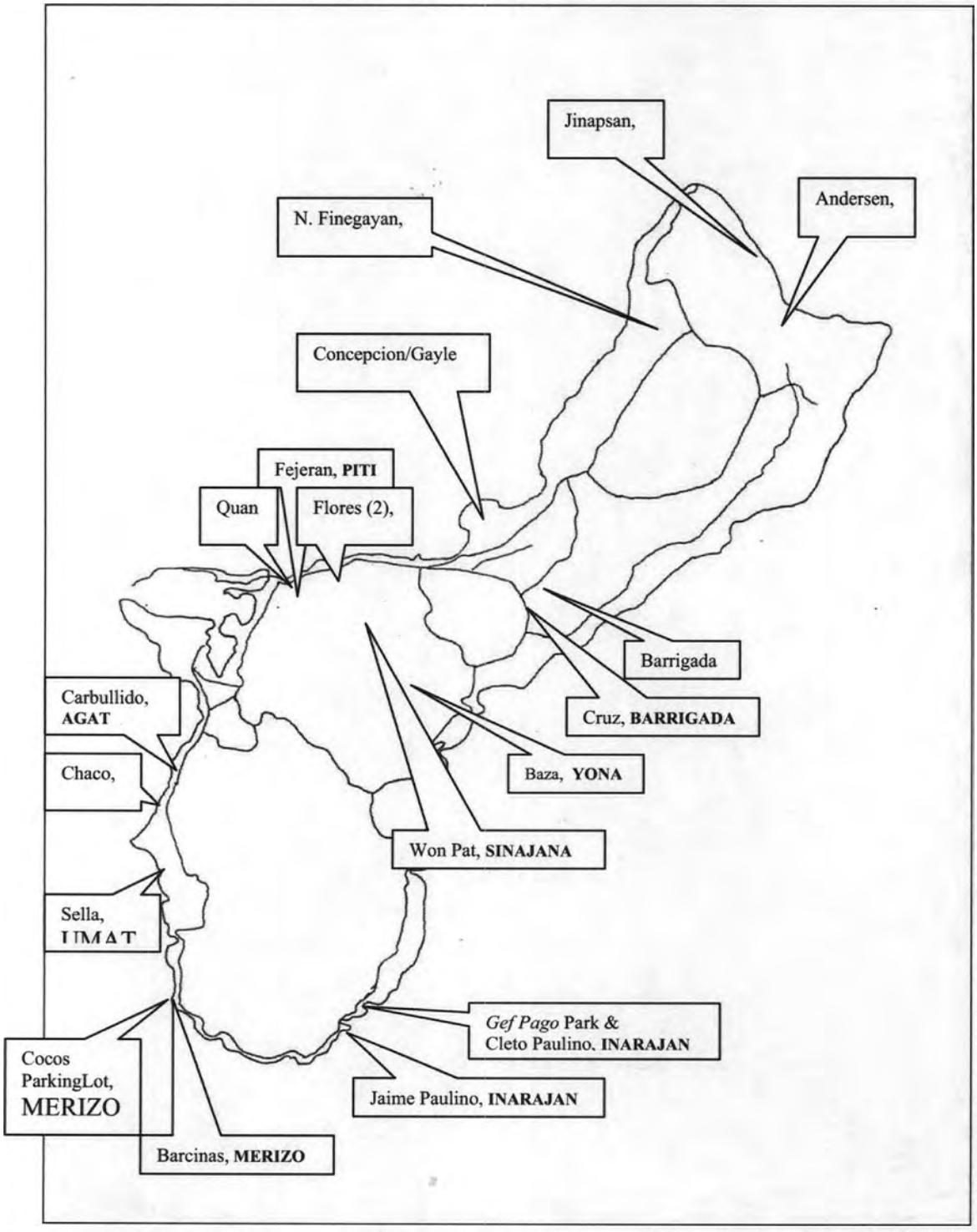

Figure 2. Map of Guam showing the locations of the various outdoor ovens.

Sometimes wall thickness depends on the way that the bricks forming the lower portion of the vault were aligned with respect to the edge of the base. In a few cases the bricks were laid perpendicular to the base edges, creating walls that slightly exceed the length of a standard brick. Most bricks measure about .24 m long, .12 m wide, and .09 m thick. In other cases, the bricks were laid parallel to the edge of the base, but were placed lengthwise on one of their narrow sides rather than on one of their flat sides. In one case with this orientation, the wall was two bricks thick (placed side by side on their lengthwise narrow edges). The base extensions varied as well. In some cases the trough was oriented to the left and the landing to the right. In other cases the opposite occurs. The size of the landings also varies.

Over the years the methods of construction, the size, and shapes of the ovens changed. The bases of the earliest ovens were built of limestone rocks and mortar, and the domes or vaults, now mostly in ruins, were built using pieces of thin red clay tiles, red clay bricks, and lime-based mortar. These vaults had rounded roofs similar to the ovens at Jinapsan and MSA/AAFB. The Jinapsan Oven is typical of the smaller "beehive" style and the MAS/AAFB Oven is typical of the larger "barrel-shaped" vault style. Apparently both styles were built contemporaneously as these two structures appear to have been built about the same time using red clay bricks and red clay tiles. Since no heat resistant bricks were observed in these two features, they may have been constructed prior to the availability of heat resistant bricks on Guam. While the red clay bricks and tiles could have been made on Guam, they also could have been brought to the island from the Philippines or some other place.

When commercially manufactured, heat resistant bricks became available on Guam, they gradually replaced the red clay bricks and tiles. Although heat resistant bricks were first made in the United States in 1836, their production did not peak until the 1920s. It is not known when heat resistant bricks were first imported to Guam, but most may have been brought in during the 1920s and 1930s as many of the companies represented by the stamped brands apparently started production in the 1920s. Early in the First American Period the naval administration invited Atkins Kroll to start a business on Guam (Sanchez 1988:112). They began operations in 1914 and sold corrugated roofing, lumber, and other construction materials (Sanchez 1988:112). Some of the fire-resistant bricks used in the ovens prior to WWII may have been purchased from this company.

Words and numbers noted on the various heat resistant bricks include the following brands: ACORN, ALAMO, CARNEGIE, THE DENVER FIRE CLAY CO., LOUISVILLE, MEX-KO, MIZZOU with FB-1317 below, MUNRO, PEERLAC, TCARR, WELLSVILLE with SAVAGE below (Table 2). These impressions had been stamped into the bricks. While researching on the internet the name Dan Mosier (danmosier@earthlink.net) was noted. He is a California man who has gathered information about bricks and their sources. He was provided with this list of names. After consulting Karl Gurcke's 1987 book, *Bricks and Brickmaking –A Handbook for Historical Archaeology*, Dan provided the information presented in Table 2.

Based on the information provided, and excepting the English bricks in the Sella Bay Oven, it appears that the stamped bricks were imported to Guam from the United States, and that they were manufactured in the states of Missouri, Colorado, California, Kentucky, and Pennsylvania. When or how they arrived on Guam, were distributed, and eventually used in

oven construction requires additional research. According to Mosier (pers. comm. 2008), all of the brick manufacturers in the United States were ordered to stop making bricks during WWII. Thus, the bricks could have been shipped to Guam during the 1920s-30s when the manufacturers were producing, or after WWII when the companies resumed production and/or shipping. It is quite possible that the U.S. Navy brought some of these heat-resistant bricks to Guam, either during the First American Period or after WWII. English whaling ships or trading vessels may have left the English bricks on Guam during the late 1800s or early 1900s.

Table 2. List of the brands noted on the various heat resistant bricks used in oven construction.

Brick Impression/Oven Name	**Place of Manufacture**	**Probable Dates of Brick Manufacture**
ACORN (WonPat)	Pacific Sewer Pipe or Pacific Clay Products, Los Angeles, California	1915-1942
ALAMO (Concepcion)	Harbison-Walker Refractories Co. Missouri (possibly Vandalia or Fulton)	1935-1942
DENVER FIRE CLAY CO. HI FIRE (North Finegayan)	Denver Fire Clay Co., Denver, Colorado	1918-1942
LOUISVILLE (Concepcion)	Louisville Fire Brick Works, Louisville, Kentucky	1921-1942
MEX-KO (Carbullido, Concepcion, Quan, Won Pat)	A.P. Green Fire Brick Co., Mexico, Missouri	1929-1942
MIZZOU FB – 1317 (WonPat)	A.P. Green Fire Brick Co., Mexico, Missouri	1922-1942
MUNRO (Barrigada)	Harbison-Walker Refractories Co., Pennsylvania	1921-1942
PEERLAC (Baza) 53-317	Laclede-Christy Clay Products Co., Missouri	1938
TCARR (Sella Bay)	Thomas Carr & Son, Newcastle-on-Tyne, England	1827-1918
WELLSVILLE SAVAGE (Barrigada, Flores)	Wellsville Fire Brick Co., Wellsville, Missouri	1927-1942
Partial ---GIE (Cocos Is. Parking Lot)	Possibly Carnegie Brick and Pottery Co. Carnegie, California, or Stockton Fire Brick Co., CA	1902-1911 1912-1942
Partial ---GREEN RE D.P. (Cocos Is. Parking Lot)	Possibly A.P. Green Empire D.P. A.P. Green Fire Brick Co., Missouri	1919-1942
Partial L. F----- LOU (Cocos Is. Parking Lot)	Possibly LFB Louisville Fire Brick Works, Inc. Louisville, Kentucky	1935

After WWII, people built new ovens using some salvaged materials along with newly purchased material which makes it difficult to judge from the materials present, the oven's date of construction, or the date of the bricks. After WWII, concrete and hollow concrete blocks sometimes were used to build the oven bases and metal strips were used to reinforce the edges of the main openings and to support the roofs. Three of the oven vaults built during post-war times

had flat roofs (Baza, Cruz and Quan) and seven (Chaco, Fejeran, Flores, Paulino, WonPat, *Gef Pago* Park and Barcinas) had rounded roofs.

With the exception of the two most recent ovens (Barcinas and *Gef Pago* Park) which are quite small, those built after WWII were fairly good sized, although they were not larger than those built prior to WWII. One reason to build larger ovens is that they could roast more pigs at one time and they could bake more bread and pastries in a single event. This would enable greater quantities of bread and other goods to be baked and sold from family owned and operated bakeries and/or stores. In addition, as the population increased and intra-island transportation opportunities improved, it is likely that larger ovens were needed to prepare greater quantities of meats and pastries to serve to the greater numbers of people who attended village fiestas and other obligatory social events.

Informants said that the ovens were used to roast pigs, turkeys, hams, and beef, toast breadfruit, and bake breads, cookies, and cakes. On the other hand no one said that they were used in the preparation of important traditional foods such as taro, yams, rice, sweet potatoes, corn soup, and *titiyas*. There is no doubt that the ovens played an important role in the Chamorro social system, but it is also clear that a family could have survived quite well without owning one.

Recommendations

Table 3 lists the seven ovens that had been previously documented and the thirteen ovens that were identified and/or recorded during the field work for this project. Of these 20 structures, one (Sella Bay) is already on the National Register of Historic Places. National Register Forms for a Multiple Property Listing will be completed and submitted to list seven more structures that are old enough and retain sufficient character and integrity. One oven on military property (MSA/AAFB) also qualifies, it can be submitted later. Eleven ovens do not qualify because of their poor condition, loss of integrity, or their age (too recent). The seven structures that make up the Multiple Property Listing are eligible under National Register Criteria C and D.

Criterion C states that properties may be eligible for nomination to the National Register if they embody the distinctive characteristics of a type, period, or method of construction.... As a group the ovens represent a common type of resource or class. While they have similar construction styles and techniques, they illustrate the individuality or variation in form that occurs within the class and they illustrate the evolution from the Spanish Period, when they were first introduced to the island, through to post-WWII times in terms of form, building materials used, and construction techniques employed. The ovens are related by cultural tradition and function.

Criterion D states that properties may be eligible if they have yielded or are likely to yield information important in prehistory or history. The ovens have the capacity to yield information important to the history Guam.

Table 3. List of outdoor ovens identified on Guam.

GHPO Number	Description and Date of Construction	Location/GPS	Reference	Recommendations and NRHP Criteria
66-02-2139	Chaco Oven[1] Built about 1952	Chalan Josen Milagro St., Agat, Gil & Stella Sablan N13°21'50.3"; E144°38'84.2"	Guam Inventory	NR Nomination Criteria C and D Multiple Listing
66-02-1008	Sella Bay Oven[1] Built –pre WWII	Sella Bay, Umatac Paul Bordallo family	Guam Inventory	On NR Form needs updating
66-08-1192	Jinapsan Oven[1] Built late 1800s early 1900s	Jinapsan, Yigo Santiago Castro family estate	Guam Inventory	On NR, but will be part of the Multiple Listing
66-08-	Andersen Oven[1] Built – pre WWII	Andersen Air Force Base, Yigo UTM270255E, 1503852N E270522.598; N1504100.409	Yee et al., 2004	NR Nomination Criteria C and D Eligible, but not included in Multiple Listing
66-04-1696	Barrigada Oven[1] Built – pre WWII	GLUP Parcel, Barrigada N644707.539; E351112.333	HunterAnderson et al. 2001	Not eligible – Loss of integrity
66-04-ANT6000	North Finegayan[1] Built – pre WWII	Navy property, Dededo	Welch 2008	Not eligible Loss of integrity
66-06-1222	Merizo Oven[1] Built 1939	Coco Island Ferry Parking Lot, Merizo N13°16'065"; E144°39'970"	Henry et al. 1991	Not eligible Loss of integrity
	Barcinas Oven Built 1992	Pigua, Merizo Joseph & Lee Barcinas		Not eligible Too recent (1992)
	Baza Oven Built 1951-52	Teresita Baza Rosario, Yona N13°24'22"; E144°46'065"		NR nomination Criteria C and D Multiple Listing
	Carbullido Oven Built in the 1950s?	Agat seaside of Route 2, across KimChee Store Arthur Carbullido Toves N13°23'342"; E144°39'612"		Not eligible – Loss of integrity
	Concepcion Oven Built 1950s	Sgt. David Camacho St., Tamuning		Not eligible– destroyed
	Cruz Oven Built after WWII	Barrigada, next to Army Natl. Guard N13°28'419"; E144°48'415"		NR nomination Criteria C and D Multiple Listing
	Fejeran Oven Built 1970	J.M. Tuncap St., Piti N13°27'830"; E144°41' 627"		Not eligible, too recent
	Flores Oven Built 1946	Matcella Dr., Agana Heights N13°27'812"; E144°44'795"		NR nomination Criteria C and D Multiple Listing
	Flores Oven (2) Built - ?	141 Fonte Drive, Hagåtña Heights N13°28'091"; E144°44'735"		Not eligible Loss of integrity
	Gef Pago Oven Built 1991	Gef Pago Park, Inarajan		Not eligible, too recent
	Paulino Oven Built 1947	Paulino family property, Agfayan Bay Inarajan N13°15'978"; E144°41'600"		NR nomination Criteria C and D Multiple Listing

GHPO Number	Description and Date of Construction	Location/GPS	Reference	Recommendations and NRHP Criteria
	Cleto Paulino Oven base Built in the 1940s?	Inarajan		Not eligible Loss of integrity
	Quan Oven Built mid-1960s	J.C. Santos St., first house on right, Piti N13°27'841"; E144°41'600"		Not eligible, too recent
	Won Pat Oven Built in the 1940s	Mansanita Court, Sinajana N13°27'726"; E144°45'242"		NR nomination Criteria C and D Multiple Listing

[1]Previously documented.

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Oral Histories by Rlene Santos Steffy

Formal interviews were held with six individuals who have special information about the various *hotnon sanhiyong* documented during the project. The transcriptions of these interviews appear in alphabetical order in this section. Each interview stands alone with its contents, photographs, pagination, bibliography, and glossary of Chamorro terms used during the course of the meeting.

The following interviews relate the importance that the *hotno* held in Chamorro culture based on firsthand oral history accounts of those whose lives were directly impacted by the use of ownership of a *hotnon sanhiyong.* It is very clear that many people on Guam before, during, and after WWII depended on a *hotnon sanhiyong* to bake the fresh bread and pastries, and roast the meats that they enjoyed. Even though operating an oven was hard work, it gave a certain amount of independence to its owners. Since these ovens did not rely on electrical power, they could be used any time, even after typhoons when typically the island lacks power, sometimes for an extended period. Another reason that the *hotno* was an important resource is because it was used to preserve dried foods, particularly breadfruit (*essok*). Stores of these foods could be saved and then relied upon during hard times. Thus, a *hotno* afforded its owner a social position uncommon to most and more importantly, an economic opportunity. In addition to economic opportunities, some owners achieved baking and roasting skills that were recognized by other members of the community. As their reputations grew, their products and services became in high demand. Some master *hotno* builders, like Jose Cruz Fejeran of Piti and Jesus Crisostomo of Inarajan, also acquired special skills that were recognized by other members of their communities.

The six interviews follow:

1) Juan Duenas Castro
2) David Mafnas Fejeran
3) Jaime Sugiyama Paulino
4) Tomasa Cruz Salas
5) Mary Lou Cruz Valencia
6) Judith Teresa Won Pat

Juan Duenas Castro Oral History Account 2008 02 04
Castro Hotnos at Hagåtña & Jinapsan

Figure 1: Juan Duenas Castro

Juan Duenas Castro was born on November 14, 1929, and his earliest memory of the family's *hotno*[1] was at the age of seven. The Castro family had one *hotno* at their *Hagåtña*[2] home at the *San Antonio*[3] district and the other at *Jinapsan*[4], the Castro's family beach property north of Ritidian Point at Andersen Air Force Base. Juan does not know when either *hotno* was built, except that they were built before he was born.

Joaquina Castro, (Tan Akina) his father's sister, remained unmarried and became a *panadera*[5] to support herself. She used the *hotno* at *Hagåtña* daily to bake *pan mames*[6], *cake*[7], *pan royu*[8], *pastet*[9], *essok*[10], and *pan* loafs and sold these at neighborhood stores.

As a schoolchild, Juan loaded the freshly baked goods on his bread wagon every morning before going to school and delivered them to stores at the *San Antonio* and *Santa Cruz* districts[11] of *Hagåtña*. He said a carpenter built the bread wagon like a large box with three shelves inside so that he could carry around 15 round-buttered-rolls loaf at a time.

Juan said pan sold for 10 or 25 cents a loaf and ten cents could buy Juan soup and *apigigi* [12] for lunch at the San Antonio School.

Juan also helped his aunt with the preparation of the *hotno*. He gathered any wood available - anything at his disposal - to start the fire in the hotno, even wood from broken boxes, unusable crates, cardboard and other flammable material as long as it was not toxic. He started the fire and fed it until it reached the desired temperature, after which he would clean out the ashes before his aunt put the dough inside to bake.

The *hotno's* foundation was about 11 to 12 feet square and the dome was about six or seven feet high. Juan described the total height of the *hotno* from the ground up to be about ten feet. He pointed out that the plaster used for the surface of the *hotno* was not manufactured concrete purchased at a store, but *afok*[13], which is made by burning rock[14] until it turns to powder and then mixing it with water to make *liniti*[15]. The primary building material used for a *hotno* is *ladriyu*[16], because the clay retains heat

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sufficiently and can last several hours depending on the length of time the fire is allowed to burn inside the hotno. Experience taught Tan Akina how long to burn wood in the *hotno* to reach the desired temperature that would last long enough to bake the number of items she prepared. Familiarity in working with a *hotno* was very important, otherwise, the food would not cook adequately, requiring the baker to repeat the entire process.

Juan remembers that some Japanese residents at *Hagåtña* owned and operated stores that had *hotnos*, and baked and sold bread too. However, most residents of *Hagåtña* could not afford to build their own *hotno* so those who owned one from time-to-time allowed others to use the *hotno* to bake *tamales*[17], *apigigi*, and pudding and to roast pigs for special occasions.

The preservation of the *lemmai*[18] to make *essok* was an important food source baked in the *hotno*. The process of making *essok* begins by peeling the *lemmai* and dividing it into halves, then slicing it into bite-sized pieces to bake in the *hotno*. They baked the *lemmai* until it was moisture free, resulting in crispy chip-like slices. The width of the pieces varied based on the preference of the *panadera*. Some liked it thin for a more crispy texture and others liked it thicker to get a chewy texture. Once they were baked and dried, the *essok* was stored in large empty aluminum cans like the Navy biscuit or coffee tins, which had covers. The cover was necessary to keep the *essok* crispy and preserving the *lemmai* this way ensured that it lasted a very long time, even for numerous years without spoiling. Juan said that the *essok*, like *pan royu*, was very good served with coffee and often served for breakfast. A common way to eat *essok* was to spread butter over it and dunk it into coffee. They ate the *pan royu* the same way.

Figure 2: This photo of the Jinapsan hotno on an unused post card auctioned and sold on eBay in May 2008. The only information regarding the photo comes from the seller's stamp box, estimating 1918-1930 as the period the photo was taken.

The *hotno* was also a benefit to people after a typhoon when everyone would get together to help repair the thatched roofs that were damaged at *Hagåtña*. The women prepared food for those who helped with the repairs.

The last time Juan saw the *hotno* at *Hagåtña* was the day[19] the Japanese bombed the village and everyone evacuated the city. Three or four Castro families moved to the family's *Fafalog*[20],

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Dededo property where Juan's uncle Manuel Castro had a ranch and at the Castro family property located at *Finaguayog*[21], the border between Dededo and Yigo. *Finaguayog* is now the area known as Northwest Field. The Castro's accessed *Jinapsan* from Northwest Field until they were forced to leave the beach and walk to the *Manenggon* Valley at Yona.

As far as he knows or can remember, Juan said that he thinks his grandfather built the *hotno* or that it was there since the Spanish period.

This writer found a photo of the *Jinapsan hotno* on e-Bay and the description said the photo was taken sometime between 1918-1930. Juan said that back then, few people knew how to build *hotno's* and that a big part of knowing how to use the *hotno* determined how long the *hotno* would last. If, for example, the *hotno* were overheated, it would crack the *afok* plaster and render the *hotno* useless.

Figure 3: Juan Rivera Castro's grave marker at the Pigo Cemetery at Adelup, Guam.

Juan estimated that the *Jinapsan hotno* had a base that was about ten feet wide, and that the dome was about six to seven feet high.

Measurements of the *hotno* at Jinapsan shown in Figure 5 and Figure 6 of this report, shows the base of the oven at seven feet wide and seven feet deep and the height of the *hotno* at seven feet tall. Juan wonders if the *hotno* has sunk into the ground over time or if he has just gotten bigger.

The Castro's *hotno* at *Hagåtña* and *Jinapsan* were constructed of *ladriyu*. However, as far as Juan is able to relate, the *Jinapsan hotno* was not used for business purposes. The members of the Castro family at *Jinapsan* during the Japanese occupation cooked their food in the *hotno*. They made *pan* and *essok* because there are many *lemmai* trees at *Jinapsan*, so *essok* was a very important resource. They also roasted wild pigs and fish in the *hotno* during World War II.

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Figure 4: June 21, 2008
Measurements of the oven at Jinapsan that is standing at Jinapsan.

Figure 5: June 21, 2008
79-year-old Juan Duenas Castro stands next to the Castro Family oven at Jinapsan, Guam.

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Glossary

[1] Oven, roast by oven or an underground pit, bake.

[2] Hagåtña gained a formal status of Ciudad, a city, in 1687 during the governorship of Damián de Esplana. It is the capital of Guam, an unincorporated U.S. territory and situated on the northern coast of the island. The name of the city is spelled Hagåtña, formerly Agaña and previously spelled Agana. The spelling was formally changed to its CHamorro-language form in 1998.

[3] A barrio or district of Hagåtña before World War II.

[4] Castro family beach property on the eastern coast of Guam.

[5] Female baker.

[6] Sweet bread

[7] Cake from scratch.

[8] Bread- twisted or toasted.

[9] Pie, turnover-meat filled.

[10] Dried breadfruit, dried either in the sun or in an oven.

[11] A barrio or district of Hagåtña before World War II located in the vicinity of the Bank of Guam Santa Cruz Branch today in western Hagåtña.

[12] Young coconut desert wrapped in banana leaf and cooked on a grill.

[13] Lime. Birdlime, limestone (soft), quicklime.

[14] Usually brain coral or limestone.

[15] Mortar mixture.

[16] Brick, paving material made by molding clay into blocks.

[17] Tamales gizo (toast corn) or tamales mendioka, kasaba, or suni

[18] Breadfruit without seeds.

[19] December 8, 1944

[20] Northwest Filed area today.

[21] The border of Dededo and Yigo today.

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David Mafnas Fejeran Oral History Account *Hotnos* Built by Jose Cruz Fejeran

2008 03 04

David Mafnas Fejeran, from the village of Piti, is the fourth child of Jose Cruz and Antonia Mafnas Fejeran's eight children.

Jose Cruz Fejeran was handy at carpentry and spearheaded the construction of the village floats for the Liberation Day parades and the *lanchon*[1] *kotpus* during village fiestas at Piti. David said that his father was, "An ambitious man, a hard working guy," and the people trusted him to get things done.

Jose built his first *hotno*[2] at the family's property sometime in the early 70's for his wife Antonia's personal use but he also recognized that there was a demand to roast pigs, ham and turkey for *fandangos*[3], *fiestas*[4] and other gatherings.

Figure 1: David Mafnas Fejeran

Figure 2: March 4, 2008
Ruins of Jose and Antonia Fejeran's hotno at the backyard of their Piti residence.

Jose did not have a blueprint to build the *hotno*; David said he did it out of ingenuity. His first consideration was location. Determining the right place to build the *hotno* on the family property was important and he decided on the north section of his back yard. He began the construction of the *hotno* by gathering *ladriyu*[5] and then started to build its foundation. Jose used regular concrete blocks for the base and *ladriyu* to construct the dome because clay retains heat well.

Laying the *ladriyu* to form the dome was a time consuming process because Jose built up the walls by laying *ladriyu* on top of each other and stopped when he reached the level that narrowed inward. He applied *afok*[6] between each

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Figure 3: March 4, 2008
Inside view of Jose Cruz Fejeran hotno showing the ladriyu and afok layers of the hotno's construction.

level of *ladriyu* and waited until the *afok* dried before he laid down the next level of bricks until it narrowed again.

After laying down the first level of *ladriyu*, Jose placed about ten bamboo strips all the way around the inside of the *hotno* to form an arch, which served as his guide in laying the levels for the dome. At the top, Jose used mortar to close off the dome and he put a hole at the back of the *hotno* for ventilation that he plugged when heating up the *hotno*, but left unplugged when actively baking or roasting. The door was wood with a metal frame backing and a handle at the front. The door inserted into the frame at the front of the *hotno* and Jose used a large *tangantangan*[7] to brace it shut when baking or roasting. A raging fire inside the *hotno* was the only way to heat up the *ladriyu*; so time-and-again, Jose replaced the door often because the fire weakened the wooden part of the door.

Jose used concrete bricks, *ladriyu*, *afok*, sand and water in the construction of his *hotno* but did not use any rebar and David said he waited about two weeks after he completed building the hotno before he fired it up for the first time. It took Jose about a month and a half to complete the construction of the *hotno*. He built it alone.

Figure 4: March 28, 2008
Interior of Fejeran hotno showing layered firebricks and afok to the top.

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If any of his children assisted, it would have been to hand him *ladriyu* as he built the *hotno.* David does not know where or from whom his father got the *ladriyu* but he said Jose purchased the lime from a hardware store. The bamboo is in abundance in Piti's jungle. His father did not use rebar in the construction of the *hotno.* The bamboo strips that he used as a model for the dome, disintegrated when Jose fired up the *hotno* for the first time. He continually fired up the *hotno* over a period of one month as he introduced heat to the materials before he cooked anything.

To build his fire in the *hotno*, Jose used wood from four wooden pallets, stacked them into the *hotno* to the top, and burned it down twice before putting the food inside. He got discarded pallets from various hardware and "mom and pop" stores.

Figure 5: March 28, 2008
This photo of the Fejeran's hotno shows the hole built into hotnos to regulate heat inside.

David said that he and his siblings tried to introduce the use of a thermometer to gauge the temperature in the hotno, but Jose's experience with the hotno was a better method. He always knew exactly how much wood to burn and how long to keep the fire burning for a baking or roasting project.

When the neighbors discovered that Jose Fejeran built a *hotno* in his back yard, his weekends filled up with roasting projects. He was able to roast a steamboat[8], turkey, ham, chicken, pig and bread in the *hotno* and was famous for making the pig's skin very crispy. He was also known for applying a tasty marinade to his cooking. David said the recipe for the marinade was a mixture of, "vinegar, black pepper, salt, onions, garlic and water."

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Figure 6: March 4, 2008
The ruins of Regino and Manuela Quan's second hotno built by Jose Cruz Fejeran.

In their hotno, Jose could roast a 50-100 pound pig, a steamboat roast and turkey all at one time. He laid the pig on a 2 ½ feet long x 4 feet wide stainless steel tray, pushed it to one side of the oven, then on a similar tray he placed the steamboat roast in the middle-back of the oven and the turkey in last to roast. It took him about four to five hours to roast a pig. On roasting days, Jose's day began at 3 AM. He got up, placed the wood in the oven, started the fire, and fed it for one or two hours until he decided it had reached the desired temperature, then he started the cleanup process.

Jose never bartered, but at times, he roasted something for his *nataotaotimano*[9] or as his *chenchule*[10] for the village fiesta or a relative's party. David said that cleaning the *hotno* was the most difficult aspect of having one and he felt sorry for his father because Jose stood in front of the hot *hotno* with a metal rake and pulled the hot charcoal towards him, then pushed it off to the left side onto the ground. After removing the charcoal, he used a broom to sweep the oven clean before placing the food inside. Jose did not mop the oven afterward as some are accustomed, because placing a wet mop on top on the *hotno's* base would lower the temperature. His wife, Antonia, prepared the dough for the *pan*[11], *pan tosta*[12], and other pastries and marinated the meat, but Jose did the cooking.

To protect the *hotno* from the elements, Jose built a shack over it and placed a table nearby which he used as a staging area for the food and utensils. When roasting, he left the food uncovered for a couple of hours until it browned, then he placed aluminum foil over it until it finished cooking.

At Piti, Jose built a *hotno* for the following people: Isabel Ignacio, his brother Joaquin Cruz Fejeran, and two for Regino and Manuela Quan who lived across the street to the north-west of the Fejeran's. Jose built the first *hotno* for the Quan's in the mid 60's after Typhoon Karen. The

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Quan's first *hotno* was larger than the ruins of the existing one. No one remembers what damaged Quan's first *hotno*.

The last *hotno* that Jose built at Piti was for Vicente and Martina Limtiaco, his immediate neighbors to the south. Ben was the commissioner of Piti at that time.

At *Hågat*, Jose built a *hotno* for his brother Juan.

At *Barrigada* Jose built a *hotno* for his wife's brother, Antonio Aguon Mafnas and his wife, Rita (Maria) Cruz, a member of the *Pedan*[13] family. They intended their oven for a commercial purpose. When the roasting orders piled up on weekends at Jose's, he referred the people to *Antonio*. Antonio reciprocated and referred people to Jose when he could not accommodate their roasting requests or when he decided not to work on a particular weekend. The Mafnas/*Pedang hotno* at Barrigada was the last *hotno* built by Jose Cruz Fejeran.

David's mother, Antonia Mafnas Fejeran died on August 1989, and the last time his father Jose used their *hotno* was on December 2000. He died almost a year later on November 2001. His youngest son Joseph inherited the family home and property at Piti and tried to fire up the *hotno* after his father died. It was his first and last time.

David Mafnas Fejeran's last meal from his parent's *hotno* was roasted pig in 1995.

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Glossary

[1] Temporary religious structure.

[2] woodfire oven.

[3] Weddings.

[4] Village celebration of their patron saint.

[5] Brick. Paving material by molding clay into blocks.

[6] Lime mortar made of limestone and water mixture.

[7] Type of plant – leucaena leucocephala. A large bush that proliferates on many of the high islands of Micronesia. Good for cattle feed and fuel.

[8] Roast beef

[9] Donation or contribution to a cause.

[10] Assigned or voluntary donation to a party, celebration or a funeral.

[11] Bread

[12] Bread baked to a crisp. Sometimes called pan royu, bread twisted, toasted.

[13] CHamorro nickname for the Cruz family.

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Jaime Darmarcio Sugiyama Paulino Oral History Account Sugiyama/Paulino Hotno Inalahan

2008 03 27

"What I remember the most is how much work it takes to get the *hotno*[1] hot. It takes a lot of work to look for the wood needed for the fire to get the *hotno* hot for baking. It is a lot of work!" This comment from 72-year-old Jaime Darmarcio Sugiyama Paulino stresses what he recalls about his association with his Grandmother Manuela's *hotno*. After gathering the firewood, "It takes about 30 minutes," of burning the wood in the *hotno* to get it as hot as Manuela needed to bake bread or other pastries.

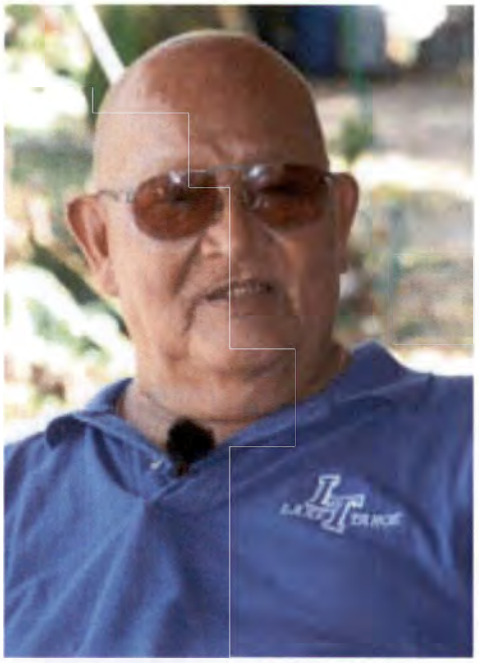

Figure 1: Jaime Darmarcio Sugiyama Paulino

Jaime and his brothers Jose and Tomas fired the *hotno* and swept the *apu*[2] out when the *hotno* reached the desired temperature that Manuela needed to begin baking. Her grandsons helped with firing the *hotno*, but Manuela did all the *kontiempo*[3] for baking.

Figure 2: Manuela Meno Sugiyama's hotno at Paulino's *Acho Lasodiac* property at *Inalahan*.

Manuela Meno Sugiyama was a *panadera*[4], primarily baked bread in a *hotno*. However, Manuela baked other pastries and though she did not have a formal name for her bakery, she was renowned for her *cake nobia*[5] and other sweets. Figure 2 shows Manuela's *hotno* after overgrowth was removed.

Manuela is the maternal grandmother of Jaime D. S. Paulino who we interviewed for the background history of the Sugiyama/Paulino *hotnos;* the first *hotno* was built before the war at the village home and the second at the family's ranch at *Acho Lasodiac*[6] after the war in the late

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1940's. The second *hotno* was built because it was difficult to gather the wood at the ranch and carry it by foot back to the village at *Inalahan*[7] on a daily basis. Both *hotnos* were used until the house at the village was sold. From that point on, the second *hotno* was used exclusively to bake goods for sale at the Paulino's store and private parties.

Long ago abandoned, the *hotno* at *Acho Lasodiac* has been left to the mercy of the elements; But except for a small crack on the left side of the door, it is in relatively good condition. Figure 3 shows the crack on the *hotno* located to the left of the door.

Figure 3: Archaeologist Darlene R. Moore records measurements and features of the Sugiyama/Paulino hotno. Note the crack at the left of the door.

Ton[8] Jesus Crisostomo built Manuela's second *hotno* around 1948, at the Paulino's *Acho Lasodiac* ranch where they pastured their cow and raised chickens. The second *hotno* was built for commercial purposes and Manuela baked or toasted *fina'mames*[9] that was sold at the family's store, the Paulino's Store, at *Inalahan*. Manuela baked *pan*[10], *pan tosta*[11], *pan mames and CHamorro cake*[12] for sale at the store on a daily basis. She worked hard and accepted special orders to roast small *babui*[13] and other food that could fit in small pans. She baked *cake nobia* for *fandangos*[14] and other cakes when ordered for special occasions. Work, that Jaime said required *kontiempo*. His grandmother also made *essok* and Jaime's favorite *essok* was *masa na lemmai*[15] or *mames lemmai*[16].

Manuela's first *hotno* was built and located at their *Inalahan* village residence, behind Alfred Flores' Store. "I think that *Ton* Mariano Torres Paulino built that *hotno,"* said Jaime, "before the Japanese occupation."

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Figure 4: Narrow opening for the Sugiyama/Paulino oven door.

Manuela was a widow early. In fact, she was only two months pregnant with her daughter Josefina when her husband, Tomas Sugiyama, died. Manuela did not remarry, dedicating her time to baking and becoming a *panadera*.

The *hotno's* door is narrow and Jaime Paulino thinks that it was built that way to ensure that the *hotno* retained the heat longer. Only small trays were used for baking and roasting food.

Josefina Sugiyama Paulino, Jaime's mother, took over as *panadera* for the Paulino Store after Manuela died in 1949 but hired someone to help her with the banking. Josefina baked until she and her husband Jesus decided to move to Tamuning in 1958.

It was about that time that Jaime built his home at *Acho Lasodiac*. Since then, the *hotno* has been left to the elements and two large *tangantangan*[17] are growing next to the *hotno*, threatening its preservation.

There was no evidence that Jesus Crisostomo used rebar in the construction of the Paulino hotno, but the imprints of *sin*[18] shown in Figure 5, show that he used *sin* for the frame of the base of the *hotno*.

Figure 5: The pattern of corrugated tin is seen in the base of the Sugiyama/Paulino *hotno at Acho Lasodiac* property.

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Figure 6: Interior of Sugiyama/ Paulino hotno showing the exhaust hole at the bottom center to the roof.

The *hotno's* interior is constructed of fire tiles as seen in Figure 6, with the hole at the bottom on the east side of the structure. The *hotno's* door is facing west towards the Paulino home.

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Glossary

[1] Oven.

[2] Ash.

[3] Preparation of food for baking.

[4] Baker.

[5] Bride's cake, wedding cake.

[6] CHamorro place name for Bear Rock Point. Reference is still made, but meaning is lost.

[7] Southeastern village on Guam.

[8] Mister, sir. Formal use to show respect when addressing an elder man.

[9] Sweet bread.

[10] Bread.

[11] Bread- twisted or toasted.

[12] Scratch cake.

[13] Pig.

[14] Weddings.

[15] Ripe breadfruit.

[16] Sweet breadfruit usually ripe.

[17] Type of plant – leucaena leucocephala. A large bush that proliferates on many of the high islands of Micronesia. good for cattle feed and fuel.

[18] Corrugated tin

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Tomasa Cruz Salas Oral History Account 2008 03 27
Cruz "*Pedang*" *Hotno* at Hagåtña and Barrigada

Figure 1: Tomasa Cruz Salas

"It was very small. We were the only ones who built it, my sister Maria, and I," Tomasa said of the first *hotno*[1] the Cruz family had at their *Agana*[2] *residence* before the Second World War. "134 San Ignacio[3] Street, *Agana*, Guam was our mailing address," Tomasa said. It was also the physical address of their Agana home.

Tomasa was born on December 21, 1916 and her mother died on May 25, 1930. She was 14 years old. Having a *hotnon sanhiyon*[4]*g* was an important resource in sustaining the family's meals and income source, despite its size. "We all baked in the *hotno*," Tomasa said of her siblings. As the eldest after her mother's death, she assumed much of the role of the mother in their home. Her father moved to the *lancho*[5] at *Barrigada*[6] to concentrate on farming and raising pigs and cows.

The *hotno* at *Agana* was a five pie-plate capacity *hotno*, so they did not make *pan*[7] at *Agana* because the *hotno* was too small. The Cruz family constructed a fire pit next to their *hotno* where the family cooked their meals over an open fire on a grill. "It was small, and next to it we had a *foggon*[8]," Tomasa said.

The Cruz family moved to their *lancho* at Barrigada after they evacuated their home at Agana by force on the morning of December 8, 1944, when Japan bombed Apra Harbor, *Sumay* [9]and *Agana*[10]. Tomasa said her brother Francisco built the *hotno* at their Barrigada property sometime during their two-and-a-half year stay at the lancho under the Japanese occupation. He built the *hotno* because the family wanted one like the one they had at *Agana*. Neighbors benefited from their Barrigada *hotno*. Tun Pepe Duenas, their closest neighbor and others in the area, baked their goods by arranging with the *Pedang*[11] family. They fired the *hotno* with coconut branches as firewood, and a hole built into the back of the *hotno's* wall, served as ventilation. Tomasa said that they plugged the hole with an empty can when baking to help retain the heat inside the *hotno*.

"At that time we were making *afok*[12]. My father and my siblings - we were all making *afok*." In order to make *afok* they had to build a *hotnon afok*[13]. They gathered large *tangantangan*[14], placed it on the ground in a square pile, and stacked it until it reached about five feet high. When that was done, they built a wooden fence around the *tangantangan* and began picking rocks, "It was special kinds of rocks," Tomasa said, but she did not elaborate. Tomasa, her 8 siblings, their father and extended family

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members helped to gather rocks. They piled the rocks about two to three feet high on top of the woodpile. She said that there was a specific time to fire up the *hotnon afok* and that her father and brother Francisco knew the particular time. She was not aware of the significance of the right time to fire the hotno afok because she was not in charge of the process. However, she knew that there was a specific time to fire up the *hotnon afok*.

Figure 2: Photo of the Cruz Siblings taken circa 1998-2001
Front (L-R) Tomasa Cruz Salas, Rita Cruz Mafnas, and Dolores Cruz Cruz. Back Row (L-R): Francisco Guerrero Cruz, Jesus Guerrero Cruz and Pedro Guerrero Cruz. Not photographed are Manuel Guerrero Cruz and Juan Guerrero Cruz who passed away before this photo was taken. (Courtesy of Marylou Mafnas Valencia)

When that time arrived, they lit the pile of wood from the bottom and started the fire. Tomasa said it sometimes took about a month and a half to complete the process of making *afok*. It took a long time because the pile of wood, mostly *tangantangan* is thick, hard wood. They also fed the fire if the pile was not sufficient to heat the rocks enough to turn it into powder. Francisco and his father took turns checking on the fire to see if the *tangantangan* had burned to the ground or if they needed to add more *tangantangan*. When the rocks turned into white *afok*, they used *hagon chotda*[15] to cover the *afok* to prevent it from the wind and the rain.

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The Cruz family processed *afok* as an income-producing resource. They packaged the *afok* in the size of a *pilota*[16] and sold it for a penny each. People needed *afok* to make *eskomme*[17]. They soaked corn in the *eskomme* over night and after removing the hull, they ground the dry corn on the *matate*[18] or the *mulinu*[19] to make *titiyas*[20]. The *afok* had other uses, plaster for construction and stimulant for chewing *pugua'*[21]. "It was a very hard time but it wasn't difficult for us because that is all we could do," Tomasa said about the family life in the past.

The *hotno*'s foundation was concrete and cement. Cement, however, was not used to plaster the side of the *hotno*. For that, they used *afok*. It was the popular belief then that cement was bad for the fire so they mixed *afok*, sand and water for its plaster. They laid bricks in a staggered manner, to form the dome of the *hotno*, making every other layer afok to hold the firebricks in place. Francisco used bamboo as a guide when shaping the top of the *hotno*. He took bamboo and cut it into strips, then stuck the bamboo strips inside the already laid wall of the oven, forming an arch at the top of the bend. He tied the bamboo strips together midway down the sides - all the way around - to hold it in place, as a frame for the dome. Then they placed the covering of the *hotno*.

Maria's husband Antonio Aguon Mafnas and his first brother-in-law Jose Cruz Fejeran from Piti built the last *hotno* for the *Pedang* family at their Barrigada property.

Tomasa said that her sister Rita (Maria[22]) Cruz Mafnas was a *panadera*[23], and the expert at making *pan royu*[24]. Baking bread was important during the Japanese occupation because they rationed the rice during the war. Even if the people could get some, it was barely enough to feed the families. *Pan* became a starch substitute. They dried *aga'*[25], *lemmai* [26]and *mendioka*[27], then ground it to make flour and used the flour to bake *pan*, cake and other pastries. She used *tika*[28] for moisture in baking cake and wedding cakes too. When they were able, they purchased flour from Japanese stores.

After she married, she continued to bake because her husband refused to allow her to work outside their home. It was her way of supplementing the family's income. Even as a senior citizen, she continued to bake chocolate chip, plain and oatmeal cookies, and *rosketi*[29]. Only she baked from an electric stove and filled orders daily, having them picked up before they would leave for the Senior Citizen Center each morning.

Learning to bake out of necessity at a young age, according to Tomasa, taught her a skill that helped her family who were orphaned by the loss of their mother. But it also helped her to help her husband as an income-producing complement when she married. It gave her a sense of independence and accomplishment.

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Glossary

[1] Outside oven, roast by oven or an underground pit, bake.

[2] Principal Town of Guam, Hagåtña gained a formal status of Ciudad, a city, in 1687 during the governorship of Damián de Esplana. It is the capital of Guam, an unincorporated U.S. territory and situated on the northern coast of the island. The name of the city is spelled Hagåtña, formerly Agaña and previously spelled Agana. The spelling was formally changed to its CHamorro-language form in 1998.

[3] A barrio or district of Hagåtña before World War II.

[4] Outside oven

[5] Ranch or farm.

[6] Village in the east where the Cruz family had a ranch before and during the war.

[7] Bread.

[8] Stove, barbecue pit.

[9] Prewar village destroyed by Japanese bombers on December 8, 1944.

[10] The former name of the capital city of Guam. Previously spelled Agana, then Agaña and formally changed to its CHamorro-language form in 1998 as Hagåtña. Agana gained a formal status of Ciudad, a city, in 1687 during the governorship of Damián de Esplana. It is the capital of Guam, an unincorporated U.S. territory and situated on the northern coast of the island.

[11] CHamorro nickname for the Cruz family.

[12] Lime, birdlime, limestone (soft) quicklime.

[13] Lime kiln.

[14] Type of plant-leucaena leucocephala. A large bush that proliferates on many of the high islands of Micronesia. Good for cattle feed and fuel. Introduced in 1957 by the United States Navy to stop erosion.

[15] Banana leaves.

[16] Dumpling size portions.

[17] Corn-soaked in a mixture of lime and water in order to remove the hull.

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[18] Grinding stone.

[19] Grinder.

[20] Tortillas.

[21] Type or plant-areca catechu. Betel nut palm.

[22] Joaquin and his wife Rita Cruz wanted to name their first daughter Maria Guerrero Cruz, but the child's godmother wanted to name her Rita. As customary, the godmother won out, but the family called the child Maria although it was not her formal name.

[23] Female baker.

[24] Bread- twisted or toasted.

[25] Banana.

[26] Breadfruit.

[27] Taro.

[28] Coconut oil.

[29] Hard cookie-like pastry, toasted, twisted, baked, and glazed with sugar.

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Mary Lou Cruz Valencia
Oral History Account
Mafnas/Cruz (Pedan) Hotno, Barrigada

2008
03 28

Figure 1: Mary Lou Cruz Valencia

Mary Lou Mafnas Valencia's memory of her parents is filled with the history of their use of the *hotno sanhiyong*[1]. In fact, Mary Lou cannot think of a time when her parents were not baking or roasting something in the *hotno*[2]. The *hotno* was an integral part of the Mafnas family life and as a result, other family members and friends benefited too.

Antonio Aguon Mafnas married Rita Guerrero Cruz fifteen years his senior, whom everyone referred to as Tan Maria. The childless couple raised their niece Mary Lou Cruz as their own daughter. Mary Lou's biological parents were Rosario Demapan & Juan Guerrero Cruz. Juan is Rita's brother. The Mafnas couple have passed away, so we interviewed Mary Lou about her parent's use of the *hotno* commonly referred to as *i hotnon Pedan*[3] – the *Pedan*[4] oven at Barrigada.

The *hotnon sanhiyong* was built by, "My uncle Jose Fejeran[5] and my father, for my father," Mary Lou said. "It was his *hotno*, he wanted it to roast *babui*[6]." Fejeran and Mafnas were brothers-in-law and Jose had experience, having built several *hotno's* at the village of Piti where he lived before construction of Antonio's *hotno*. They mixed *afok*[7], sand and cement, and bricks that Antonio called, "*ladriyun antigu*[8]." They placed firebricks with holes at the center of the *hotno* that they bought from Perez Brothers or Hawaiian Rock and used that at the bottom of the *hotno*, which sat on top of cement blocks. They used rebar to help them form the *hotno*'s arch at the top. They built a shelter over the *hotno* with a *kusina*[9] and a *baño*[10].

One year a typhoon damaged the *hotnon sanhiyong* and Mary Lou said that she helped her father and Uncle Jose with its remodeling. She washed the bricks to get the dirt off so the *afok* could stick to it when they laid it down in layers for the *hotno's* walls. Between the bricks, they laid *afok* mixture consisting of lime, sand and water, which served as plaster. The lime was

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bought at the store. Mary Lou thinks that it was Typhoon Omar that destroyed the original *hotno* and she said that her father and Uncle Jose repaired the hotno the same day it sustained typhoon damage because without power, it was necessary to get the hotno working quickly.

Figure 2: Rita (Maria) Cruz Mafnas at the original hotno built by her husband Antonio Aguon Mafnas and brother-in-law Jose Cruz Fejeran. Photo Courtesy of Mary Lou Cruz Valencia

Her father was a construction worker at Naval Station and focused more on roasting projects after his retirement. Before he retired, he woke up early, gathered the wood, and placed it at the *kusina* for Maria before he left for work. Maria was a *panadera*[11].

"My father roasted the pigs because he loved the work. He did not do it because he believed it was the man's work. People liked the way he roasted the pigs because the *babui* were well done, and the skin was crispy," Mary Lou said of her parents. There was no division of labor between her parents regarding their work in the *kusina*. "My mother roasted *babui* when my father had to go to a *matai*[12] and he would bake when she needed his help," she said. To emphasize, Mary Lou said, "They roasted *babui*, chicken, turkey, pot roast; virtually everything that could be roasted in the *hotno*, they roasted." They shared the preparation work, labor and joy of baking and roasting. They were a special couple and great partners. "Even though my mother was fifteen years older than my dad, they loved to roast and bake. They enjoyed what they were doing and did it until they died. My mother baked in the *hotno* until she was in her late 80's and my father died while he was roasting a *babui* for a wedding," Mary Lou said to punctuate how much her parents enjoyed their *hotno*.

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Figure 3: Wedding Day: Antonio Mafnas Cruz and his bride Rita Guerrero Cruz. Photo Courtesy of Mary Lou Cruz Valencia

The Mafnas couple used commercial-sized trays used in the cafeteria, to bake or roast food in the *hotno*. They had large orders to fill and the preparation work demanded a lot of time, because it required the mixing of ingredients in very large portions, which they did by hand. It also required waiting for the dough to rise before they could roll the dough into the shapes for baking. Maria managed to carry the large trays from the *hotno* to the house, but they were heavy and she welcomed the assistance of relatives and friends who always seemed to be around. Because the roasting jobs were weekend related activities, there was always someone around to help her take the *babui* out of the *hotno*. "The pans were heavy, but she was strong enough to handle them herself. If she needed help, there was always someone around to assist," Mary Lou said of her mother's abilities.

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Demand for food cooked in the *hotno* by family, friends and commercial orders came in regularly. The Cruz family members were partially responsible for getting the word out that Antonio and Tan Maria were baking and roasting for parties and before long, they were very busy. Many of the *Pedan* family members worked for government agencies, so at the beginning, they were roasting *babui* for specific agencies where Cruz family members worked. But once the word got out that her parents were baking and roasting from an *hotnon sanhiyong*, they began to roast for parties of almost all Government of Guam agencies. "All of them," Mary Lou said when answering which government agencies ordered *babui* from her parents but she could only remember, "Guam Housing Urban Renewal, UOG, Guam Police Department and even the Governor's Office," when having to name a few. "There are more, but I forgot," she said.

Figure 4: Rita (Maria) Cruz Mafnas smiles as she grades a coconut in her kusina. Photo Courtesy of Mary Lou Cruz Valencia

"One time the roasting job required three *hotno's*," she said of the Governor's Office order. The job was so large that they needed three *hotno's* to get it done on time. Antonio asked his brother-in-law Jose Fejeran and his *kompaire*[13] Tomas Blas[14] at lower Barrigada Heights to help. Antonio reciprocated when Jose or Tomas needed his help to roast a *babui* for someone. Government of Guam agencies, "Would call over here and ask if they could have their *babui* roasted. They brought the babui to the house ready for roasting and my Dad put the *mantika*[15] on it for roasting," Mary Lou said.

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Figure 5: Rita (Maria) Cruz Mafnas works in her kusina. The hard work required of a panadera contributed to her hunchback seen in this photo. Photo Courtesy of Mary Lou Cruz Valencia

Antonio had wonderful support for his wood supply. Many of his nephews got wooden pallets from local stores and at times, the pallets would be delivered to his house. His nephew Mike knew the owner or manager at Guam Supermarket and that guaranteed that Antonio had pallets when he needed them; delivery was made to his house as a convenience. Once it was known that he needed the pallets to fire the *hotno*, people brought the pallets to him. In return, many benefited from freshly baked goods. Mostly, they wanted to help Antonio so that is why they gave him the pallets.

It is the intense heat from the *hotno*, which takes a toll on the *panadera* and their assistants. "It's very hot. And my father had to stand in front of the *hotno* to prepare it and clean it," Mary Lou said, "before they could use it." While both her parents were able to start the fire and heat up the *hotno*, Mary Lou helped by rolling the dough. She was quick about it and they relied on her often to do the work, even when she did not want to participate.

Mary Lou's exposure to the *panedera's* work taught her how to bake and roast in the *hotnon sanhiyong*. However, she did not assume her mother's role as *panadera* when she got older because, "It's too hard. It is hard work! Oh my goodness, its hard work," she said. "It's hard on the people who work with the *hotno*," she said, but she did learn to bake. She was always available to assist her mother after graduation from high school because she did not work outside the home. As a result, it became her responsibility to care for the children of family members who were secularly employed.

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Mary Lou learned to bake cookies, prune cake, cake and other goodies that her mother baked. While her mother was alive, holiday orders were guaranteed by government agencies and Mary Lou was responsible for decorating the favorite CHamorro[16] cookies and cakes.

Everyone in the *Pedan* family used the *hotno*; the neighbors too were able to bake in the *hotno*. "Sometimes when my mother baked, people on the road stopped and visited her at her *kusina* because they could smell the aroma of the freshly baked bread," Mary Lou said. It was gone as fast as it was taken out of the *hotno*. Whether it was *pan*, cookies or cake, Tan Maria baked and nothing lasted long.

Figure 6: Cruz Siblings. Front Row (L-R) Tomasa (Bacha) Cruz Salas, Rita (Maria) Cruz Mafnas, Dolores (Loli) Cruz Cruz. Back Row (L-R) Francisco Guerrero Cruz, Jesus Guerrero Cruz, and Pedro Guerrero Cruz. Not Shown: Manuel Guerrero Cruz and Juan Guerrero Cruz who had passed away before this photo was taken.
Photo Courtesy of Mary Lou Cruz Valencia

Tan Maria's sister Dolores, known as *Tan Loli*, also baked and other cousins rolled the dough for baking. Mary Lou shared a mischievous story about rolling dough. "Sometimes when my aunt (Loli) was not looking, we threw away the dough so that we would not have to roll it," Mary Lou chucked in reflection. "Sometimes we threw the dough on top of the *bilembines*[17] trees," she laughed out of embarrassment. When Loli came into the *kusina* and noticed that there was not as much dough as she had prepared on the tray, she

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asked, "What happened to the dough?" Mary Lou and her cousins played as if they had rolled it, but *Loli* knew better. She looked around and noticed the dough hanging from the branches of the *bilembines* tree.

Dolores Cruz Cruz was employed outside the house but had a big share in baking in the *hotno* and prepared what she needed to bake before she left for work, going into the *kusina* when she came home. In this way, there was always a *Pedan panadera* working and when people caught on to that, they came, day and night. People got accustomed to knowing that a *panadera* was always baking at the *Kusinan Pedan* and many friends came and hung around because there was always something good happening around the *hotno.* "My *Nino*[18], Tomas Blas came every morning after dropping my *Nina*[19] off at work to have coffee and visit with my parents," said Mary Lou. "There is something wrong with my truck because it always turns into this place. It cannot pass without stopping," he would say about not going straight home.

Figure 7: Riota (Maria) Cruz Mafnas pauses as she prepares to take out a babui from the hotno. Photo Courtesy of Mary Lou Cruz Valencia

Some of the friends included Rose Trap and her mother Nan Beja, Harriet Gutierrez, Rev. Joaquin Sablan and his brother Angel Sablan, Pale (Scot) Oscar Calvo and his sisters Mac Calvo, Lana Calvo Carlos, Juanita Calvo DeOro came often. In fact, DeOro owned and operated a store at Agana Heights and frequently ordered roast pigs from the Mafnas couple.

Mary Lou said her mother and aunt did not sell their breads at the store. They only baked from orders and at the house. The sisters baked cake Chamorro, Chamorro cookies, cherry wink, oatmeal and chocolate chip cookies, *pan*[20], *pan royu*[21], *rosketi*[22], velvet, carrot cake, sponge, devil's food cake, and stored the cookies in *latan pri*tolio or empty Navy biscuit cans so they would last a long time.

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Figure 8: Rita (Maria) Cruz Mafnas in her late 80s pauses for a photo. Photo Courtesy of Mary Lou Cruz Valencia

Maria baked through her late 80's but Mary Lou said that her mother was either 89 or 90 years old when her father made her mom stop baking. Antonio was concerned that the work in the *kusina* had become too tough for his wife to continue, primarily because it was getting increasingly difficult for her to lift the trays and other things on her own. He was also concerned that she became *badu*[23] because of the posture she acquired from having to carry the heavy trays and bending over to do most of the work as a *panadera*. He was also concerned that she was getting too old to be working that hard. Maria was hurt and got angry with her husband for telling her it was time to stop baking, but he was firm that she could not continue and her family supported him.

After she stopped, her sister Dolores took over, but even then, Maria went into the *kusina* to *fan ayuda*[24]. Dolores did her preparation work during early mornings and placed the dough in the refrigerator before she went to work so that it would be ready for rolling when she got back from work. Mary Lou helped her to roll the dough and her father greased the trays.

On Saturday morning, November 6, 1999, Antonio was roasting a pig for a *fandango*[25] and walked back to the house to ask his wife to prepare his water for a shower. As Antonio was going for his medication at the *kusina*, he fell to the floor and died instantly. Five-year-old Marissa Lariquente, Dolores' granddaughter saw Antonio fall to the floor and called for help. She told her grandmother, "Uncle Ton is sitting on the cement!"

According to doctors, Antonio suffered a massive heart attack. He died next to his *hotno*.

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The groom who ordered the *babui*[26] felt very bad about Antonio's death and asked the family's mercy; assuming some responsibility for his death. The family said there was no way that anyone could have known that Antonio would have a heart attack that morning. The groom's friend, Vince Quichocho who referred Antonio to the groom, took up the responsibility to complete the roasting for the *fandango* that day at the Pedan hotno while everyone scrambled to attend to Antonio.

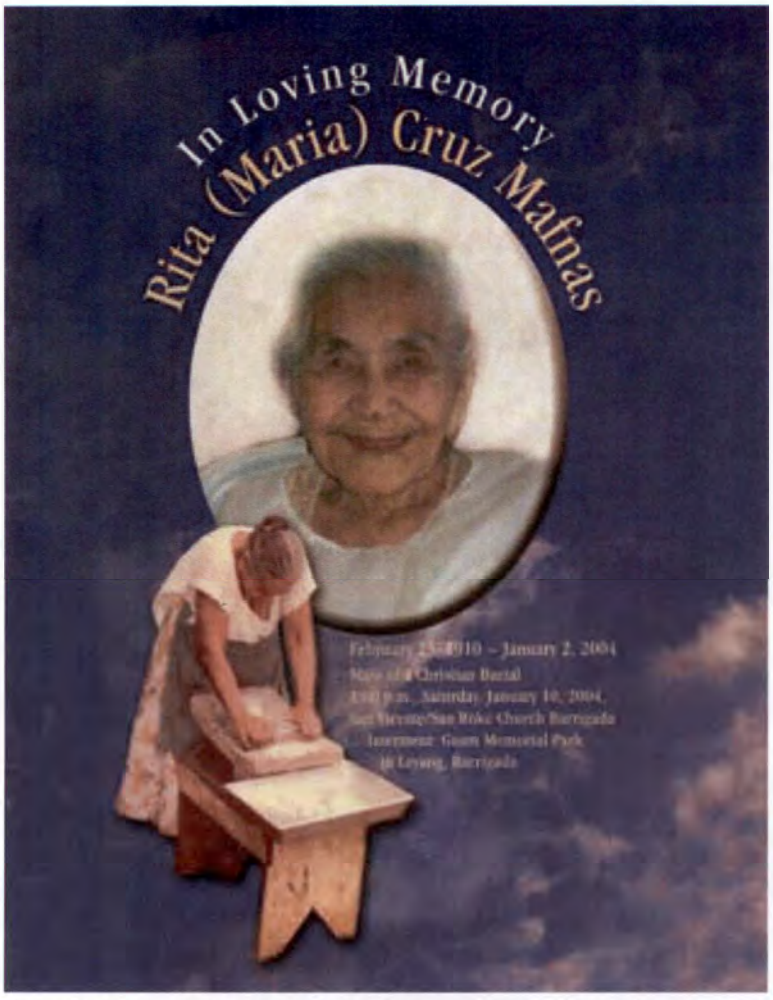

Figure 9: Cover of Rita (Maria) Cruz Mafnas Memorial Booklet Courtesy of Mary Lou Cruz Valencia.

After Antonio died, his nephew John Cruz, who lived next door, tried several times to roast pigs in the *hotno* but he gave up because the *hotno* was too hot to work with. Mary Lou said that Juan gathered wood and a bush-like plant from the field are behind their home for his broom to clean up the oven of ash and kindle. She said that when Antonio was alive, he used the ash and kindle for fertilizer.

After Antonio died, Maria returned to baking. She was not the type to lie around and did not want to spend her time at the Senior Citizens Center at Mangilao. Mary Lou took her there a couple of times to see if she would be interested, however she was not interested in spending her time at the Center.

Rita (Maria) Cruz Mafnas died at home in January 2, 2004, at the age of 94 years.

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Mary Lou saved her mother's recipes but Rita's original cookbook is lost. Mary Lou saw the value of learning how to bake in a *hotnon sanhiyong*, but enjoyed the convenience of baking in an electric oven. Therefore, when her cousin Patty and her friend, Fay Guerrero came to visit, Mary Lou asked Fay to break down her mother's recipes so that she could use them. Fay agreed and from that point on, Mary Lou was able to bake using her mother's recipes but in an electric oven. "My mother's recipes called for 20 cups of this and 20 cups of that and I just wanted to pare that down to smaller quantities so I asked Fay to do it for me and she did," she said. Other family members asked Mary Lou for Rita's recipes and Mary Lou gladly made copies for them. She continues to bake today but is physically limited because she is not able to stand for prolonged periods.

Mary Lou Cruz Valencia provided her mother's modified recipe to make *pan* for this report.

PAN or *PAN ROYU*
6 - C. Flour
1 ½ - C. Warm Water
4 – t. Yeast
4 – Eggs
3 ¼ - C. Foremost Milk
2 – C. Sugar
1 – C. Salad Oil

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Glossary

[1] Outside oven
[2] Oven
[3] Pedang oven
[4] CHamorro nickname for the Cruz family.
[5] Jose Cruz Fejeran built ovens at Piti, Agat and the Pedang hotno at Barrigada.
[6] Pig
[7] Lime, quicklime,
[8] Old red clay bricks
[9] Kitchen
[10] Shower
[11] Baker
[12] Funeral
[13] Mary Lou's confirmation godfather. The term is used between fathers and godfathers or mother to godfather. Also pari.
[14] Mary Lou's confirmation godfather
[15] Lard
[16] Guam Language Commission official spelling of the word beginning 1998.
[17] Star Apple
[18] Godfather
[19] Godmother, Carmen Blas, wife of Tomas Blas
[20] Bread
[21] Bread twisted and toasted
[22] Pastry
[23] Hunchback, crooked back, humpback
[24] Help, assist
[25] Wedding feast
[26] Pig

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Speaker Judith Teresa Won Pat
Oral History Account
Won Pat Hotno, Sinajana

2008
07 01

Figure 1: Honorable Judith Teresa Won Pat, speaker of the 29th Guam Legislature. Won Pat is also the first female speaker in the legislative history.

Judith Teresa Won Pat spent a lot of time inside her mother's *hotnon sanhiyong*[1] as a pre-schooler. "I used to hide inside the oven," said the current Speaker of the 29th Guam Legislature of her playful ways as a young girl. "I climbed in and out of the oven. It was one of my favorite hiding places," she said.

As a preschooler around the age of three or four, young Judy loved to play in the neighborhood and ran away each morning, failing to return until after dusk. "And in those days, right, we were *aguaguat*[2] as kids and as soon as I would wake up, I would run away and when I would come back, I'd get spanked for it. So I would always find hiding places and that was also a hiding place for me," said the first female speaker of the Guam Legislature. She giggled with embarrassment as she relayed the years of her life at their *Sinajana*[3] home. "I was very young and the reason I had to be as early as pre-school and elementary level is because I had to be small enough to actually enter that door and I could fit inside. I haven't seen it for many years [now] but I used to crawl into the oven to use it more-or-less like a playhouse." Because of making it a playhouse, "My father actually built me a playhouse," she proudly stated.

Young Judy thought that if she crawled into the *hotno* or other hiding places after a long day of playing in the neighborhood that her mother would be convinced she was hiding there all day. "I had to sweep out all the ash then climb into the small door and sit inside like an Indian," she continued. "I was so small that my head did not hit the top of the oven. When I was bored, I'd crawl out." How long did it take before she bored? Speaker Won Pat's eyes tightened before letting out a laugh, "Not long... I've always had a problem staying anywhere too long." She'd give herself away when she came out of the *hotno* covered in ash. Eventually her mother discovered all her hiding places. She chuckled at the logic she had as a child. "You know, that's the way we thought as a kid. That we could get away with things. But they [her parents] were too smart for us."

Because she was very young when her mother used the *hotno*, Speaker Won Pat does not know when it was built. She thinks that her parents' *muchachos*[4] built the *hotno* for her mother. "I don't of course know when it was built, but I do know that my parents had *muchachos* who

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helped with the ranch and around the house. The reason that I remember the oven is because I used to play in it. The oven was built of concrete and it has this real large dome and a real small opening like the door. My mother would always put a piece of wood in front of it when she was baking. So, I can only think that the guys working for my parents, actually built it because my mother wasn't a mason of the sort and neither was my father. He was more of a carpenter and the *hotno* would require more of a masonry work.

My mom was apparently the baker of bread. Not other pastries, but bread. What happened was that she shared with the neighbors who apparently were her *kumaire*[5]. Apparently, everyone around our circle was her *kumaire*. One of them who she was very close to was *Tan*[6] *Marian Edman*[7], Maria Crisostomo. She inherited my mother's recipes. Our family left in 1965 [for Washington] that was the last time that she used the oven," she said of her mother, "When my father won to be Guam's Washington representative. So, she had given all of her pans and all the baking wares to *Tan Maria*. And, as a result of that, she [*Tan Maria*] continued on to bake the rolls and she actually went into business and she did that for many years and used to supply the rolls to *Chode*[8] [Store]. That's what I found out when I came back [to live on Guam] and she would always be proud to share some of her bread with us and always proud to say that the recipe was that of my mother's." *Tan Marian Edman's formal name is* Maria Crisostomo. Her husband was Herman Crisostomo Sr.

"My mother used the *hotno* for about 15 years. In those days, you see, my mother would tell us that it was difficult at times to go to stores. I remember at that time, she said that someone drove away with their Jeep. It was the impending arrival of the Japanese and my parents told me that they pulled over at one of the stores to get some groceries. When they got out of the store, somebody drove away with the Jeep. Somebody drove away with their Jeep! So, it was very difficult for the family. My father would tell me that sometimes he would hike all the way from *Inarajan*[9] to buy groceries. So, it was much easier then to take care of themselves by

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either baking their own goods, or raising their crops and stock as well. And, that is what it was like. We were a large family, eight children, and that's what my mother did [bake]. And we had several individuals to help out; the *muchachos*, so there was quite a bit [of help] and she also had her sister, Rita [White], who stayed with her while she was still single. So there were a lot of mouths to feed in those days.

Regarding the *muchachos*, I know there were several women because they were like nannies. They helped with us. I had my own nanny. I hate to say this, but I did (shyly laughing) and I know that my older sisters did. There were two men that I remember, I don't know their names but I can see their faces; they would help out at the ranch. We had a ranch, which was beyond where the old Ordot Dump is, beyond that where Charlie Corn's memorial is. That whole area there, they would call commercial port. We would go, as a child, we would go there every weekend, but on a daily basis they would go and tend to the animals. So, they had to have several helpers."

The *hotno* was built at Sinajana because the Won Pat family finally took residence there in a two-story house. The family lived on the second floor and they had a grocery store and a pool hall on the bottom floor. To the back of the property was where the *hotno* was built. Judy said that there was a back stairway that led directly to the *hotno*. "All I remember about it was that it was a concrete dome and it had that little opening and it was on bricks. I know that my mother would use wood to cover the opening when she was baking and they would use other bricks to hold it shut. She used a long flat board to put the dough or loaf into the *hotno* and she used that to take it out," Judy said. "Her workers were the ones who fired up the *hotno,"* Judy said, "At that time, we had a lot of *tangantangan*[10] in the area and then also, [we got it] from our ranch."

Her brother Anthony complained about being the only boy. "He felt that he was a *muchacho* because it was his job to feed the pigs and the other animals and he also had to bring firewood [from the ranch to the house]," Judy explained.

To the extent that Judy tasted everything that was baked in the *hotno* and to play in it when it was not in use, she had no other dealing with the *hotno*. "I was very young then," she said. "I was the seventh out of eight [children] so I was not any part of having to do any chores at that time." Regarding her older sisters, "None of them took on baking. Maybe because I was the one who played around in it, I was the only one [later] who took an interest in baking bread. But

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none of my sisters picked up on it." Judy thinks that one reason her sisters may not have developed the interest was because during their teen years, her parents sent them off to boarding schools. "So they really didn't participate in that at all. Then of course there were the helpers, so they didn't have to do that. And, by the time they left, I just started my teen years; we didn't have any of the workers anymore. So, I had to learn [how] to take over the chores. So I definitely know what it's like to have to help out."

Judy said that she and her mother complained about having big arms and associated it with having to knead dough. "I hated it," Judy said chuckling, "it is hard work, but we all had to help out." Kneading was the hardest part of baking Judy said, "Kneading is the hardest. We had to knead the dough then cover it and wait until we had to knead it again. I think we did that three times [before baking]. When it came time to bake she said, "They were rolls, large rolls," and baked in round loafs. "We rolled it [dough] on the table and then neatly put them together." She remembers that when she was learning how to roll and lay them down next to each other, it was difficult and the learning process was critical. "I remember the time we were told [the dough] was not evenly placed [on the trays]. " Because some were small, some were too big. My mother was good at it and she was able to get the size almost identical when placing the dough side-by-side into a round loaf. In a flat pan, she also knew how many rolls to put down in rows to come out perfectly even. I never knew how to do that."

After the bread was taken out of the *hotno*, they spread, "melted butter, and sometimes she would sprinkle sugar if that was available," Judy said of her mother. "As kids," Judy said, "we liked it that way. It was not just starch but more for even snacks or dessert because it was sweet."

Ana Perez Won Pat also roasted *babui*[11] in her *hotno*. "We had the ranch and every time they would kill a pig, I remember that, because it used to bother me when they would kill a pig. It would squeal and I would run and hide because I could not stand to hear that. I would run upstairs and hide in my room or in the closet because those were my hiding places."

Judith Teresa Won Pat had a lot of hiding places when she was a child, but hid for a different reason when a pig was butchered. "I guess I hid because when I saw it struggling... I don't know, I felt for the animal, that we shouldn't kill an animal. And especially because we'd go to the ranch a lot and when I was a child, I would always pick a certain [animal] like a white goat, and that was like a pet. I'd find a real, nice pink piglet, or a rabbit, or a horse or cow and make

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them my pet. I was also sickly at the time. My mother would always give me a pet and only to find out later that I was actually allergic to them because of the [dander in their] fur. As a result, I would have them for a day or two and then I would lose them. Only to find out that many of them ended up in the oven!"

Judy was very clear about the cow. "When they would kill a cow," she said, "my mother would say one *petna*[12] for this family and the other *petna* for this function, a wedding, things like that." Judy pointed out that she did not participate in the roasting projects because the task was too difficult for her. "*Binadu*[13] too, because all these animals [were available to them] at the ranch."

Regarding the location of the oven, "I remember it at what we call pre-GHURA (Guam Housing Urban Renewal Authority) days. So pre-GHURA the two-story structure was still there. And remember that I told you there were steps, the really long seven steps that go down [to the back yard]? I would say it took a couple of feet to reach it [hotno]. Right next to the *hotno* was our apartment complex. That was a duplex. After GHURA, all that changed. The boundary line shifted and our driveway became part of our neighbor's, *Tan* Romana Ramos' property. GHURA turned things around and they cut the property in the back in a very weird shape, almost like a "V." And that's where the oven is at, almost at the pointed end of that "V." All of a sudden it didn't belong to us. It fell in the property line of my *Nino*[14] and *Nina*[15], Vicente and Ana Reyes' property.

The last big party that the Won Pat family had at their Sinajana home was her brother Tony's wedding, which was held on the patio and carport, which is no longer part of the property.

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Glossary

[1] Outside bake oven, brick oven.
[2] Naughty.
[3] Central village originally built by U. S. Navy to relocate displaced family from Agana after the war.
[4] Domestic helpers. Can be CHamorro but usually foreign laborers.
[5] Term used for mother and children's godmothers or the mother of one's godchild.
[6] Madam. Formal use to show respect when addressing an elder woman.
[7] Description used to identify Maria as Herman's wife.
[8] CHamorro nickname for Sablan family operating the Agana Liquor Store at Anigua.
[9] Southeastern most village on Guam.
[10] Type of plant – leucaena leucocephala. A large bush that proliferates on many of the high islands of Micronesia. Good for cattle feed and fuel.
[11] Pig.
[12] Thigh part of cow.
[13] Deer.
[14] Term describing the male godparent for baptism or confirmation.
[15] Term describing the female godparent for baptism or confirmation.

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Bibliography

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Felix P. Camacho
Governor

Michael W. Cruz, MD
Lt. Governor

Joseph W. Dueñas
Director

Jose M. Quinata, Jr.
Deputy Director

September 30, 2010

Carol Shull
Interim Keeper
National Register of Historic Places
U.S. Department of the Interior
National Park Service
1849 C Street NW
Washington, D.C. 20240

64501093

Subject: Submission of Nominations
Multiple Property Listing – Guam's *Hotno* / Guam's Outdoor Ovens

Dear Ms. Shull,

Enclosed for your review is our nomination packet on Guam's Outdoor Ovens. The Nomination is a multiple property listing of eight outdoor ovens. However, only four property owners agreed to list their property on the National Register. The multiple listing is not comprehensive or reflected of all outdoor ovens found on Guam. We hope to pursue a comprehensive survey of this valuable cultural resource in the future.

Should you require clarification, please do not hesitate to contact us.

Sincerely,

Joseph W. Duenas
Director

Co-Signature:

Lynda B. Aguon
Guam (State) Historic Preservation Officer

"Lynda B. Aguon" <lynda.aguon@dpr.guam.gov>

12/13/2010 11:18 PM

To Paul_Lusignan@nps.gov
cc
bcc
Subject Re: Guam Outdoor Oven MPS

Hafa Adai Paul,

Thank you for the wonderful news. The firm contracted for the project did an excellent job.

I apologize for the minor technical errors and very appreciative of the corrections your office made through the use of the SLRs.

You are correct in assuming that the documentation forms for the four properties, Jinapsan, Curz, Flores, and Chaco, were included as supplemental information and not as formal requests for listing or determination of eligibility consideration. We hope to convey more of an awareness on just how significant these ovens are to the overall history of outdoor baking on Guam.

As requested, attached are the digital images for Baza, and Paulino Photo 1. Quan and Won Pat photos are sent on a separate email. The images were converted from the original 72 dpi to 300 dpi. Pls. let me know if there is anythign else you need from us to complete the nomination file. Thank you.

Sincerely,
Lynda

On Fri, Dec 10, 2010 at 4:26 AM, <Paul_Lusignan@nps.gov> wrote:

> Lynda,
>
> I just wanted to let you know that the four Guam Outdoor Oven National Register nominations were formally approved for listing. The Baza, Paulino, Quan, and Won Pat ovens, along with the MPS cover document were all listed on 12/3/2010. Each of these listings had minor technical errors which we corrected through use of a Supplementary Listing Record (SLRs). A copy of those SLRs are attached to this memo. A signed hard copy will be provided through the mail. If you have any questions regarding these changes, please let me know.
>
> As part of the original submission, your office also provided documentation forms for four additional properties (Jinaspan, Cruz, Flores, and Chaco Outdoor Ovens). Each of these was accompanied with a note regarding either an owner objection or an off-island owner. In addition, none of these

forms included the official SHPO/FED certification required of all formal submissions. It is our assumption that these four nomination documents were only provided as supplemental information and not as formal requests for listing or determination of eligibility consideration. As a result, the Keeper did not take formal action on these nominations. Instead we are returning the "nominations" to you until such time as the owner's objections are removed, or the SHPO determines that the documentation should be forwarded to the Keeper for a formal determination of eligibility. The documentation can then be appropriately certified by the SHPO and resubmitted to the National Park Service. In each case revisions to the documentation, as noted below on the attached return sheet, should be made prior to resubmission. These changes are consistent with the changes made to nominations for the four oven properties listed under the MPS in 2010. (Copies of the documentation will be retained by our office for reference.)

If you have any questions regarding this process or the returned materials, please contact me.

Finally, when providing digital images for the nomination photographs, each nomination should be accompanied by a CD containing the electronic version of the images, as per our NR photo policy. If you have these images available, can you send them as e-mail attachments so that we can complete the nomination file. If the documents are large you may have to send them separately. You can then follow up with a disk at your convenience.

Thank you. Great work on the unique oven resources.

(See attached file: guamovenmps.rtn.doc)

(See attached file: Guamovenspaulino.mps.doc)
(See attached file: Guamovensquan.mps.doc)
(See attached file: Guamovenswonpat.mps.doc)
(See attached file: Guamovens.mps.doc)

Paul R. Lusignan
Historian
National Register of Historic Places
National Park Service
(202) 354-2229
(202) 371-2229 fax

--

Si Yu'os Ma'åse'.

Lynda Bordallo Aguon
Guam (State) Historic Preservation Officer
Guam Historic Resources Division
(State Historic Preservation Office)
Dept. of Parks and Recreation
671-475-6294 / 6295 / 6270 / 6337
Fax: 671-477-2822
website: www.historicguam.org


Baza Hotno Photo No. 1.jpg


Baza Hotno Photo No. 2.jpg


Paulino Hotno Photo No. 1.jpg

NPS Form 10-900 (Rev. Aug. 2002)

968

OMB No. 1024-0018
(Expires 1-31-2009)

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

==========

1. Name of Property

==========

historic name **JINAPSAN OUTDOOR OVEN**

other names/site number **JINAPSAN *HOTNO* 66-08-1192**

==========

2. Location

==========

street & number **BEACH ROAD, ANDERSEN AFB** not for publication ____
city or town **YIGO** vicinity ___
state **GUAM** code ____ county _____ code ____
zip code **96929**

==========

3. State/Federal Agency Certification

==========

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria. I recommend that this property be considered significant ___ nationally ___ statewide ___ locally. (___See continuation sheet for additional comments.)

_____ _____
Signature of certifying official Date

_____
State or Federal Agency or Tribal government

In my opinion, the property ____ meets ____ does not meet the National Register criteria. (___ See continuation sheet for additional comments.)

_____
Signature of commenting official/Title Date

_____
State or Federal agency and bureau

==========

4. National Park Service Certification

==========

I, hereby certify that this property is:

____ entered in the National Register _____ _____
___ See continuation sheet.
____ determined eligible for the _____ _____
National Register
___ See continuation sheet.
____ determined not eligible for the _____ _____
National Register
____ removed from the National Register _____ _____

____ other (explain): _____

_____ _____ _____
Signature of Keeper Date of Action

==========

5. Classification

==========

Ownership of Property (Check as many boxes as apply)

XX private
___ public-local
___ public-State
___ public-Federal

Category of Property (Check only one box)

___ building(s)
___ district
___ site
XX structure
___ object

Number of Resources within Property

Contributing	Noncontributing	
_____	_____	buildings
1	_____	sites
1	_____	structures
_____	_____	objects
2	_____	Total

Number of contributing resources previously listed in the National Register **1 Jinapsan Archaeological Site (66-08-0014)**

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

GUAM'S *HOTNO*

==========

6. Function or Use

==========

Historic Functions (Enter categories from instructions)

Cat:	Sub:
DOMESTIC	**secondary structure for roasting and baking**
AGRICULTURE/SUBSISTENCE	**Oven for preparing food**

Current Functions (Enter categories from instructions)

Cat:	Sub:
VACANT/NOT IN USE	

==========

7. Description

==========

Architectural Classification (Enter categories from instructions)

OTHER - OUTDOOR OVEN

Materials (Enter categories from instructions)

foundation **CORAL ROCKS AND MORTAR**
roof **TERRA COTTA TILES AND MORTAR**
walls **TERRA COTTA BRICKS AND MORTAR**
other

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

==========

8. Statement of Significance

==========

Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

____ A Property is associated with events that have made a significant contribution to the broad patterns of our history.

____ B Property is associated with the lives of persons significant in our past.

XX C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

XX D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations (Mark "X" in all the boxes that apply.)

____ A owned by a religious institution or used for religious purposes.

____ B removed from its original location.

____ C a birthplace or a grave.

____ D a cemetery.

____ E a reconstructed building, object, or structure.

____ F a commemorative property.

____ G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance (Enter categories from instructions)

ETHNIC HERITAGE

HISTORIC TECHNOLOGY

Period of Significance **SPANISH COLONIAL PERIOD**
FIRST AMERICAN PERIOD
POST WWII PERIOD

Significant Dates **A.D. 1668-1898**
A.D. 1898-1942
1944-1980

Significant Person (Complete if Criterion B is marked above)

_____

Cultural Affiliation **PACIFIC ISLANDER/CHAMORRO**

_____

_____

Architect/Builder **N/A**

_____

Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS)
___ preliminary determination of individual listing (36 CFR 67) has been requested.
___ previously listed in the National Register
___ previously determined eligible by the National Register
___ designated a National Historic Landmark
___ recorded by Historic American Buildings Survey # _____
___ recorded by Historic American Engineering Record # _____

Primary Location of Additional Data
XX State Historic Preservation Office
___ Other State agency
___ Federal agency
___ Local government
___ University
___ Other
Name of repository: _____

10. Geographical Data

Acreage of Property **LESS THAN ONE ACRE**
UTM References (Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing		Zone	Easting	Northing
1	**55**	**271.540**	**1506.920**	3	__	_____	_____
2	__	_____	_____	4	__	_____	_____

___ See continuation sheet.

Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.)

Boundary Justification (Explain why the boundaries were selected on a continuation sheet.)

==========

11. Form Prepared By

==========

name/title **Darlene Moore,archaeologist**

organization **Micronesian Archaeological Res. Srvcs.** date **8/30/08**

street & number **P.O. Box 22303** telephone **(671)734-1129**

city or town **Barrigada** state **GU** zip code **96921**

==========

Additional Documentation

==========

Submit the following items with the completed form:

Continuation Sheets

Maps

A USGS map (7.5 or 15 minute series) indicating the property's location.

A sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items (Check with the SHPO or FPO for any additional items)

==========

Property Owner

==========

(Complete this item at the request of the SHPO or FPO.)

name _____

street & number _____ telephone _____

city or town _____ state _____ zip code _____

==========

7. Narrative Description (historic and current condition of the property).

The Jinapsan *hotnu* is located on the sand flat and within the boundaries of the Jinapsan Site (66-08-0014). The Jinapsan site was placed on the Guam Inventory

NPS Form 10-900-a
(8-86)

OMB No. 1024-0018
(Expiration 1-31-2009)

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section 7 Page 3

JINAPSAN *HOTNO*
name of property
YIGO, GUAM
county and State
GUAM'S *HOTNO*
name of multiple property listing

7. Narrative Description (Continued).

July 1974 and on the National Register of Historic Places December 1974. Now it is proposed to include the oven in the Multiple Property Listing of Guam's *HOTNO.* The oven is situated about 115 m inland of the high tide line in the Santiago de Castro Estate located at Jinapsan on Guam's northern coast. The oven stands alone. Nearby vegetation includes coconut palms (*Cocus nucifera*), lada (*Morinda citrifolia*), grasses, ferns, vines and weeds.

The date of the oven's construction is not known for certain. A photo of the oven, estimated to date from 1918-1930, recently appeared on e-Bay (Steffy pers. comm. 2008), and the photo suggests that the oven is at least that old. It is likely that it was built between 1875 and 1900. According to Juan Duenas Castro, born in 1929, the oven was there when his grandfather was alive. The oven was built for the extended family's use. Since there are many breadfruit trees in the Jinapsan area, the oven was used to prepare *essok* (dried breadfruit), bake bread, and roast wild pigs.

The squarish oven base, constructed of coral rocks from the beach and lime mortar, measured about 2.15 m on a side and .71 m tall. Its upper surface was paved with red clay bricks. The oven's round and tapered vault was built in the center of the solid base, leaving a narrow platform on all sides. The vault walls and roof were built of red clay tiles and mortar, and they measure about .20 m thick. The top of the vault is about 1.42 m above the base. The vault's maximum exterior diameter is 1.35 m. There are two openings, the main door and the vent in the back wall. The main door was about .60 m tall and .60 m wide, but the top has broken forming an opening that is now .90 m tall. The square back vent is .07 m on a side. This oven has an east/west orientation with the main opening facing to the east. During a baking event, a wooden door made from *ifit* (*Intsia bijuga*), was propped against the opening.

This oven is an interpretation of a form that was introduced to Guam by the Spanish during the Spanish Colonial Period (A.D. 1668-1898). The oven style retains the same basic shape, and similar construction materials were used. As one of the oldest known oven structures on Guam, it retains its character and integrity.

NPS Form 10-900-a
(8-86)

OMB No. 1024-0018
(Expiration 1-31-2009)

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section **8** Page **4**
Section **9** Page **5**

JINAPSAN *HOTNO*
name of property
YIGO, GUAM
county and State
GUAM'S *HOTNO*
name of multiple property listing

8. Statement of Significance

The Jinapsan *hotno* is significant under National Register Criteria C and D. Criterion C states that properties may be eligible for the National Register if they embody the distinctive characteristics of a type, period, or method of construction. This oven exhibits the traits of design and methods of construction used to build ovens on Guam in the late 1800s and early 1900s.

Criterion D states that a property must have yielded or must have the potential to yield important information about some aspect of history. It is likely that if the oven were studied in more detail, additional information would be gained about specific techniques employed in its construction. Archaeological excavation in the sand deposit near the oven would likely provide additional information about the oven's construction, its use over time, and what kinds of foods were handled in the associated kitchen.

9. Major Bibliographical References

Barratt, Glynn (Translator and Editor). 2003. An Account of the Corvette L'Uranie's Sojourn at the Mariana Islands, 1819 by Louis Claude de Freycinet. Occasional Historical Papers No. 13, CNMI Division of Historic Preservation.

Driver, M.G. 2005. The Spanish Governors of the Mariana Islands. Micronesian Area Research Center, University of Guam.

Safford, W.E. 1910. A Year on the Island of Guam. Library of Congress, Washington D.C.

Safford, W.E. 1905. Useful Plants of Guam. Government Printing Office, Washington, D.C.

Steffy, R. S. 2008. Interview with Juan Duenas Castro, 02/04/2008.

Topping, D.M., P.M. Ogo, and B.C. Dungca. 1975. Chamorro-English Dictionary. University of Hawaii Press, Honolulu.

NPS Form 10-900-a
(8-86)

OMB No. 1024-0018
(Expiration 1-31-2009)

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section **9** Page **5**
Section **10** Page **5**

JINAPSAN *HOTNO*
name of property
YIGO, GUAM
county and State
GUAM'S *HOTNO*
name of multiple property listing

9. Major Bibliographical References (Continued)

Thompson, L. 1947. Guam and Its People. Greenwood Press, New York.

10. Geographical Data

Verbal Boundary Description: The boundary for the oven is the structure and its immediate surroundings, which includes an area that measures about 5 m square.

Boundary Justification: The boundary includes just the area that supports the oven structure.

Property owner off island.

Jinapsan Outdoor Oven
Jinapsan Hotno 66-08-1192

NPS Form 10-900
(Rev. Aug. 2002)

OMB No. 1024-0018
(Expires 1-31-2009)

United States Department of the Interior
National Park Service

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NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

==========

1. Name of Property

==========

historic name **FLORES OUTDOOR OVEN**

other names/site number **FLORES *HOTNO*** **66-01-2273**

==========

2. Location

==========

street & number **Matcella Drive** not for publication ____
city or town **Agana Heights** vicinity ___
state **GUAM** code ____ county _____ code ____
zip code **96910**

==========

3. State/Federal Agency Certification

==========

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria. I recommend that this property be considered significant ___ nationally ___ statewide ___ locally. (See continuation sheet for additional comments.)

_____ _____
Signature of certifying official Date

_____
State or Federal Agency or Tribal government

In my opinion, the property ____ meets ____ does not meet the National Register criteria. (___ See continuation sheet for additional comments.)

_____
Signature of commenting official/Title Date

_____
State or Federal agency and bureau

==========

4. National Park Service Certification

==========

I, hereby certify that this property is:

____ entered in the National Register _____ _____
___ See continuation sheet.
____ determined eligible for the _____ _____
National Register
___ See continuation sheet.
____ determined not eligible for the _____ _____
National Register
____ removed from the National Register _____ _____

____ other (explain): _____

_____ _____ _____
Signature of Keeper Date of Action

==========

5. Classification

==========

Ownership of Property (Check as many boxes as apply)

xx private
___ public-local
___ public-State
___ public-Federal

Category of Property (Check only one box)

___ building(s)
___ district
___ site
xx structure
___ object

Number of Resources within Property

Contributing	Noncontributing	
_____	_____	buildings
_____	_____	sites
1	_____	structures
_____	_____	objects
1	_____	Total

Number of contributing resources previously listed in the National Register **0**

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

GUAM'S *HOTNO*

6. Function or Use

Historic Functions (Enter categories from instructions)

Cat:	Sub:
DOMESTIC	**secondary structure for roasting and baking**
AGRICULTURE/SUBSISTENCE	**processing in oven**

Current Functions (Enter categories from instructions)

Cat:	Sub:
LANDSCAPE	**YARD**
VACANT/NOT IN USE	

7. Description

Architectural Classification (Enter categories from instructions)

OTHER - OUTDOOR OVEN

Materials (Enter categories from instructions)

foundation **STONE, BRICKS, CONCRETE**
roof **TERRA COTTA BRICKS AND MORTAR**
walls **BRICKS AND MORTAR**
other

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

____ A Property is associated with events that have made a significant contribution to the broad patterns of our history.

____ B Property is associated with the lives of persons significant in our past.

XX C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

XX D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations (Mark "X" in all the boxes that apply.)

____ A owned by a religious institution or used for religious purposes.

____ B removed from its original location.

____ C a birthplace or a grave.

____ D a cemetery.

____ E a reconstructed building, object, or structure.

____ F a commemorative property.

____ G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance (Enter categories from instructions)

ETHNIC HERITAGE

HISTORIC TECHNOLOGY

Period of Significance **SPANISH PERIOD**
FIRST AMERICAN PERIOD
POST WWII PERIOD

Significant Dates **A.D. 1668-1898**
A.D. 1898-1941
1944-1980

Significant Person (Complete if Criterion B is marked above)

_____

Cultural Affiliation **PACIFIC ISLANDER/CHAMORRO**

_____

_____

Architect/Builder **N/A**

_____

Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS)
___ preliminary determination of individual listing (36 CFR 67) has been requested.
___ previously listed in the National Register
___ previously determined eligible by the National Register
___ designated a National Historic Landmark
___ recorded by Historic American Buildings Survey # _____
___ recorded by Historic American Engineering Record # _____

Primary Location of Additional Data
XX State Historic Preservation Office
___ Other State agency
___ Federal agency
___ Local government
___ University
___ Other
Name of repository: _____

10. Geographical Data

Acreage of Property **LESS THAN ONE ACRE**

UTM References (Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing		Zone	Easting	Northing
1	**55**	**256140**	**1489560**	3	__	_____	_____
2	__	_____	_____	4	__	_____	_____

___ See continuation sheet.

Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.)

Boundary Justification (Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title **Darlene Moore, archaeologist**

organization **Micronesian Archaeological Res. Srvcs.** date **8/30/08**

street & number **P.O. Box 22303** telephone **(671) 734-1129**

city or town **Barrigada** state **GU** zip code **96921**

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A USGS map (7.5 or 15 minute series) indicating the property's location.

A sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items (Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of the SHPO or FPO.)

name **EDDIE FLORES**

street & number _____ telephone _____

city or town **ALBUQUERQUE** state **NM** zip code **87106**

7. Narrative Description (historic and current condition of the property).

The Flores Oven is located in Agana Heights, on Matcella Dr., just south of its intersection with Chalan Makahana. The oven is six meters east of Matcella Dr. According to the Agana Heights Mayor, Paul McDonald, the oven is owned by Eddie

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NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section **7** Page **3**
Section **8** Page **4**

FLORES *HOTNO*
name of property
AGANA HEIGHTS, GUAM
county and State
GUAM'S *HOTNO*
name of multiple property listing

7. Narrative Description (Continued).

Flores, who now lives in Albuquerque, New Mexico. Family relatives are currently living in his house and in the house next door. According to an inscription on the oven, Ben Flores built it for Mrs. Tenorio in March 1946. The Flores *Hotno* is a modern interpretation of an oven form that was introduced to Guam by the Spanish during the Spanish Colonial Period (A.D. 1668-1898). Although the construction materials used to build the ovens changed over time, the oven style retained the same basic shape.

The barrel-shaped oven has an east/west orientation, and its main opening faces to the west. The base measures 2.20 m long, 1.70 m wide, and 2.40 m tall. The .60 m high base is built of bricks, tiles, limestone rocks, and cement. The walls and roof of the vault are built of tan, heat resistant bricks and red clay bricks that are covered on the exterior with a coat of cement or lime plaster. On the inside of the vault eight alternating courses of bricks and mortar are visible. Some of the bricks are laid on their narrow side rather than in the usual flat position. Some of the heat resistant bricks are stamped with the words WELLSVILLE and SAVAGE. Red clay bricks were used in the upper wall/roof construction. About .90 m above the vault floor, the .25 m thick walls taper toward the domed top.

The main opening is .65 m high by .55 m wide. The vent in the back wall is located about 1.60 m above ground surface, and it has a diameter of .08 m. An "L"shaped platform extends out from the base in front of the main opening. The long leg is .88 m long by .48 m wide, and it is .63 m high. The right side of the extension is broken, but it had a trough to catch the ashes.

The oven is in fairly good condition, it retains its character and integrity.

8. Statement of Significance

The Flores *hotno* is significant under National Register Criteria C and D. Criterion C states that properties may be eligible for the National Register if they embody the distinctive characteristics of a type, period, or method of construction. This oven exhibits traits of design and methods of construction

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NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section **8** Page **3**
Section **9** Page **5**
Section **10** Page **6**

FLORES *HOTNO*
name of property
AGANA HEIGHTS, GUAM
county and State
GUAM'S *HOTNO*
name of multiple property listing

8. Statement of Significance (Continued)

that are similar to other ovens in this group.

Criterion D states that a property must have yielded or must have the potential to yield important information about some aspect of history. It is likely that more detailed study of the oven would yield additional information about the specific techniques employed in its construction. Excavations in the soil around the oven would likely provide additional information about the oven's use over time and what kinds of foods and dishware were associated with its use.

9. Major Bibliographical References

Barratt, Glynn (Translator and Editor). 2003. An Account of the Corvette L'Uranie's Sojourn at the Mariana Islands, 1819 by Louis Claude de Freycinet. Occasional Historical Papers No. 13, CNMI Division of Historic Preservation.

Driver, M.G. 2005. The Spanish Governors of the Mariana Islands. Micronesian Area Research Center, University of Guam.

Safford, W.E. 1910. A Year on the Island of Guam. Library of Congress, Washington D.C.

Safford, W.E. 1905. Useful Plants of Guam. Government Printing Office, Washington, D.C.

Topping, D.M., P.M. Ogo, and B.C. Dungca. 1975. Chamorro-English Dictionary. University of Hawaii Press, Honolulu.

Thompson, L. 1947. Guam and Its People. Greenwood Press, New York.

10. Geographical Data
Verbal Boundary Description: The boundary for the oven is the structure and its immediate surroundings, which includes an area that measures about 5 m square.

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(8-86)

OMB No. 1024-0018
(Expiration 1-31-2009)

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National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

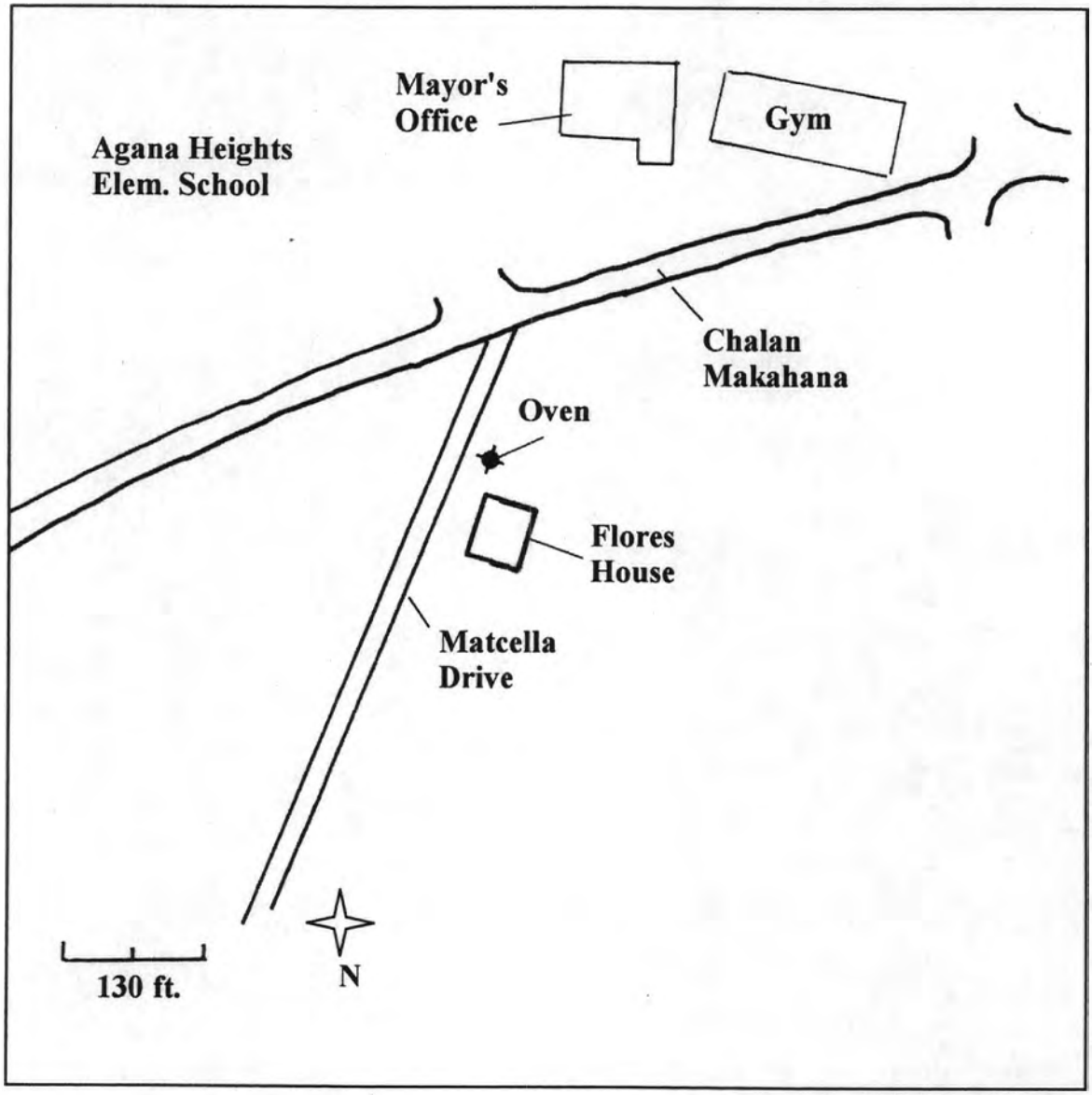
Section **10** Page **6**

FLORES *HOTNO*
name of property
AGANA HEIGHTS, GUAM
county and State
GUAM'S *HOTNO*
name of multiple property listing

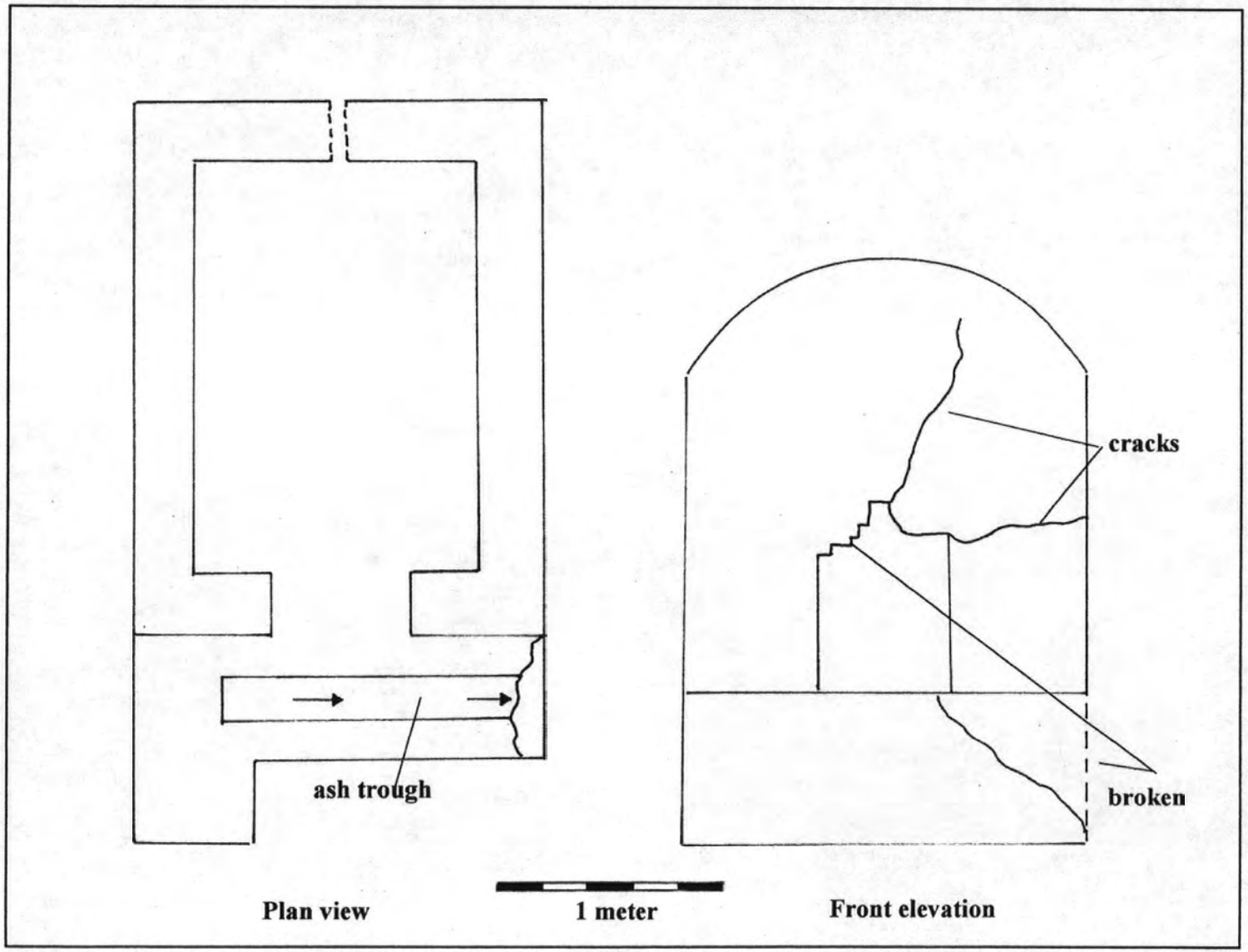
10. Geographical Data (Continued)

Boundary Justification: The boundary includes just the area that supports the oven structure.

Sketch map:



Sketch map showing the location of the Flores *Hotnu* in Agana Heights, Guam.



Drawings of the Flores *Hotnu* showing the plan and front elevation.

Photos:

Photo 1

3. Name of Photographer: Darlene Moore
4. Date of Photograph: March 5, 2008
5. Location of original negative: Micronesian Archaeological Research Services, Guam
6. Description of view: Camera facing east, showing the front of the oven with its intact landing to the left of the opening.

Photo 2

3. Name of Photographer: Darlene Moore
4. Date of Photograph: March 5, 2008
5. Location of original negative: Micronesian Archaeological Research Services, Guam
6. Description of view: Close-up of the writing on the surface of the landing showing the date, 1946.

Photo 3

3. Name of Photographer: Darlene Moore
4. Date of Photograph: March 5, 2008
5. Location of original negative: Micronesian Archaeological Research Services, Guam
6. Description of view: Close-up of the opening showing the bricks making up the vault wall

Photo 4

3. Name of Photographer: Darlene Moore
4. Date of Photograph: March 5, 2008
5. Location of original negative: Micronesian Archaeological Research Services, Guam
6. Description of view: Camera facing west showing the back of the oven.

FLORES OVEN ZONE 55
E 256.140
N 1489.560

WON PAT OVEN ZONE 55
E 257.200
N 1489.360

Property owner off island.

Flores Outdoor Oven
Flores Hotno 66-01-2273

966

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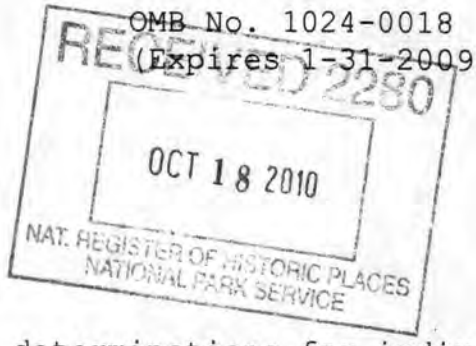

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name **CRUZ OUTDOOR OVEN**

other names/site number **CRUZ *HOTNO*** **66-04-2272**

2. Location

street & number **ROUTE 16** not for publication ___
city or town **BARRIGADA** vicinity ___
state **GUAM** code ___ county _____ code ___
zip code **96921**

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ___ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ___ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant ___ nationally ___ statewide ___ locally. (___See continuation sheet for additional comments.)

_____ _____
Signature of certifying official Date

_____
State or Federal Agency or Tribal government

In my opinion, the property ____ meets ____ does not meet the National Register criteria. (___ See continuation sheet for additional comments.)

_____
Signature of commenting official/Title Date

_____
State or Federal agency and bureau

==========

4. National Park Service Certification

==========

I, hereby certify that this property is:

____ entered in the National Register _____ _____
___ See continuation sheet.

____ determined eligible for the _____ _____
National Register
___ See continuation sheet.

____ determined not eligible for the _____ _____
National Register

____ removed from the National Register _____ _____

____ other (explain): _____

_____ _____ _____
Signature of Keeper Date of Action

==========

5. Classification

==========

Ownership of Property (Check as many boxes as apply)

XX private
___ public-local
___ public-State
___ public-Federal

Category of Property (Check only one box)

___ building(s)
___ district
___ site
XX structure
___ object

Number of Resources within Property

Contributing	Noncontributing	
_____	_____	buildings
_____	_____	sites
1	_____	structures
_____	_____	objects

1 ____ Total

Number of contributing resources previously listed in the National Register **0**
Name of related multiple property listing (Enter "N/A" if property is not part of a multiple property listing.)

GUAM'S *HOTNO*

6. Function or Use

Historic Functions (Enter categories from instructions)

Cat:	Sub:
DOMESTIC	**Secondary structure for roasting and baking**
AGRICULTURE/SUBSISTENCE	**processing in oven**

Current Functions (Enter categories from instructions)

Cat:	Sub:
LANDSCAPE	**YARD**
VACANT/NOT IN USE	

7. Description

Architectural Classification (Enter categories from instructions)

OTHER - OUTDOOR OVEN

Materials (Enter categories from instructions)

foundation **CONCRETE BLOCKS**
roof **TERRA COTTA BRICKS AND MORTAR**
walls **BRICKS AND MORTAR**
other

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

____ A Property is associated with events that have made a significant contribution to the broad patterns of our history.

____ B Property is associated with the lives of persons significant in our past.

XX C Property embodies the distinctive characteristics of a type, Period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

XX D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations (Mark "X" in all the boxes that apply.)

____ A owned by a religious institution or used for religious purposes.

____ B removed from its original location.

____ C a birthplace or a grave.

____ D a cemetery.

____ E a reconstructed building, object, or structure.

____ F a commemorative property.

____ G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance (Enter categories from instructions)

ETHNIC HERITAGE

HISTORIC TECHNOLOGY

Period of Significance **SPANISH COLONIAL PERIOD**
FIRST AMERICAN PERIOD
POST WWII PERIOD

Significant Dates **A.D. 1668-1898**
A.D. 1898-1941
1944-1980

Significant Person (Complete if Criterion B is marked above)

_____

Cultural Affiliation **PACIFIC ISLANDER/CHAMORRO**

_____

_____

Architect/Builder **N/A**

_____

Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS)
___ preliminary determination of individual listing (36 CFR 67) has been requested.
___ previously listed in the National Register
___ previously determined eligible by the National Register
___ designated a National Historic Landmark
___ recorded by Historic American Buildings Survey # _____
___ recorded by Historic American Engineering Record # _____

Primary Location of Additional Data
XX State Historic Preservation Office
___ Other State agency
___ Federal agency
___ Local government
___ University
___ Other
Name of repository: _____

10. Geographical Data

Acreage of Property **LESS THAN ONE ACRE**

UTM References (Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing		Zone	Easting	Northing
1	**55**	**262580**	**1490590**	3	__	_____	_____
2	__	_____	_____	4	__	_____	_____

___ See continuation sheet.

Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.)

Boundary Justification (Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title **Darlene Moore, archaeologist**

organization **Micronesian Archaeological Res. Srvcs.** date **8/30/08**

street & number **P.O. Box 22303** telephone **(671) 734-1129**

city or town **Barrigada** state **GU** zip code **96921**

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A USGS map (7.5 or 15 minute series) indicating the property's location.

A sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items (Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of the SHPO or FPO.)

name **Dolores Concepcion Cruz**

street & number **Route 16** telephone

city or town **Barrigada** state **GU** zip code **96921**

---

7. Narrative Description (historic and current condition of the property).

Originally this oven was owned by Maria Cruz Mafnas on another piece of property near the present Army National Guard complex. When the U.S. military took over the family property after WWII, she saved the materials from the first oven and had it rebuilt in its present location. As one travels north on Route 16, the oven is located about 20 m east of the yellow bus stop situated

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NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section 7 Page 3

CRUZ *HOTNO*
name of property
BARRIGADA, GUAM
county and State
GUAM'S *HOTNO*
name of multiple property listing

7. Narrative Description (Continued).

on the right side of Route 16 just south of the Army National Guard complex. It is located in the family's yard and is surrounded by ornamental plants. Breadfruit, betelnut, and mango trees grow nearby. Mr. Jose Fejeran of Piti built the present oven, which was repaired in the 1960s by Maria's husband and their daughter Mary Lou. The oven was last used in the 1990s.

The Cruz *hotno* is a modern interpretation of an oven form that was introduced to Guam by the Spanish during the Spanish Colonial Period (A.D. 1668-1898). Although the construction materials used to build the ovens changed over time, the oven style retained its same basic shape.

The oven base measures 2.10 m long, 1.62 m wide, and .60 m tall. It is built of concrete blocks. The elongated vault measures 2.10 m long, 1.60 m wide, and 1.60 m tall. The vault walls begin to taper toward the flat top about .60 m above the vault floor. The flattened top measures about 1.06 m long by .75 m wide. The exterior surface is smoothly finished. The vault's walls are .25 m thick and built of heat resistant bricks and thinner red clay bricks. Inside the vault nine alternating courses of bricks and mortar are visible. Above these are five courses of thinner red clay bricks and mortar.

The main opening measures about .50 m on a side and its inner edges are reinforced with pieces of angle iron that measure about .10 m wide. The diameter of the back vent is .08 m. The vent is about 1.10 m above ground surface, at the point where the vault begins to narrow.

The base extends out in front of the main opening for .60 m and it is .64 m tall. Within this extended platform there is a hollow space in front of the opening. The space measures. 50 m long and .18 m wide.

Mary Lou Cruz Valencia, daughter of Rita Cruz Mafnas, said her mother was a *panadera* (Chamorro for baker) and she did a lot of baking in the present oven, for the family as well as others. People often ordered cookies and special cakes. The *pan rosa* (bread)that she made was sold at the Happy Mart store in Barrigada. In addition to the baking, her mother and father(both deceased now)

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CONTINUATION SHEET

Section 7 Page 3
Section 8 Page 4
Section 9 Page 5

CRUZ *HOTNO*
name of property
BARRIGADA, GUAM
county and State
GUAM'S *HOTNO*
name of multiple property listing

7. Narrative Description (Continued).

were well known for their delicious roasted pigs.

Mary Lou said that wood from shipping pallets was sometimes burned to heat the chamber. When the oven was hot enough, the ashes were swept out and saved to use as fertilizer. Sometimes a few coals were left inside to maintain the temperature.

When the oven needed to be repaired in the 1960s, Mary Lou helper her father gather the materials. At that time, they purchased some heat resistant bricks and these were incorporated into the oven.

This oven retains its character and its sense of place.

8. Statement of Significance

The Cruz *HOTNO* is significant under National Register Criteria C and D. Criterion C states that properties may be eligible for the National register if they embody the distinctive characteristics of a type, period, or method of construction. This oven exhibits traits of design and methods of construction that are similar to the other ovens of this type.

Criterion D states that a property must have yielded or must have the potential to yield important information about some aspect of history. It is likely that if the oven were studied in more detail, additional information would be gained about specific techniques employed in its construction and use.

9. Major Bibliographical References

Barratt, Glynn (Translator and Editor). 2003. An Account of the Corvette L'Uranie's Sojourn at the Mariana Islands, 1819 by Louis Claude de Freycinet. Occasional Historical Papers No. 13, CNMI Division of Historic Preservation.

Driver, M.G. 2005. The Spanish Governors of the Mariana Islands. Micronesian Area Research Center, University of Guam.

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NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section **9** Page **5**

Section **10** Page **6**

CRUZ *HOTNO*
name of property
BARRIGADA, GUAM
county and State
GUAM'S *HOTNO*
name of multiple property listing

9. Major Bibliographical References (Continued)

Safford, W.E. 1910. A Year on the Island of Guam. Library of Congress, Washington D.C.

Safford, W.E. 1905. Useful Plants of Guam. Government Printing Office, Washington, D.C.

Topping, D.M., P.M. Ogo, and B.C. Dungca. 1975. Chamorro-English Dictionary. University of Hawaii Press, Honolulu.

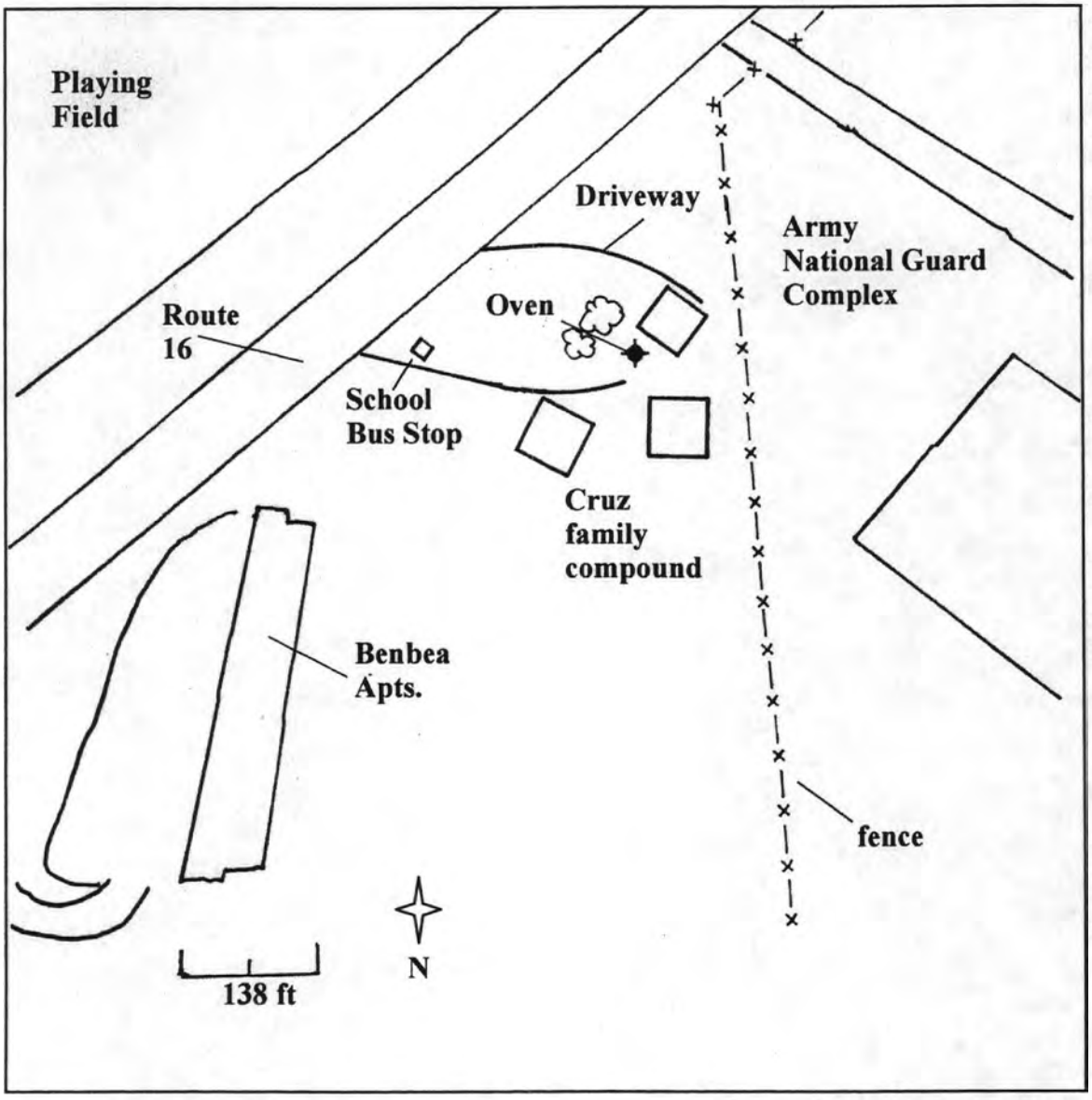
Thompson, L. 1947. Guam and Its People. Greenwood Press, New York.

10. Geographical Data

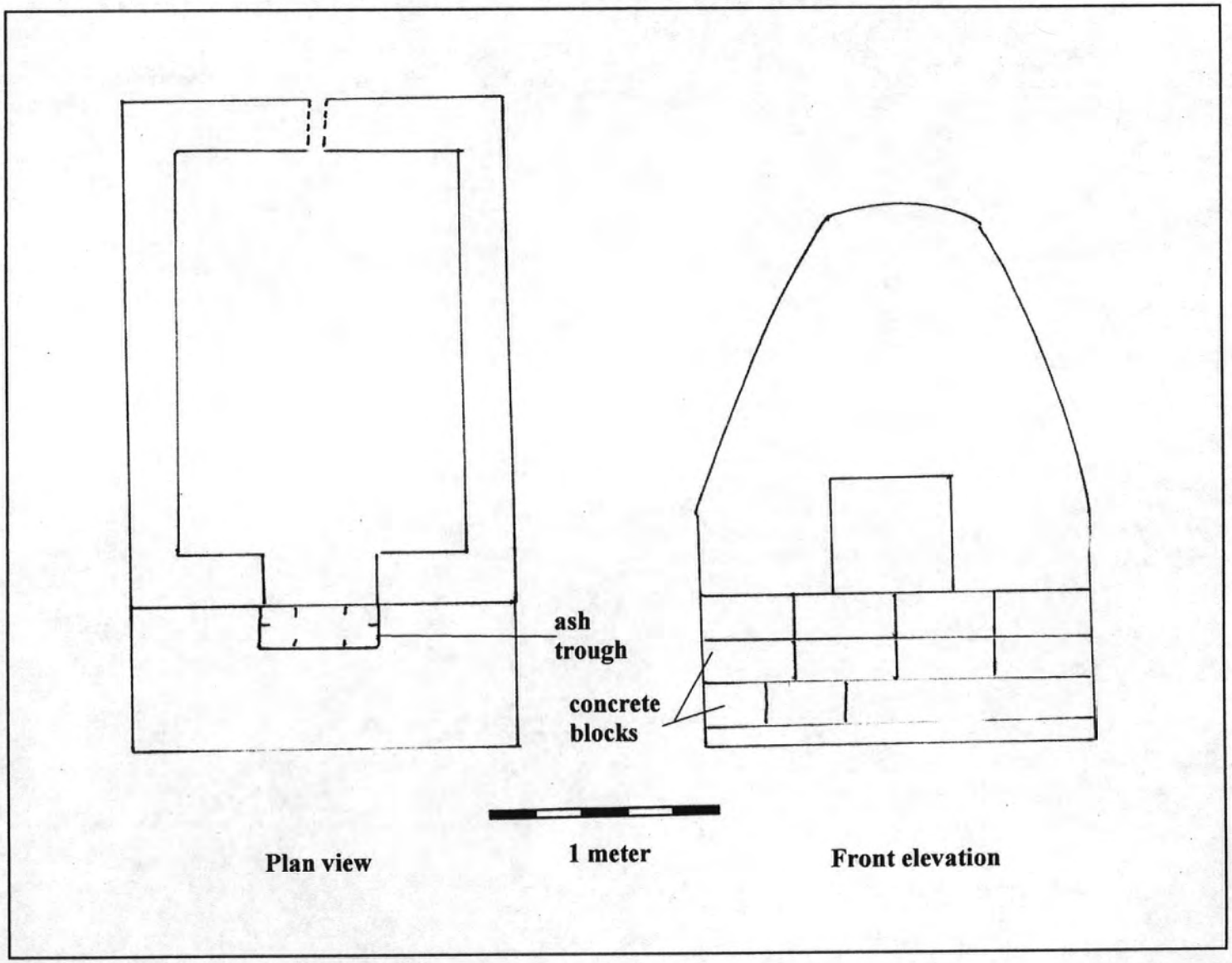
Verbal Boundary Description: The boundary for the oven is the structure and its immediate surroundings, which includes an area that measures about 5 m square.

Boundary Justification: The boundary includes just the area that supports the oven structure.

Sketch map:



Sketch map showing the location of the Cruz *Hotnu* in Barrigada, Guam.



Drawings of the Cruz *Hotnu* showing the plan and front elevation

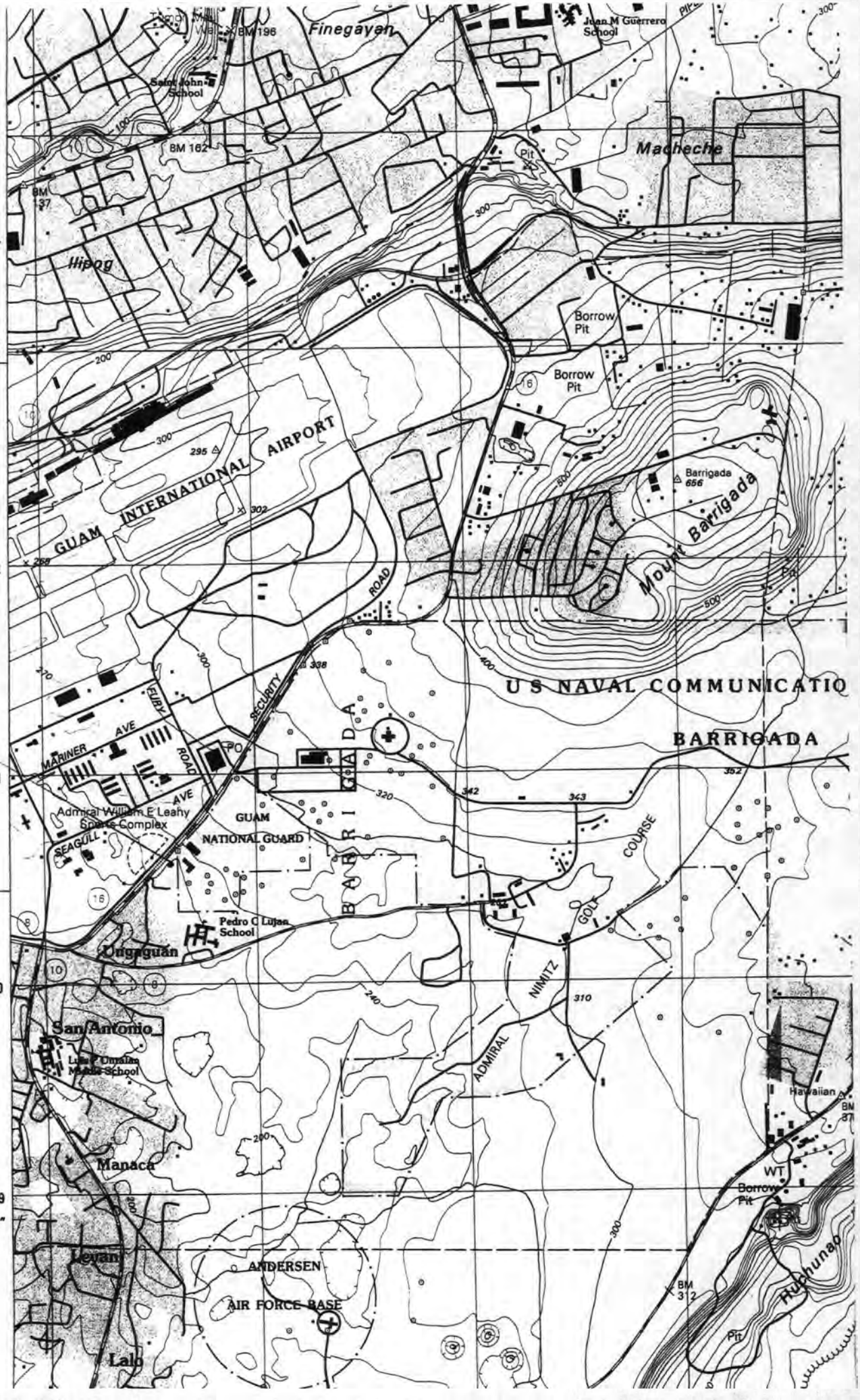
Photos

Photo 1

3. Name of Photographer: Darlene Moore
4. Date of Photograph: March 5, 2008
5. Location of original negative: Micronesian Archaeological Research Services, Guam
6. Description of view: Camera facing south, showing the front of the oven. The photo rod is one meter long. Note the concrete blocks in the base.

Photo 2

3. Name of Photographer: Darlene Moore
4. Date of Photograph: March 5, 2008
5. Location of original negative: Micronesian Archaeological Research Services, Guam
6. Description of view: Camera facing east, showing the side of the oven.



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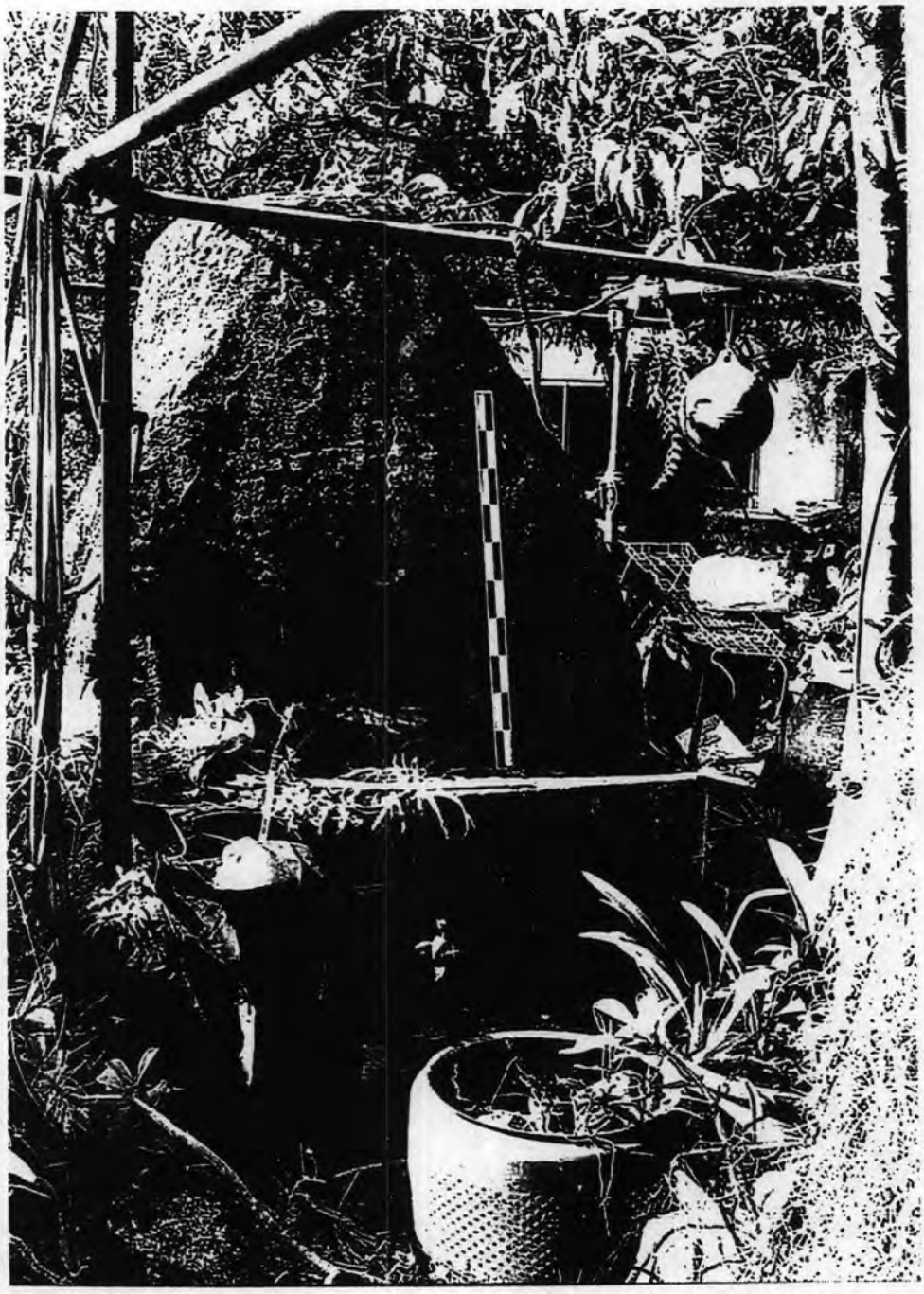
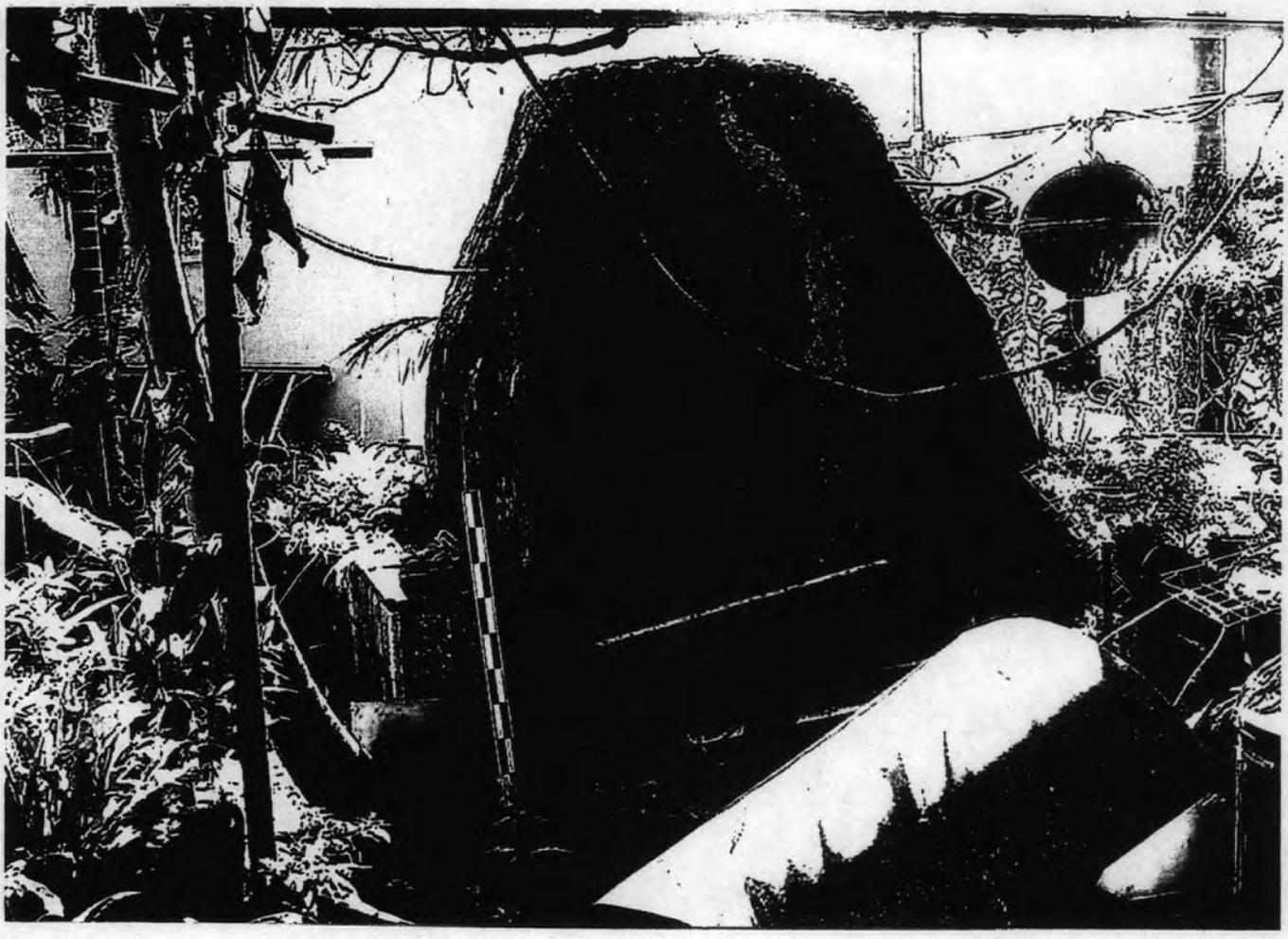
N 1490,590





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(Rev. Aug. 2002)

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United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name **CHACO OUTDOOR OVEN**

other names/site number **CHACO *HOTNO*** **66-02-2139**

2. Location

street & number **Chalan Josen Milagro St.** not for publication ____
city or town **Agat** vicinity **AGAT**
state **GUAM** code ____ county _____ code ____
zip code **96915**

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria. I recommend that this property be considered significant ___ nationally ___ statewide ___ locally. (___See continuation sheet for additional comments.)

_____ _____
Signature of certifying official Date

_____
State or Federal Agency or Tribal government

In my opinion, the property ____ meets ____ does not meet the National Register criteria. (___ See continuation sheet for additional comments.)

_____

Signature of commenting official/Title Date

_____

State or Federal agency and bureau

==========

4. National Park Service Certification

==========

I, hereby certify that this property is:

____ entered in the National Register _____ _____
___ See continuation sheet.

____ determined eligible for the National Register _____ _____
___ See continuation sheet.

____ determined not eligible for the National Register _____ _____

____ removed from the National Register _____ _____

____ other (explain): _____

_____ _____ _____
Signature of Keeper Date of Action

==========

5. Classification

==========

Ownership of Property (Check as many boxes as apply)

__**XX** private
___ public-local
___ public-State
___ public-Federal

Category of Property (Check only one box)

___ building(s)
___ district
___ site
__**XX** structure
___ object

Number of Resources within Property

Contributing	Noncontributing	
____	____	buildings
____	____	sites
__**1**__	____	structures

	1	objects
1	**1**	Total

Number of contributing resources previously listed in the National Register **0**

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

GUAM'S *HOTNO*

6. Function or Use

Historic Functions (Enter categories from instructions)

Cat:	Sub:
DOMESTIC	**secondary structure for roasting and baking**
AGRICULTURE/SUBSISTENCE	**processing in oven**

Current Functions (Enter categories from instructions)

Cat:	Sub:
Landscape	**yard**
VACANT/NOT IN USE	

7. Description

Architectural Classification (Enter categories from instructions)

OTHER - OUTDOOR OVEN

Materials (Enter categories from instructions)

foundation **LIMESTONE BLOCKS AND MORTAR**
roof **TERRA COTTA TILES AND MORTAR**
walls **BRICKS AND MORTAR**
other

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

____ A Property is associated with events that have made a significant contribution to the broad patterns of our history.

____ B Property is associated with the lives of persons significant in our past.

XX C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

XX D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations (Mark "X" in all the boxes that apply.)

____ A owned by a religious institution or used for religious purposes.

____ B removed from its original location.

____ C a birthplace or a grave.

____ D a cemetery.

____ E a reconstructed building, object, or structure.

____ F a commemorative property.

____ G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance (Enter categories from instructions)

ETHNIC HERITAGE

HISTORIC TECHNOLOGY

Period of Significance **SPANISH PERIOD**
FIRST AMERICAN PERIOD
POST WWII PERIOD

Significant Dates **A.D. 1668-1898**
A.D. 1898-1941
1944-1980

Significant Person (Complete if Criterion B is marked above)

Cultural Affiliation **PACIFIC ISLANDER/CHAMORRO**

Architect/Builder **N/A**

Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS)
___ preliminary determination of individual listing (36 CFR 67) has been requested.
___ previously listed in the National Register
___ previously determined eligible by the National Register
___ designated a National Historic Landmark
___ recorded by Historic American Buildings Survey # _____
___ recorded by Historic American Engineering Record # _____

Primary Location of Additional Data
XX State Historic Preservation Office
___ Other State agency
___ Federal agency
___ Local government
___ University
___ Other
Name of repository: _____

10. Geographical Data

Acreage of Property **LESS THAN ONE ACRE**

UTM References (Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing		Zone	Easting	Northing
1	**55**	**245200**	**1477980**	3	__	_____	_____
2	__	_____	_____	4	__	_____	_____

Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.)

Boundary Justification (Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title **Darlene Moore, archaeologist**

organization **Micronesian Archaeological Res. Srvcs.** date **8/30/08**

street & number **P.O. Box 22303** telephone **(671) 734-1129**

city or town **Barrigada** state **GU** zip code **96921**

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A USGS map (7.5 or 15 minute series) indicating the property's location.

A sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items (Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of the SHPO or FPO.)

name **Gil and Stella Sablan**

street & number **Chalan Josen Milagro St.** telephone **565-1801**

city or town **Agat** state **GU** zip code **96915**

7. Narrative Description (historic and current condition of the property).

To reach the Chaco *hotno* turn right from Route 2 on to Chalan Josen Milagro St. Follow the street to its end at the Gil and Stella Sablan house. The oven stands in the yard seaward (west)of the house. The oven is located about 20 m

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CONTINUATION SHEET

7. Narrative Description (Continued)

east of the high tide line in the family's well kept yard. Several concrete homes and other outbuildings belonging to various members of the family are located in the area, but the oven stands alone in the yard under some large mango trees. Nearby vegetation includes an avocado tree, coconut palms, betelnut, and a kapok(*Ceiba pentandra*)tree.

The oven was originally built in 1952 as part of the family's outdoor kitchen(*kusina* in Chamorro). At that time it was protected by a tin-roofed shelter. This oven was last used in the 1980s.

In addition to having an oven, many outdoor kitchens on Guam had a place to store fuel, a barbecue area, a hearth area for boiling or steaming foods such as rice and roots (yams and taro), a sink area for food preparation and clean-up, and a *metate* or stone mortar for grinding corn and other foods. There is a stone mortar on the property, it is situated in the open about 30 m east of the oven, near the end of the street.

The Chaco *hotno* is a modern interpretation of an oven form that was introduced to Guam by the Spanish during the Spanish Colonial Period (A.D. 1668-1898). Although the construction materials used to build the ovens changed over time, the oven style retained the same basic shape.

This oven has an east/west orientation with the main opening facing to the east (inland). The oven consists of two parts, a base and a vault. The base measures 1.50 m long by 1.50 m wide and it is .48 m tall. It appears to be built of limestone blocks that have been shaped and fitted together. The floor, walls, and roof of the oven vault are built of heat resistant bricks. A single brick measures about .24 m long, .12 m wide, and .095 m thick. Seven courses of bricks form the vault's vertical lower walls. Above that point, which is about.80 m above the vault floor, the walls begin to taper toward the rounded roof. The top of the vault is 2.0 m above ground surface.

The walls are about .13 m thick, and their exterior surfaces are plastered with cement, or a lime/sand mixture. In places the plaster is 1.5-2.0 cm thick.

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CONTINUATION SHEET

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Section 8 Page 4

CHACO *HOTNO*
name of property
AGAT, GUAM
county and State
GUAM'S *HOTNO*
name of multiple property listing

7. Narrative Description (Continued)

The main opening in the vault measures about .50 m square. A .50 m wide by .50 m tall extension of the base is located across the front of the oven. On the right side of this extension there is a .50 m wide platform, or landing. In front of the main opening there is a .30 m wide groove, or trough, that gradually slopes to the left until it reaches ground surface. The purpose of the trough was to catch the ashes when the oven was swept out. There is a vent in the vault's back wall. It is located .70 m above the vault floor and it has a diameter of .12 m.

The oven is in fairly good condition although several cracks have developed. It retains its character and integrity.

8. Statement of Significance

The Chaco *hotno* significant under National Register Criteria C and D. Criterion C states that properties may be eligible for the National Register if they embody the distinctive characteristics of a type, period, or method of construction. This oven exhibits traits of design and methods of construction that are similar to other ovens built and used on Guam since they were introduced during the Spanish Colonial Period.

Criterion D states that a property must have yielded or must have the potential to yield important information about some aspect of history. It is likely that if the oven were studied in more detail, additional information would be gained about specific techniques employed in its construction. Archaeological excavation in the sand deposit near the oven would likely provide additional information about the oven's construction, its use over time, and what kinds of foods and dishware were handled in the associated kitchen area at specific points in time.

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CONTINUATION SHEET

Section **9** Page **5**
Section **10** Page **6**

CHACO *HOTNO*
name of property
AGAT, GUAM
county and State
GUAM'S HOTNO
name of multiple property listing

9. Major Bibliographical References

Barratt, Glynn (Translator and Editor). 2003. An Account of the Corvette L'Uranie's Sojourn at the Mariana Islands, 1819 by Louis Claude de Freycinet. Occasional Historical Papers No. 13, CNMI Division of Historic Preservation.

Driver, M.G. 2005. The Spanish Governors of the Mariana Islands. Micronesian Area Research Center, University of Guam.

Safford, W.E. 1910. A Year on the Island of Guam. Library of Congress, Washington D.C.

Safford, W.E. 1905. Useful Plants of Guam. Government Printing Office, Washington, D.C.

Topping, D.M., P.M. Ogo, and B.C. Dungca. 1975. Chamorro-English Dictionary. University of Hawaii Press, Honolulu.

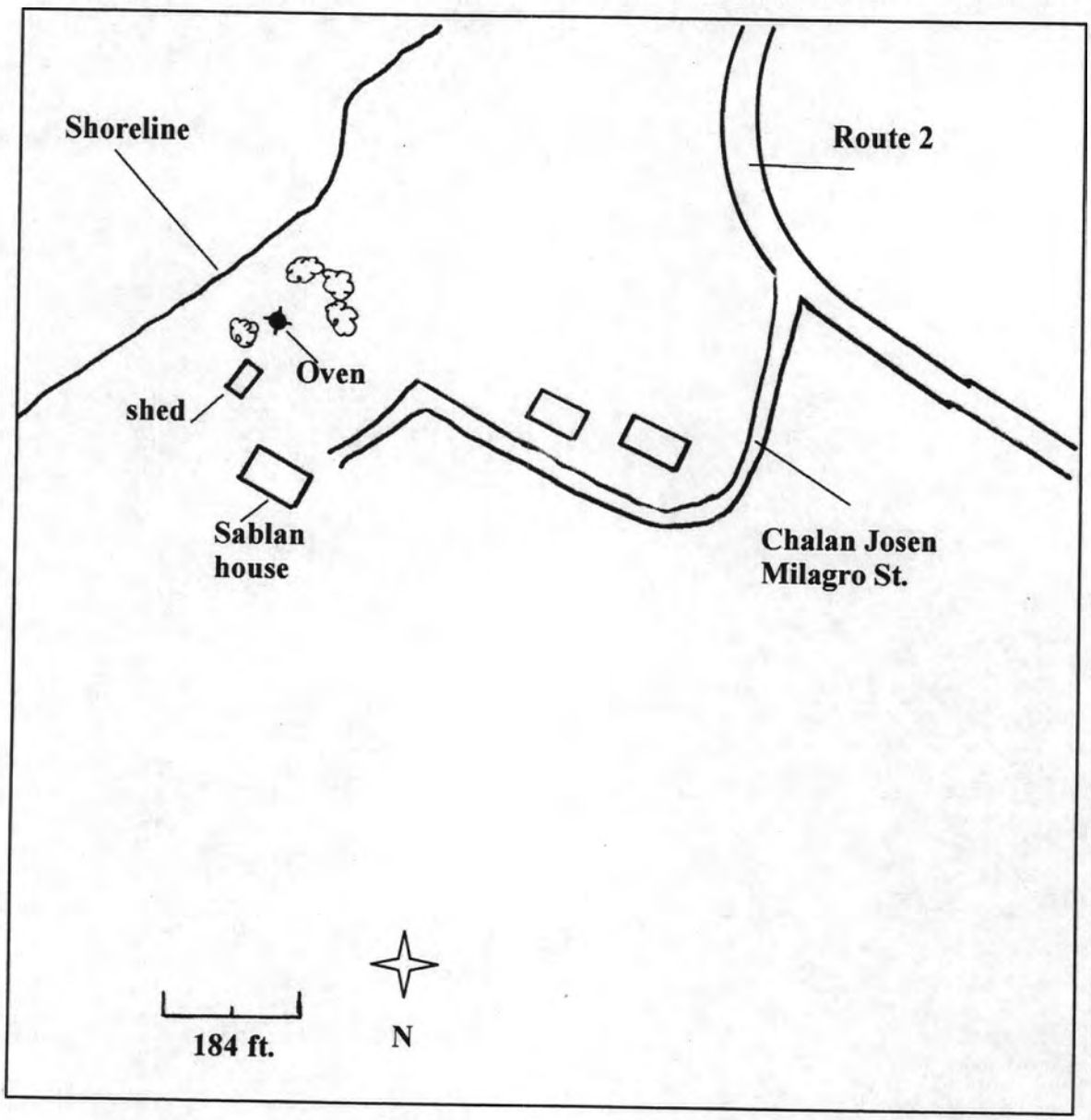
Thompson, L. 1947. Guam and Its People. Greenwood Press, New York.

10. Geographical Data

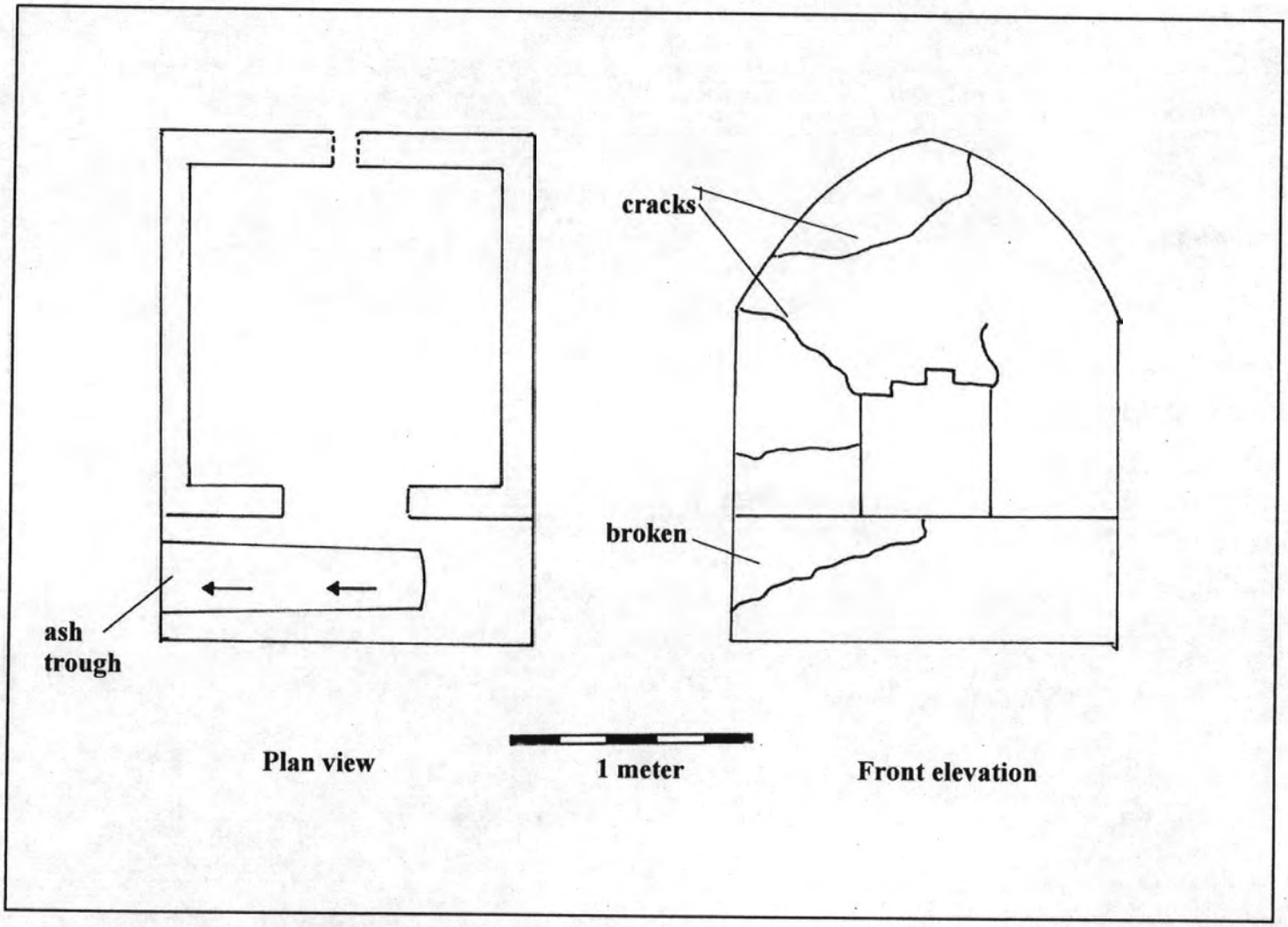
Verbal Boundary Description: The boundary for the oven is the structure and the land it sits on which includes an area that measures about 5 m square in the existing yard.

Boundary Justification: The boundary includes just the area that supports the oven structure.

Sketch map:



Sketch showing the location of the Chaco *Hotnu* in Agat, Guam.



Drawings of the Chaco *Hotnu* showing the plan and front elevation.

Photos:

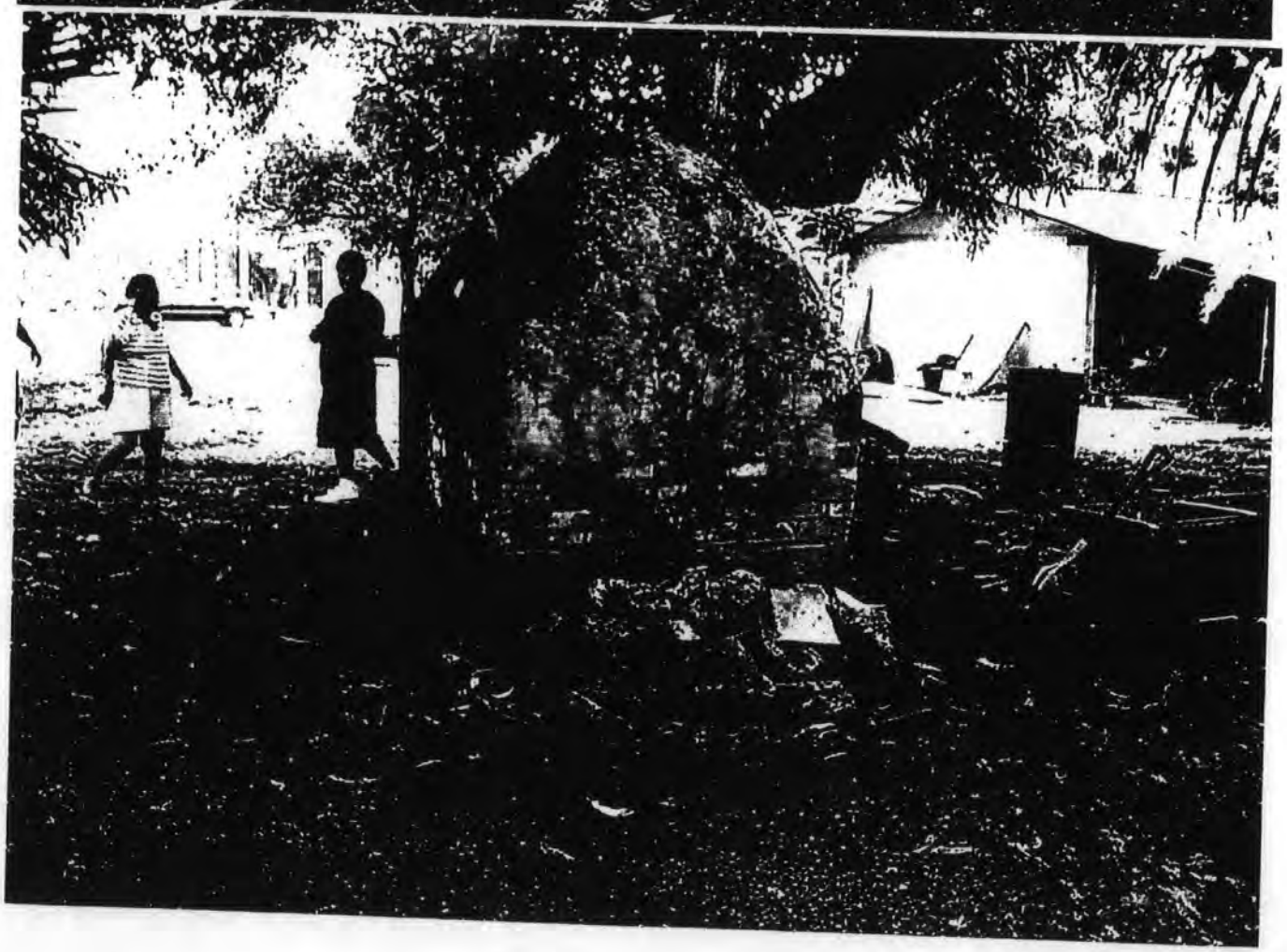
Photo 1

3. Name of Photographer: Darlene Moore
4. Date of Photograph: February 28, 2008
5. Location of original negative: Micronesian Archaeological Research Services, Guam
6. Description of view: Camera facing northwest, showing the front and left side of the oven with its ash trough and landing.

Photo 2

3. Name of Photographer: Darlene Moore
4. Date of Photograph: February 28, 2008
5. Location of original negative: Micronesian Archaeological Research Services, Guam
6. Description of view: Camera facing east, showing the back side of the oven.


War in the Pacific National Historical Park (Agat Unit)
Agat Sewage Treatment Plant
Gaan Point
Agat Cemetery
Salinas
Marcial A Sablan School
Our Lady of Mount C School
Agat
War in the Pacific National Historical Park (Agat Unit)
Alutom
Yona Island
Bangi
War in the Pacific Nat Hist Park (Agat Unit)
Bangi Island
Bangi Point
Finile
Inalo
Bejao
Umang
REEF
CORAL
Marina
Maqbo
Asiqki
Chaligan
Nimitz Beach Park
BM 6
Ladgi
Anaguan
Old Spanish Bridge
Biyae
Taleyfac
Coral Reef
Anae
San Isidro Chapel
Taelayag Beach
Taelayag
Taelayag Sanpapo
Taelayag Sanhilo
4WD
Pastuhan
Sagua
Tumag
Sagua Beach
Facpi Island
Facpi Point
Facpi
Aspelior
Ogasay
Achugao
Achugao Point
Coral
Agaga
CHACO QUEN
ZONE C5
E. 245, 200
N 1477 980



Property owner objected.

Chaco Outdoor Oven
Chaco Hotno 66-02-2139