1. NAME AND LOCATION OF PROPERTY

Historic Name: Latte Quarry at As Nieves

Other Name/Site Number: Rota Latte Stone Quarry (NRIS 74002225); As Nieves Latte Quarry (CNMI Site RT-2-0010); As Nieves Quarry (Site RT-IP-21); Taga Stone Quarry or Taga Latte Stone Quarry

Street and Number (if applicable)**:** N/A

City/Town: N/A **County:** Rota Municipality **State:** Commonwealth of the Northern Mariana Islands (CNMI)

Designated a National Historic Landmark by the Secretary of the Interior September 2, 2024.

2. SIGNIFICANCE DATA

NHL Criteria: Criteria 4 and 6

NHL Criteria Exceptions: N/A

NHL Theme(s): III. Expressing Cultural Values
5. architecture, landscape architecture, and urban design
6. popular and traditional culture

IV. Shaping the Political Landscape
2. governmental institutions
4. political ideas, cultures, and theories

VII. Transforming the Environment
1. manipulating the environment and its resources

Period(s) of Significance: Latte Period (approximately AD 1000 – late AD 1600s)

Significant Person(s) (only Criterion 2)**:** N/A

Cultural Affiliation (only Criterion 6)**:** Chamorro Latte Period

Paperwork Reduction Act Statement. We are collecting this information under the authority of the Historic Sites Act of 1935 (16 U.S.C. 461-467) and 36 CFR part 65. Your response is required to obtain or retain a benefit. We will use the information you provide to evaluate properties nominated as National Historic Landmarks. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number. OMB has approved this collection of information and assigned Control No. 1024-0276.

Estimated Burden Statement. Public reporting burden is 2 hours for an initial inquiry letter and 344 hours for NPS Form 10-934 (per response), including the time it takes to read, gather and maintain data, review instructions and complete the letter/form. Direct comments regarding this burden estimate, or any aspects of this form, to the Information Collection Clearance Officer, National Park Service, 12201 Sunrise Valley Drive, Mail Stop 242, Reston, VA 20192. Please do not send your form to this address.

Designer/Creator/Architect/Builder: N/A

Historic Contexts:
Finding a Path Forward: Asian American Pacific Islander National Historic Landmarks Theme Study (Odo 2017)

3. WITHHOLDING SENSITIVE INFORMATION

Does this nomination contain sensitive information that should be withheld under Section 304 of the National Historic Preservation Act?

___ Yes

_x_ No

4. GEOGRAPHICAL DATA

1. **Acreage of Property:** 0.41 acres (0.166 hectares)

2. **UTM Reference (clockwise starting at northwest corner of property:** (NAD 1983)

Zone:	55N	**Easting:**	312056.92	**Northing:**	1567411.67 (WGS 1984)
Zone:	55N	**Easting:**	312071.27	**Northing:**	1567419.15 (WGS 1984)
Zone:	55N	**Easting:**	312110.20	**Northing:**	1567422.16 (WGS 1984)
Zone:	55N	**Easting:**	312117.15	**Northing:**	1567410.62 (WGS 1984)
Zone:	55N	**Easting:**	312095.05	**Northing:**	1567397.00 (WGS 1984)
Zone:	55N	**Easting:**	312101.83	**Northing:**	1567376.45 (WGS 1984)
Zone:	55N	**Easting:**	312076.24	**Northing:**	1567372.83 (WGS 1984)

3. **Verbal Boundary Description**:

The boundary of the Latte Quarry at As Nieves is indicated by a yellow outline on the figure titled "Boundary of the Latte Quarry at As Nieves NHL (proposed), with UTM references."

4. **Boundary Justification:**

The boundary encompasses all 17 identified features of the recorded Latte Quarry at As Nieves (nine shafts, seven capstones, and one trench carved into the limestone bedrock). The area immediately surrounding these features is a mown grass lawn that is visibly absent of any associated features. A larger area to the east, north, and west (total of 14.7 acres) has been archeologically surveyed: although scattered and less distinguishable quarry elements have been identified to the east and west, they are not of comparable magnitude to the Latte Quarry and do not warrant inclusion within the landmark boundary. A road marks the southern boundary of the site.

5. SIGNIFICANCE STATEMENT AND DISCUSSION

INTRODUCTION: SUMMARY STATEMENT OF SIGNIFICANCE

The Latte Quarry at As Nieves is an exceptional architectural, archeological, and cultural resource in the Mariana Islands. Since its first formal recording in 1925 by Hans G. Hornbostel of the Bernice Pauahi Bishop Museum (Hawai'i), it has been repeatedly identified as the location of the largest and most well-defined *latte* elements (structural stone shafts and capstones) that remain in place in or near their quarry pits (e.g., Thompson 1932, Spoehr 1957, Lizama et al. 1981, April 2004). It is easily the most recognizable quarry in the Marianas for the size and condition of its elements. It was placed on the National Register of Historic Places (NRHP) in 1974 (as the "Rota Latte Stone Quarry").

The Latte Quarry at As Nieves consists of nine shafts and seven capstones, still partially formed and in situ in the limestone bedrock (one capstone is outside of its pit); it also includes one trench at the southern edge of the site that may be the initial stages of another quarry pit. Also within the site are debris mounds at the edges of the quarry pits, which are interpreted as having been produced during the process of carving the *latte* elements.

Figures include a plan view of the quarry and photographs of selected *latte* elements in the quarry. The tallest shaft is 5.33 m tall and weighs approximately 24,932 kg (Shaft 3); the largest capstone is 3.30 m across and is estimated just over 19,833 kg (Capstone 1).[1] If fully excavated and constructed, the shafts and capstones would have formed the tallest and most massive *latte* set in the Mariana Archipelago.

Latte sets are the archetypal archeological remains representing the Latte Period of the archipelago, which extended from approximately AD 1000 to 1521, the date of initial Western contact.[2] A *latte* set consists of two parallel rows of pillars formed by placing the semi-hemispherical capstones on top of the upright shafts. Sets range in size from six to 14 pillars (i.e., three to seven pairs) and in height from less than 50 cm to the 5 m tall pillars at the House of Taga site on the island of Tinian.[3] The generally accepted functional interpretation is that a set formed the foundation for a thatched, wood superstructure used for a variety of residential activities or as community men's houses; some of the sets constructed with low pillars may also have been used for storing canoes or as shelters for outdoor activities like food preparation.

The Latte Quarry at As Nieves is directly associated with the Latte Period in Mariana Islands prehistory and is of exceptional archeological and design significance to the construction method of a distinctive building type. It is nationally significant under National Historic Landmark (NHL) Criteria 4 and 6, under the NHL themes "Expressing Cultural Values," "Shaping the Political Landscape," and "Transforming the Environment." The following is a brief introductory summary of the application of the NHL criteria and themes, which are

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1 Measurements are taken from Cunningham (1978, as presented in Lizama et al. 1981:Appendix A).

2 Traditional Chamorro culture representative of the Latte Period continued to approximately AD 1668, the beginning of intensive Spanish colonization of the Mariana Islands (Tomonari-Tuggle et al. 2018:17). There was little apparent interaction between Chamorro and Westerners during this early contact period from AD 1521 to 1668, termed the Late Latte Phase. By the close of the seventeenth century, however, Spanish conquest had removed all Chamorro from the northern Mariana Islands, except for a handful on Rota, to mission villages on Guam. Note the spelling of Chamorro references here the original inhabitants of the Commonwealth of the Northern Mariana Islands, by contrast to use of CHamoru and other variant orthography in the context of Guam.

3 The House of Taga was the central *latte* set of a complex of 18 *latte* sets along a 488 m long stretch of coastline on the west side of the island of Tinian. Most of the site was destroyed by US military activity after the 1944 invasion of the island (Morgan 1988:133). In total, the complex included five 12-column, six 10-column, and seven 8-column sets. Only one pillar of the original 12 pillars of the House of Taga remains standing (Cabrera 2005:25); it is 4.8 m tall (C.E. Craft, in Marsh [Taitano] and Liston 2021:40).

discussed in more detail in this section. The site is also evaluated within the context of the Asian American Pacific Islander NHL theme study, which states:

> For a property to be eligible for NHL designation under the Asian American/Pacific Islander theme, it must be directly associated with the history of associated cultural, national, or ethnic groups within the context of North American and Pacific Island heritage. A property … must be of exceptional archeological or design significance (architectural, landscape architectural, engineering, or artistic). At least one of the six NHL criteria must be met to demonstrate eligibility, and exceptional significance must be demonstrated within the context of comparable resources (Odo 2017:343).

The Study List presented with the theme study identifies the Taga Latte Stone Quarry (Latte Quarry at As Nieves) as an AAPI (Asian American Pacific Islander) property that may be eligible for NHL designation; this nomination provides the necessary documentation to formalize its consideration.

NHL CRITERIA

Under Criterion 4 (property embodies "the distinguishing characteristics of an architectural type specimen exceptionally valuable for a study of a period, style, or method of construction"), the Latte Quarry at As Nieves is nationally significant as an outstanding example of *latte* elements and *latte* quarries in the Marianas. The defining characteristics of most archeologically identified quarries are most often reflective of the cumulative use of the site by varied intensity and extraction processes across great time depth. In contrast, latte quarries are intimately reflective of a particularly patterned process of site choice and preparation, followed by a well-defined process of extraction leading to the use of removed materials expressly for a specific architectural purpose. Within the inventory of known latte quarry sites, the Latte Quarry at As Nieves is of invaluable significance under Criterion 4 to convey aspects of the style and methods of construction of the little understood built environment of the Latte period. Latte are the signature markers of the Latte Period in Marianas prehistory (including the Late Latte Period following initial Western contact in AD 1561), and the Latte Quarry at As Nieves contains uniquely massive elements that are the largest that have been recorded. The layout of the quarry is also unusual in that shafts and capstones are paired, an organization that does not lend to either functional or efficient quarrying of multiple elements; in addition, each element in the Latte Quarry is in a discrete pit. In contrast, other quarries exhibit a pattern of successive removal of *latte* elements from the same pit, presumably to maximize the effort to carve and remove large blocks of limestone; so, for example, the extraction of one shaft leaves an open area for easy removal of the subsequent shaft. Further, the site is the only recorded quarry in which the shaft/capstone forms are still largely in situ within the quarry pits, and it is also the only quarry that is not in close proximity to completed *latte* structures. It is one of the earliest sites to have been systematically recorded, albeit by an avocational archeologist (Hans Hornbostel).

Under Criterion 6 (property has "yielded or may be likely to yield information of major scientific importance by revealing new cultures, or by shedding light upon periods of occupation over large areas of the United States"), the Latte Quarry at As Nieves is nationally significant for its potential to contribute to a better understanding of the archeological and cultural history of the Latte Period of the Mariana Archipelago. From an archeological perspective, the site is an almost complete set of *latte* forms remaining in situ in their quarry pits, and thus offers the opportunity to address numerous substantive and methodological questions related to the structure and use of quarries. From a cultural-historical perspective, further study of the Latte Quarry can look at its association with the mytho-historical figure, the chief Taga, and with historically collected place names (of which As Nieves is one) as they reflect cultural identification of traditional places.

NHL THEMES

The site reflects the NHL theme Transforming the Environment through the deliberate and laborious manipulation of the surrounding environment to produce the massive *latte* elements. It is also the only recorded *latte* site within a radius of 1 km, which suggests a special, possibly ceremonial function (although this could, of course, be the result of historic disturbance). The Latte Quarry further expresses the NHL theme Shaping the Political Landscape. It has been related to the accounts of the mytho-historical figure, the chief Taga, which is one of the few Mariana traditions that transcend a strictly local, island-specific context, taking the individual Taga across the main islands of the Mariana Archipelago (R.F. Mendiola, in Marsh [Taitano] and Liston 2021:61). In addition, the massive *latte* elements act as a statement on power, i.e., the ability of an individual or group to harness the labor to create the massive elements, and may reflect the rise of increased complexity in Mariana social and political organization.

Finally, the Latte Quarry at As Nieves, along with other sites in eastern Rota, reflects the theme Expressing Cultural Values. As a possible ceremonial construction, the Latte Quarry may represent one of a set of several unusual components of the island archeological landscape, including unique features at Mochong on the north coast and at As Dudo on the east coast.

GEOGRAPHIC CONTEXT

The Latte Quarry at As Nieves is located on the Sinapalu Plateau at the eastern area of the island of Rota, just east of the Rota International Airport and the community of Sinapalu. The island of Rota is the fourth largest of 15 islands that constitute the Mariana Archipelago in the western Pacific Ocean. The archipelago extends over 664 km from the unincorporated US Territory of Guam in the south to Uracas (Farallon de Pájaros) in the north. Except for Guam, which is the largest island in the chain, the archipelago forms the Commonwealth of the Northern Mariana Islands (CNMI). Rota, the southernmost island of the CNMI, is oriented along an east-west axis with an area of ca. 85 km^2; the maximum east–west length of the island is about 20 km, and the maximum north–south width is approximately 6.75 km. Sinapalu and Songsong are the two main towns on the island; the latter is located at the west end of the island on the isthmus of the Taipingot Peninsula.

The island is essentially a series of limestone terraces and plains overlying a volcanic core (Simonds et al. 2020:7). It is divided into five physiographic units: the eastern Sinapalu Plateau, the western plateau, the Taipingot Peninsula, the northern coastal lowland, and the southeastern volcanic area called Talakhaya.

- The eastern Sinapalu Plateau (sometimes called the northern plateau), on which the Latte Quarry at As Nieves is located, occupies the northeastern half of the island and is divided into two sections by a low, northeast-facing cliff or fault scarp in the Gampapa area east of the Latte Quarry. The north side of the plateau drops to the northern lowland coast. Cliffs with narrow coastal terraces bound the east and south sides of the plateau.

- The western Sabana Plateau (sometimes called the southern plateau) occupies the southwestern half of the island and is topped by the highest point on the island, Mount Manira (496 m). A series of terraces descend to the north coast, and the south side of the plateau drops to the volcanic area called the Talakhaya region.

- The Talakhaya region is a steeply sloped area of exposed and weathered volcanic rock on the south side of the Sabana. The only streams on the island are in this region, and springs that feed the streams are the primary sources of water for the island.

- The northern coastal lowland is a narrow, sandy strip on the north side of the Sabana and eastern plateau. Along with the Taipingot Peninsula, it is the only area on the island with relatively easy access to the ocean.

- The Taipingot Peninsula extends off the west coast of the island, with the 143 m high Wedding Cake formation at its end.

The present vegetation patterns of Rota are the result of centuries of human modification, although the island retains a large area of native forest. It is assumed that Latte Period Chamorro modified the landscape for agricultural purposes, including creating terraces for planting rice, taro, and other plants, but the extent of these modifications is unknown. Following the Spanish conquest and the vast reduction in the Chamorro population in the sixteenth to nineteenth centuries, the forests expanded. By the 1920s, it was impossible to traverse much of the inland areas, except through cleared trails. In the 1930s, however, intensive sugarcane farming was carried out by the Japanese across much of the island, but especially in the central Sinapalu Plateau, which cleared the wild forest and likely obliterated remains of the traditional landscape. During World War II, Rota was spared the destruction of the larger Mariana islands caused by widespread bombing, battles, and military buildup.

Today, the Sinapalu Plateau remains largely cleared of its original forest. Some patches of native forest remain, but much of the plateau has been allowed to develop into a secondary forest with many introduced species (Fosberg 1960:50–51).

HISTORIC CONTEXT: THE CHANGING LANDSCAPE OF ROTA

Human activity on the island of Rota generally follows a timeline consistent with the rest of the Mariana Archipelago. For the pre-Contact period, there has been considerably less archeological research on Rota compared to the larger islands of the archipelago, particularly related to accurate locational and chronometric data (to contemporary standards). In the historic era, Spanish, other European, and Japanese settlement also tended to focus on the larger islands, which offered safe harbors and more usable land for their purposes. The following discussion describes the prehistory and history of Rota in the general context of the larger Mariana timeframe, using what is called the "conventional narrative" (Tomonari-Tuggle et al. 2018:10). This narrative retains an essential division between pre- and post-Contact times, with a boundary roughly defined by the 150-year period following first contact between Chamorro and Westerners in 1521; during this period, many traditional lifeways were maintained despite Western contact. The discussion is taken largely from Butler (1997) and Russell (2002), with regard to Rota specifically, and from Tomonari-Tuggle et al. (2018) and Simonds et al. (2020) relating to general Mariana prehistory and history.

THE PRE-CONTACT ERA

The pre-Contact era is separated into two main periods, Pre-Latte and Latte, a division first proposed by Spoehr (1957) and maintained by researchers since then. It is notable that the Latte Period, named for the stone shafts and capstones that are the signature markers of the period, covers a span of only 500 to 700 years of the approximately 3,200-year span of human occupation. In contrast, the Pre-Latte Period covers a much longer period of at least 2,500 to 2,700 years.

The Pre-Latte Period

The Pre-Latte Period constitutes the span of time from around 1200 BC (Petchey et al. 2017; Petchey and Clark 2021; Reith and Athens 2019; contra Carson 2014) until approximately AD 1000, when monumental architecture in the form of *latte* structures began to appear in the islands. Pre-Latte sites are typically found in

coastal areas, and on Rota, evidence for sites of this period occur on the north coastal lowlands, with Mochong having the earliest radiocarbon dates (2300–2900 BP) (Craib 1990, in Dixon 2002:23).

The Pre-Latte Period is subdivided into four phases: Early, Middle, Late, and Transitional, based primarily on changes in ceramic assemblages and archeological middens (Moore 2002:5-7). The Transitional Phase is considered to end with the appearance of *latte* structures, which are currently estimated to first date to around AD 1000. The occurrence of Marianas Plain pottery—another marker of the Latte Period—may have begun several hundred years earlier, as early as AD 800.

Dixon (2002:45, brackets added) succinctly summarizes the archeological context of the Sinapalu Plateau during the Pre-Latte Period:

> Radiocarbon dated evidence of Pre-Latte settlement in this portion of the island is non-existent, presumably due to early settlement and subsistence being focused on the north coast prior to AD 1000. This absence of archaeological evidence should not be mistaken as suggesting that the plateau resources were unused for the first 3000 years of prehistory, however, since it is likely that the forest birds (Steadman 1999) and plants were a dependable source of protein and building materials for coastal dwellers, especially in times of prolonged drought or after major typhoons.

The Latte Period

The Latte Period begins sometime around AD 1000, with the Early and Middle Latte Phases concluding at initial Western contact in 1521. Chamorro on Rota expanded residential and agricultural activities over much of the island, accessing resources in a broad variety of environmental zones.

Archeologically, the Latte Period is distinguished by a distinctive architectural technique—the *latte*—which consists of large upright stone shafts (often, but not always, of limestone) termed *haligi*, topped by semi-hemispherical capstones called *tasa*.[4] The two together form a column or pillar that were arranged in two parallel rows of three to seven pairs (14-column *latte* sets are the largest thus far identified).

As with all temporal periods in the Marianas, ceramics serve as primary markers of Latte Period sites. Marianas Plain, characterized by thick walls, rims with thickened lips relative to the body, and minimal slipping and decoration, replaced the Marianas Red of the Pre-Latte Period. Other artifactual markers of this period include *lusong*, which is a grinding basin or mortar usually of basalt, although sometimes of limestone; pestles (*lommok*); slingstones; carved bone spear points; and ornaments including beads and pendants of large *Conus* spp. and orange- or purple-colored *Spondylus* sp. shells.

Latte sites are found in large numbers along the shorelines of all the major Mariana Islands, as well as inland areas. In addition to *latte* sets and complexes, the use of numerous caves and rock shelters date to the Latte Period, and it seems that use of these natural features shifted from being isolated overnight camps for coastal residents to a more integral part of permanent settlements.

For Rota, Butler's (1997:326) aggregated radiocarbon dates from the major southern coastal village of Alaguan and from several interior sites suggest that the settlement of the interior and marginal coastal sites on Rota

[4] In a discussion of the etymology of *latte*-related terms, Tuggle (2022: footnotes 66 and 67) argues that *haligi* and *tasa* are loan words from Tagalog and Spanish, respectively, referring to post (*haligi*) and cup (*tasa*).

occurred in pulses, beginning in the AD 1200s, peaking in the AD 1400s, and showing a smaller peak in the AD 1600s, with declines in the AD 1300s and AD 1500s. This is compared to a similar pattern noted in the Manenggon Hills on Guam, which Hunter-Anderson (2012) associates with climactic changes due to the Medieval Warm Period, a time of reliable rainfall and overall good agricultural conditions from AD 800–1350, and the Little Ice Age, a time of frequent drought and less stable conditions from AD 1350–1900.

After Western Contact: The Late Latte Phase

The last phase of the Latte Period spans the time from Western contact in 1521 until the beginning of intensive Spanish colonization in 1668. In 1565, Lopez de Legazpi, on the first successful round-trip voyage between Mexico and the Philippines, landed on Guam, planted a cross, and claimed the islands for Spain. His voyage pioneered the Manila galleon route, on which a trading ship sailed annually between Manila in the Philippines and Acapulco in New Spain (i.e., Mexico). Guam became a regular stopping point on the westward Acapulco to Manila voyage; water was taken on board, and iron was bartered for food supplies like rice, fruit, fish, and coconut. The voyages were dangerous, and several galleons shipwrecked in Mariana waters, including the *Santa Margarita*, which wrecked on the coast of Rota in 1601.

A first-hand account of Chamorro society on Rota during this early period of Spanish contact is provided by the Franciscan lay brother, Fray Juan Pobre de Zamora (d. 1615), who spent seven months on the island in 1602 (Driver 1983, 1988). On a galleon in layover during a voyage from Mexico to the Philippines, Pobre jumped ship into a Chamorro canoe in defiance of orders from the Spanish authorities that he not carry out mission work in the Marianas. He was taken to the coastal village of Tazga on Rota and kept at the home of Sunama, a *maga'låhi* (a word that is often translated as chief, but which Pobre says was applied to several leading citizens in each village). According to Pobre, there were as many as 50 villages on Rota at the time, and a population of 12,000. Life in the coastal villages centered around fishing, with many traditions about how fish were shared among the community and ceremonies involving ancestral skulls to ensure safety at sea and a good catch.

Pobre notes that the Chamorro made very fast canoes and had many ingenious techniques for catching ocean fish, such as mahimahi, blue marlin, and flying fish. While the men of the villages focused on fishing, the primary activities for women were cooking and weaving leaves to make sails, sleeping mats, mats to eat on, and containers. By the time of Pobre's stay in the Marianas, the Chamorro had largely replaced traditionally made wood and shell fishhooks, and stone knives, with tools made from introduced materials; for example, fishhooks made from nails that were traded for, or recovered from ships like the *Santa Margarita*.

According to Pobre, the inhabitants of inland villages focused on agriculture, although coastal villagers maintained small inland farm plots. Crops included two types of taro, two types of yams, sweet potatoes, rice, coconut, and breadfruit. Both men and women took part in tending gardens. Unlike fishing, the Chamorro had not adapted iron to their agricultural pursuits and continued to use sharpened sticks for most tasks in the garden. Pobre notes that the inhabitants of the coastal villages were considered of a higher status than those of the inland villages, and that the coastal villages would trade fish for the produce of the inland villages.

Each village had several *maga'låhi*, who served as village leaders and whose families were accorded special honors. Also important were the *macana*, who maintained collections of ancestral skulls and were responsible for healing and rituals to bring good weather. The communities were tightly knit and generous to each other, coming together to erect *latte* and build houses, sharing food with those who were ill and unable to fish for themselves, and generally making sure everyone's needs were addressed. Inter-village relations were generally peaceful. Several thousand people from multiple villages would come together for feasts multiple times a year, during which they would also host debates, which sometimes devolved into physical contests or fighting that typically ended once someone was injured. Pobre noted that, although typically peaceful and friendly, the

Chamorro were highly skilled with spears and slings. He also described how the canoes of different coastal villages raced each other to reach a Spanish ship first to trade with it.

Pobre was not the only outsider living in the Marianas at the time. When the *Santa Margarita* wrecked, there were 20–25 survivors, of which some were rescued a month after the wreck, and others early in 1602. Three survivors stayed on, spread among Guam, Saipan, and Tinian. In addition, at least 18 African slaves from the Spanish galleon chose to stay in the Marianas, hiding in the jungle whenever Spanish ships arrived. Pobre was told that the Chamorro considered it a great honor to house Spaniards because they would receive a large amount of iron when they brought them back to a Spanish ship. This was indeed the case for Sunama, who was given iron hoops, knives, and scissors, as well as a monkey, when he brought Pobre to a Spanish ship.

THE POST-CONTACT ERA

The post-Contact era is divided into periods that reflect changes in the colonial powers that controlled the Mariana Islands: the Spanish Colonial Period; German Administration; Japanese Administration; World War II; and Post-War Period.

Spanish Colonial Period

The Spanish Colonial Period covers the last years of the seventeenth and the entirety of the eighteenth centuries, during which Spain actively exerted control over the Marianas. In 1668, Father Luis de Sanvitores, accompanied by four other Jesuit missionaries and a small contingent of soldiers, arrived from Acapulco to found a mission on Guam. Assisted by Quipuha, the chief of the village of Hagåtña, they began to convert the Chamorro to Christianity. However, attempts to change Chamorro customs, alienation of Quipuha's rivals, and Quipuha's death in 1669 led to conflict and eventual violence between Spanish and Chamorro. During 1678 and 1679, the Spaniards mounted "scorched-earth sweeps into hostile areas throughout Guam, tearing down big *latte* houses, burning food stores, killing any hostiles they caught, and carrying off children to be baptized" (Rogers 1995:62).

By 1686, the Spanish had totally subdued the Chamorro on Guam, and established a religious and political administrative center at Hagåtña. Chamorro on Rota were not spared from Spanish incursions, and between 1680 and 1695, they were the subject of brutal attacks by the Spanish, particularly by military commander José Quiroga. The Chamorro often followed with their own counterattacks. In 1682, the Spanish instituted a policy of relocating Rota residents into a centralized mission village in Songsong, gathering the population from coastal and inland villages (Russell 2002:32–33). By 1695, and after a final expedition by Quiroga, the Chamorro of Rota were effectively subjugated.

The Spanish instituted a policy called *reducción*, in which the populations of the northern islands of the Marianas were forcibly relocated to Guam, which had become a provisioning stop for Manila galleons and a base for protecting the galleon trade from British and other threats. Rota, however, was an exception and the small population was allowed to remain on the island, although concentrated in the mission village. An official census in 1712 counted only a few hundred remaining on the island, a significant decrease from Pobre's estimate of 12,000 (Russell 2002:35).[5]

Spanish control of the Mariana Islands continued in the nineteenth century, although the Manila galleon trade

[5] Russell (2002:35) considers Pobre's estimate to be too high and suggests a pre-Contact population of 3,000 to 4,000 to be more accurate. There was also a smallpox epidemic in 1700 that could be one explanation for the low census count (Russell 2002:36, referencing Underwood 1973:18).

ended in 1815 as Spanish colonies in the Americas gained their independence. In 1817, administration and the source of support for the Marianas shifted to the Philippines, which had already assumed some control during the last part of the eighteenth century. Rota became an isolated outpost to Guam, which itself was an isolated outpost in what remained of the Spanish empire.

German Administration

Between 1899 and 1914, the Northern Mariana Islands were under the control of Germany. Following the Spanish-American War, Spain ceded its Micronesian possessions in the Carolines, Marshalls, and Marianas (except for Guam) to Germany for the sum of about $5 million (Dixon 2002:35). The German administrative center was in Saipan, and Rota remained an outpost. The mission village at Songsong continued as the central location on the island, and Germans took over a few stone buildings for administrative purposes. Daily life, however, continued with little change (Russell 2002:41).

Japanese Administration

In 1914, the German colonial possessions in the Pacific were seized by the Japanese, who eventually obtained a League of Nations mandate to rule those portions of Micronesia (Butler 1997:29). The Japanese pursued an aggressive program of economic expansion in the Marianas, with a focus on sugarcane production, and large numbers of Japanese, mostly Okinawans, were encouraged to immigrate to the islands to work on plantations or in factories, to farm, or to pursue various trades (Peattie 1988). In the 1920s, major efforts in plantation development occurred on Saipan and Tinian. The latter island became essentially a single plantation, with almost the entire island under cultivation, with supporting refineries, mills, and transportation infrastructure.

Beginning in 1930, Japanese interest shifted to Rota, where large tracts of inland land were leased, a refinery developed near Songsong, and phosphate mining operations begun in the Sabana. In 1932, plantation workers and settlers began arriving, and by 1936, the Japanese/Okinawan population was 4,729, compared with only 787 Chamorro (Butler 1997:31). That same year, the Chamorro across the island, including those in Songsong, were forcibly relocated to a new settlement area about two miles east of the main town (called Tatachiyo by the Japanese). By the end of the decade, there were four exclusively Japanese communities, at Songsong (and the expanded town to the south, Rota) and in three small villages in the interior, Shinaparu, Rugi, and Gampapa (Bowers 1950: Figure 42; Butler 1997:31).

Sugarcane cultivation and the development of supporting infrastructure transformed the landscape of the eastern plateau. In the 1920s, the eastern plateau was densely vegetated and little visited, as experienced by Hans Hornbostel in his 1925 search for the Latte Quarry site; his difficulty in finding the site was exacerbated by the reluctance of his Chamorro informants to accompany him into the forest. By the 1930s, sugarcane fields covered the plateau. Extensive archeological remains exist from this time, as established by a 1992 survey of 650 acres on the eastern plateau which identified extensive remains of pre-World War II Japanese farming activities such as railroad stations and a fieldworkers' camp for Okinawan laborers, and including the remains of sleeping quarters, bath houses, latrines, water catchments, and charcoal kilns (Pantaleo et al. 1993:86).

World War II

On the morning of December 10, 1941, invading Japanese troops landed on the western shore of Guam and made their way to Hagåtña, where a short battle with resident Americans ended with American surrender. With this takeover, Japan controlled the entire Mariana Archipelago. The early years of the war saw little change in Japanese activities in the islands, which served primarily as a logistical base for operations further east and south. With the dramatic shift in the Pacific war in 1943 and early 1944, the Japanese began a frantic effort to build defenses in the Marianas, including building up troop strength. The military ordered an end to sugarcane production, replaced by focusing on cultivating food for the military (Butler 1997:32).

The military garrison on Rota consisted of an infantry battalion, as well as naval air units stationed at the Rota airfield (site of the present international airport). Defensive positions were established near Songsong, along the north coast where invasion landings were possible, and near the airfield (Butler 1997:33). With successful American invasions of Guam, Saipan, and Tinian, the fate of Rota was to become a bypassed island, the target of only periodic neutralizing aerial raids, many of which targeted the airfield. Japanese military forces on the island surrendered to US Marines in September 1945.

After the War

With the end of the war, Japanese and Okinawan civilians were repatriated, and Rota became home to the Chamorro population again, numbering 820 (Russell 2002:59). Under the governance of a US naval administration, Songsong was rebuilt and resettled, with the Japanese town of Rota to the south left in ruins.

In 1947, Rota and the rest of the Northern Mariana Islands became part of the newly created United Nations-mandated Trust Territory of the Pacific Islands (TTPI), which also included the Caroline and Marshall Islands and Palau. In 1951, responsibility for administration of the TTPI shifted from the Navy to the Department of the Interior (Russell 2002:61).[6] Beginning in the 1960s, island residents throughout the TTPI sought an end to US control. For the Northern Mariana Islands, a covenant to establish the Commonwealth of the Northern Mariana Islands (CNMI) was signed by US President Gerald Ford in 1976. Rota is now a senatorial district of the CNMI.

In the modern era, much of the Sinapalu Plateau became public lands under the jurisdiction of the Marianas Public Land Corporation (Pantaleo et al. 1996:165).

ARCHEOLOGICAL CONTEXT: LATTE SETS AND LATTE QUARRIES

Latte are the archetypal archeological remains representing the Latte Period in Mariana Islands prehistory. Archeologically, *latte* are represented by individual built components called *latte* sets or complexes of *latte* sets.

LATTE SETS

As noted above, *latte* sets are a paired arrangement of pillars that were generally carved from limestone (although other material such as basalt, sandstone, and conglomerates were also used). Pillars consist of two components: a shaft called a *haligi* and a semi-hemispherical capstone called a *tasa*. Together, they are aligned in two parallel rows defining a rectangular plan; the pillars served as a foundation for a wood and thatch superstructure (see reconstruction of the monumental *latte* set on the island of Tinian called the House of Taga). Archeologically, sets occur from three pairs of six columns up to seven pairs of 14 columns, with the most common sets having eight columns. Regardless of the number of pairs, which determine the length of the set, the rows are usually about 3.7 m wide (J. Liston, in Marsh [Taitano] and Liston 2021:44). Sets are sometimes found individually but more often in groups ranging from as small as two to three sets to as many as many as 50. Larger village groups typically consist of *latte* sets arranged in multiple linear rows or in several non-linear clusters (Craib 1986:168–169).

Typically, one 10- or 12-pillar *latte* set is associated with a cluster of several smaller sets. The complex at Mochong on the north coast of Rota includes a 14-pillar set, which is the largest recorded on the island, along with 46 smaller sets arranged in multiple rows. Mochong also includes a unique *latte* stone wall consisting of six columns and five slabs and running more than 15 m long.

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[6] After the war, Guam returned to US naval administration, replaced through protest with a civilian government in March 1949. A year later, in 1950, Guam became an unincorporated US territory with passage of the Organic Act of Guam.

The set of columns is interpreted to have served as the foundation for a superstructure constructed of perishable materials. In 1602, Fray Juan Pobre de Zamora, the first long-term Spanish visitor to Rota, wrote extensively about Chamorro lifeways, and described the Chamorro residences as the "best native houses I have ever seen because they are all built on stone pillars" (Driver 1983:211). In spite of this early description, however, the function of the monumental *latte* sets posed a dilemma to early twentieth-century archeological researchers. Hornbostel (1925:104, 113) interpreted them as burial monuments, citing incidences when Japanese railroad builders on Saipan found "masses of human remains" in *latte* sites. In writing one of the earliest scholarly papers on the subject, Thompson (1940:463–464, brackets added), on the other hand, saw them as the foundations for thatched residential buildings and for canoe sheds, consistent with Pobre's description:

> Based on the archaeological, historical, and ethnographical evidence presented above, we may infer that the latte of the Marianas functioned as house-sites. Moreover, there were evidently at least two types of houses built on stone pillars in the Marianas, namely pile-houses and canoe-sheds.…
>
> Concerning the pile-houses, we know that the roofs were thatched. The floors were raised above the ground and the floor-space was divided into compartments which probably served as sleeping rooms, kitchens, storage, carpentry shops, etc. The walls of some houses at least had openings which served as windows. The ground under the houses was used for burials, accompanied by broken artifacts. We may safely assume that at least some of the pile-houses served as men's clubs. It is probable that clubhouses resembling the Pelewan [Palauan] keldok-bay type were built on twelve-pillared latte, while houses resembling the modern Chammorran pile dwellings were built on smaller latte.
>
> Concerning canoe-sheds, we may definitely infer that at least some of the latte built along the shore with long axis at right angles to the shoreline served this purpose. Moreover, it is probable that canoe-sheds in the Marianas resembled sheds built for housing war-canoes in the Pelews [Palau], except that the thatched roof was supported by capped stone uprights instead of wooden posts.

Modern researchers concur that *latte* were the foundations for buildings with multiple practical residential and community functions (D.J. Welch, in Marsh [Taitano] and Liston 2021:34–35). They also had symbolic meaning, and high-ranking individuals or families may have been responsible for larger *latte* construction as expressions of greater wealth, status, or prestige. The area demarcated by the pillars (under the superstructure) was used for burials of family and family ancestors.

In general, it has been hypothesized that the size of *latte* stones increased over time, and that exceptionally large stones were the result of competition between villages. Under this hypothesis, the *latte* of monumental size were not constructed until the sixteenth or seventeenth centuries, perhaps with the aid of iron tools (Craib 1986:174; Butler 1997:323; Hunter-Anderson 2012:164).

LATTE QUARRIES

Quarries are the locations from which the *latte* elements (*haligi* and *tasa*) were sourced. Limestone is the most common material but beach rock, coral, sandstone, conglomerates, river boulders, and volcanic rock were also used; in some coastal areas, large brain coral was a source for *tasa* (April and Marsh [Taitano], in Marsh [Taitano] and Liston 2021:36). Most identified quarries are situated immediately next to or at least in close proximity to finished *latte*, and in most cases (see below for examples), the *latte* elements are no longer in place within the quarry depressions.

Quarrying Techniques

Alternative quarrying techniques have been posed by archeological investigators. Hornbostel interpreted the presence of charcoal in the Latte Quarry area as the remains of a quarrying process that involved burning the limestone bedrock to convert it into a soft, workable material. April (2004:50) summarizes the possible method, but also counters:

> The area that was to be removed for shaping of the latte elements was supposedly heated and then sprinkled with water to weaken the limestone thereby making it easier to excavate with stone and shell adzes and axes. The fire and water technique that Hornbostel speculated as the technique used for quarrying has not been tested, however, the technique used for preparing lime (afok in the Chamorro language), in the early days and is still being practiced in other parts of Micronesia for example, Palau and Yap, involves burning of corals with a large amount of firewood and an extremely high degree of heat which is continuous for approximately 12 hours before the corals turn into lime. If fire and water technique was employed at the As Nieves Quarry, which would have required a large amount of firewood, there should be some obvious evidence of fire activities that still exist at the site.

Williams et al. (1996) found no evidence of the burning practice at the Latte Quarry at As Nieves. They instead, posit that "The sharp edges of the pit walls and the *latte* stones themselves, combined with cutting striations on the pit walls, suggest that the latte stones were cut from the limestone bedrock with basalt adzes." They further add:

> The undercut portions of the latte shafts also provide good evidence that fire was not used as a means to soften the limestone prior to cutting it. The undercuts have regular, sharp edges, and extend under shafts for over a meter. Controlling fires or even getting them to burn under such conditions would be extremely difficult and unnecessary, given the relative softness of the unaltered limestone. In short, the cuts in the limestone seem too perfectly formed to have done by first softening the rock with fire and water.

In describing quarry features at the Taga Quarry site on Tinian, April (2004:56) observed tool marks on the sides of the trench going into a capstone depression: "The marks measure 4 centimeters in width which indicates that small tools, possibly metal and stone adzes, were used." Similar marks, both vertical and horizontal, were observed in three other quarry features. April (2004:60) also describes tool marks in limestone pits in the Agingan Quarry; these measure about 7 cm in width and 10 cm in length. Unlike these quarries, the quarry at As Nieves has little evidence of tool marks, which April (2004:87) attributes to weathering in the softer limestone material.

April (2004) describes a quarrying method that maximizes excavation effort, which he terms "downward quarrying." At the Agingan Quarry site on Saipan (see below), he notes evidence of multiple quarrying use in the same location, such that there are large depressions from which "oftentimes several capstones were removed from a single depression vertically in a successive fashion." In some cases, naturally shaped limestone or coral were fortuitously excavated; for example, capstones were created from naturally shaped circular coral heads.

There are no speculations as to how the quarried stone was moved, although April (2004:86) suggests that, at the Latte Quarry at As Nieves, backfilling was used to raise *latte* components up to the ground surface (at Capstones 4 and 5, and Shaft 3).

COMPARATIVE ANALYSIS

Other Examples of Latte Quarries in the Mariana Islands

Besides the Latte Quarry at As Nieves, April (2004) provides a description of three other major *latte* quarries in the Mariana Islands, one each on Tinian (Taga), Saipan (Agingan), and Guam (Urunao) that offer a representation of quarry sites in the Marianas.

Taga Quarry Site, Tinian

The Taga Quarry is on the east coast of Tinian, on a low limestone bench that terminates in a cliff about 7 m above sea level. The quarry consists of at least 33 depressions/pits from which shafts and capstones have been removed (April 2004:50). The features occur in two clusters separated by a small inlet, with the main portion of the site on the north side of the inlet. The quarry is about 1.6 km southeast of the House of Taga *latte* set (NRIS 74002193, NRHP listed December 19, 1974/Boundary Increase and Additional Documentation NRIS 97000931, September 5, 1997), and about 500 m north of the Tachognya *latte* complex (also called the Blue Site, after the 1944 U.S. military designation of that section of the coast as Blue Beach, NRIS 86000235, NRHP listed February 13, 1986). Within the quarry complex, April (2004:58) examined six capstone depressions and 12 shaft depressions. Shaft depressions range in length from 1.2 to 4.5 m, and in width from 0.88 to 2.84 m. Capstone depressions are between 1.1 and 3.6 m in diameter. The depressions are relatively close together and some have been disturbed by the removal of shafts/capstones from adjacent depressions.

There are no *latte* elements remaining in the quarry depressions, and it is presumed that the elements from this quarry were used for the House of Taga, the Tachognya Site, or for both.

Agingan Quarry, Saipan

The Agingan Quarry is located along a 500 m long stretch of the southwestern coast of Saipan (April 2004:60). Located in an area of exposed limestone in small coves at the base of the coastal cliff, the quarry consists of a series of depressions from which capstones and shafts of similar sizes were removed; some of the coves "may have been created as a result of quarrying activities" (April 2004:60). April (2004) terms this excavation method "downward quarrying." Shafts and capstones were observed on the inland side of the quarry.

April (2004:62–73) records two sections of the northern portion of the Agingan Quarry: Section I is at the northernmost end of the quarry and consists of 18 features, all capstone depressions within a large, 10 x 10 m pit created by repeated downward quarrying. Quarrying apparently ceased when relatively soft limestone was encountered at the base of the pit. Tool marks were observed in almost all of the depressions. There are several shaped capstones that remain in place at the bottom of the pit (April 2004:84).

The remains of two shafts (one depression and one shaft still in place) were also recorded in more shallow limestone to the south of Section I. The shafts would have been 30 cm thick, 60 to 70 cm wide, and 1.3 m long (April 2004:66).

Section II of the Agingan Quarry is a small, 20 x 20 m inlet about 25 m south of Section I. It contains at least 30 definable depressions from which *latte* elements have been removed (26 capstone depressions and four shaft depressions).

At the southernmost part of the quarry (south of Section II), the limestone outcrops are relatively small, shallow, and isolated. It appears that larger individual capstones were quarried, and several depressions contain capstones that were not removed (April 2004:73). There is no evidence of downward quarrying such as occurs in the northern portion of the site.

Just inland of the quarry was the Agingan *latte* site recorded by Hornbostel in the early 1920s (Thompson 1932)

but which was significantly disturbed by aerial bombardment during World War II.

Urunao Quarry, Guam

The Urunao Quarry is in the beach area south of Ritidian Point at the northwest corner of the island of Guam (April 2004:75). The beach rock quarry covers an area 200 m long x 5 m wide and shows evidence of nine shaft extractions. April (2004:87) notes that the natural limestone formation of the quarry is narrow and shallow, thus limiting quarrying to the production of shafts only, and that all but two of the shafts were quarried on the ocean side of the limestone formation. Further, it appears that capstones were created from naturally shaped circular coral heads in the reef at Urunao. The average size of *latte* shafts at Urunao is between 20 and 24 cm at the base, becoming narrower at the top (April 2004:87).

The quarry falls within the larger Urunao Archeological Complex recorded by Hornbostel in 1925 and by Reinman in 1974 (April 2004:75); the complex includes *latte* structures, ceramic concentrations, and caves with pictographs. There are also two possible quarries at Manenggon in the central area of Guam (Hunter-Anderson 1994).

LATTE SETS IN EASTERN ROTA

The accompanying figure shows the distribution of known *latte* sets and set complexes on the eastern plateau and coast of Rota, based primarily on Pantaleo et al. (1993) and Pantaleo et al. (1996), which report on the most extensive areal survey coverage on the plateau, with additional site information from other researchers (see discussion on Previous Studies of the Latte Quarry in Section 6).[7] There are 47 *latte* sites that have been recorded on the uplands of the eastern plateau, and an additional nine sites on the coastal perimeter. The manner in which sites are numbered varies by researcher so the 47 upland sites represent individual *latte* sets as well as clusters of sets. For example, Pantaleo et al. (1996) assigned a site number to each *latte* set, even those in close proximity to each other, while Gordon et al. (1980) assigned a single site number to clusters of *latte* sets. The nine coastal sites are all complexes.

The largest extant village sites in eastern Rota are Alaguan on the south coast with more than 60 *latte* sets and Mochong on the north coast with 47 *latte* sets. Smaller villages on the interior of the Sinapalu Plateau are found at Dugi, Gampapa, and Chugai, which were probably located near agricultural fields (Dixon 2002:45). Villages also occurred on the narrow eastern and southern coastal terraces of the Sinapalu Plateau around As Dudo, Sagua Gagha, and Koridot.

Of the major *latte* complexes in the upland area, Dugi (NRIS 85000287, NRHP listed February 11, 1985, Site RT-2-0014) has at least 23 *latte* sets on about 10 hectares. It appears to be differentiated into two groups based on *latte* set size with "structures built from small stones being oriented around three, equidistant, large latte sets" (Gordon et al. 1980:15). Craib (1990: Table 9-2) notes that 14 of the *latte* sets at Dugi could be identified to class size, of which 10 are 8-pillar and four are 10-pillar sets. The highest mean pillar height for *latte* at Dugi is 1.2 m high in the 10-pillar set (DL-4) (Craib 1990: Table 9-1). Photographs of *latte* sets at Dugi in Cabrera (2005:36) show standing and fallen columns on an open plain of low grass in the 1970s and in 2003, indicating that the sets were easily and clearly identifiable.

To the south of Dugi is the Gampapa complex (RT-IP-26, 27, 28), which has at least 13 *latte* sets on about

[7] Pantaleo et al. (1993) and Pantaleo et al. (1996) are two iterations of a report on a survey of east-central Rota undertaken in 1992. The former is informational and the latter is a draft of the final report on the same survey. They are individually referenced in this nomination because they contain different information; notably, the 1993 document has a site location map, which the 1996 report does not.

10 hectares (Gordon et al. 1980:14); it could also include *latte* sets documented by Pantaleo et al. (1993, 1996) along the Gampapa limestone fault scarp (the recorded data are unclear about associations). The Pantaleo et al. survey recorded 20 *latte* sets along the base of the Gampapa fault scarp and 12 on top of the fault; other *latte* sets were also observed along the fault, outside of their project area. Due to the extensive disturbance from historic activities, Pantaleo et al. (1996) could classify only 25 *latte* sets by size: 12 8-pillar sets; six 6-pillar sets; three 10-pillar sets; and two 12-pillar sets. The larger *latte* sets occur at the base of the fault.

The Chugai complexes are listed by Gordon et al. (1980:16) as Chugai Village I (RT-IP-9 and 10) and Chugai Village II (RT-IP-19). Chugai Village I contains at least seven *latte* sets but dense vegetation likely obscured others. Chugai Village II has at least three sets but was similarly obscured by vegetation and what could be seen was heavily disturbed. Pantaleo et al. (1993) and Pantaleo et al. (1996) recorded seven *latte* sites at or near Chugai but did not correlate them with the earlier recorded site.

Coastal complexes are better defined as village aggregations. These include the largest village sites at Alaguan (RT-CP-61) on the south coast with more than 60 *latte* sets and at Mochong (RT-2-0026) on the north coast with at least 47 *latte* sets. Four smaller villages are on the eastern and southeastern coastal terraces around As Dedo (RT-1-0601), Sagua Gagha (RT-1-0561), and Koridot (RT-1-0583 and -0584). In the concluding discussion of his survey of the east and southeast coasts of the island, Butler (1997:329) notes the difference between *latte* sites on the coastal terraces and on the upland plateau:

> The latte villages on the coast are quite nucleated, but the latte settlements on the plateau above are much more dispersed. Even the large sites such as Gampapa (Pantaleo et al. 1996) or Dugi (Craib 1988:114–115) are very open, loose arrangements of latte features. This difference mostly reflects the restricted topographic settings on the coast, but it also suggests that, when such physical constraints are lacking, the social arrangements that define villages in spatial terms are relatively weak.

Mochong (NRIS 85002301. NRHP listed September 11, 1985) is the most well-known *latte* complex on Rota and has been the subject of research since the 1920s (summarized in Ward 1990). It covers 11 hectares, extending over 450 m along the coast. Craib (1990:9-9) describes 47 *latte* sets in the complex, with at least nine other sets that "had been destroyed and removed by the Japanese during World War II." The complex includes *latte* sets of all size classes (from six to 14 pillars), including two 12-pillar sets and the one 14-pillar set. The complex also includes an unusual walled *latte* set (Feature ML-1) (Craib 1990:9-11 to 9-12):

> ML-1, a 12 pillar latte, serves as the center of a section in which it is the only latte. This is the only example of this configuration. Given the regular spacing between ML-l and the three nearest large latte (70.5±8.2) and good preservation of latte in this portion of the site, it seems unlikely that any other large latte are missing, resulting in a skewed pattern. Not only is ML-1 unique in this respect but it also is unique in its construction. This latte differs from nearly all other latte in the Marianas in that its inland (southern) row does not consist of individual pillars but was built by placing large coral slabs on end. What significance, if any, these two anomalous aspects (i.e. spatial and structural) of ML-1 have is unknown. As described in Chapter 2, excavation at this latte (Takayama and Egami 1971) yielded a typical latte period assemblage and burials of women and children. Based on this general evidence, it seems unlikely that ML-1 served as a special-purpose structure.

LATTE QUARRIES IN EASTERN ROTA

Gordon et al. (1980:17) identify *latte* stone quarries as one of four types of sites recorded in their island-wide

survey (besides *latte* sets, rock shelters, and wells):

> Quarry sites spatially separate from latte structures seem to be rare on Rota. Most latte sites we observed had associated outcrops of coral limestone which could have provided most of the stone needed. Most of these outcrops were silted over. However, at least one (RT-IP-07) clearly showed the areas where stones were removed. It is our impression that latte stones were generally quarried on site, and we would suggest that putative quarry areas at latte sites such as As Nieves (RT-IP-06), Gampapa (RT-IP-28), and Chugai (RT-IP-19) be tested to confirm quarrying activities.

The accompanying figure shows the locations of the four *latte* quarry sites in eastern Rota that Gordon et al. recorded: the Latte Quarry at As Nieves (CNMI Site RT-1-0010), the smaller As Nieves Latte Quarry (RT-IP-08) to the southwest, the quarry at Chugai II Village (RT-IP-19), and a quarry at Gampapa Village (RT-IP-28). Only the Latte Quarry at As Nieves is a discrete site separate from any *latte* set or complex of *latte* sets. All of the sites are located in the southeastern quadrant of the Sinapalu Plateau, which was later surveyed by Pantaleo et al. (1993) and Pantaleo et al. (1996).[8] A quarry was also located within the Agusan Latte Site (CNMI Site RT-2-0024) on the north coast of the island, close to but outside of the eastern plateau. Mapped by Gordon et al. (1980) and recorded again by Hunter-Anderson et al. (1988), the beach site consists of a number of *latte* sets and a *latte* quarry that is in a limestone outcrop; only depressions were left after shafts and capstones were removed.

The Latte Quarry at As Nieves stands out in multiple ways (element size, organization, and character) in the sample of known quarry sites as well as latte in general in the Mariana Islands, and as such, strongly conveys the National Historic Landmark themes Expressing Cultural Values, Shaping the Political Landscape, and Transforming the Environment under Criteria 4 and 6. Except for the Latte Quarry at As Nieves, the quarry sites, including the Agusan quarry, appear to be near to and associated with *latte* sets that were constructed with elements from the nearby quarries.

CULTURAL CONTEXT: THE CHIEF TAGA AND THE PLACE NAME "AS NIEVES"

Two Chamorro traditions warrant discussion as they relate to the Latte Quarry at As Nieves: one is the story of the chief Taga because of his apparent direct connection with the quarry, and the other relates to the place name "As Nieves."

THE TRADITION OF THE CHIEF TAGA

Possibly due to the large size of the *latte* elements, the Latte Quarry at As Nieves is often compared with the Tinian site known as the House of Taga and, by extension, has been associated with the quasi-historical, legendary figure, Taga, a 10' -tall *maga'låhi* (Chamorro word for a chief or leading citizen of a village) (Spoehr 1957:89–90).

Notably, however, Gertrude Hornbostel, who recorded a number of folktales told by Chamorro elders in the 1920s, did not record any stories of Taga (Thompson 1932:59–65). Instead, she recorded several stories of anonymous men and boys that are attributed to Taga in more recent tellings. These include the story of a young man who jumped from Guam to Rota to escape his father who was afraid of his strength; the story of a man who

[8] Based on the available reports, it is not possible to definitively correlate the site identification numbers assigned by Gordon et al. (1980) and Pantaleo et al. (1996). The former grouped individual features in complexes, whereas the latter assigned site numbers to individual features, even those in close proximity. Neither project had the benefit of modern GIS technology.

could grate a coconut by squeezing it; the story of a man who could harvest all the coconuts from a tree by shaking it; and two stories of a baby who pulled up a young coconut tree and scared his father with his strength.

Spoehr (1957:89–90) recounts a version of the Taga story that includes incidents found in stories recorded by Hornbostel (but not assigned to Taga) and later published in Thompson (1932):

> Taga was originally a chief on Guam. He was a very big man, at least ten feet tall. He came from Guam to Rota, fought the Rota chief, and defeated him. Then Taga became the chief of Rota. He married a Rota woman and had a girl child by her. Taga commenced to build himself a house on Rota, and started to quarry the shafts and capstones at As Nieves. But he never finished the quarrying, as he decided to go to Tinian instead. So he left Rota and went to Tinian.
>
> On Tinian, Taga met the Tinian chief for a contest of strength. First, the two chiefs both got in one canoe, sitting back-to-back. Taga faced Rota and the Tinian chief, Tinian. At a given word they both paddled as hard as they could. The canoe cracked apart between them. The two chiefs were even on this contest and returned to shore.
>
> Next, the two chiefs took their throw nets. The Tinian chief cast his net along the shore. When he pulled the net up, it was full of fish. Taga was worried. He did not know Tinian and did not know where the good shore fishing spots were located. He finally gave his net a great heave and threw it far beyond the reef into the deep water. He dove into the open sea, pulled up his net, and found there were just as many fish in it as in the net of the Tinian chief. Because Taga had thrown his net so much farther, he won this contest.
>
> After this, the two chiefs took their fish home to cook them. They needed some coconuts for coconut cream to put on the fish. The Tinian chief started to climb a coconut palm. "That is not the way," said Taga. Taga grasped the coconut palm and shook it so hard by the trunk that even the smallest coconuts fell off. The Tinian chief was shamed. Twice he had been defeated.
>
> "We need now to husk and grate the coconuts," said the Tinian chief. He husked several coconuts, broke them open, and gave them to his wife to grate. "That is not the way," said Taga. Whereupon Taga took a nut, tore off the husk, and crushed the nut in his two hands, squeezing out the cream. The Tinian chief had been defeated again. Three times he had been defeated. So Taga became the chief of Tinian.
>
> Then Taga built himself a great house. The ruins of this house are still called the House of Taga.
>
> After the house was finished, Taga's wife became pregnant. At this time, Taga decided to go to Saipan, to fight with anyone who wished to oppose him. So he went to Saipan with his wife and found a cave as shelter for her. But at night she gave birth to a son. The cave was contaminated with birth fluid. Taga was afraid to fight, as he might lose his vitality by being present at a childbirth, so he returned to Tinian.
>
> When Taga's son was five years old, Taga caught a beach crab, tied a string to it, and gave it to his son to play with. The string broke and the crab ran into a hole under a coconut tree. The child called, "Father, come here and push over the tree so that I can get the crab."
>
> Taga refused, because the coconut was one he had planted, and it had just commenced bearing

> nuts. The boy became very angry. He pushed the tree back and forth, and finally pushed it over. Then Taga became afraid. "The boy is so strong he may kill me when he gets older," Taga thought. So that night when the boy was sleeping, Taga killed him by strangling him.
>
> Then Taga's daughter became very afraid of her father, and also sorrowed over her brother's death. She fled into the Carolines—the mountains of Tinian.

The mother, too, sorrowed so that she became ill and died. Taga was filled with remorse. One day Saint Joseph came to Tinian to convert the people to Christianity. Taga became a Christian and died on Tinian.

The contemporary Taga story may be a conflation of various unrelated legends, but nonetheless, the association between the chief Taga and the Latte Quarry at As Nieves is so strong that it has been incorporated into public presentation at the Latte Quarry site. A visually prominent and out-sized statue of the chief is located immediately west of the quarry features.

A NOTE ON THE NAME "AS NIEVES"

The site has often been referred to as the "As Nieves Latte Quarry" but this is a misleading designation in that it suggests that As Nieves is an original Chamorro name for the quarry itself, rather than simply the name of the area. The site was known to Chamorro at the time of Hornbostel's work on the island in 1925, and it was information from them that resulted in his search for it. However, Hornbostel was not given any name for the site, and writes only that he had "been told about an ancient fort or *trinchera taotaomona mona* (trenches of the people of before time) located at the eastern end of the island" (Hornbostel 1935:287). The general area of the quarry was pointed out to him by Chamorro informants, but he makes no indication that he was given a traditional name specific to the quarry itself; in fact, he does not mention any name related to its location. Hornbostel does not indicate the specific individuals who told him about the quarry.

As Nieves was recorded as the name of the place at some point after Hornbostel's work at the site, when he and his wife Gertrude collected some 266 place names for the entire island (Hornbostel and Hornbostel n.d:1). One of the maps attached with a place name list has a point marked with the notation "Site at As Nievis [sic]," indicating as noted above that the quarry itself did not have a known Chamorro place name.

The word "As" is a common prefix used in place names on Rota, which can be translated as "the place of." The word "Nieves" means snow in Spanish, and is a fairly common Spanish female name taken from one of the names of the Virgin: La Virgen de las Nieves or Nuestra Señora de las Nieves.[9] The origin of the historic appearance of this word as a personal or family name on Rota is unknown, but it is probable that this is also the source of the word in the place name, which could thus be translated as "at Nieves' place," "the place of Nieves," or "Nieves' place."

The Hornbostels' place name research in the 1920s identified eight additional places in the vicinity of As Nieves that incorporate the "As" prefix. All are located along trails. Simonds et al. (2020:56) infers that "the pattern of names suggests some form of property (house or agricultural lot)" which by the 1920s, when the island population lived in Songsong, would mean these were among the latter.

As a minor complication, Gordon et al. (1980) gave the name "As Nieves" to a *latte* set and quarry about 1.75 km to the southwest of the Latte Quarry, with site numbers RT-IP-06 and -08, respectively. The Latte Quarry

[9] A commonly used alternative spelling of the place name "As Nieves" is "As Niebes."

(subject property) itself was assigned the name "As Nieves (Taga Stone) Quarry" with the site number RT-IP-21.

SIGNIFICANCE OF THE LATTE QUARRY AT AS NIEVES

The Latte Quarry at As Nieves is nationally significant under Criteria 4 and 6 of the National Historic Landmarks program.

CRITERION 4

Under Criterion 4, the Latte Quarry at As Nieves is an outstanding example of the construction method of the signature architectural type of the Latte Period in Marianas prehistory. As noted by Genevieve Cabrera (in Marsh [Taitano] and Liston 2021:17), *latte* "more than any other indigenous cultural element, has become the Chamorro cultural symbol." The Latte Quarry at As Nieves stands out in multiple ways (element size, organization, and character) in the sample of known quarry sites as well as *latte* in general in the Mariana Islands, and as such, strongly reflects the National Historic Landmark theme Expressing Cultural Values.

The Latte Quarry at As Nieves, one of the earliest Mariana archeological sites to be documented, contains uniquely massive *latte* elements that are the largest that have been recorded in the archipelago (the second largest *latte* elements are in the 12-pillar House of Taga *latte* set on the west coast of Tinian), if not in terms of possible plan layout. The nine shafts and seven capstones in the Latte Quarry at As Nieves would at most constitute a 10-pillar *latte* set. While on the larger scale of *latte*, the 10 pillars would not constitute the most impressive structure in plan, surpassed by the 14-pillar *latte* at Mochong on the north coast of Rota, or even the 12-pillar sets at As Dudo and Alaguan on the east and south Rota coasts or at Chugai on the southeastern Sinapalu Plateau. Nonetheless, the size of the individual columns is significant, despite what was likely a relatively smaller plan layout.

Further, the site is the only recorded quarry in which the shaft and capstone elements (except for one) are still in situ within the quarry pits (Cabrera 2005:42). Recorded quarries in the Mariana Islands, including the major ones described by April (2004), generally consist of the pits from which the *latte* elements have been removed, with the resultant constructed *latte* set in relatively close proximity.

Uniquely, the Latte Quarry at As Nieves comprises paired shafts and capstones, an organization that does not lend to either functional or efficient quarrying of multiple elements because of the different basic shapes of each element. In other quarries, such as those described by April (2004), shafts were generally excavated in one area and capstones in another.

The quarry pits themselves are discrete to each element, so that each pit contains a single element. In contrast, the quarry at Agingan on Saipan exhibits a pattern of successive removal of *latte* elements from the same pit, presumably to maximize the effort to carve and remove large blocks of limestone (so, for example, the extraction of one shaft leaves an open area for easy removal of the subsequent shaft); this is a process termed "downward quarrying" by April (2004). The single-purpose quarry pits at the Latte Quarry at As Nieves suggest a unique intent for the massive *latte* elements and in turn the ability to seek better understanding of a rare architectural type.

The Latte Quarry is the only recorded quarry that is not in close proximity to completed *latte* structures, or to a complex of *latte* structures.

CRITERION 6

Under Criterion 6, the Latte Quarry at As Nieves is nationally significant for its potential to contribute to a

better understanding of the archeology and cultural history of the Latte Period of the Mariana Archipelago. It reflects the National Landmark themes of Transforming the Environment, Shaping the Political Landscape, and Expressing Cultural Values.

From an archeological perspective, the site is an almost complete set of *latte* forms that remain in situ in their quarry pits, and thus offers the opportunity to address several questions of research interest:

- Do marks on the *latte* elements and in the quarry pits indicate labor with metal tools? If so, this would date the use of the Latte Quarry at As Nieves site to the period between first Western contact in 1521 to the intensive Spanish occupation of the Marianas beginning in 1668.[10] Compiling data on Latte Period structures with similar indications of metal tool work and/or artifacts of the period can result in a distributional model that defines the Indigenous landscape at this transitional period at the cusp of fundamental changes by foreign power. Alternative methods for carving and extracting the *latte* elements have been proposed in the past, but a detailed study of the quarry pits and *latte* elements has yet to be completed (see April 2004 for an initial analysis).

- How does the Latte Quarry at As Nieves fit into the chronology of the Latte Period on Rota? In general, it has been hypothesized that the size of *latte* stones increased over time, and it is thought that exceptionally large stones such as at the Latte Quarry and at the House of Taga site on Tinian were the result of competition between villages (assuming contemporaneity). The date that these large stones were quarried is unclear, and it has been speculated that *latte* of this size were not constructed until the sixteenth or seventeenth centuries (Craib 1986:174; Butler 1997:323; Hunter-Anderson 2012:164).

- Was the intended function of the Latte Quarry at As Nieves strictly utilitarian as the source for foundation materials for a superstructure, or could it have served a ceremonial purpose as *latte* elements in place? There is an uneven number of shafts (nine) and capstones (seven) that would not constitute a complete *latte* set, and it has been assumed that the quarry was abandoned (for a reason or reasons not yet established) before sufficient elements could be completed and/or extracted to comprise at least a 10-pillar *latte*. An alternative hypothesis is that the quarry was a ceremonial site and that the elements were never intended to be removed for construction elsewhere (there are no other known quarry sites in which almost all elements remain in place). The elements at the Latte Quarry are also paired, which is not common to other *latte* quarries where shafts were generally carved in one location and capstones in another. This perhaps indicates that there was no intention of actually extricating the elements for use in construction.

- On the other hand, if the *latte* elements were intended for ultimate construction of a monumental *latte* set, the question then arises as to where that set would have been built. Most quarries are in proximity to constructed *latte*, with the assumption that the material was quarried for immediate and nearby use. The only comparable site to the Latte Quarry at As Nieves is the Taga Stone quarry on Tinian, which is about 1.6 km south from the House of Taga *latte* complex and about 0.5 km north from the Tachognya site; all three sites are on the coastal strand. If that model is applied to Rota, that would place the *latte* constructed from the Latte Quarry at As Nieves near the middle of the inland Sinapalu Plateau, an unusual location given that major settlements were at coastal locations (at least 2 km north to Mochong, or about 5 km southwest to Alaguan), although smaller village clusters are within 1.6 km of the quarry.

[10] There is reference to iron being present in the Marianas prior to Spanish contact (e.g., Quimby 2011), but nonetheless, the availability of the material certainly increased following 1521.

If a coastal location was intended, there are significant topography changes from the inland plateau to the coast that would have challenged the transport of components to the ultimate building site.

- Does the distribution of *latte* sites on the eastern plateau suggest an unusual centrality to the quarry with a distinctive separation from other *latte* sites, particularly the interpreted village complexes at Gampapa, Chugai, and Dugi (as well as the larger coastal villages)? There are no *latte* sites within a radius of about 1 km around the Latte Quarry at As Nieves except for small, disturbed features in the immediate vicinity. Granted, the central place of the quarry on the landscape could be the result of twentieth century disturbance from farming and military activities, but it nonetheless is a starting point for further research on the location of the quarry in the broader island landscape.

From a cultural-historical perspective, future research on the Latte Quarry at As Nieves can focus on two aspects: the relationship with the mytho-historical figure, the chief Taga, and place names as they reflect cultural identification of traditional places.

- Modern accounts of Chamorro folktales attribute the excavation of *latte* elements from the Latte Quarry at As Nieves to the 10'- tall *maga'låhi* Taga. Although recent versions of these stories of Taga agree on the connection to the Latte Quarry, they differ on many other points—such as the nature of Taga's death and his dealings with the Spanish—and the development of these stories into their present form has not been well studied. The origin of the folkloric connection between Taga and the Latte Quarry at As Nieves is, therefore, as yet not well understood. The presence of these traditional stories in accounts recorded by Gertrude and Hans Hornbostel in the 1920s suggests that the modern collection of Taga stories may have evolved over time, as stories originally attributed to other individuals became associated with the better-known figure of Taga. Simonds et al. (2020:61) suggest that connections between the Latte Quarry at As Nieves and the chief Taga may date to the late nineteenth or early twentieth century. In any case, it is clear that further research is required to understand the origin and nuance of the folkloric connection between Taga and the Latte Quarry at As Nieves, and the evolution of the Taga legend in Chamorro understanding.

- Place names collected by the Hornbostels in the mid-1920s suggest that at an earlier time, there was general Chamorro activity, probably at least dryland farming, in this area.[11] Further, there is the possibility that there were specific parcels of land associated with or "owned" in some sense by ancestral families, who in spirit form were the perpetual inheritors of these parcels. This creates important questions for archival and archeological research: what is the Chamorro history of occupation and abandonment of this landscape, and what place does the Latte Quarry at As Nieves have in this history?

The site reflects the NHL theme Transforming the Environment through the obvious manipulation of the surrounding environment to create, or begin to create, the massive *latte* elements. At a regional scale, the Latte Quarry at As Nieves is the only recorded *latte* site within a radius of about 1 km (except for small, disturbed features in the immediate vicinity of the quarry). Although this could be the result of historical disturbance, particularly during the period of Japanese industrial farming in the 1930s and military activity before and during World War II, this poses a question about a ceremonial function for the quarry as a central place, beyond its

[11] In their field notes related to place name research on Rota, the Hornbostels note three points of relevance to *latte* quarry research: 1) that "all these place names were obtained from natives," using a map of the island for identifying locations; 2) that Gertrude Hornbostel spoke Chamorro and thus could communicate directly with informants; and 3) that "no Spanish, German, or Japanese records of place names have been made" (although this likely refers to a comprehensive listing of island place names, not specific locations) (Simonds 2020:55, footnote 9).

utilitarian function as a source for the critical foundations for building.

The Latte Quarry at As Nieves expresses the NHL theme Shaping the Political Landscape. It has been related to the accounts of the mytho-historical figure, the chief Taga, one of the few Mariana traditions that transcend a strictly local context, taking the individual Taga across the main islands of the Mariana Archipelago (see R.F. Mendiola, in Marsh [Taitano] and Liston 2021:61). In addition, the massive *latte* elements are a statement on power, i.e., the ability of an individual or group to harness the labor to create the massive elements and may reflect the rise of increased complexity in Mariana social and political organization.

The Latte Quarry at As Nieves, along with other sites in eastern Rota, reflects the theme Expressing Cultural Values. As a possible ceremonial location, the Latte Quarry at As Nieves may represent one of a set of several unusual components of the island archeological landscape; examples include the Feature M-1 walled *latte* set at Mochong and the *latte* pillar at As Dudo on the east coast that combines the shaft and capstone out of a single piece of limestone.[12] Further study is necessary to better define the nature of unique components of eastern Rota *latte* sites, as well as their contemporaneity.

In closing, it is important to add that the Latte Quarry at As Nieves is one of only two traditional (Indigenous) sites in the western Pacific that are recognized to date for their national significance.[13] The other site is the Nan Madol NHL (designated September 16, 1985) archeological complex at Pohnpei in the Federated States of Micronesia. In the Asian American Pacific Islander National Landmarks Theme Study (Odo 2017), Stillman (2017:42) uses the "rubrics of place and mobility" as a means of framing discussions of Pacific Islander cultural history and commonality, and by extension consideration of historic preservation in the Pacific. Of the land-based rubric of place, she writes (Stillman 2017:43):

> … the rubric of place encompasses the physical geography and ecology, and the systems of stewardship to support all aspects of daily living. Intimate knowledge of the environment, combined with keen awareness of the limitations of natural resources on and surrounding islands, was manifest in systems of stewardship that could ensure survival and sustainability.

Stillman (2017) gives Nan Madol as an example of the Indigenous effort to order the Pohnpeian universe. The Latte Quarry at As Nieves is a comparable, nationally significant example of Indigenous effort within the Chamorro universe.

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[12] Butler (1997:323) describes the combined shaft and capstone pillar: "What inspired the latte builder to produce this specimen will never be known; perhaps it was simply a piece of limestone whose shape naturally lent itself to this outcome. In terms of published sources, it is the only recorded instance of such that I am aware of. Feature 9 is not among the largest or most impressive constructions on the site, but the uniqueness of this stone support must have made the structure special in some sense."

[13] The preponderance of other currently designated National Historic Landmarks in the western Pacific are related to World War II installations and/or battles.

6. PROPERTY DESCRIPTION AND STATEMENT OF INTEGRITY

Ownership of Property		**Category of Property**	
Private:		Building(s):	
Public-Local:	x	District:	
Public-State:		Site:	x
Public-Federal:		Structure:	
		Object:	

Number of Resources within Boundary of Property:

Contributing		**Non-contributing**	
Buildings:		Buildings:	
Sites:	1	Sites:	
Structures:		Structures:	
Objects:		Objects:	
Total:	1	Total:	0

PROVIDE PRESENT AND PAST PHYSICAL DESCRIPTIONS OF PROPERTY
(Please see specific guidance for type of resource[s] being nominated)

INTRODUCTION

The Latte Quarry at As Nieves consists of 17 pits in the limestone bedrock that contain partially or almost fully carved *latte* shafts (nine) and capstones (seven); one of the 17 pits is a trench that may be the initial stage of a quarry excavation as it does not yet have recognizable *latte* elements. In addition to the well-defined shafts and capstones are debris mounds at the edges of the quarry pits, which were likely produced as the *latte* elements were carved and possibly augmented by subsequent clearing of the pits (Filimoehala and Tomonari-Tuggle 2022:61); these mounds are visible as rolling, low-lying berms covered by soil and manicured grass.

The accompanying figures show some of the *latte* elements in the Latte Quarry at As Nieves. Although remaining unfinished, these *latte* elements are the largest known for the Mariana Archipelago and if fully erected, would have exceeded the 5 m tall House of Taga structure on the island of Tinian. The largest shaft (Shaft 5) weighs over 31,000 kg, and the largest capstone (Capstone 1) is estimated at over 19,833 kg.

LOCATION AND SETTING

The Latte Quarry at As Nieves is located in the east-central area of the island of Rota, just east of the Rota International Airport and the community of Sinapalu.

The Latte Quarry at As Nieves occupies 0.166 hectares on the level Sinapalu Plateau of central-east Rota and is maintained by the local government as a cultural park. The quarry itself, which is 46 m (east-west) x 36 m (north-south), and the immediately surrounding area is cleared and landscaped as an open grassy lawn, with scattered, isolated trees including *Casuarina* (*gagu*, ironwood), *Cocos nucifera* (*nijog*, coconut palm), and plumeria. A paved road bounds the site on the south side, with a native limestone forest to the south of the road. Stands of mixed introduced forest lie to the north, east, and west sides of the manicured park area.

In the area immediately around the site are modern features that were erected in the late twentieth or early twenty-first centuries as part of the development of the cultural park. About 5 m west of the Latte Quarry at As Nieves NHL boundary is a large and imposing monument featuring a statue of the chief Taga, the mytho-historical figure to which Chamorro stories attribute the construction of the quarry. The monument includes a concrete platform and ramps. Further west in what is now a densely vegetated area are the abandoned concrete foundations for a replica 6-pillar *latte* set. Immediately east of the NHL site boundary within the grassy area are two low, circular concrete/rock platforms that appear to have been intended as umbrella foundations to provide shade for visitors to the site.

PRESENT PHYSICAL APPEARANCE

The Latte Quarry at As Nieves consists of seven capstones and nine *latte* shafts at various stages of quarrying and completion, and one trench carved into the limestone bedrock. Fifteen of the monumental *latte* elements are still within the pits where they were being carved. A single capstone (Capstone 5) has been partially removed from its pit. Table 1 describes the individual quarry elements; see also the plan view of the quarry provided.

Capstone 6 and Shafts 3, 5, and 8 are fractured. Previous researchers suggest that the fracturing is the result of the poor quality of the limestone and may be the reason that the *latte* quarry was apparently abandoned. Seigrist (1996:16) describes the geology of the quarried stone at As Nieves as "coarse, poorly-cemented foraminiferal-molluscan limestone." Pantaleo et al. (1996:169) suggest that the poor cementation characteristic made for "fairly easy quarrying and sculpting, but was inherently weak" and this may be a possible reason for the abandonment of the quarry with the *latte* elements still in place.

Latte shafts in general vary in cross-section from square to rectangular to trapezoidal, generally tapering from a larger base to a smaller top but with great variation. Morgan (1988:136) observes that *latte* shafts at the Quarry at As Nieves (as well as the House of Taga on Tinian) display a slight convexity (i.e., entasis) but considers that it was not an intentional design of the builders (although it would have improved the stability of the shafts). Pantaleo et al. (1996:158) suggest that the convex shape on one side of the shaft is the result of quarrying:

> The larger shafts are quarried horizontally along their lengths, thus the bottom, or one side, of the shaft is necessarily rounded during reduction for ease of access. This may be similar to the "keeling" technique, so called because of its resemblance to the keel of a boat, used for the quarrying of the moai of Easter Island.

The *latte* elements are situated in well-defined quarry pits with nearly vertical walls (see examples). The space between the pit walls and elements (called "working space" in Table 1) varies from 59 to 106 cm for the shafts, and 70 to 99 cm around the capstones. Williams et al. (1996) suggest that this was a "minimum of material … cut away to form each stone and to provide room to work in." They also note that "the stones are not positioned adjacent to each other, which would have reduced the amount of excavation needed to form at least the shafts; rather, there seems to be a general pairing of shafts and caps."

Variations in the pits include two sets of well-carved steps leading into the Capstone 1 pit, and foot holes pecked into the wall of the Capstone 3 pit. Other pits have at least one side cut away "to form a lowered ramp … intended to aid in removing the completed stones from the pit" (Williams et al. 1996).

Table 1. Features in the Latte Quarry at As Nieves.

Element	Other No.*	Description**	Diameter (cm)	Length (cm)	Width (cm)	Height (cm)	Weight (kg)
Cap 1	7	Capstone; two sets of stairs are carved into the south side of the pit wall; 99 cm from base of pit to top of capstone	330.2	--	--	--	19,833.8
Cap 2	4	Capstone; 120 cm thick; working space is 79–87 cm	304.8	--	--	--	15,600
Cap 3	11	Capstone; 105 cm thick; working space is 81–99 cm; a notch (possible step?) is carved into the south side of the pit wall	325.1	--	--	--	18,932.5
Cap 4	9	Capstone; 110 cm thick; working space is 70–84 cm; slightly overlaps Shaft 5 pit	292.1	--	--	--	13,729.8
Cap 5	2	Capstone was almost entirely removed from its pit; base of pit contains large amount of fill, suggesting that removal of capstone involved backfilling method	292.1	--	--	--	13,729.8
Cap 6	14	Capstone; 103 cm thick; working space is 73–86 cm; capstone is fractured into four pieces	325.1	--	--	--	18,932.5
Cap 7	15	Capstone; 114 cm thick; working space is 75–88 cm; southern portion of the pit wall has been sloped or could be worn steps	312.4	--	--	--	16,799.3
Shaft 1	6	Rectangular cross-section; east-west orientation; working space is 86–106 cm; this shaft may have been in the process of being removed; the northern edge of the element is 30–40 cm higher than the natural ground surface	--	518.2	238.8	88.9	23,136.8
Shaft 2	5	Minimally shaped; north-south orientation; working space is 88–103 cm; shaft is minimally formed and only part of the southern portion is clearly excavated (the rest is only an outline); it was either in an early stage of quarrying, or was never re-excavated/exposed like the other elements	--	508	188	25.4	6,480.9

Shaft 3	10	Rectangular cross-section; east-west orientation; this shaft may have been in the process of being removed; the northern edge of the element is 33 cm higher than the natural ground surface; most of wall separating Shaft 3 and Capstone 3 has been removed	--	533.4	208.3	106.7	24,932.2
Shaft 4	8	Rectangular cross-section; east-west orientation; working space is 73–99 cm; wall separating Shaft 4 and Capstone 4 has been removed (April 2004 suggests so as to increase working space)	--	497.8	213.4	127	28,378.1
Shaft 5	12	Trapezoidal cross-section; north-south orientation; working space is 84–104 cm; shaft is fractured into five pieces	--	502.9	223.5	132.1	31,234.4
Shaft 6	13	Trapezoidal cross-section; east-west orientation; working space is 64–90 cm; wall between Shafts 5 and 6 has been mostly removed	--	518.2	264.2	104.1	29,986.5
Shaft 7	16	Trapezoidal cross-section; north-south orientation; working space is 79–106 cm	--	508	162.6	167.6	29,122.9
Shaft 8	1	Trapezoidal cross-section; east-west orientation; working space is 66–83 cm; shaft rests on its side; west end of the shaft is fractured	--	497.8	162.6	127	21,621.4
Shaft 9	3	Trapezoidal cross-section; north-south orientation; working space is 59–85 cm; the perimeter trench either was not completed or has been infilled since abandonment (it is unusually shallow compared to other pits)	--	523.2	208.3	67.3	15,431.2
Trench 1	--	Long, narrow, carved trench with east-west orientation; trench is much longer than any other excavated quarry element; may have been the initial stages of a multi-stone pit	--	--	--	--	--

* These numbers were assigned by Pantaleo et al. (1996) and used by Williams (1996). April (2004) used the Pantaleo et al. (1996) map and site data in his survey of the quarry site. The “Cap” and “Shaft” designations originate with Spoehr (1957) and were used by Lizama et al. (1981) and in the NHL-related survey (Filimoehala 2022; Filimoehala and Tomonari-Tuggle 2022).

** Working space refers to area between the *latte* element and the side of the quarry pit. This is the space that the quarry worker would have used to carve the element, and to prepare it for extraction.

NOTE: *Latte* element descriptions are based on the 2022 fieldwork carried out for preparation of the NHL nomination (Filimoehala 2022; Filimoehala and Tomonari-Tuggle 2022:Table 1). Dimensions and weights are based on calculations by Lawrence J. Cunningham and his students at Inarajan High School (Cunningham 1978, as presented in Lizama et al. 1981:Appendix A).

At the edges of the quarry pits are debris mounds that were produced during the process of carving the *latte* stones. These mounds are visible as rolling, low-lying features covered by soil and manicured grass. During test excavations carried out in support of the NHL nomination preparation, no significant archeological materials were identified, although metal fragments were observed within mounds in two shovel test pits, which indicate that at least some of them may, in part, relate to modern cleaning of the quarry features (Filimoehala and Tomonari-Tuggle 2022).

Additional probable quarry features are located to the east and northwest in heavily overgrown areas. However, none are of comparable size and character to the Latte Quarry features and are of such distance that they are not considered part of the Latte Quarry at As Nieves site. There are at least 13 features from 45 to 100 m to the east of the main quarry, including 12 depressions and peripheral mounds and one capstone (Lizama et al. 1981; Williams et al. 1996; Filimoehala and Tomonari-Tuggle 2022). Two features over 120 m to the northwest are depressions with low-lying mounds along their edges (Filimoehala and Tomonari-Tuggle 2022).

The features in the Latte Quarry at As Nieves exhibit a range from initial shaft outlines to completed (but not removed) shafts, indicating a range of manufacturing stages, although most appear nearly complete or finished. For example, Trench 1 is suggestive of an initial effort at creating a shaft (or possibly two), Shaft 2 appears to be in an early stage of carving, and Shafts 1 and 3 may be at the stage of removal from the pit. Capstone 5 has been completely removed from its pit and is lying on the surface.

HISTORIC PHYSICAL APPEARANCE

The *latte* elements in the Latte Quarry at As Nieves are in exceptional condition and undoubtedly represent their historic appearance at the time that the quarry was being worked. Given the number of features in the site, the stones would have been used for a four- or five-pair (8- to 10-stone) *latte* set, and their condition suggests that the quarrying activities occurred during a brief period of time. The date of quarrying activity is unknown, but several researchers (Butler 1997:323; Craib 1986:174; Hunter-Anderson 2012:164) have suggested that these stones, as well as the stones forming the House of Taga on Tinian, were shaped using metal tools, assigning a sixteenth- to seventeenth-century date to their construction.

The broader general landscape in which the quarry is set, however, has been considerably altered. The earliest published description of the general area is from Hornbostel's account of his initially unsuccessful search for the quarry in 1925 (Hornbostel 1935:287):[14]

> It may be thought that a large ruin could be found by following general directions, and this I at

[14] The denseness of vegetation on Rota was noted by several visitors to the island. A member of the 1819 Louis de Freycinet expedition gave the description of it as "Les points inhabités sont ici tellement hérissés de broussailles, qu'il est difficile d'y pénétrer" (translated as "The uninhabited places here are so bristling with undergrowth that it is difficult to get through.") (A. Bérard, in Freycinet 1829: 257). Georg Fritz (1904:27), District Officer of the German Mariana Islands from 1899 to 1907, also remarked on the dense vegetation.

> least attempted but without success as the locality it was in was covered with a dense virgin forest. Not only did the trees stand very close together, but the ground was covered with stout vines and thorny underbrush which meant that one could advance only very slowly and by means of hard work with a bolo.
>
> In addition to the entangling forest growth the surface it grew on was in places a mass of needle-like coral rocks here and there broken into crevices some of which were fifty or more feet in depth. Smaller crevices were covered by forest vines and if one did not keep his eyes wide open a plunge to the bottom of one of these and sure death would result.
>
> To make the search still more difficult was the fact that it showered now and again and a host of insects especially mosquitoes kept one's hands busy and therefore away from the bolo and forward motion.… After many days of fruitless work I decided that I could not by myself locate the mysterious ruin and held a long consultation with Juan Taitano, my obliging and friendly landlord.

Less than a decade after this, the island had been developed as a sugarcane plantation by the Japanese, and large areas of the Sinapalu Plateau were leased for cultivation. The direct impact of this intensive farming on the quarry site is unclear. It lies at the edge of the cultivated area (Illustration 7), and the 1974 NRHP nomination states that "preliminary clearing has been accomplished" which suggests that the site was forested (or re-forested) at the time. Accompanying photographs in the nomination show the immediate area of the quarry in low but not manicured grass, with a surrounding dense forest.

SITE MANAGEMENT AND PROTECTION

The Latte Quarry at As Nieves was recognized in 1974 as a significant historic property when it was placed on the US National Register of Historic Places (NRHP) as the "Rota Latte Stone Quarry." The site area has been maintained as a park since at least the early 1980s, for "Japanese tourists and other visitors to Rota" (Lizama et al. 1981:7). At some point, an imposing statue of the chief Taga was built on a large platform to the west of the quarry, and further west are a set of six footings that were to be the foundations for a concrete replica of a *latte* set (both are visible in a 2005 aerial image, but the concrete *latte* set was never completed and is now overgrown in dense vegetation). Two low, circular concrete and rock foundations, each about 2 m in diameter with a hole in the center, were installed immediately east of the quarry, presumably to hold shade umbrellas for visitors.

In 2004, at the request of local elected officials, the National Park Service conducted a reconnaissance survey of island cultural and natural resources to identify and evaluate alternatives for the establishment of a park or conservation area on the island (NPS 2005). Four cultural sites, including the Latte Quarry at As Nieves, were part of this survey, which found that the most feasible option for site protection was through creation of a national park unit, as that option "appears to be the best way to ensure the protection of Rota's nationally significant cultural and natural resources for future generations" (NPS 2005).

In 2017, the National Park Service initiated a Special Resources Study (SRS) to determine whether Rota contains nationally significant sites that are suitable and feasible for inclusion in the national park system (NPS 2020:2). Preliminary findings of the study found that natural sites associated with the island's limestone forests, sites associated with ancestral Chamorro culture, and historic sites associated with World War II meet the national significance criteria. The Latte Quarry at As Nieves is one of three exceptional sites that individually

retain national significance, in an island complex of 26 sites that were reviewed (including *latte* villages, rock art caves, rock shelters, artifact scatters, and other site types); the other two sites are Mochong Latte Village Complex on the north coast and the Alaguan Latte Village Complex on the south coast. Of the Latte Quarry at As Nieves, the SRS (NPS 2020:6) states:

> As Nieves Latte Quarry contains the largest latte stones known to exist in the Mariana Islands and is considered the best preserved quarry site in the archipelago. The site is also an exceptional expression of latte architecture, offering opportunities for comparative analysis with other examples of megalithic stone construction in Micronesia and the broader Pacific.

PREVIOUS STUDIES OF THE LATTE QUARRY

The earliest known documentation of the Latte Quarry at As Nieves is by Hans Hornbostel, who was on Rota in 1925 as a research associate of the B. P. Bishop Museum in Honolulu. The focus of his island research was the collection of artifacts, folklore, and place names, but he made a concerted effort to record the Latte Quarry, which was known only to local Chamorro.[15] After an unsuccessful attempt to carve a way through the dense forest, Hornbostel was forced to consult with his friend and landlord, and was able to convince some men (unspecified number) to get him close to the site and then just give him directions. They took him to a stopping point "in the forest" and pointed him in the direction of the site and he "plunged into the brush" and located the quarry within about 400 yards (Hornbostel 1935:300).

After finally reaching the site, Hornbostel produced several drawings and photographs: a plan view map, cross-sections of a quarried pillar, and two capstones, and a rendering of the imagined quarrying process. Hornbostel's field drawing of the Latte Quarry as As Nieves is included here. Hornbostel's field notes were summarized in 1932, but mention of the quarry is limited to a short paragraph (Thompson 1932:20):

> Ruins of large monuments have been reported from only a few localities on the east end of the island. Although monument ruins on Rota are reported to be larger than those on Tinian, details are available for only one site, which appears to have been an ancient quarry where uprights and caps were cut out of limestone. In this site, located at As Nieves on the northwest [sic] coast of the island, 7 complete and 2 partially cut limestone uprights and 7 limestone caps, all partially covered by surface soil, were found lying on the limestone base from which they had apparently been cut.

The quarry was again visited in 1950 by Alexander Spoehr (1957) during a brief, five-day archeological survey of the island. The focus of his work was the north coast and a portion of the south coast, but he also visited the quarry at As Nieves. He notes that at the time, in spite of considerable twentieth century disturbances, Rota retained more intact *latte* sites than Guam, Tinian, or Saipan (Spoehr 1957:102).

Gordon et al. (1980) conducted a literature review and preliminary reconnaissance survey of the island in 1980. One of the purposes of the month-long field survey was to "locate, map, and fill out CNMI Historic Property Forms for sites known to local residents" (Gordon et al. 1980:6). Their primary source of informant information

[15] Intensive archival research carried out as part of the NHL nomination preparation corroborates Hornbostel's assertion that nothing had been previously written about the site (or at least is known to have been written) before his own documentation (Simonds et al. 2020:60; Chapter III, Appendices A and B). The research included review of online sources, starting with Europeana (www.europeana.en), which is a web portal to European archives, and its U.S. equivalent, The Public Digital Library of America (https://dp.la/), which led to other sources.

was their field assistant, Abraham Charfours, a local hunter/fisherman. Forty-six Latte Period sites (as well as 19 historical period sites) were recorded: two quarries, three wells, seven rock shelters, one isolated sherd scatter, and approximately 113 discrete *latte* stone structures that were clustered into several complexes.[16]

Recent field surveys specific to the quarry area include Lizama et al. (1981), Pantaleo et al. (1993), Pantaleo et al (1996), Williams et al. (1996), and Filimoehala and Tomonari-Tuggle (2022).

In 1979, Lizama et al. (1981) carried out four days of survey and limited shovel testing in the area immediately east of the landscaped quarry, in an area of gently undulating ground that appeared to contain mounds and depressions. Vegetation was cleared and soil removed from several locations, exposing depressions from which additional capstones were removed, as well as one in-place capstone (Lizama et al. 1981:7):

> Approximately 19 meters east of the present eastern boundary of the quarry, fill was removed, exposing an apparent series of contiguous semicircular cuts into the limestone strata. These are possible sockets from which capstones have been removed. Approximately 45 meters east of this excavation, another spot was selected for excavation. Soil was removed, exposing a possible capstone, partially formed in the limestone. The capstone measured 85 cm. in diameter and was shaped to a depth of 30 cm. on the south side and 80 cm. on the north side. Fill was removed from a depression situated about 3 meters north of this capstone. The depression exposed a semicircular pattern left in the limestone.

Over a five-day period in 1988, a team of archeologists visited twenty sites identified from archival research and consultation with staff at the Rota Historic Preservation Office in a northeastern area of the island proposed for development of the Rota Resort (Hunter-Anderson et al. 1988). Six of the 20 sites are *latte* sites, including the previously known complexes at Mochong, Dugi, and Agusan (west of Mochong on the coast), and three other newly recorded *latte* complexes near or in the coastal zone.

Moore and Hunter-Anderson (1995) carried out survey of the proposed Rota International Airport expansion, involving survey of a strip of land parallel to and north of the original airport runway. One *latte* site was identified at the east end of the runway (Site 2). They also revisited the Mua *latte* set (CNMI Site RT-1-0156).

In 1992, an inventory survey of 650 hectares was carried out on the eastern plateau of the island, east of the Rota International Airport; Pantaleo et al. (1993) is a preliminary overview of the survey, and Pantaleo et al. (1996) is the draft final report (a finalized version is not available). As part of this survey, the first detailed maps of the quarry were produced at the request of the CNMI government, including drawings of features to the east of the main complex that were obscured by dense vegetation, presumably the same features first noted by Lizama et al. (Williams et al. 1996).

Of the 80 archeological sites that were identified by Pantaleo et al. (1996), 49 sites (including the Latte Quarry at As Nieves) are interpreted to be prehistoric Latte Period constructs, and the remaining 31 sites date to the pre-war and World War II-era Japanese occupation. The prehistoric sites include 36 *latte* sets and 55 charcoal/ash-rich soil mounds.

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[16] Adding some confusion to the island site inventory, Gordon et al. (1980:15) recorded two sites "at As Nieves": a highly disturbed *latte* site (Site RT-IP-06) and a nearby quarry (Site RT-IP-08). These sites are southwest of the subject property Latte Quarry at As Nieves. Interestingly, she describes these sites as "so badly disturbed by farming that we cannot be sure of the exact location of some of the *latte* sets," but they are not in an area shown to have been leased for Japanese farming.

Filimoehala (2022) and Filimoehala and Tomonari-Tuggle (2022) carried out survey, documentation, limited excavation, and photogrammetric recording of the main quarry as part of the preparation of the NHL nomination. Filimoehala and Tomonari-Tuggle (2022) also surveyed the areas to the west, east, and north of the main quarry, recording 15 quarry depressions or possible quarry depressions; several of these are features initially recorded by Lizama et al. (1981).

Summary descriptions of the quarry include Morgan (1988) and April (2004). The latter report includes verbal details of quarry features using the Pantaleo et al. (1996) base map.

ASSESSMENT OF INTEGRITY

The Latte Quarry at As Nieves retains a high level of integrity. The component features of the site (*latte* shafts and capstones in excavated depressions) are in excellent condition and in their original locations at the time the *latte* elements were being worked. Although Capstone 6 and Shafts 3, 5, and 8 have large fractures, these are the possible result of original attempts to remove the elements from the quarry pits or natural post-abandonment processes (e.g., earthquakes) and are therefore part of the historic and archeological character of the site.

The general landscape of the site area is maintained as a park, so there have been minimal historic or modern alterations that could adversely affect archeological subsurface contexts. However, during limited subsurface testing undertaken as part of the NHL nomination preparation, Filimoehala and Tomonari-Tuggle (2022:84) found that some of the dirt mounds surrounding the quarry pits may be the result of modern activity, possibly cleaning out of the quarry pits as part of park maintenance.

Further, the openness of the park provides an unobstructed view of the *latte* elements, and there are no surrounding modern uses or development that would detract from the historic feeling. The imposing statue of the chief Taga, built sometime before 2005, lies just outside of the proposed NHL boundary. While the statue may superficially appear to be intrusive, it is clearly representative of contemporary Chamorro culture, which places high value on *latte* and on the figure of Taga (see, for example, Marsh [Taitano] and Liston 2020). Thus, there is an overall retention of the sense of place and character. The Latte Quarry at As Nieves thus exhibits an exceptionally high level of all seven aspects of integrity of location, setting, feeling, association, materials, design, and workmanship, serving as an undisturbed quarry location with monumental *latte* components effectively undisturbed and *in situ*.

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_X_ Previously listed in the National Register (fill in 1 through 6 below)
__ Not previously listed in the National Register (fill in **only** 4, 5, and 6 below)

1. NR #: 74002225
2. Date of listing: December 23, 1974
3. Level of significance: State
4. Applicable National Register Criteria: A__ B__ C_X_ D_X_
5. Criteria Considerations (Exceptions): A__ B__ C__ D__ E__ F__ G__
6. Areas of Significance: Aboriginal (prehistoric); Architecture; Engineering

__ Previously Determined Eligible for the National Register: Date of determination:
__ Designated a National Historic Landmark: Date of designation:
__ Recorded by Historic American Buildings Survey: HABS No.
__ Recorded by Historic American Engineering Record: HAER No.
__ Recorded by Historic American Landscapes Survey: HALS No.

Location of additional data:

State Historic Preservation Office: X
Other State Agency: N/A
Federal Agency: N/A
Local Government: X
University: X (University of Guam, Micronesian Area Research Center)

Other (Specify Repository): n/a

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LIST OF FIGURES, LATTE QUARRY AT AS NIEVES, ISLAND OF ROTA, COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS (CNMI)

Figure 1. Location of the Latte Quarry at As Nieves on the 1999 US Geological Survey topographic map of the island of Rota.

Figure 2. Aerial photograph showing the *latte* elements of Latte Quarry at As Nieves, with NHL boundary.

Figure 3. Photogrammetric models of the Latte Quarry at As Nieves: plan view (top) and oblique view (bottom).

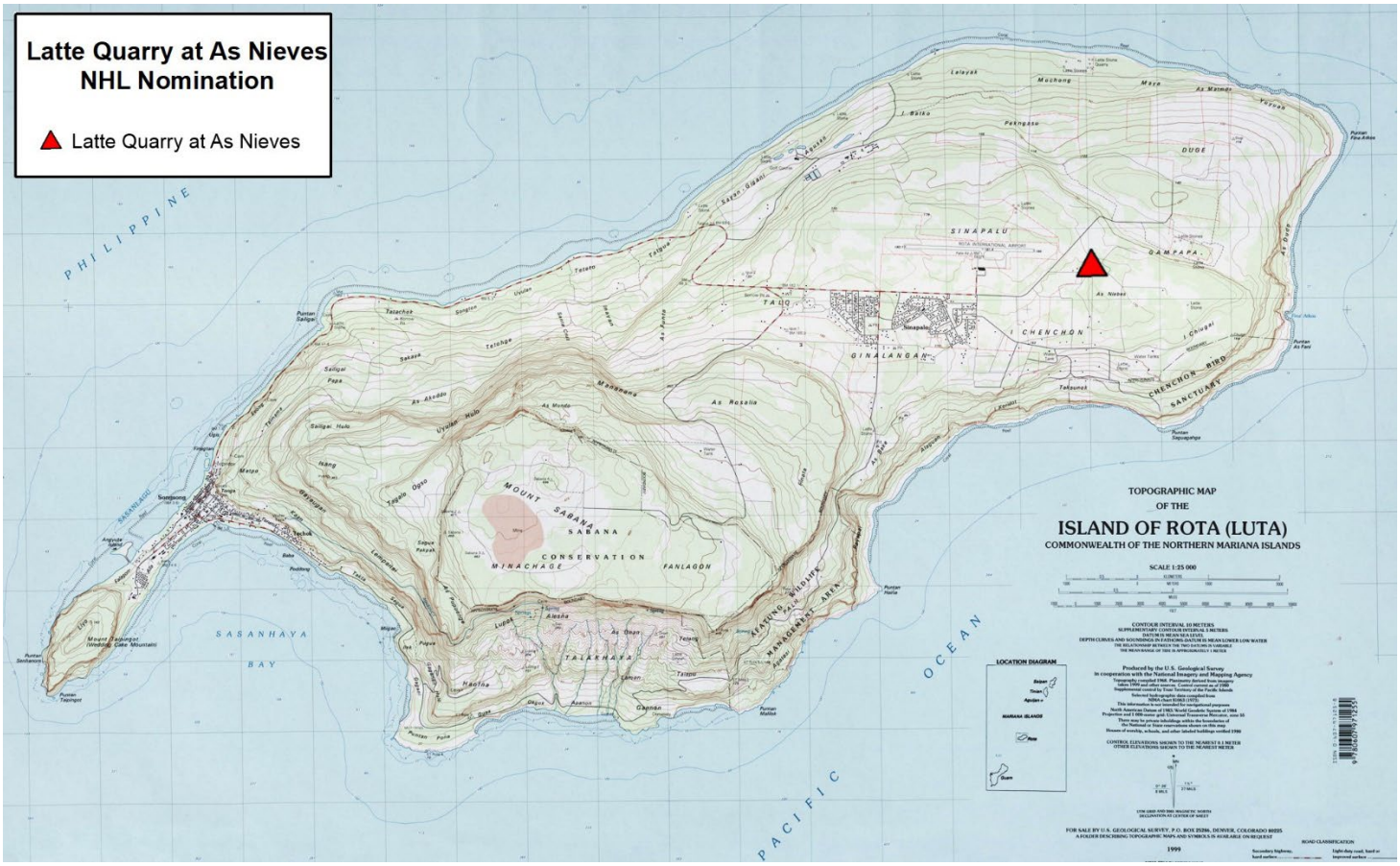


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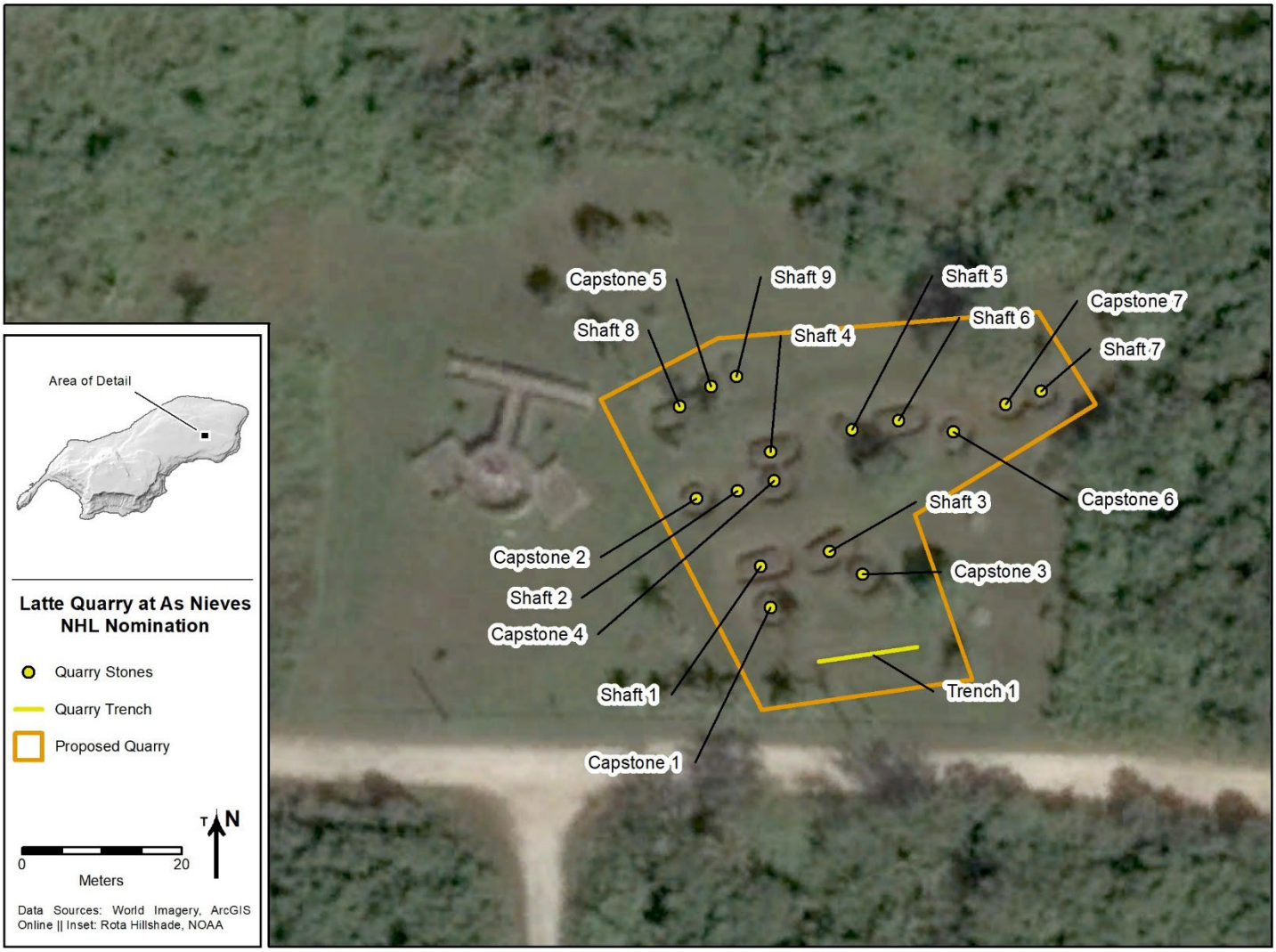


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Illustration 1. Boundary of the Latte Quarry at As Nieves National Historic Landmark.

Illustration 2. Plan view of the Latte Quarry at As Nieves (2022).

Illustration 3. Photographs of selected *latte* elements.

Illustration 4. Reconstructed perspective drawing of the House of Taga on Tinian (reproduced from Morgan 1988:147).

Illustration 5. Geographic regions of the island of Rota (taken from Gordon et al. 1980:Figure 2).

Illustration 6. A 1937 map of Rota, showing extent of lands leased by the Japanese sugarcane company (after Bowers 1950:263).

Illustration 7. Distribution of *latte* sets and quarries in eastern Rota.

Illustration 8. Statue of the chief Taga at the Latte Quarry at As Nieves.

Illustration 9. The Latte Quarry at As Nieves in 1974 (source: 1974 NRHP nomination).

Illustration 10. Plan view by Hans G. Hornbostel, 1925.



Illustration 5. Boundary of the Latte Quarry at As Nieves National Historic Landmark, with UTM references.



Illustration 6. Plan view of the Latte Quarry at As Nieves (in 2022).

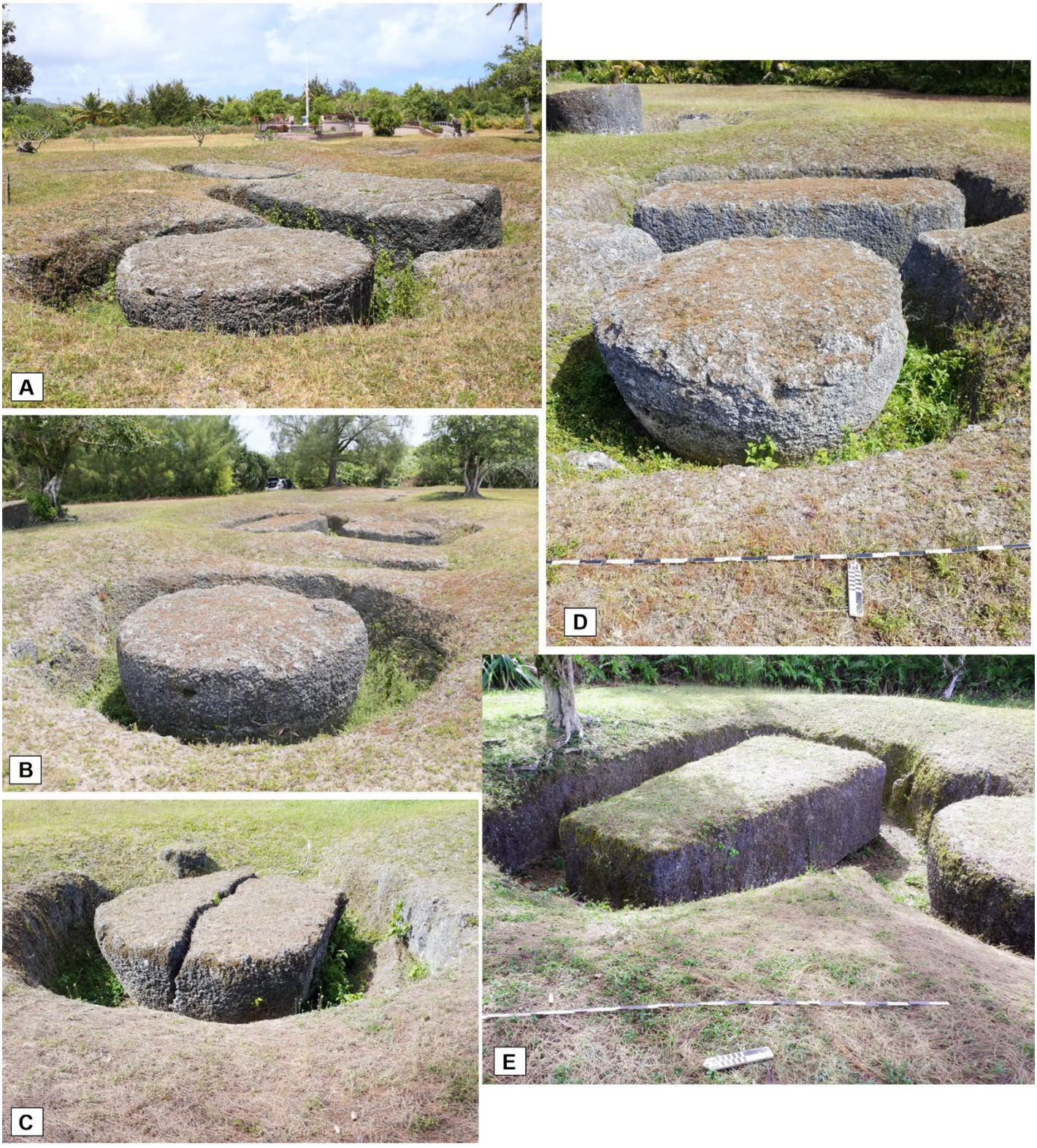


Illustration 7. Photographs of selected *latte* elements: A. Capstone 3 and Shaft 3, view to the northwest (the statue of the chief Taga is in the background); B. Capstone 2 in the foreground and Shaft 2, capstone 4 and Shaft 4 in the background, view to the east; C. Capstone 6, view to the south; D. Capstone 4 and Shaft 4, view to the north; E. Capstone 7 and Shaft 7, view to the southeast.

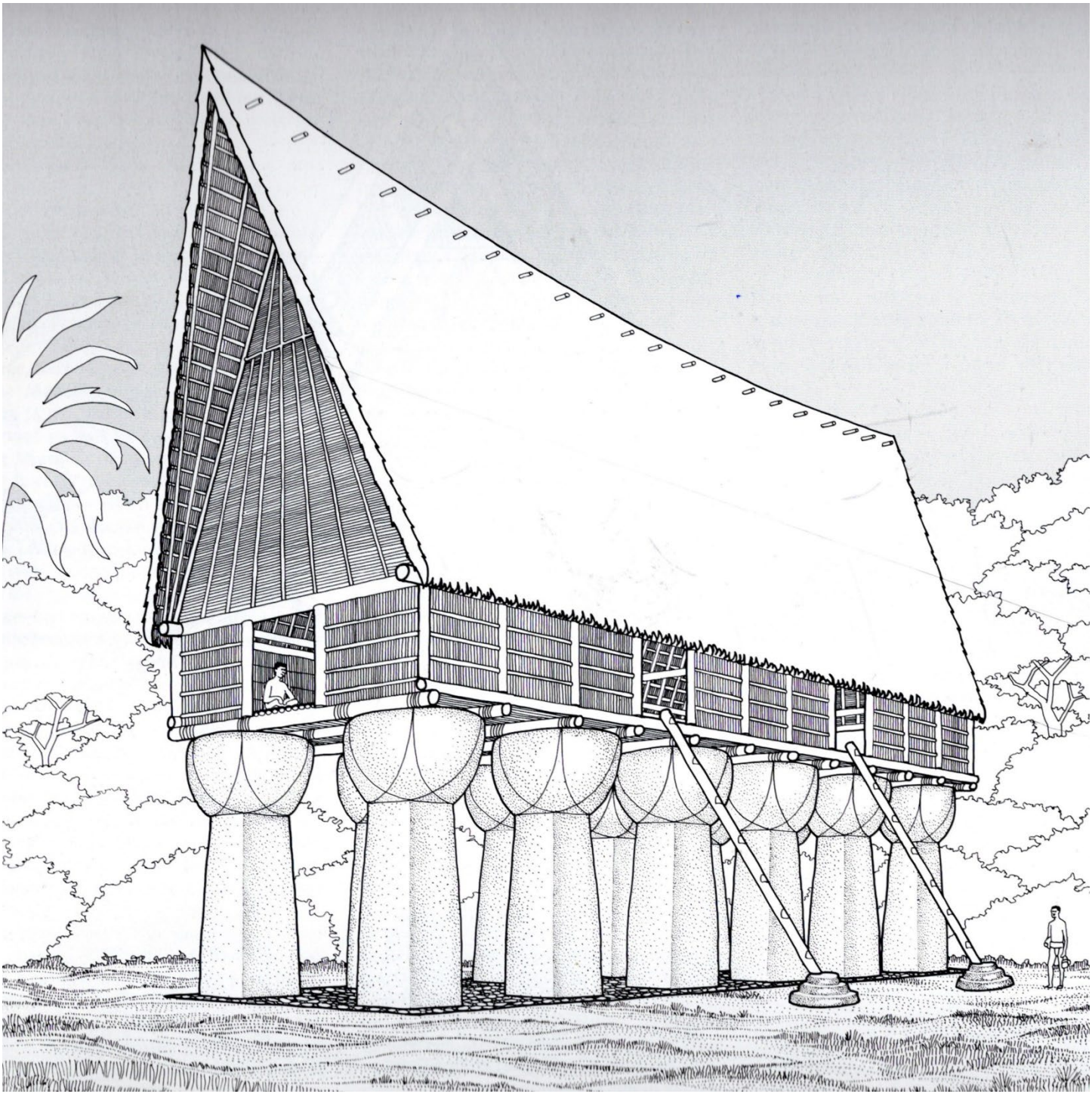


Illustration 8. Reconstructed perspective drawing of the House of Taga on Tinian (reproduced from Morgan 1988:147).

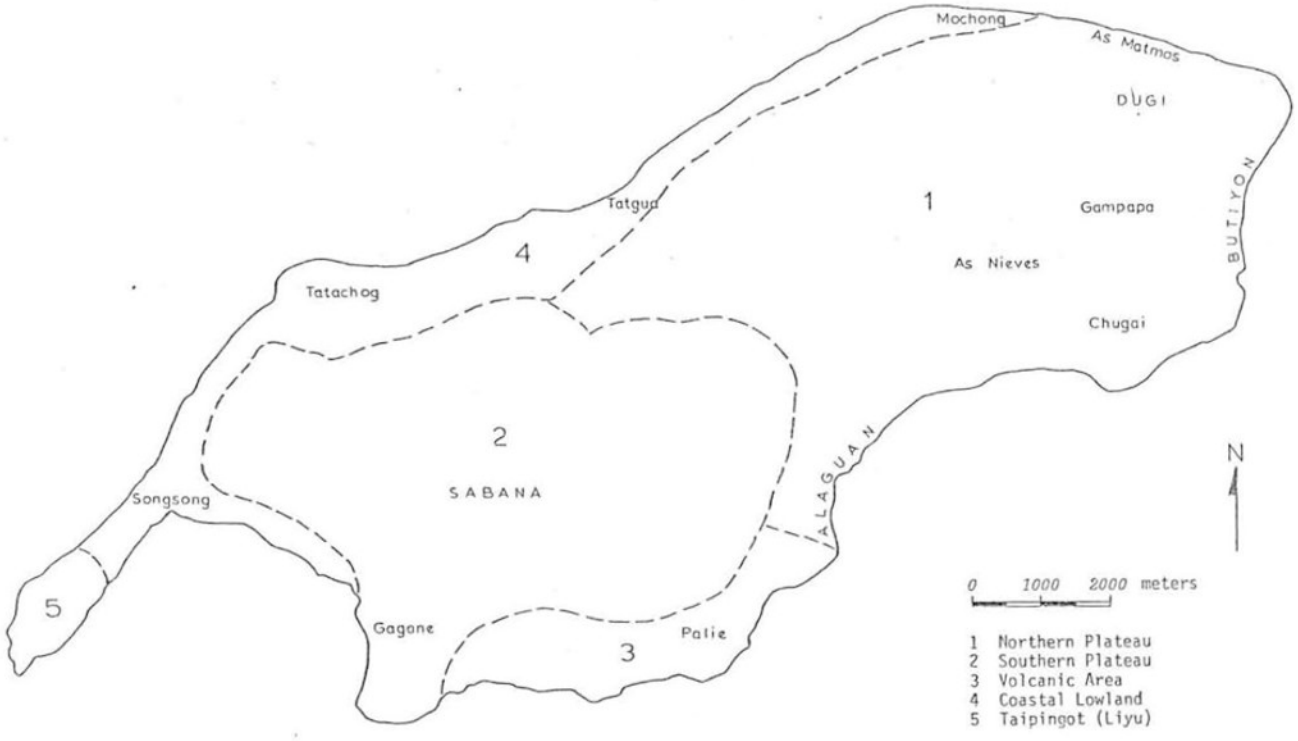


Illustration 5. Geographic regions of the island of Rota (taken from Gordon et al. 1980:Figure 2).

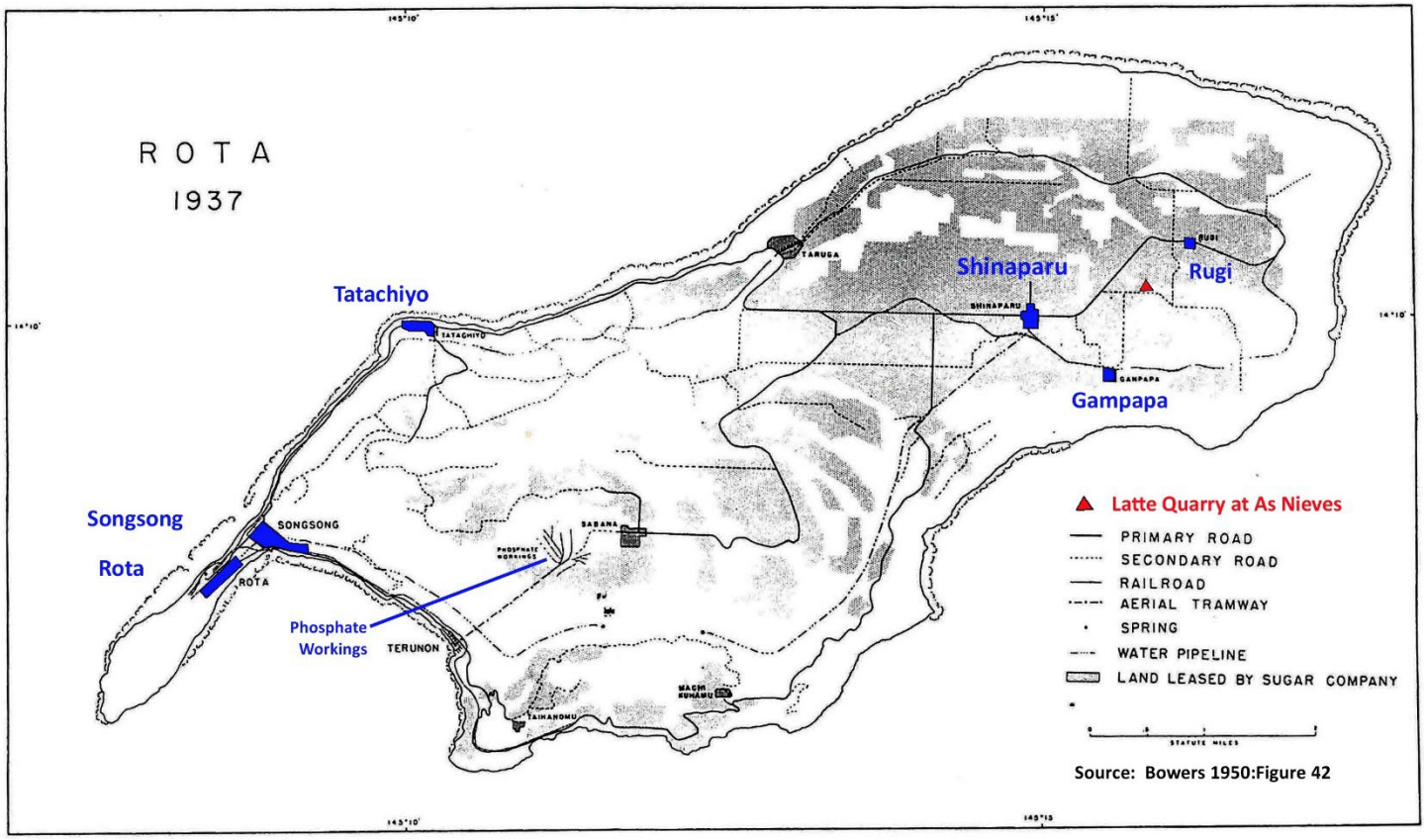


Illustration 6. A 1937 map of Rota, showing extent of lands leased by the Japanese sugarcane company (after Bowers 1950:263). Blue labels denote Japanese communities, the Chamorro village of Tatachiyo created by the Japanese, and the Japanese phosphate workings.

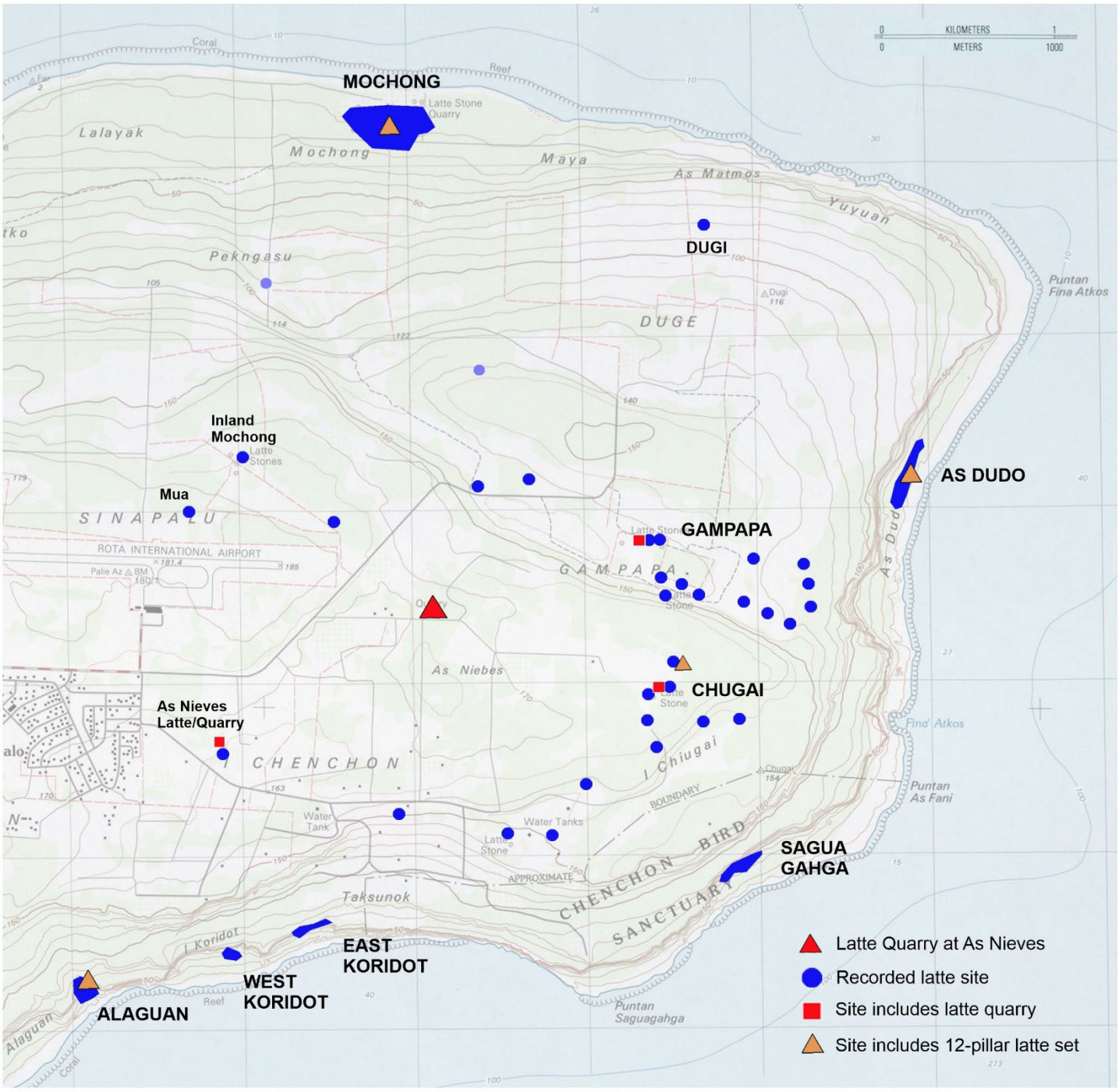


Illustration 7. Distribution of *latte* sets and quarries in eastern Rota.



Illustration 8. Statue of the chief Taga at the Latte Quarry at As Nieves. The inset photograph shows the scale of the statue by comparison with the individual (photo by Andrea Jalandoni, 2012).

Sha



Illustration 9. The Latte Quarry at As Nieves in 1974 (source: 1974 NRHP nomination).

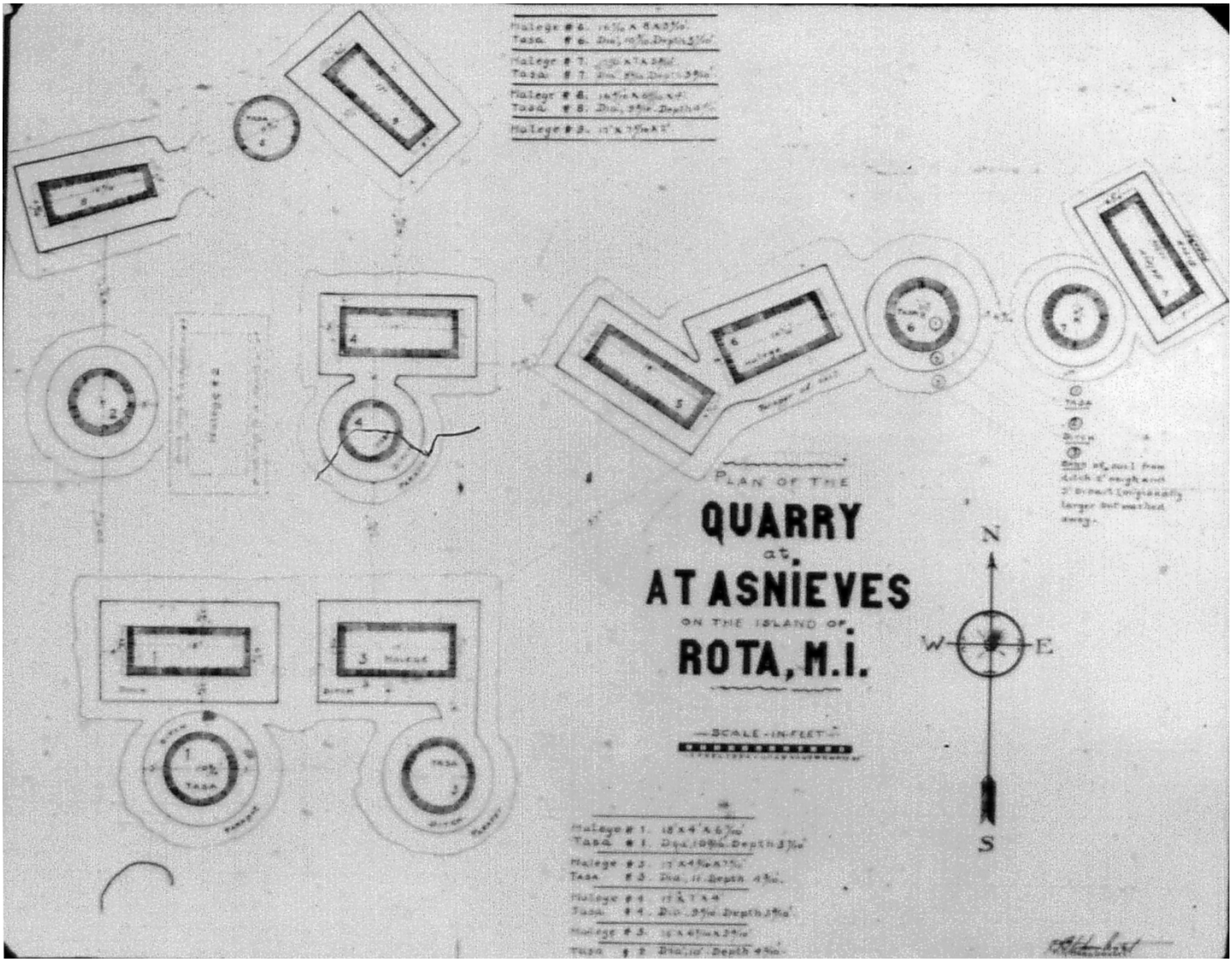


Illustration 10. Plan view by Hans G. Hornbostel, 1925.

LIST OF PHOTOGRAPHS, LATTE QUARRY AT AS NIEVES, ISLAND OF ROTA, COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS (CNMI)

Name of Property:	Latte Quarry at As Nieves
City or Vicinity:	Sinapalu
Island:	Rota
Country:	Commonwealth of the Northern Mariana Islands
Name of Photographer:	Christopher Filimoehala
Date of Photographs:	March 28 to March 31, 2022
Location of Original Digital Files:	2081 Young St., Honolulu, HI, 96826-2231
Number of Photographs:	8

Photo 1 of 8 (CNMI_Rota_Latte Quarry at As Nieves NHL_0001)
Capstone 6 (in foreground) and Shafts 5 and 6 (in mid-ground). Capstone 5, which is the only *latte* element that has been removed for its quarry pit, is in the far distant right. Camera facing west.

Photo 2 of 8 (CNMI_Rota_Latte Quarry at As Nieves NHL_0002)
Capstone 2 (in foreground) and Capstone 4 and Shaft 4 (in right mid-ground). Capstone 5, which is the only *latte* element that has been removed for its quarry pit, is at the left of the photo under the tree. Camera facing northeast.

Photo 3 of 8 (CNMI_Rota_Latte Quarry at As Nieves NHL_0003)
Capstone 5, which is the only *latte* element that is largely removed from its quarry pit. Camera facing south.

Photo 4 of 8 (CNMI_Rota_Latte Quarry at As Nieves NHL_0004)
Shaft 5 (in center) with Shaft 6 (in foreground). Shaft 5 is one of four *latte* elements with major cracks in the stone. Camera facing southwest.

Photo 5 of 8 (CNMI_Rota_Latte Quarry at As Nieves NHL_0005)
Trench 1, which may be the beginning of an excavation for a *latte* element. The raised circular feature in the background is one of two modern concrete platforms that appear to be foundations for visitor shelters. Camera facing east.

Photo 6 of 8 (CNMI_Rota_Latte Quarry at As Nieves NHL_0006)
Capstone 4 and Shaft 4. Capstone 5, which is the only *latte* element that has been removed for its quarry pit, is in the upper left of the photograph. Camera facing north.

Photo 7 of 8 (CNMI_Rota_Latte Quarry at As Nieves NHL_0007)
Capstone 3 and Shaft 3, with Shaft 1 just beyond in the background. The monument of the chief Taga is in the far distance. Camera facing southwest.

Photo 8 of 8 (CNMI_Rota_Latte Quarry at As Nieves NHL_0008)
Capstone 7 and Shaft 7. Camera facing southeast.



Photo 1 (CNMI_Rota_Latte Quarry at As Nieves NHL_0001.tif)
Capstone 6 (in foreground) and Shafts 5 and 6 (in mid-ground). Capstone 5, which is the only *latte* element that has been removed for its quarry pit, is in the far distant right. Camera facing west.



Photo 2 (CNMI_Rota_Latte Quarry at As Nieves NHL_0002.tif)
Capstone 2 (in foreground) and Capstone 4 and Shaft 4 (in right mid-ground). Capstone 5, which is the only *latte* element that has been removed for its quarry pit, is at the left of the photo under the tree. Camera facing northeast.



Photo 3 (CNMI_Rota_Latte Quarry at As Nieves NHL_0003.tif)
Capstone 5, which is the only *latte* element that is largely removed from its quarry pit. Camera facing south.



Photo 4 (CNMI_Rota_Latte Quarry at As Nieves NHL_0004.tif)
Shaft 5 (in center) with Shaft 6 (in foreground). Shaft 5 is one of four *latte* elements with major cracks in the stone. Camera facing southwest.



Photo 5 (CNMI_Rota_Latte Quarry at As Nieves NHL_0005.tif)
Trench 1, which may be the beginning of an excavation for a *latte* element. The raised circular feature in the background is one of two modern concrete platforms that appear to be foundations for visitor shelters. Camera facing east.



Photo 6 (CNMI_Rota_Latte Quarry at As Nieves NHL_0006.tif)
Capstone 4 and Shaft 4. Capstone 5, which is the only *latte* element that has been removed for its quarry pit, is in the upper left of the photograph. Camera facing north.



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Capstone 3 and Shaft 3, with Shaft 1 just beyond in the background. The monument of the chief Taga is in the far distance. Camera facing southwest.



Photo 8 (CNMI_Rota_Latte Quarry at As Nieves NHL_0008.tif)
Capstone 7 and Shaft 7. Camera facing southeast.