

**THREE REPORTS ON
ARCHAEOLOGICAL SURVEYS AND TESTING OF A 432.7-ACRE
TRACT NEAR INGLESIDE, SAN PATRICIO COUNTY, TEXAS**

**By
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And
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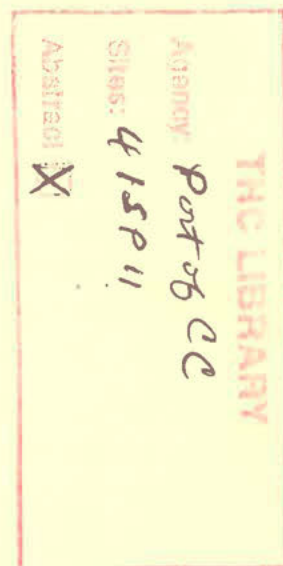
And

A DETAILED TOPOGRAPHIC MAP OF THE McGLOIN BLUFF SITE, 41SP11

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Texas Antiquities Permit #3385

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ABSTRACT

Three reports, two on separate phases of cultural resources survey, and one on testing of the McGloin Bluff Site (41SP11), are contained under the covers of this monograph. All three were originally intended as "stand-alone" reports. However, Mr. Paul Carangelo of the Port of Corpus Christi Authority requested the reports on the sequence of tasks and the pertinent findings be submitted simultaneously to the Texas Historical Commission (THC) for their review and comments. This has now been done, and the THC has concurred with the recommendations made by Coastal Environments, Inc., as put forth in the various reports.

The present set of reports are reproduced here in the same form in which they were reviewed by the staff of the THC. The first report describes and discusses a limited survey undertaken of part of the 432.7 acre tract of property that the Port of Corpus Christi Authority requester be subjected to an archaeological survey. No archaeological sites were found at this time, with the exception of 41SP11, an extensive and long-known Rockport Phase site originally reported by James E. Corbin. The second report describes an intensive survey of the remainder of the property, an area that was covered with dense brambles and thornbrush. No archaeological materials or sites were found within the area of this second survey.

The third report contained herein describes and discusses formal testing at the McGloin Bluff Site. During our initial survey, shovel testing within the area of this site produced aboriginal lithic and ceramic artifacts that suggested that this site might be eligible for listing on the National Register of Historic Places (NRHP) and for designation as a State Archeological Landmark (SAL), so it was recommended that testing be carried out for the purpose of determining if the site was so eligible. As discussed in the report contained herein, it was determined that the site has research potential that makes it eligible for listing on the NRHP and for designation as an SAL.

The final component of the work carried out within this project area was the production of a detailed topographic map of 41SP11, showing local topography and accurately delineating the boundaries of the site based on intensive shovel testing to determine the extent of subsurface archaeological deposits. This map is included herein, along with a letter to the Port Authority that explains how it was prepared.

Since the three reports are reproduced as they were originally completed, there is some redundancy of information herein. However, the reports show the sequence of work as it was carried out and provide an exposition of how the recommendations were determined.

41SP11 is the only site within the project area that was relocated during the surveys reported here. The testing at this site confirmed that the site is significant and eligible for listing on the NRHP and as an SAL. It is recommended that, if avoidance during future development of the property is not feasible, that formal data recovery be carried out at the site.

These tasks were carried out under Texas Antiquities Permit No. 3385. All archaeological materials recovered during these projects (all from 41SP11) have been inventoried and prepared for permanent curation, which will take place at the Texas Archeological Research Laboratory, The University of Texas at Austin.

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Cultural Resources Survey of a Portion of Port of Corpus Christi 432.7-Acre Tract near Ingleside, San Patricio County, Texas

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Extent and Goals of the Survey

The presently reported survey took place in the southeastern part of a tract of 432.7 acres owned by the Port of Corpus Christi Authority. The tract is located [REDACTED] Ingleside, Texas. The tract includes an extent of the northern shoreline of Corpus Christi Bay a 400-meter-long stretch of bay shoreline and extends inland for a distance of some 1800 meters (Figure 1). The entire area rests on the geologic formation of the Ingleside Strandplain, a sandy clay deposit of Pleistocene age (Brown et al. 1976). Eolian weathering of Holocene shoreline sands has resulted in an extensive mantle of medium-to-fine sand that blankets the Ingleside Strandplain deposit, so that the surface topography today is characterized by shoreline sand dunes and a hummocky surface of low dunes and swales immediately inland of the shoreline zone. Vegetation cover consists of a mix of grasses and brambles under a canopy of trees (mostly live oaks and thorn brush of hackberry and mesquite).

There were two goals in the present survey, as follows:

1. To examine the locations of previously recorded sites by means of surface inspection and shovel testing. A total of four prehistoric archaeological sites had been recorded within the survey area, the locations of which are shown in Figure 1. The present effort was designed to relocate these sites and determine if any merit testing for eligibility for listing on the National Register of Historic Places.
2. To examine the ground cover in the more inland part of the tract and assess the feasibility of further survey there. The extremely dense cover of brambles and thornbrush immediately inland of the shoreline zone was thought to perhaps present a significant impediment to effective archaeological survey work, and thus it was deemed necessary to determine if standard walkover survey and shovel testing would be feasible under the present ground-cover conditions.

A Brief Overview of the Area's Archaeology and Archaeological Sites Previously Recorded within the 432.7-Acre Property

The shoreline zone along this part of Corpus Christi Bay, including the inlet to the west known as Ingleside Cove, has been recognized as an archaeological area of considerable significance. Surface reconnaissance of the shoreline zone by James E. Corbin (1963), conducted over four decades ago, established the presence of extensive prehistoric Native American shell midden [REDACTED] Kinney Bayou at the [REDACTED] end of Ingleside Cove, along the Ingleside Cove shoreline, and [REDACTED] along McGloin's Bluff on the

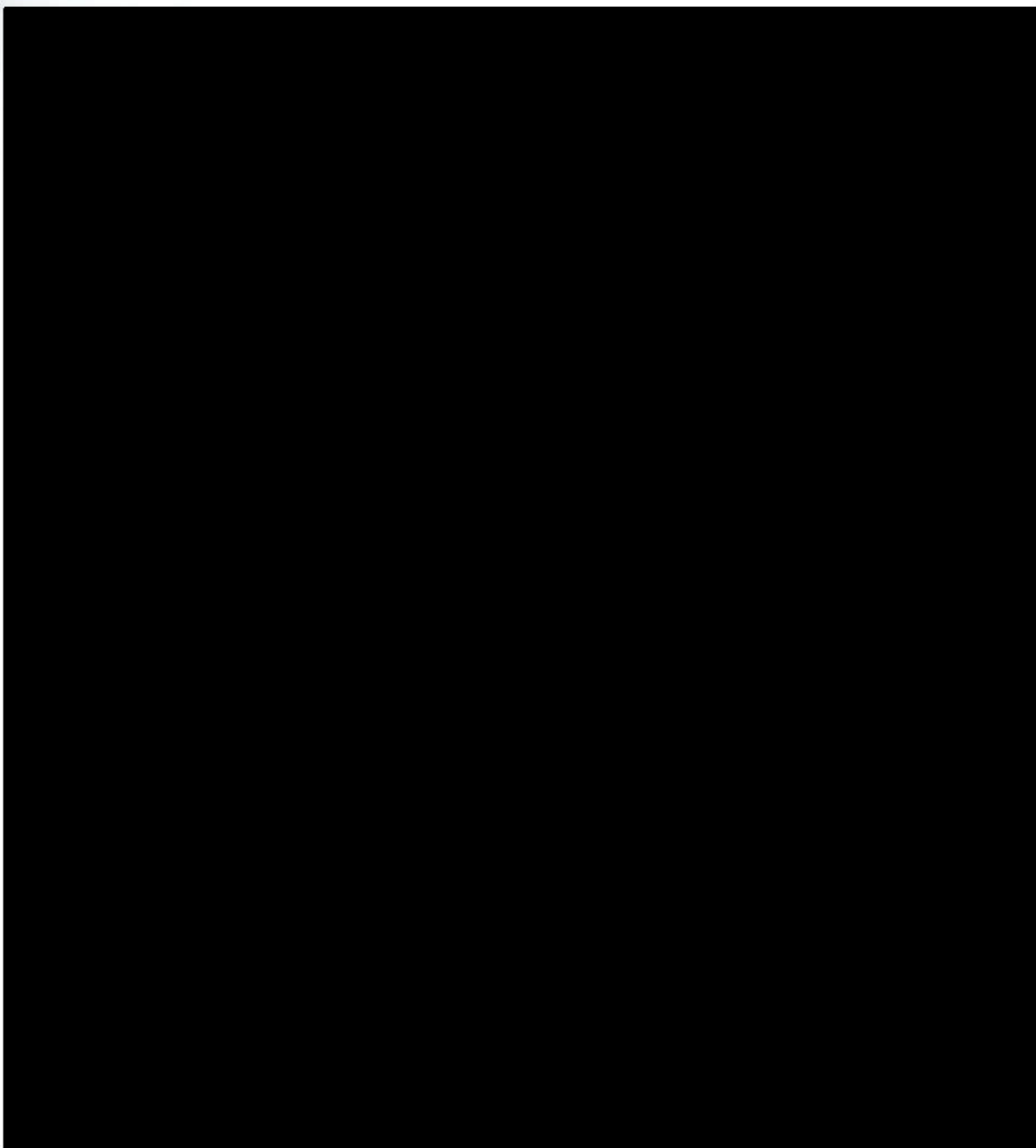


Figure 1. Map of survey tract, southern end of Live Oak Peninsula, showing tract boundaries and locations of previously recorded archaeological sites within those boundaries.

██████ shore of Live Oak Peninsula (Corbin 1963). The various sites reported by Corbin in these areas form a nearly continuous archaeological deposit that has produced abundant stone, bone, shell and ceramic artifacts spanning much of the known prehistory of the central Texas coast region. Excavations carried out on ██████ (Story 1968; Ricklis 1995, 1996) have revealed thick stratified shell middens of pre-ceramic Archaic times radiocarbon dated to between ca. 5000 years before present (b.p.) and 1000 b.p. and later ceramic-period deposits of the Late Prehistoric Rockport Phase, an archaeological construct that linked with the native Karankawan people of the area

(Ricklis 1996). [redacted] along the [redacted] shoreline of Live Oak Peninsula, Corbin identified a major Late Prehistoric Rockport Phase site, 41SP11 (the McGloin's Bluff Site) from which he reported several thousand fragments of Rockport ware pottery, and numerous chipped stone arrow points and other tools. A small group of burials of probable Late Archaic age was reported from the [redacted] of Live Oak Peninsula (Hester and Corbin 1974). A survey along the [redacted] area of the peninsula revealed additional shell midden deposits (Prewitt 1984).

Four sites have been recorded in the past on the Port property. These are:

41SP11, The McGloin Bluff Site. This is an extensive Late Prehistoric and possibly Early Historic Rockport Phase site [redacted]

[redacted] While most of the dune terrain is vegetated and stable, several deflated swales are found along the site, and ceramic and lithic artifacts have been collected here over the years. As noted above, most of the artifacts are typical of the Rockport Phase and include thousands of fragments of sandy-paste pottery, often decorated and/or coated with natural beach tar or asphaltum. Chipped stone, stemmed and unstemmed arrow points and other tools have been reported as well. A single glass bead was reported by Corbin, who suggested that it represented an Early Historic or Colonial-Period Native American occupation of the site.

41SP118 (see location in Figure 1) was documented during an archaeological survey of Baker's Port conducted by Prewitt and Associates, Inc. of Austin (Prewitt 1984). At the time of this survey, the site had been severely disturbed by bulldozer activity. Oyster (*Crassostrea virginica*) and whelk (*Busycon perversum*) shells, presumably representing prehistoric human food items, were found exposed in the disturbance, and one stone arrow point was also found, on the basis of which the site was assigned to the Late Prehistoric period. The surveyors estimated that between 0 and 40 percent of the site might have escaped destruction from the bulldozing. They also noted that the site was under a sand dune and may have been associated with ponded water in a nearby blowout (TexSite records).

41SP125, also recorded during the Baker's Port survey by Prewitt and Associates, was found [redacted]

[redacted]. The site was noted to be [redacted] of a large water-filled depression or blowout. The site was exposed by an unimproved road cut, revealing three shell concentrations, each 1.5-2 meters in diameter. The only shell species reported was *Busycon perversum*. Several modified busycon columellas were collected from one of the shell concentrations (TexSite records).

41SP129, again documented in the survey by Prewitt and Associates (Prewitt 1984), this site lies a short distance northeast of 41SP118 (see Figure 1). No diagnostic artifacts are reported, and thus the site can only be assumed to represent prehistoric human occupation on the basis of the scattered shell debris found there.

Survey Methods and Findings

As noted above, the two primary methods of investigation in the presently reported survey were pedestrian surface inspection and shovel testing.

The surface inspections were in places useful in confirming the presence of archaeological sites, most notably at 41SP11, where shell debris and prehistoric artifacts were observable in wind-deflated areas of the shore-parallel sand dunes in which the site is located. The shovel tests were useful in determining whether or not subsurface archaeological materials were present at a given location. The shovel tests (see Figure 2 for locations) were dug at locations previously determined to contain archaeological sites (the four sites listed above), as well as at the location of the proposed telecommunications tower at the [REDACTED] as shown in Figure 2.

Pedestrian Surface Inspection

The areas subjected to careful surface inspection were largely confined to known archaeological sites and surrounding terrain, as shown in Figure 2. The areas within the boundaries drawn in Figure 2 had fairly good ground exposure, particularly in blowouts and deflated areas in the shoreline sand dunes. Archaeological materials were observed in only one place, namely within a deflated blowout toward the eastern end of 41SP11, where 20 small sherds of Rockport ware pottery (see Figure 3) and a scattering of whelk (*Busycon perversum*) and sunray venus (*Macrocallista nimbosa*) shell fragments were exposed.

The ground within and immediately around the areas of the four recorded sites shown in Figure 2 was inspected for evidence of cultural remains. However, with the exception of the just-mentioned potsherds and shell in the blowout at 41SP11, no such materials were found.

Shovel Tests

A total of eight shovel tests was excavated. The locations of these, as plotted with a GPS device, are shown in Figure 2. Three shovel tests were dug within the bounds of 41SP11, two within the area of the proposed telecommunications tower at the [REDACTED], and one within each of the three other recorded archaeological sites within the surveyed tract. Each shovel test was excavated to a depth of at least 100 cm below the ground surface. Excavation was done with hand shovels and in 20-cm arbitrary levels. All excavated soil (invariably sand) was screened through ¼-inch mesh hardware cloth and any archaeological materials were collected according to provenience data of Shovel Test number and arbitrary level.

The soil characteristics and findings for each shovel test are listed in Table 1, along with well as a concise summaries concerning the presence/absence of cultural materials. Also indicated are the archaeological sites (by trinomial number) in which the given shovel

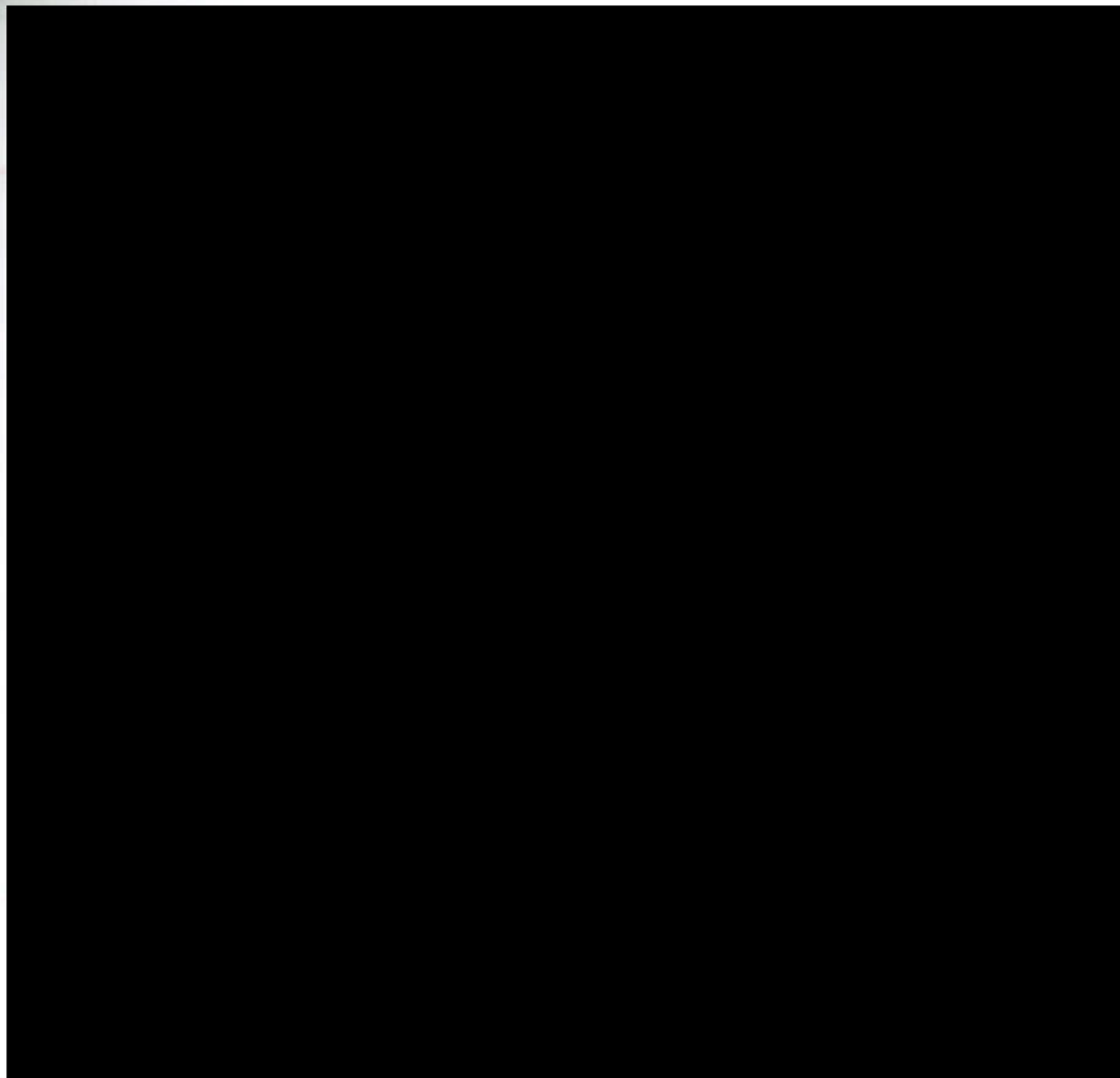


Figure 2. Map of survey area showing locations of recorded archaeological sites (red outlines), shovel test locations (red dots), and areas of surface inspection (blue outlines)

test was located, or the location of the telecommunications tower area for Shovel Tests 1 and 2.

As the tabulated data show, Shovel Tests Nos. 1 and 2, within the area of the proposed telecommunications tower, produced very little or no archaeological evidence. The only materials found were three tiny fragments of oyster shell in Level 4 (60-80 cm below surface) of Shovel Test 2. These largely negative findings, in combination with an absence of any observable cultural materials on the ground surface in that area, strongly suggest that no concentration of archaeological materials exists within the telecommunications tower area.

A contrasting situation was revealed in the three shovel tests dug within the bounds of site 41SP11. While Shovel Test 3 yielded only a single umbo fragment of a quahog

(*Mercenaria texana*) shell, Rockport Phase artifacts were found in Shovel Tests 4 and 5. These were most abundant in Shovel Test 4, located on a 35-foot-high dune; this shovel test produced 19 sherds of Rockport Ware pottery, shell fragments, a perforated whelk shell, a tiny fragment of burned faunal bone (taxon unidentified), small pieces of charcoal, and a small fragment of rusted iron sheeting that could conceivably be of early Historic or Colonial age. These materials were found in all arbitrary levels. Shovel Test 5, located some 100 meters to the east of Shovel Test 4 and at an approximately 10 feet-lower elevation near the aforementioned blowout that contained exposed artifacts, produced four shell fragments, four Rockport ware potsherds, and a unifacially retouched flake of chert (see Figure 3). Two rusted iron nails found in Level 1 of this shovel test (0-20 cm below surface) are assumed to be modern. These findings, as well as the materials collected from the exposed sand in the blowout, all conform with expectations for an extensive and relatively intensively occupied Rockport Phase site, as reported and inferred by Corbin (1963).

Shovel Tests 6, 7 and 8 were dug at the UTM coordinates listed (in TexSite), respectively, for sites 41SP125, 41SP129 and 41SP188. As may be seen in Table 1, no artifacts, shells or other objects of archaeological interest were found in any of these tests. A trace of dark staining in the sand at 80-100 cm below surface in Shovel Test 6 possibly reflects deposition of organic materials associated with human activity at 41SP125, though this is certainly not clear. Similarly, small flecks of charcoal at 60-100 cm below surface in Shovel Test 8 (41SP118 might represent human fire-building or cooking activities, though natural grass or brush fires could easily account for such materials. Generally, then, no clear archaeological evidence was found in these three shovel tests which, along with an absence of any surface evidence of human occupation, suggests that these sites are, at most, representative of short-term or even ephemeral human occupation and activity.

Examination of Terrain and Assessment of the Feasibility of Additional Survey

This was the second goal of our work, as already stated. Field personnel tested the feasibility of fully surveying the 431.7-acre tract by attempting to walk through areas of dense brush and brambles, which appears to cover at least 40 percent of the tract (with the remaining acres being largely covered by more widely spaced trees with a less dense understory of brambles). It was found that this is do-able, but at approximately half the pace that can be maintained on relatively open ground. Thus, it is concluded that additional survey on the tract can be done, but that more time should be allocated than would be the case under conditions of less-dense ground cover.

Recommendations

The following recommendations are made on the basis of the presently reported survey results:

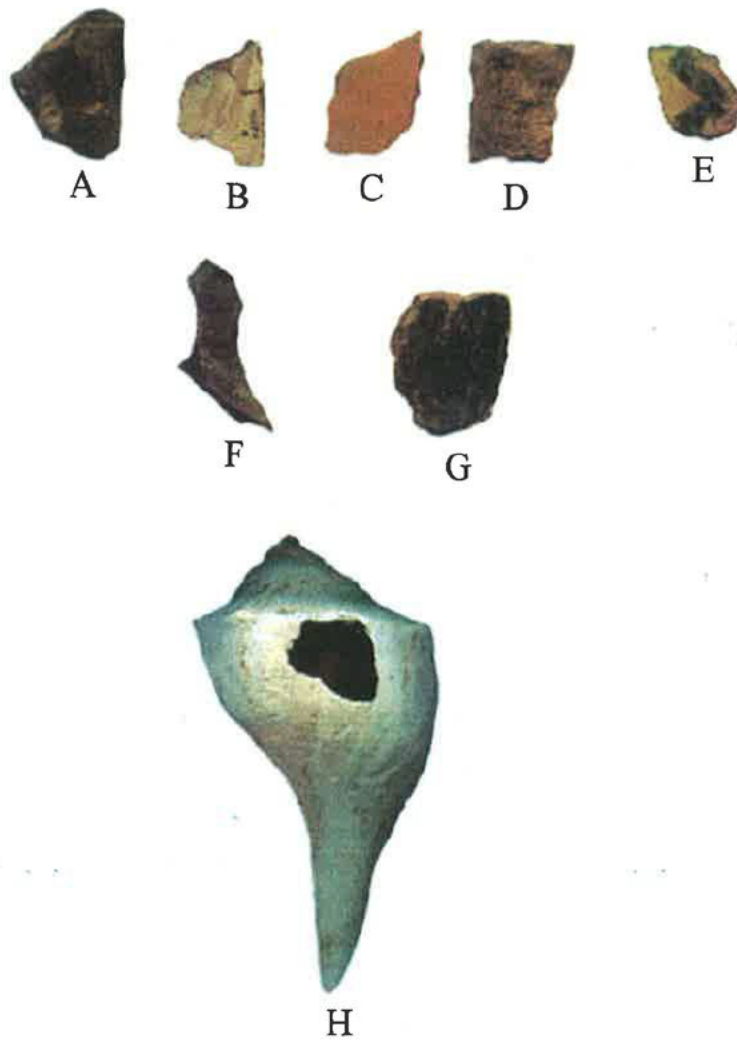


Figure 3. Artifacts found during survey at 41SP11. A-D, G, sherds of Rockport Ware pottery; F, retouched chert flake; H, perforated whelk (*Busycon perversum*) shell.

1. Our findings at 41SP11, the McGloin's Bluff site, confirms earlier assessments that the site is significant. The finding of fragments of Rockport ware pottery supports the interpretation of this site as a major locus of Late Prehistoric occupation.
2. The general absence of earlier time diagnostic artifacts (e.g., lithic dart points of the Archaic period) suggests that the site contains a single component of the Late Prehistoric Rockport Phase. The presence of organic materials such as shell and

charcoal suggests that the time range of this component could be defined by radiocarbon dating.

Given these conclusions, it is clear that 41SP11 has potential for eligibility for listing on the National Register of Historic Places. Thus, it is recommended that this site should be avoided in any future impacts or alterations to the property. Alternatively, if avoidance is not feasible, the site should be subjected to archaeological testing to formally define its NRHP eligibility and to provide the bases for recommendations for any possible archaeological mitigation.

1. No clear archaeological evidence was found on the surface or in the shovel testing carried out within the area of the proposed telecommunications tower. Three tiny fragments of oyster shell were found in Shovel Test 2, but the absence of artifacts or any substantial amount of shell or other cultural debris suggests that no significant cultural resources are present within this area. No further archaeological work is recommended at this location.
2. No cultural materials were found at the other three sites previously recorded for within the surveyed property, either on the surface or within the shovel tests. It is, therefore, concluded that these sites contained only sparsely distributed debris, to the extent that none could be located in the present survey. It is recommended that no further work be done at these loci.
3. Examination of the density of thornbrush and bramble groundcover over at least 40 percent of the property determined that additional survey is possible. This could be accomplished only more slowly than on relatively open ground, as surveyors would need to work their way through areas of obstructive brush. It is estimated that approximately twice the normal time would be required to move to, and set up at, locations selected for shovel testing.

Table 1. Shovel Test Data.

Site/Area: cell phone tower area

S.T. No.	Level	Soil	Soil Color	Contents
1	0-20 cm.	light gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	none
	20-40 cm.	light gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to	none

40-60 cm.	light gray medium sand	light gray 10YR 6/2 to 10YR 7/1 light brownish gray to light gray	none
60-80 cm.	light gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	none
80-100 cm.	light gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	none

Site/Area: cell phone tower area

S.T. No.	Level	Soil	Soil Color	Contents
2	0-20 cm.	light gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	none
	20-40 cm.	light gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	none
	40-60 cm.	light gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	none
	60-80 cm.	light gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	3 oyster shell fragments
	80-100 cm.	light gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	none

Site/Area: 41SP11

S.T. No.	Level	Soil	Soil Color	Contents
3	0-20 cm.	gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	none
	20-40 cm.	gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	none
	40-60 cm.	gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	none
	60-80 cm.	gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	none
	80-100 cm.	gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	1 Quahog shell fragment

Site/Area: 41SP11

S.T. No.	Level	Soil	Soil Color	Contents
4	surface	light gray sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	1 potsherd
	0-20 cm.	gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	4 potsherds, 1 shell fragment, 1 iron fragment

20-40 cm.	gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	8 potsherds, 1 possible utilized shell fragment, 2 shell fragments, 1 charcoal fragment
40-60 cm.	gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	3 potsherds, 1 burnt faunal bone fragment, 1 lightning whelk shell, 1 shell fragment, 1 charred wood fragment
60-80 cm.	gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	3 potsherds, 1 charred wood fragment
80-100 cm.	gray medium sand	10YR 6/2 to 10YR 7/1 light brownish gray to light gray	1 whelk shell, 1 Quahog shell cuneata shell, 1 shell fragment

Site/Area: 41SP11

S.T. No.	Level	Soil	Soil Color	Contents
5	0-20 cm.	gray medium sand	10YR 7/1, light gray	2 nails
	20-40 cm.	gray medium sand	10YR 7/1, light gray	3 shell fragments
	40-60 cm.	gray medium sand	10YR 7/1, light gray	none
	60-80 cm.	gray medium sand	10YR 7/1, light gray	none
	80-110 cm.	gray medium sand	10YR 7/1, light gray	1 chert uniface, 4 native potsherds, 1 Sunray Venus fragment

Site/Area: 41SP125

S.T. No.	Level	Soil	Soil Color	Contents
6	0-20 cm.	gray medium sand	10YR 7/1, light gray	none
	20-40 cm.	gray medium sand	10YR 7/1, light gray	none
	40-60 cm.	gray medium sand	10YR 7/1, light gray	none
	60-80 cm.	gray medium sand	10YR 7/1, light gray	none
	80-100 cm.	gray medium sand	10YR 7/1, light gray	some dark staining in strata

Site/Area: 41SP129

S.T. No.	Level	Soil	Soil Color	Contents
7	0-20 cm.	gray medium sand	10YR 7/1, light gray	none
	20-40 cm.	gray medium sand	10YR 7/1, light gray	none
	40-60 cm.	gray medium sand	10YR 7/1, light gray	none
	60-80 cm.	gray medium sand	10YR 7/1, light gray	none

	80-100 cm.	gray medium sand	10YR 7/1, light gray	none
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Site/Area: 41SP118

S.T. No.	Level	Soil	Soil Color	Contents
8	0-20 cm.	gray medium sand	10YR 7/1, light gray	none
	20-40 cm.	gray medium sand	10YR 7/1, light gray	none
	40-60 cm.	gray medium sand	10YR 7/1, light gray	none
	60-80 cm.	gray medium sand	10YR 7/1, light gray	miniscule charcoal flecking
	80-100 cm.	gray medium sand	10YR 7/1, light gray	miniscule charcoal flecking

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**Archeological Survey of Port of Corpus Christi 400+ Acres
Near Ingleside-on-the-Bay, San Patricio County, Texas**

by
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May 11, 2005

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Prepared for the
Port of Corpus Christi Authority
PCCA Project 04035A

Texas Antiquities Permit No. 3385

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Background Information

The survey discussed in this report was performed on a 432.7-acre tract of land [REDACTED], Texas. The survey was done under contract with the Port of Corpus Christi Authority. This investigation is in addition to a partial survey of the southeast part of the property that Coastal Environments, Inc. (CEI) has completed and reported (Ricklis 2004).

The [REDACTED] along the project area has long been recognized as having archaeological significance. Surface reconnaissance by James E. Corbin (1963) established the presence of prehistoric Native American shell midden sites around [REDACTED]

[REDACTED] The various sites reported by Corbin in this area form a nearly continuous zone of archaeological deposits that has produced abundant shell, stone, bone, and ceramic artifacts that span much of the known prehistory of the central Texas coastal region. Other excavations carried out on [REDACTED] (Story 1968; Ricklis 1995, 1996) have revealed stratified shell middens of pre-ceramic Archaic, that have been radiocarbon dated to between 5000 B.P. and 1000 B.P., plus ceramic-period deposits of the Late Prehistoric Rockport Phase, an archaeological construct that is linked the historic Karankawan people with the region (Ricklis 1996).

Coastal Environments' more recent survey work involved surface reconnaissance and shovel testing within a limited area adjacent to the corner of [REDACTED] [REDACTED] where construction of a cell tower was proposed (Ricklis 2004). Additional archaeological testing was carried out at 41SP11 by CEI during a two-week period in August 2004. Cultural materials excavated from the 41SP11 site also indicate that the area was occupied during the Rockport phase.

The current survey area is located [REDACTED]

[REDACTED] Near the shore are elongated sand dunes, and a hummocky surface of lower dunes and swales characterizes the more inland part of the project area.

The area is dotted with numerous freshwater ponds ranging in diameter from approximately 2 meters to about 70 meters. These areas are likely water-filled due to shallow aquifers, underground springs, and precipitation (Brown et al. 1976). Vegetation throughout the 432-acre tract consists of dense thorn brush, which placed a considerable constraint on accessibility to parts of the property. In some areas a canopy of Live Oak, Hackberry, and Mesquite trees overlay an under story of grasses, in these parts of the survey area, access was feasible. Through a combination of pedestrian walkovers and shovel testing in these areas, along with pedestrian survey along existing roads (see Figure 1), the project area was sufficiently well covered to allow for confident conclusions concerning the presence/absence of significant cultural resources.

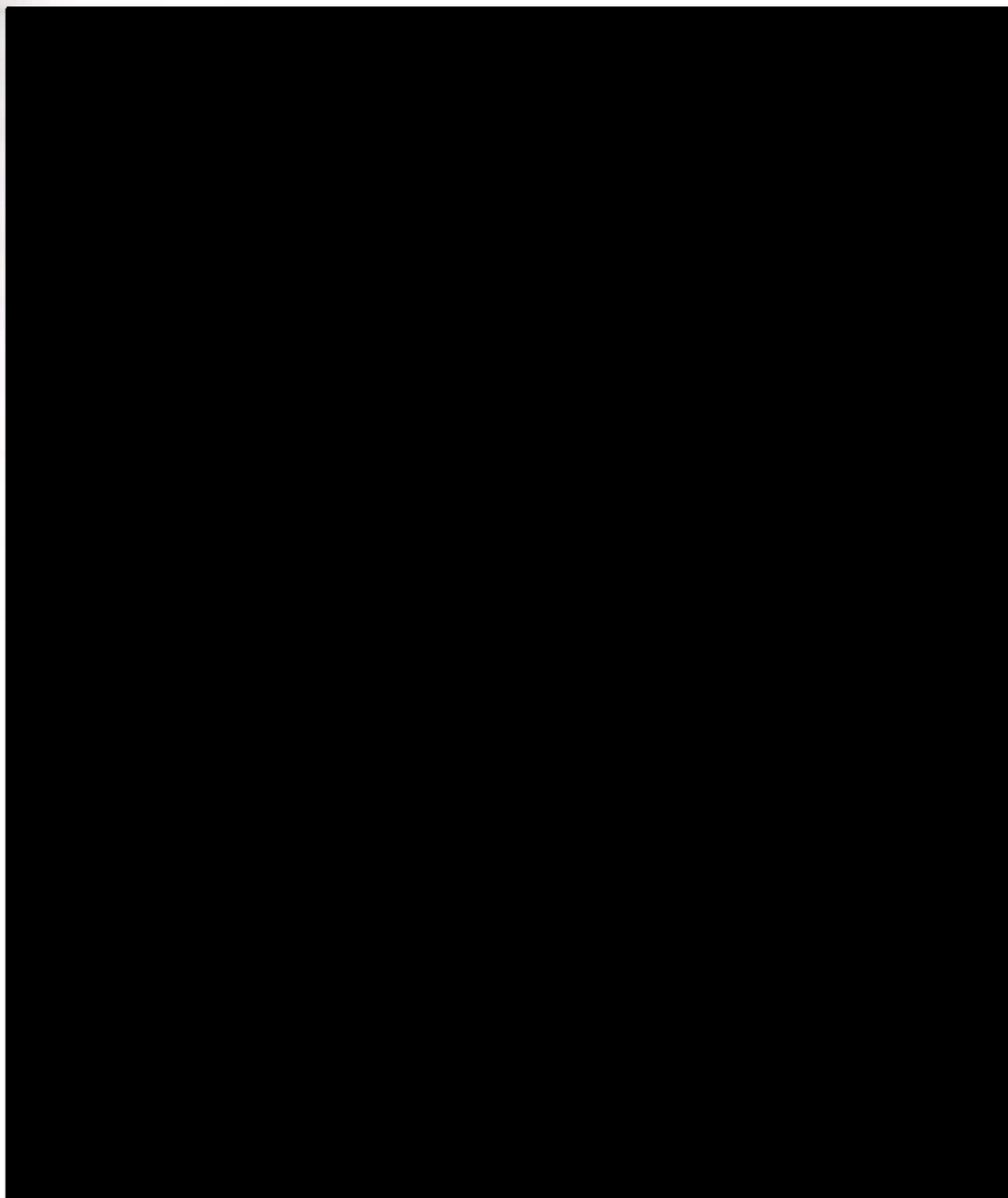


Figure 1. 432.7-acre survey area delineated by dash marks.

To date, four sites have been recorded within the 432-acre tract (Figure 2). Only one of these, 41SP11, was located during CEI's recent initial survey of the project area. That the three other sites were not relocated suggests that they are very ephemeral sites marked by scant cultural debris. The four sites are:

41SP11 McGloin Bluff Site Corbin first identified this as a major Late Prehistoric, and possibly early Historic site. He reported approximately 3,000 thousand pottery fragments, numerous chipped stone points, stemmed and non-stemmed, and other tools. Ricklis (1988) placed the site in his Group 1 category of Rockport Phase sites based on its size, the amount of artifacts reported from the site, and its shoreline location. This site is

[REDACTED]. Several deflated swales are found at the site, however, most of the terrain is vegetated and stable. Artifacts from the site are typical of the Rockport Phase and include fragments of sandy-paste pottery that is often decorated and/or coated with natural beach tar, or asphaltum. A single glass bead was also reported by Corbin (1963), who suggested that it represented an early Historic or Colonial-period Native American occupation. The site was relocated in our 2004 survey and subsequently tested to assess its eligibility for the National Registry of Historic Places (Ricklis 2004).

41SP118 This site was documented by Prewitt and Associates, Inc. (P&A; 1984) of Austin, Texas during an archaeological survey of Baker's Port. At the time of the survey, however, the site had been heavily disturbed by bulldozer activity. Oyster (*Crassostrea virginica*) and whelk (*Busycon perversum*), assumed to reflect prehistoric food items, were exposed due to the disturbance. One stone arrow point was also recovered, representing the Late Prehistoric period. P&A surveyors estimated that as much as 40 percent of the site had escaped destruction by the bulldozer. They noted that 41SP118 was under a sand dune, and was associated with a small pond in a nearby blowout.

41SP125 This archaeological site was also recorded during the survey of Baker's Point by P&A in 1984. It is located [REDACTED] from the Corpus Christi Bay shoreline, and about [REDACTED] south of State Road 1069. The site was noted to be just [REDACTED] and seemed to be exposed by an unimproved road that revealed three shell concentrations. The only shell species present was *Busycon perversum*, and several modified busycon columnellas were collected from one of the shell concentrations (TexSite records).

41SP129 Likewise, documented by P&A (1984), this site was reported to lie a short distance northeast of 41SP118. No artifacts were found so the site was defined only on the basis of scattered shell debris found strewn over the site.

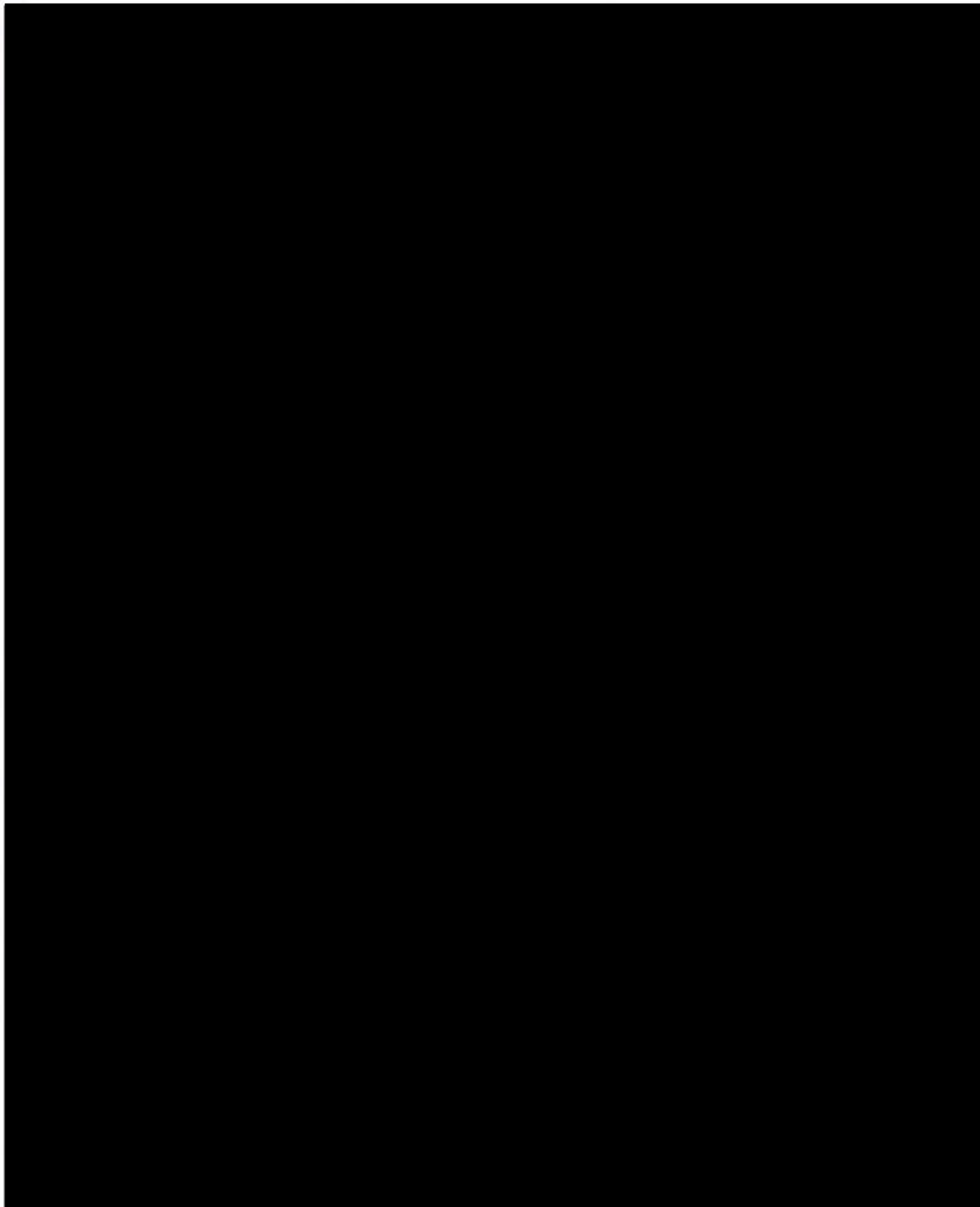


Figure 2. Other known sites within the survey area. Despite a previous intensive survey, only 41SP11 could be relocated.

The Survey Standards set forth by the Council of Texas Archeologists do not specify a particular number of shovel tests per acre on parcels larger than 200 acres. Therefore, it was proposed that CEI excavate approximately 100 shovel tests within the 423.7-acre area. However, heavy vegetation made it impossible to do so consistently throughout the project area (Figure 3). For this reason, a sample survey was undertaken, and included pedestrian inspection of at least 30 percent of the survey area, along with a total of 72 shovel tests (see Figure 1).

Results of the Pedestrian Surface Inspection

A significant portion of the 432.7-acre survey area was subjected to surface inspection. High ground – dunes – received particular attention, although the vegetation made accessibility virtually impossible in some areas. In these cases, visual inspection and trowel testing on the slopes was conducted. On two of the largest dunes, ATV paths with exposed ground were used for visual surface reconnaissance.

Two areas within the survey area exhibited surface scatters of shells. Shell scatter 1 (Figures 8 & 9) measured approximately 30x30 meters. It was made up exclusively of whole and fragmentary oyster shell. Shell scatter 2, located about [REDACTED] (Figures 10 & 11), and also consisted exclusively of oyster. Both areas were subjected to shovel tests, and the results are discussed below.

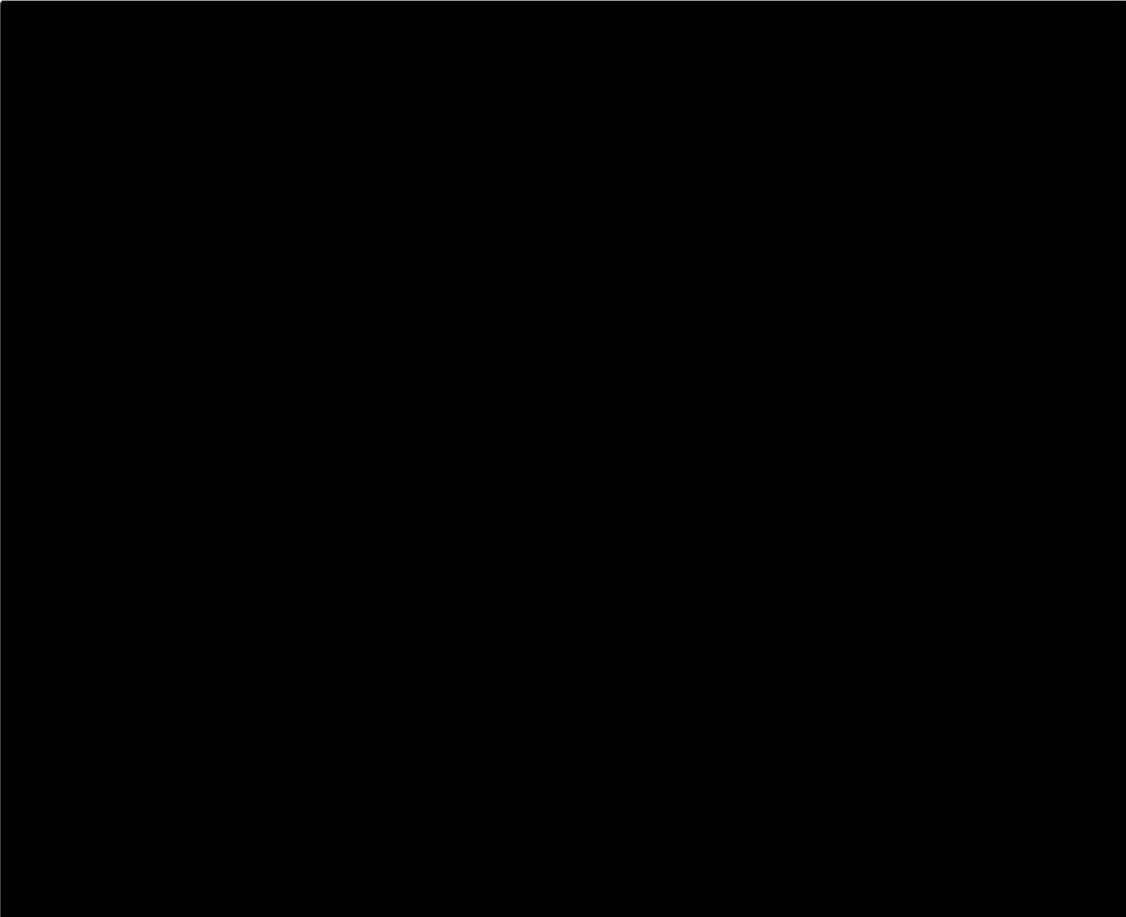


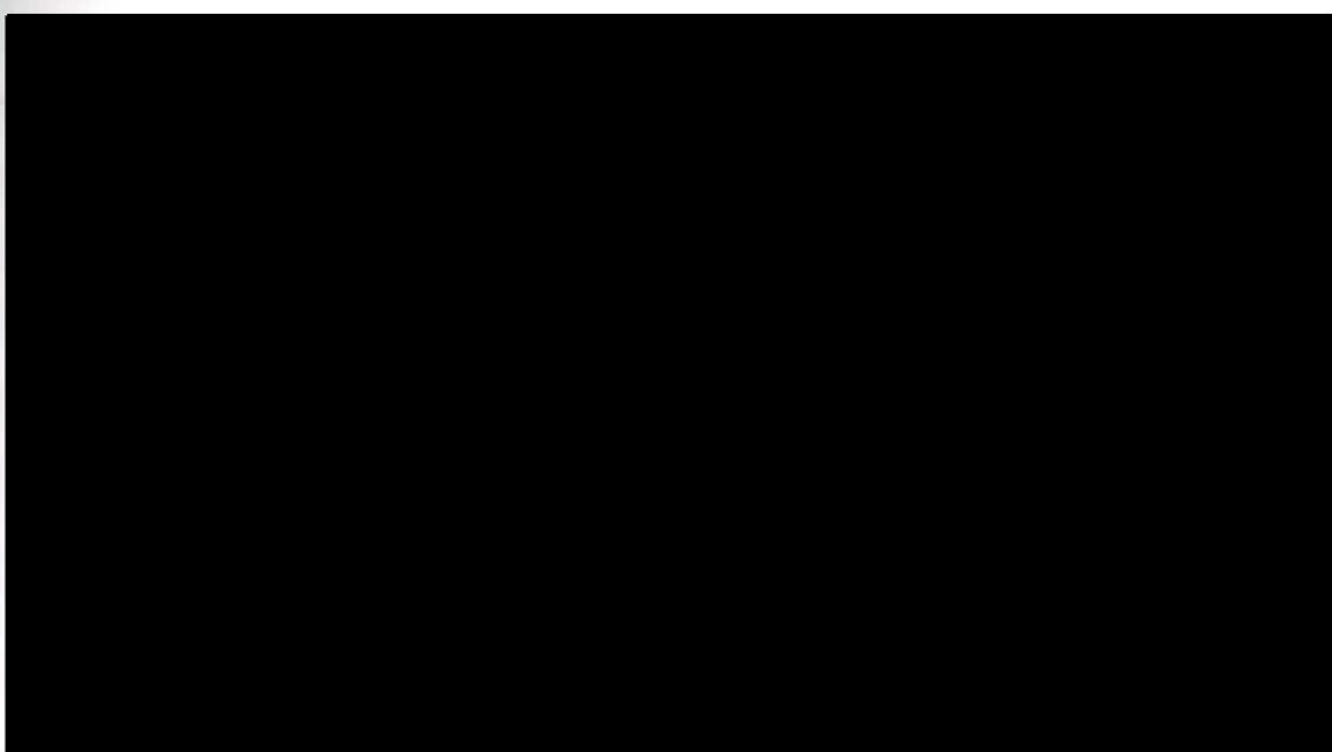
Figure 3. Heavy vegetation encountered throughout much of the survey site

Results of the Shovel Tests

Seventy-two shovel tests (STs) were dug in 20-centimeter (cm) arbitrary levels. Sand from the test sites was screened through a ¼ inch mesh hardware cloth. STs were placed around 14 pond areas, and several clearings. Shovel tests 1-6 were dug around Pond 1, located in the south-central region of the survey area (Figures 4 & 5). The pond is approximately 70 meters (m) in diameter, and is surrounded by heavy vegetation of Live Oaks and thorn brush. In all cases, the water table was often reached between 40-60 cm. The sand was medium-to-fine-grained throughout, and there was gradation in the color from 10YR 5/1 (gray) to 10YR 4/1 (dark gray). The STs at Pond 1 produced neither shell nor cultural material.

Shovel tests 7-11 were located around the perimeter of [REDACTED] (Figures 6 & 7). Shovel tests were conducted in the same manner as Pond 1, however there were two areas around the edge of the pond – to the southeast and north – where STs were not attempted. These areas appeared to be large mounds of earth most likely dredged from the pond. They were sparsely vegetated, and ground visibility was at least 60 percent in most areas. The area around Pond 2 was wetter than the previous pond, and ground water was present at a maximum of 70 cm below the surface. The sand here was fine-to-medium-grained, and consistently 10YR4/1 (dark gray) to 10YR5/1 (gray) in color. No archaeological materials were found in the STs 7-11, and none were observed on the apparent spoil piles.





Twelve smaller ponds and several clearings throughout the site were also shovel tested. STs conducted around these ponds were unremarkable. Sand here was medium-to-fine-grain, and was consistently 10YR5/1 (gray) in color. The water table was reached at a maximum of 70 centimeters below the surface. All STs were negative for shell or archaeological materials.

Shovel tests in the clearing sights offer no clear indications of aboriginal or historic occupation. Oyster and other shell were visible on the surface of the large blowout area marked as shell scatter 1 (Figures 8 and 9). This area is adjacent to what appears to be a dredged pond, and is higher than the land surrounding the pond. STs 59-64 revealed shell up to 100 cm, but with a significant decrease in the material after 50 cm below the surface. ST 63 produced densely packed oyster shell until 40 centimeters below the surface. The shell was a rusty color, and at 60 cm below the surface, a rusty bottle cap was found. As the shell above the bottle cap was so tightly packed, it is believed that the bottle cap did not sift down through the sand, but was present when the shell was deposited. The sand screened from ST 64 was fine-to-medium-grain, and 10YR5/1 (gray) in color; and the absence of darker-colored matrix at this location precludes interpreting the dense shell as a prehistoric shell midden. Rather, this shell deposit is interpreted as modern spoil shell deposition, inferably for the purpose of creating a stable surface for vehicular traffic.

Figure 9.
Densely
packed spoil
to 60 cm
below the
surface at
shell scatter 1,
ST 63. Note
rust stain
from bottle
cap.



Shell scatter 2 (Figures 10 & 11), [REDACTED] of Starlight Road also revealed densely packed shells. That this material represented one species of oyster (not the case at other reported shell middens in the area which contain a wide range of gastropod and bivalve species; e.g. Story 1968; Ricklis 1996) this deposit is not believed to be of prehistoric cultural origin. Rather, the densely packed oyster shells may be a spoil deposit perhaps placed here to facilitate vehicular traffic on the unconsolidated sand.

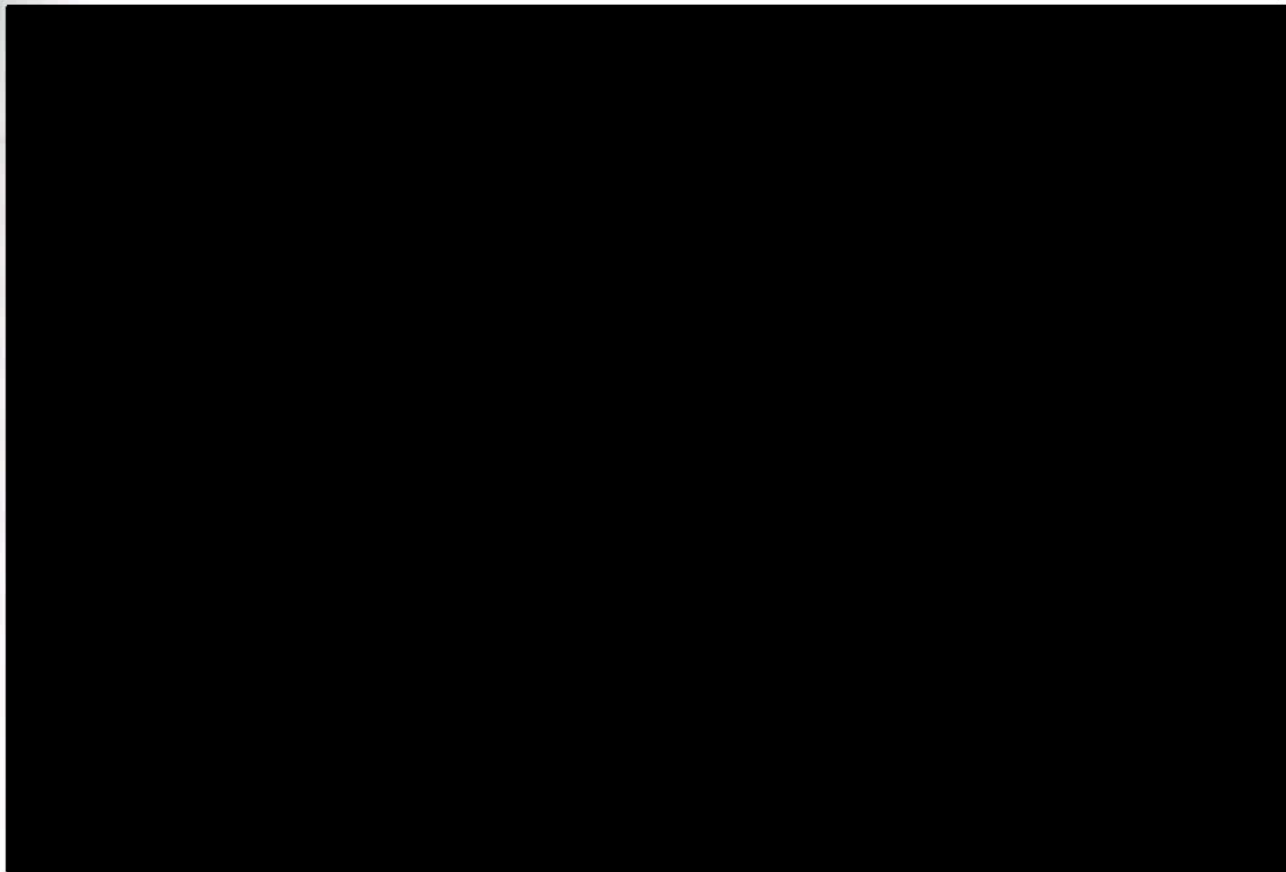


Figure 11. Densely packed shell from shell scatter 2

The northern edge of the McGloin Bluff Site (41SP11) was surveyed to determine the limitation of the site in that direction (see Figure 1). STs 65 and 66 were dug 30 meters and 15 m [REDACTED] of Block A. The area was largely overgrown with the vegetation common to the rest of the survey area, but as 41SP11 is on a relatively high and well-drained bluff, no water was encountered. The ST located [REDACTED] of Block A was negative, but ST 66, 15 m north of Block A, produced charcoal flecks and dark-stained sand possibly associated with prehistoric population occupation at 41SP11. Likewise, two STs were dug at 30- and 15-meter intervals from Block B. No cultural material or shell was found.

Conclusions and Recommendations

No archaeological evidence was found within the 432.7-acre survey area, either on the surface or within the shovel tests. Two shell scatters were encountered adjacent to a large dredged pond in the southern part of the quadrant, and in the area of the Starlight Road, respectively. They appear to represent dredge fill, judging from (a) the fact that oyster is the sole species represented (in contrast to shells found at nearby archaeological sites which consist of various bivalves as well as several species of gastropod), (b) the absence of organically stained matrices of the sort typically found at shell middens in the area, and (c) the complete absence of any artifacts or faunal bones found in association with the shell scatters. It is likely that the shells found were dredged from nearby Corpus Christi Bay, where numerous oyster reefs have been documented in historic times (e.g., Brown et al. 1976). It is also possible that dredging of the ponds immediately east of SS1 uncovered Pleistocene oyster reefs associated with the Ingleside Strandplain, the geologic formation that underlies the project area. A modern deposition of the oyster shells reported here is also strongly suggested by the finding of a bottle cap under the densely packed shell encountered in ST 63.

The complete absence of artifacts, faunal bone, or shell deposits with the attributes of shell middens (e.g. dark-stained soil matrix and cultural debris) within the project area strongly suggests that significant cultural resources are present. Many of the ponds were sampled during this survey, and it is our belief that these ponds are representative given that they are hydrographically and topographically identical with other water resources throughout the survey site. It is apparent then, given what we know regarding the environment of the area, that significant sites, such as the McGloin Bluff and the Ingleside Cove sites are found on the shoreline where food resources were readily available. For this reason, no further archaeological work is recommended in this area.

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Archaeological Testing at the McGloin Bluff Site, 41SP11, San Patricio County, Texas

**By
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**Prepared for
The Port of Corpus Christi**

Texas Antiquities Permit No. 3385

**Coastal Environments, Inc.
Corpus Christi, Texas**

2004

Abstract

Coastal Environments, Inc. (CEI) conducted archeological testing at the McGloin Bluff site in the summer of 2004, under Texas Antiquities Permits No. 3385. This was requested by Mr. Paul Carangelo as representative of the Port of Corpus Christi Authority, the project sponsor. CEI had carried out a survey of the site and adjacent ground earlier in the year, and our finds of Late Prehistoric potsherds and lithic debitage led us to recommend testing for eligibility for listing on the National Register of Historic Places. The findings made during the testing indicate that the site contains a single component pertaining to the Late Prehistoric Rockport Phase, as defined by diagnostic lithic artifacts and Rockport ware pottery. Good bone preservation allowed for the identification of mammalian, reptile and fish taxa. A variety of marine/estuarine bivalve and gastropod shellfish species are represented. Although cultural materials were vertically dispersed, as may be expected in the loose sand at the site, the greatest abundance was in a relatively dark-colored stratum that was discernible in excavation profiles. A radiocarbon assay on a large whelk shell from this stratum produced a calibrated date range of A.D. 1324-1416, well within age expectations for the Rockport Phase. Based on the abundance of Rockport Phase materials and good potential of the site to provide zooarchaeological data, it is concluded that the site is eligible for the National Register of Historic Places and for listing as a Texas State Archeological Landmark. Thus, if any ground-disturbance construction activities are planned at this location, it is recommended that archaeological data recovery be conducted beforehand in order to actualize the site's potential to contribute to understanding of the lifeway and culture of the Late Prehistoric people who occupied the site and the surrounding region.

Archaeological Testing at the McGloin Bluff Site, 41SP11, San Patricio County, Texas

The Goals of the Testing at 41SP11

Archaeological testing was carried out at 41SP11 by Coastal Environments, Inc. (CEI) during a two-week field period in August, 2004. This work was done on the basis of a recommendation made by the author to the landowner, the Port of Corpus Christi (PCC), that the site be tested for eligibility for listing on the National Register of Historic Places. CEI had surveyed the site in the spring of 2004 at the request of Mr. Paul Carangelo with the PCC, as part of a 432-acre tract of land acquired by the PCC. Shovel testing done on 41SP11 as part of that survey had shown that parts of the site contained abundant prehistoric Native American artifacts pertaining to the Late Prehistoric Rockport Phase, particularly numerous fragments of Rockport Ware pottery (Ricklis 2004). The primary goals of the subsequent testing was to better define the range of prehistoric artifacts at the site, and to assess the integrity of the culturally relevant deposits. It was anticipated that if cultural materials were abundant and in relatively undisturbed matrix, then the site might be considered eligible for listing on the NRHP.

Previously Obtained Information on, and Assessments of, 41SP11

The site was first reported in the regional archaeological literature by James E. Corbin (1963) as part of a report on surface-collected materials from the [REDACTED] of Corpus Christi Bay. Corbin, a professional archaeologist, had collected materials from the surface of the site when he was a resident of the nearby community of [REDACTED]. Corbin reported over 3,000 sherds of Rockport ware pottery, as well as chert arrow points (of Perdiz, McGloin, Fresno and other types), and chert scrapers and drills from the site. On this basis he concluded that 41SP11 was a significant site of the Late Prehistoric Rockport Complex (now Phase). The potential importance of the site was reiterated later in the appropriate entry in the Texas Historical Commission's internet website, "Texas Archeological Sites Atlas".

In the late 1980s, I examined Corbin's collection from 41SP11, housed at the Texas Archeological Research Laboratory of The University of Texas at Austin, and made a study of the sizeable sample of prehistoric ceramic fragments in that collection (see Ricklis 1996, Appendix A). Based on the large amount of material collected from the site, along with the recorded presence of apparently associated fish bones (Corbin 1963), I concluded that the site was one of several large fishing campsites of the Rockport Phase located on the shorelines of Corpus Christi Bay (Ricklis 1988, 1996). These sites I assigned to a "Group 1" site category, as distinguishable from smaller, less artifact-productive "Group 2" Rockport Phase sites found inland along upland margins overlooking streams such as Oso Creek and the Nueces and Aransas Rivers. A number of key characteristics defined the significant differences between these two groups of sites, which were all generally contemporaneous insofar as they all could be placed

within the same Late Prehistoric time period represented regionally by the Rockport Phase. Group 1 sites tended to cover relatively large areas (several thousand square meters), produced relatively abundant artifacts, especially Rockport ware pottery fragments, contained abundant fish and (sometimes) shellfish remains, indicating a major reliance on estuarine food resources, and were all located on bay or lagoon shorelines. By contrast, Group 2 sites were much smaller (generally covering no more than a few hundred square meters), had thin archaeological deposits with fewer artifacts, produced relatively large amounts of bones of game animals (i.e., deer, bison), little in the way of fish or shellfish remains, and were usually located some distance inland along stream-valley margins. Given that both categories of sites represented the Rockport Phase, as defined most prominently by the stylistically distinctive Rockport ware pottery, it was concluded that both reflected two different aspects of the settlement and subsistence pattern during the Late Prehistoric period along the central Texas coast (a region known locally as "the Coastal Bend"). This duality is reinforced by seasonality data on fish otoliths and oyster shells, analyses of which indicate that the shoreline Group 1 sites were occupied by sizeable groups of people during the fall through early spring seasons inferably as an optimal economic response to the high abundance of fish, particularly redfish (*Sciaenops ocellata*) and black drum (*Pogonias cromis*), during corresponding seasonal spawning cycles, while Group 2 sites were occupied mainly during the later spring and summer, when the large shoreline groups fissioned into smaller kin groups to move slightly inland, up stream courses, to focus their subsistence activities on hunting of bison and deer and to gather plant food on the coastal prairies and riverine floodplains. The detailed data that support this model of Rockport Phase settlement and subsistence patterns has been presented in detail elsewhere, along with Spanish colonial archival information on the same pattern as exhibited by the Karankawa Indians of the region, the aboriginal people who produced the archaeological materials of the Rockport Phase (see Ricklis 1992, 1996). The key criteria for a Group 1 site appeared to be met by 41SP11, and this site was placed within the Group 1 category, based solely on the surface finds made by Corbin (Ricklis 1988). A secondary goal of the testing at the site was to assess this categorization of the site on the basis of the data recovered from excavated test units.

The Environmental Context of 41SP11

41SP11 is

Corpus Christi Bay.

a sandy clay deposit perhaps around 100,000 years old (Brown et al. 1976). Most of the Peninsula is today capped with a veneer of eolian sand, creating a hummocky topography that supports dense stands of live oak and blackjack oak, with an understory of short grasses. The geologic age of the sand dune has not been determined, but it can be inferred that it postdates establishment of modern sea level during the last few thousand years of the current Holocene geologic era.

Corpus Christi Bay, like the other embayments along the Central Texas coast, was created as sea level rose in response to general global warming at the end of the Pleistocene, after ca. 18,000 ago. By around 9,000 years ago, sea level, which had been some 300 feet lower than present during the Pleistocene glacial maximum, had reached with a few meters of its present position, and had inundated the incised valleys created by

the subparallel rivers that flow into the Gulf of Mexico (e.g., Byrne 1975). Sea level approximated its modern position by ca. 3,000 years b.p. Under stable sea level conditions, ongoing wave action and longshore drift caused mid-Holocene offshore shoals to coalesce to form the modern, continuous barrier island chain that is broken only by narrow tidal passes such as Aransas pass at the northeast margin of Corpus Christi Bay. Simultaneously, river discharge into the bays dropped suspended sediments, leading to infilling and the creation of extensive shallows that provided the conditions for the emergence of grass beds and salt marshes.

The combination of bay-bottom sedimentation and barrier island formation resulted in the emergence of low-turbidity, protected estuarine shallows that provide ideal conditions for high aquatic photosynthesis and extensive vegetated shallows that are crucial for supporting a biotically rich food chain. The resultant extensive oyster reefs and other shellfish beds, and grass flats that provide ideal spawning areas for fish provided a rich ecological milieu for human hunter-gatherer populations, so that after 3,000 b.p. large, thick and extensive shell middens were deposited as prehistoric populations were drawn to the rich food resources of the geologically modern coastline.

The riverine floodplain woodlands and upland prairie of the adjacent interior provided edible plant foods and a dense mammalian game including whitetailed deer and bison. The available evidence suggests that bison were present on the south Texas coastal prairies at various periods during the Holocene (the last 10,000 years; see Dillehay 1974), and especially abundant during Late Prehistoric and Early Historic times (i.e., after ca. A.D. 1250-1300).

The Rockport Phase of the Central Coast Area

The Rockport Phase is an archaeological construct which, as noted above, represents the aboriginal Karankawan peoples of this section of the Texas coast. The linkage with the Karankawa culture is a confident one, given that (a) the archaeological phase has essentially the same geographic distribution as the territories of the several known Early Historic Karankawan tribes (see Newcomb 1961, 1983 and Ricklis 1996), (b) the Rockport Phase can be dated to the last few centuries of prehistory and into the early Historic Period (Ricklis 1996), and the distinctive Rockport ware pottery has been found in abundance at Eighteenth Century Spanish mission sites known to have been occupied by Karankawa groups, namely Rosario Mission at Goliad, Texas (Ricklis 2000) and Refugio Mission at Refugio, Texas (Perttula 2002). Moreover, Euroamerican artifacts of metal and glass have been found at non-mission Rockport Phase sites (e.g., Campbell 1957; Ricklis, in prep.), including 41SP11, from which Corbin reported finding a possible Colonial-Period glass bead. Such findings confirm the contemporaneity of the Rockport Phase with the period of early European exploration and colonization of the Texas coast and adjacent interior, when the Karankawas were observed and documented by French colonists (Newcomb 1983; Weddle 1987) and Spanish missionaries (see discussion in Ricklis 1996).

In sum, the extant information indicates that the McGloin Bluff Site, 41SP11, is a major shoreline (Group 1) site of the Rockport Phase, and thus also is a historic property that represents occupation by the Karankawa people known to have been the Native

American residents of the area at the time of first European contact. The report of a glass bead from the site (Corbin 1963) suggests that the site was occupied, at least in part, during the period of early historic interaction between Europeans and the native Karankawa folk.

The Prehistoric Culture Chronology of the Area

In order to put the Rockport Phase into chronological perspective, it is worthwhile to briefly summarize what is currently known about the regional cultural sequence (see summary presented as Table 1). As noted repeatedly above, the Rockport Phase emerged during what is known as the Late Prehistoric Period, a temporal interval identified over much of Texas and characterized by a set of fairly constant traits in the archaeological record. Radiocarbon dates from numerous archaeological sites place the Late Prehistoric at between ca. A.D. 700/800 and the time of initial European exploration and settlement in the late 1600s to early 1700s. The Rockport Phase pertains to the later years of this period, with a date range estimated between ca. A.D. 1250/1300 and ca. A.D. 1700, when native culture started to become affected by the introduction of Euroamerican ideas and technology, and when native populations began to decline as the result of the introduction of Old World diseases such as smallpox and measles (see Ewers 1973).

The Late Prehistoric was the final period of cultural expression in aboriginal Texas, following upon millennia of human occupation and a long series of cultural developments as evidenced by changes in technology and style in surviving artifact assemblages. The region's first definitively identified inhabitants were early hunter-gatherers known archaeologically as Paleo-Indians. The Paleo-Indian period begins at the end of the Pleistocene Epoch (the popularly known "Ice Age"), around 11,000 B.C., based on calibrated radiocarbon dates, and lasts into the early Holocene until around 7,000 B.C., when regional climate became warmer and began a long drying trend. During the earlier Paleo-Indian period, hunting included the killing of large, now-extinct megafaunal species such as mammoths, mastadons, and early species of bison that were larger than their modern descendents. Human groups were probably highly mobile, ranging over expansive territories. Most probably, human population density was low relative to that attained during later times.

Starting at ca. 7,000 B.C., peoples in what is now Texas (and North America generally) began to focus on more localized subsistence and settlement patterns, which is reflected in an emergent regionalization in artifact forms, most clearly in stone projectile point shapes. Whereas during the Paleo-Indian period, especially its earlier aspect, essentially the same specific types of points were made over vast areas (e.g., the Clovis point type, dated to ca. 11,000 B.C. is found throughout the continent), the following cultural period, termed the Archaic, is characterized by a plethora of different point types, each of which is found within a limited area or region. This can be generally inferred to reflect reduced group mobility with more narrowly circumscribed territories. During the Archaic, then, people in different places came to have cultural adaptations that were specifically suited to the post-Pleistocene environmental mosaic of a given area.

Table 1. Simplified Culture Chronology Chart for the Central Texas Coast Region.

Years B.P.	Phase/Period	Diagnostic Artifacts	Culture-Adaptive Patterns
	Historic Karankawa	Pottery, Lithics, European goods	Use of Spanish Missions
	Rockport Phase	Rockport pottery, lithics	Seasonal major fishing camps; spring-summer hunting & gathering
1000	Initial Late Prehistoric	Triangular arrow points; shell and bone tools	
2000	Late Archaic	Various dart point types, shell and bone tools, incl. Conch shell adzes, gouges, hammers, etc.	Intensive fishing and shellfish gathering; hunting and plant gathering
3000			
4000			Markely reduced shoreline occupation due to sea level change
5000	Middle Archaic	Bell/Andice and Early Triangular dart points, perforated oyster shells edge-flaked sunray venus tools	Shellfish gathering and limited fishing
6000			
7000	Early Archaic	Edge-flaked sunray clamshell tools, dart points	Shellfish gathering, hunting and plant gathering
8000			
9000			
10,000	Paleo-Indian	Various Paleo-Indian dart point types, other lithic tools	Hunting and plant gathering; some hunting of now-extinct Pleistocene megafauna early in the period
11,000			

On the Texas coast, early Archaic peoples quickly adapted to the resource opportunities of the shoreline. During Paleo-Indian times, before the end of the Pleistocene, much of the world's water supply was locked up in vast continental ice sheets and montane glaciers. As global temperature warmed in the Holocene, land-locked ice melted, causing sea level to rise dramatically, so that by 7,000 B.C. the Pleistocene river valleys along the continental shelves were inundated by transgressive marine waters. In Texas, this period saw the formation of the precursors of the modern bays, which are all flooded valleys that have been only marginally reshaped by ongoing erosion by wave action. Archaeological sites investigated around the margins of Corpus Christi Bay (Ricklis 1993, 1995, 2004) and Lavaca Bay (Weinstein 1994) have produced thin shell deposits radiocarbon dated to between 6,000 and 5,000 B.C., showing that prehistoric humans were already exploiting shellfish beds in the emergent bays by this time.

During the later millennia of the Archaic, prehistoric peoples continued to make use of coastal resources, and by ca. 4,000 B.C. fishing had become a significant part of the subsistence pattern (though not nearly as important as it would later become in the Late Prehistoric). At the McKinzie site (41NU221) near Nueces Bay, a shell-midden deposit of this period has produced numerous fish otoliths representing several species, including black drum, redfish, sea trout (*Cynoscion nebulosus*), Atlantic croaker (*Micropogon undulatus*) and marine catfishes (*Aureus felis*). Based on the range of species represented here, it is apparent that prehistoric peoples were gradually exploiting the aquatic estuaries more intensively than had earlier been the case.

Between 2,000 and 1,000 B.C., however, there appears to have been a dramatic reduction in the human occupation and exploitation of the shoreline and its nearby estuarine resources. Geological evidence suggests that this period saw a rapid rise in sea level, possibly to a 1-2 meter highstand (Paine 1991; Thomas and Anderson 1993), and it has been inferred that this resulted in destruction of the extensive shoreline shallows that had been the ideal environment for both shellfish bed and fish nurseries, with the overall effect that there was a marked reduction in biotic productivity in the bays and thus a corresponding reduction in human settlement along the shoreline (Ricklis 1995, 2004; Ricklis and Cox 1991; Ricklis and Blum 1997; Ricklis and Weinstein in press).

Nonetheless, by around 1,000 B.C., sea level stabilized at approximately its modern level, leading to a new and richer equilibrium in biotic productivity. Under stable sea level conditions, wave action and longshore drift deposited the modern barrier islands (e.g., Brown et al. 1976), and ongoing bay-bottom sedimentation created extensive estuarine shallows and deltaic salt marshes in which sea grasses and other halophytic aquatic plants thrived and provided both the basic nutrients for a biotically rich food chain and the ideal conditions for fish spawning and nursery grounds (Ricklis and Blum 1997). With these optimal conditions, human occupation of the shorelines resumed with greater intensity, as fishing became, by ca. 2000 years ago, an intensive economic pursuit (Ricklis 2004a). Archaeological sites along the central Texas coast dating to this period, termed the Late Archaic, are larger, with thicker and more artifact-productive midden deposits, than anything known for earlier time periods. Shoreline

sites are characterized by their large size—up to 1-2 kilometers in length along shorelines—dense and thick shell deposits made up of species such as oyster (*Crassostrea virginica*), bay scallop (*Argopectin irradians*), quahog (*Mercenaria campechensis*), and lightning whelk (*Busycon perversum*), that additionally contain profusions of bones of fish such as black drum, redfish, sea trout, marine catfish and Atlantic croaker. The wide array of artifacts found on these Late Archaic shoreline sites includes flaked chert dart points of various types, flaked chert knives, scrapers and drills/perforators, a variety of shell tools such as knives/scrapers made from edge-flaked sunray venus (*Macrocallista nimbosa*) clam shells, adze blades made from body-whorl sections of large whelks, and gouges for woodworking fashioned from the central columellas of large whelks and Florida horse conches (*Pleuroploca gigantea*). Also found are tools and points made from deer bone and antler, as well as ornaments (beads and pendants) made from shells and bird bones.

Insofar as Late Archaic shoreline sites were large, contain large quantities of fish bones, and numerous artifacts, the presage the large Group 1 sites that were occupied during the Late Archaic Rockport Phase. The Archaic period ends ca. A.D. 800-1000, with the replacement of the relatively large, heavy flaked-stone dart points (which tipped “darts” or small spear-like weapons that were propelled with a dart-throwing stick or *atlatl*) by smaller, lighter stone arrow points (marking the general introduction of the bow and arrow in Texas and North America at this time. This technological change is a rather arbitrary one used by archaeologists to define the end of the Archaic, though this shift is marked elsewhere and somewhat earlier in Texas by other technological changes such as the introduction of pottery and maize agriculture).

By A.D. 1200, ceramic technology was introduced to the Central Coast region, probably by way of diffusion from the Upper Texas Coast, where pottery was being manufactured much earlier, by ca. 400 B.C. after its introduction from coastal Louisiana and the Lower Mississippi Valley area (Ricklis 2004b). The pottery made on the Upper Coast consisted of bowls and jars made by the coil-built technique from sandy-paste clays. While some ceramic traditions use clay to which sand is added as a tempering material, it is generally agreed that the sand in prehistoric Texas coast pottery was a natural inclusion, and that clays were derived largely from the Pleistocene Beaumont Formation which consists of sandy clays laid down as extensive fluvial-deltaic deposits over 100,000 year ago.

Rockport ware, mentioned repeatedly above, is the most distinctive diagnostic artifact of the Rockport Phase. This is a regionally unique pottery consisting of bowls, jars, and constricted neck ollas and bottles, made by building vessel walls with thin coils of clay, which were then smoothed over. Dried vessels were well fired, often in an oxidizing firing atmosphere that produced vessel walls in light colors such as reddish buff, orange and red. Onto the light-colored vessel surfaces were frequently applied decorations or coatings in black asphaltum, a natural petroleum tar-like substance that washes up on Gulf of Mexico beaches. Rockport Phase potters made liberal use of asphaltum to coat both the interiors and exteriors of pots, and to apply painted designs, most commonly thin black bands around vessel rims and vertical squiggle or zig-zag

lines and less commonly dots on otherwise unpainted vessel exteriors. This painted pottery is uniquely confined to the Rockport Phase, and is common along the coast between the Colorado River and Baffin Bay and extending some 40 km inland from the outer shoreline of the mainland. It is also abundantly present at certain Rockport Phase sites on the barrier islands and other smaller islands between the barrier and the mainland. Rockport ware is easily distinguished from contemporaneous Late Prehistoric ceramics made by inland groups, and its geographic extent serves to clearly define the range of the Karankawan peoples who left the remains ascribed to the Rockport Phase.

Other diagnostic artifacts of the Rockport Phase include arrow points of the Perdiz, Cuney and Bulbar Stemmed Types (see Turner and Hester 1999), with Perdiz by far the most common, small unifacial flaked-cert end scrapers, flaked chert drills or perforators, and bifacially flaked chert knives. Other artifact forms found in Rockport contexts are less culturally diagnostic, having widespread distribution in Texas and beyond. These include bone awls, bone chert-flaking tools, bird-bone beads, along with tools and ornaments of shell similar to those found in Late Archaic sites in the same area. Stone grinding slabs and grinders (or manos) are known from Rockport Phase sites; these were probably used to grind seeds and other plant foods. A final item in the Rockport assemblage is the tubular ceramic smoking pipe that is sometimes decorated with asphaltum designs similar to those found on pottery vessels.

Testing Excavations at 41SP11

Site 41SP11 is a moderately large site that extends along the crest of a generally stabilized sand dune that [REDACTED] of Corpus Christi Bay, up to 100 meters or more back from the present bay shoreline (see Figure 1). This dune, known locally as McGloin's Bluff, presents an abrupt rise in topography, with a steep windward slope to the grass-covered beach that adjoins the bayshore and a more gradual and uneven slope on its leeward (northern) side. The top of the dune, on which the site is [REDACTED] (approx. 20 meter wide) strip of land that is alternately fairly level and undulating. A sand quarry pit is located [REDACTED] end of the site; numerous potsherds and other artifacts have been collected from the walls of this pit over the years. [REDACTED] of the site is a natural hollow or blowout, wherein our survey crew collected a handful of Rockport potsherds in the spring of 2004. The intervening dune surface is fairly heavily vegetated with short grass and clumps of live oaks, small hackberry and mesquite trees.

As called for in our proposal, test excavations consisted of two 2x2-meter blocks. Block A was placed at the approximately locations of one of our survey shovel tests (S.T. no. 5) that had produced a relative abundance of Rockport ware potsherds and 2 flakes of chert, plus several shells of oyster and lightning whelk. This location was marked by level ground and a ground cover of short grass, though dense clumps of trees were in close proximity. Due to high artifact recovery and the usefulness of such materials for evaluating site significance, the 2x2-meter block was extended one meter westward to create a final block that measure 2x3 meters. Excavation was generally terminated at the

base of 10-cm Level 17, or 170 cm from the ground surface. However, in order to test for earlier, pre-Rockport material, a one-meter-square downward

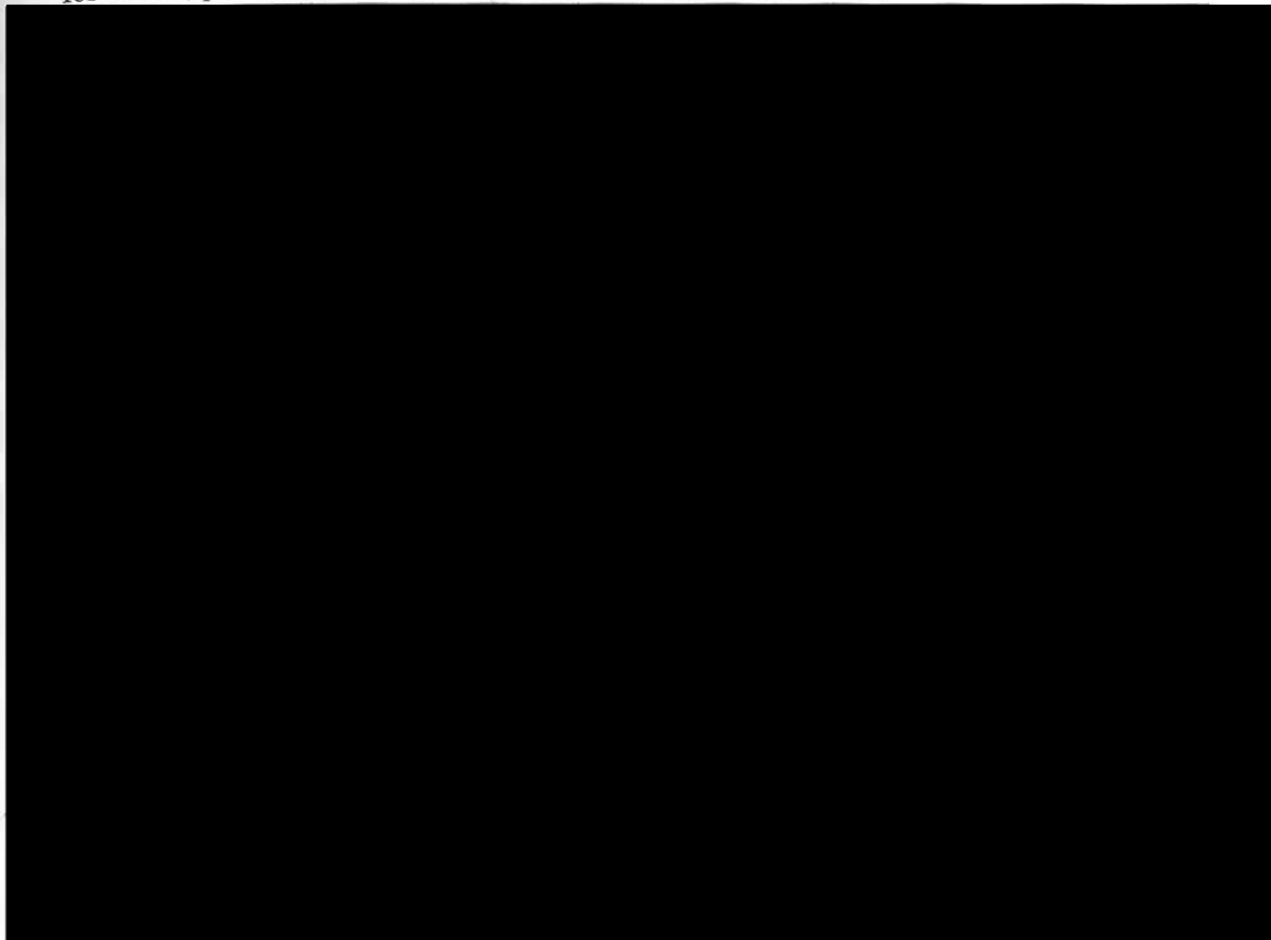


Figure 1. *Contour map of the McGloin Bluff site, 41SP11, showing locations of numbered shovel tests dug during survey and Block A and B 2x2-meter excavations done during the testing phase.*

extension in the middle of the block was dug to the base of Level 20, or 200 cm below the ground surface.

Block B was 40 meters to the [REDACTED] along the crest of the dune. At the time of proposal writing, I had suggested that the second excavation block would be placed at the location of Shovel Test 5, close to the aforementioned blowout where pottery had been collected. However, upon close inspection during the testing phase, it was determined that the ground surface in this area was so undulating and eroded that definition of vertical context of materials might be especially problematical. Thus, it was decided in the field that Block B would be placed on relatively level ground along the crest of the dune in closer proximity to Block A. The [REDACTED] of the Block was dug to 120 cm below the surface, while the [REDACTED] was dug to 160 cm below surface.

The excavation technique consisted of skim shoveling the unconsolidated sand matrix in thin (2-3-cm-thick) increments using a flat-bladed shovel to remove materials in 10-cm arbitrary levels. This allowed for a controlled procedure in which in situ artifacts and/or features would be easily identified as the work progressed. All excavated sand matrix was screened through ¼-inch-mesh hardware cloth, and artifacts or other archaeological materials (e.g., shell, faunal bones) were placed in zip-loc plastic bags and labeled according to excavation block, 1-meter quadrant within the block, and 10-cm level (thus, a given provenience might be Block A, NW Quadrant, Level 1 [0-10 cm])

Sediment Stratigraphy

Although the sedimentary matrix at 41SP11 is consistently a cumule eolian sand deposit, it was possible to identify in the field a basic, grossly intact stratigraphy. In both excavation blocks, three strata were identified. Stratum 1 is a light grayish-brown fine sand, Stratum 2 is a slightly darker gray fine sand, and Stratum 3 is a light gray sand. In both units, Stratum 2 was visible in wall profiles as a discernibly darker-colored stratum; the darker color suggests a somewhat higher organic content that may be the result of human occupation at the site. A photograph of a wall profile in Block A is shown in Figures 2 and, and in Block B as Figures 3. The strata are listed along with depth ranges, and colors for each of the two excavation blocks in Table 2.

Rodent Disturbance

Rodent disturbance, probably by pocket gophers, judging by the size of the filled burrows, or krotovinas, of the deposits was abundantly in evidence. As may be seen in Figures – and –, old, sand-filled krotovinas were visible in the excavation walls as circular-to-oval patches of sand that contrasted in color with the surrounding stratigraphic matrix. In the field, attention was given to noting the colors of sand that filled the krotovinas. As may be seen in Figures – and –, it was documented that krotovinas visible in Strata 1 and 3 contained fill that was the same color as the sand in Stratum 2. Conversely, fill in krotovinas in Stratum 2 was of a color that matched Strata 1 and 3. This is expectable, insofar as a burrow found in, say, Stratum 2 that was filled with

Table 2. Depth Ranges of Strata in Blocks A and B, 41SP11.

	Stratum	Depth range	Sediment	Munsell Color	Inferred Origin
Block A	1	0-30/40 cm	fine sand	10YR5/2	eolian deposition
	2	30/40-90/100 cm	fine sand	10YR5/1	eolian w. anthrogenic input
	3	90/100-160/165 cm	fine sand	10YR6/1	eolian deposition
	4	160/165cm+	fine sand	10YR6/2	eolian deposition
Block B	1	0-70/95	fine sand	10YR5/2	eolian deposition
	2	70/95-125/160	fine sand	10YR5/1	eolian w. anthrogenic input
	3	125/160cm+	fine sand	2.5Y7/2	eolian deposition



Figure 2. *Photograph of the west wall of Block A. Stratum 2 is delineated by lines.*

Stratum 2 sediment would most likely not be discernible; the color contrast between krotovia fill and stratum matrix is what renders the krotovinas visible. The notations of krotovina fill colors do, however, suggest that burrows were filled with sand that was vertically displaced by gophers as much as 110 cm. This is significant as it inferably accounts for the degree of vertical displacement of Rockport Phase artifacts within the sand at the site, as discussed below; although these artifacts were found throughout the excavations, they tended to be most abundant in Zone 2, the relatively dark color of which may be the result of the inclusion anthropogenic organics during site occupation.

Artifacts

Rockport Phase materials found during the test excavations (see Table 3) include 1,296 Rockport ware potsherds, 220 pieces of lithic debitage, four flaked lithic tools (two arrow points, a third possible arrow point, and a perforator or drill), a bone awl or pin fragment, 464 faunal bone fragments, 44 marine-fish otoliths, and 248 marine shells (whole and



Figure . *West wall profile of Block B, 41SP11. Black lines delineate Stratum 2.*

fragmentary bivalves and gastropods). Given that all of the time-diagnostic artifacts (the potsherds and the arrow points) are typical of the Late Prehistoric Rockport Phase, it can be assumed with reasonable confidence that the faunal bone, fish otoliths and shells represent food procurement during that same time period. As a whole, then, the materials collected support previous suggestions that 41SP11 is a single-component site of the Rockport Phase. The kinds and quantities of artifacts recovered are discussed below.

Lithics

With the exception of a single small (approx. 1-cm long) piece of pumice, all of the stone artifacts found are made of flaked chert. Although no chert is naturally available along the Texas coast, workable chert is found as cobbles in Pliocene gravels exposed by the Nueces River some 40 km inland, and these materials were widely used and distributed by the Late Prehistoric (and probably earlier) peoples of the central coast region (see Ricklis and Cox 1993).

Arrow Points

Three flaked chert arrow points were found, all in Block A. One of these (Fig. 4, B) shows breaks that indicate missing shoulder barbs and a narrow stem, and is assigned

Table 3. Artifacts, by 10-cm Levels, in Blocks A and B, 41SP11.

Block A

Levels:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	TOTALS
Perdiz arrow points (prob.)					1					1								2
Triangular arrow point																1		1
expanded-base drill								1										1
Unifacial end scraper												1						1
debitage		3	19	17	24	18	19	13	13	14	3	4	5	2		3		157
Pumice fragment									1									1
Potsherds	10	50	116	112	106	115	104	52	83	95	50	101	69	56	45	10	9	1183
Asphaltum pieces	3	3	27		16	11	24	14	10	13	18	8		30	4	2	1	207
Burned clay nodules		2	1		1	1			1	1			1	1	2	6		17

Block B

Levels:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	TOTALS
debitage			7	4	6	6	12	16	6	4		2						63
Potsherds			2	5	7	11	16	10	5	13	16	9	9	9		1		113
Asphaltum pieces		2			3	4	1	2	1	2	5							20
Burned clay nodules					1			1										2



unexcavated

to the Perdiz type (see Turner and Hester 1999). The second (Fig. 4, A) is a medial fragment that exhibits fairly prominent barbed shoulders and has a missing, narrow stem. This specimen is also classified as a possible Perdiz point. The third specimen a (Fig. 4, C) is a rather unusual unstemmed arrow-point-sized specimen bifacially flake on a prismatic blade of dark brown chert; this piece does not fit well into any established type; the piece is unbroken, and measures 50.2 mm long, by 13.7 mm wide at the base and 5.2 mm thick. By virtue of its unstemmed and elongated triangular outline, the closest parallels are the triangular arrow points from nearby 41SP120 on Ingleside Cove that have been dated to the initial part of the Late Prehistoric and that pre-dates Perdiz points.

Expanded-Base Drill

The chert drill or perforator (Fig. 4, D), from [redacted] has an unworked, expanded base. It is 32.4 mm long, 14.3 mm wide at the base, and 4.6 mm thick. The drill was made on a thin prismatic blade and is of the same form as commonly reported on inland Late Prehistoric sites of the Toyah Phase/Horizon (e.g., Black 1986; Highley 1986).

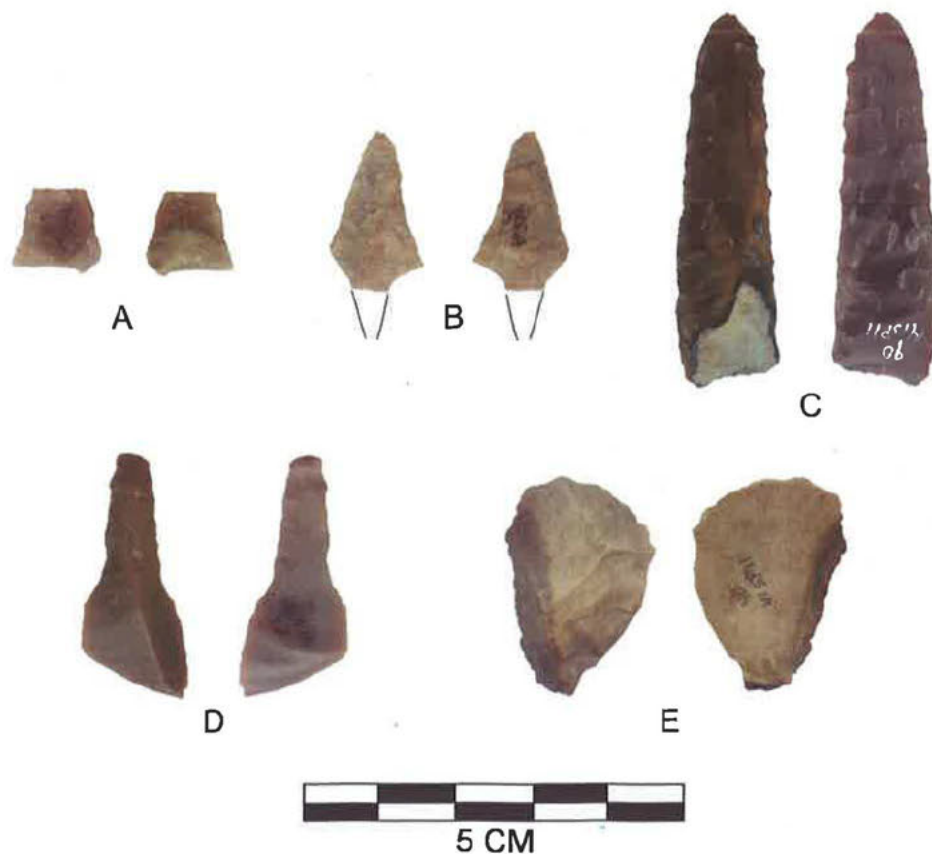


Figure 4. *Lithic artifacts from Block A. A, medial arrow point fragment; B, two faces of a probable Perdiz arrow point; C, possible unstemmed arrow point; D, expanded-base drill; E, unifacial end scraper.*

This is the only reported expanded-base drill from a Rockport Phase site on Corpus Christi Bay. Small cylindrical or bi-pointed drills have been reported from 41SP120 (Ricklis 1996) and other sites in the area, and a number of expanded-base forms are reported by Weinstein (2002) from 41CL2, a major Rockport Phase site on Guadalupe Bay near the delta of the Guadalupe River.

Unifacial End Scraper

This end scraper (Fig. 4, E) is made on a secondary chert flake, that is, a flake that retains the cobble cortex on part of its dorsal surface. It is unbroken, and measures 27.9 mm long, by 20.5 mm wide, by 4.4 mm in maximum thickness. The distal or working end bears small retouch flakes that created the scraping edge. This specimen is typical of the many small end scrapers commonly found on Rockport Phase sites (e.g., Ricklis 1996; Ricklis and Cox 1994; Weinstein 2002).

Chert Debitage

Chert debitage was moderately abundant in the test excavations. The 220 specimens consist mainly of very small, tertiary (interior, lacking any cobble cortex) flakes that can be categorized as retouch flakes. This fact suggests that the flint-knapping activity at 41SP11 involved mainly resharpening of tools rather than primary tool production. Such activity is expectable at a site so far (>40 km) from the sole known lithic source area on the Nueces River in western San Patricio County (Ricklis and Cox 1993).

Pumice

One small (11m in diameter) piece of pumice was recovered from Level 8 in Block A. There is no discernible modification on this fragment of porous volcanic rock. It may be broken from a larger piece, since pumice with abrasions has been documented at Late Prehistoric sites along the Texas coast (e.g., Ricklis 1994; Weinstein 2002). The surface grinding on such pieces suggests their use as abraders.

Bone Artifact

A single bone artifact was found. A small fragment of a ground and polished bone implement, probably a pin or awl, from Block A. Level 6, this artifact was probably made from a splinter of deer long bone. It is oval in cross section, 6.2 mm by 4.9 mm, and the fragment is 12.6 mm long.

Asphaltum Lumps

A total of 227 small lumps of asphaltum, ranging from 0.5 to 3 cm in diameter, was recovered during the testing. The majority (207 or 91%) were found in Block A. These small items are inferred to represent breakage from larger pieces, or probably in some cases, drips of soft, heated asphaltum. Presumably they were associated with the use of asphaltum in coating and/or decorating ceramics, or possible for various hafting or mending tasks. Their scattered ubiquity in the deposits inferably reflects the importance of this material to aboriginal potters and craftspersons.

Burned Clay Nodules

A scant number of small (usually 1 cm or less in diameter) nodules of fired clay were found, 17 in Block A and only 2 in Block B. Burned clay nodules are common in sites along the central Texas coast and on the adjacent inland coastal prairie (e.g., Ricklis 1997, 2002), as well as at some inland southern Texas sites (e.g., J. Turpin 2004), where they have been inferred to represent surrogate stone for use in cooking or pit baking. Certainly, the specimens from 41SP11 represent intentional transport of clay onto the site, as accidental firing of the sandy ground would not produce these items. At 41SP120 on nearby Ingleside Cove, burned clay nodules were found far more abundantly in pre-ceramic levels of the site than in the ceramic-bearing Rockport Phase levels, suggesting

that they indeed were used for cooking (e.g., as artificial boiling stones) in this stone-free environment. The relative dearth of burned clay nodules in the Rockport levels inferably reflects a shift in cooking technology with the introduction of ceramics to the region in Late Prehistoric times. This shift might account for the relative scarcity of these items at 41SP11.

Potsherds

Fragments of Rockport ware pottery (Figures 5-8) were by far the most abundant artifact in the excavation blocks. A total of 1,296 potsherds was recovered, with the great majority (1,183, or 91%) coming from Block A. Rimsherds, numbering only 37, account for only 2.85 percent of the total; neck, body and basal sherds account for the remaining 97.15 percent of the sample. The low percentage of rimsherds probably reflects that fact that many vessel orifices were narrow and constricted, probably sometimes creating bottle-like shapes that are documented for Rockport ceramics (see Ricklis 1995b).

Based on an attribute analysis of the 37 rimsherds, the following characteristics of the 41SP11 prehistoric pottery can be summarized:

1. Paste characteristics. All of the vessels represented contained sand as an aplastic, as is typical of Rockport ware and other ceramics of the Texas coast. Twenty-eight of the rimsherds contained sparse sand grains (less than 5% of the clay body), while nine contained moderate (5-25% of the clay body) sand inclusions. Generally, it is believed that the sand was a natural inclusion in the clay and it served thus as a natural clay-tempering agent.
2. Firing characteristics. Most of the vessels in the 41SP11 excavated sample were fired in an oxidizing atmosphere, with the result that 32 (86.5%) of the rimsherds sherds have light colors (orange, light brown or buff). The fact that most of these (22, or 68.8% of the oxidized sherds) are orange to buff throughout the thickness of the sherd indicates that firings were complete and well controlled; the remaining 10 sherds have darker gray cores, indicating that oxidation during firing did not completely penetrate the vessel wall. Only five (13.5%) of the rimsherds were fired in a reducing atmosphere, with the result that sherd surfaces and cores are gray to black in color. The majority of the vessels having light-colored surfaces was doubtless an intended result of the 41SP11 potters, since such would provide a contrasting background for the black-asphaltum painted decorations (Figures 6 and 7) that were then commonly applied to the fired vessel.
3. Asphaltum surface treatment. A high percentage (89.2%) of the rimsherds bear painted decoration or coating of natural asphaltum. This black substance (see Figures 5 and 8) was commonly used to decorate or coat the surfaces of Rockport ware vessels, and this is a regionally unique technique and style that helps to readily distinguish Rockport pottery from the contemporaneous Late

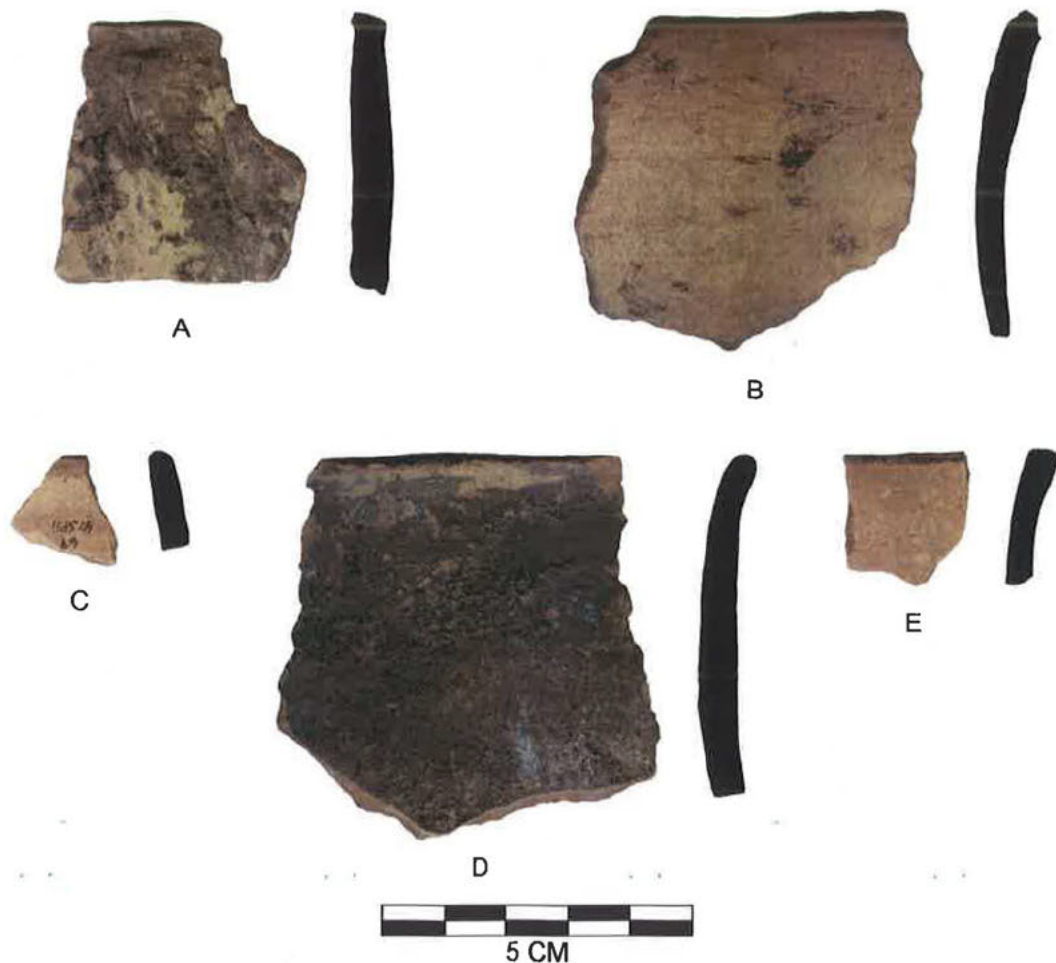


Figure 5. Rimsherds from Block A, D, rims with asphaltum coating; B, plain rim; C, E, rims with asphaltum lip band. Rim profiles are shown adjacent to each specimen, with vessel exterior to the right.

Prehistoric ceramic traditions of the inland Toyah Horizon or southern Texas and the Upper Texas Coast (e.g., Story and Jelks 1962; Ricklis 1995b, 1996). Analysis at various sites shows that, generally, at least around 50 percent of vessels on Rockport Phase sites had either painted decoration or coating of black asphaltum (Ricklis 1995b). Thus, the percentage of rimsherds with these attributes at 41SP11 is relatively high, at 33 or 89.2% of all rimsherds. The most common decorative element is a band of asphaltum painted around the lip of the vessel (see Fig. 6); this decoration is found on 28 or 75.6% of the rimsherds. Seven (18.9%) of the rimsherds bear exterior asphaltum coating, while four (10.8%) have interior coating.

Another distinctive decorative motif in Rockport pottery is a series of Parallel squiggly painted asphaltum lines running vertically on vessels (this motif has been used to define a distinctive pottery type, Rockport

Black-on-Gray II (Ricklis 1995b, 1996). None of the rimsherds exhibit this design element, but it is present on 15 non-rim body or neck sherds (Fig. 7). Generally, the vertical squiggles are spaced several centimeters

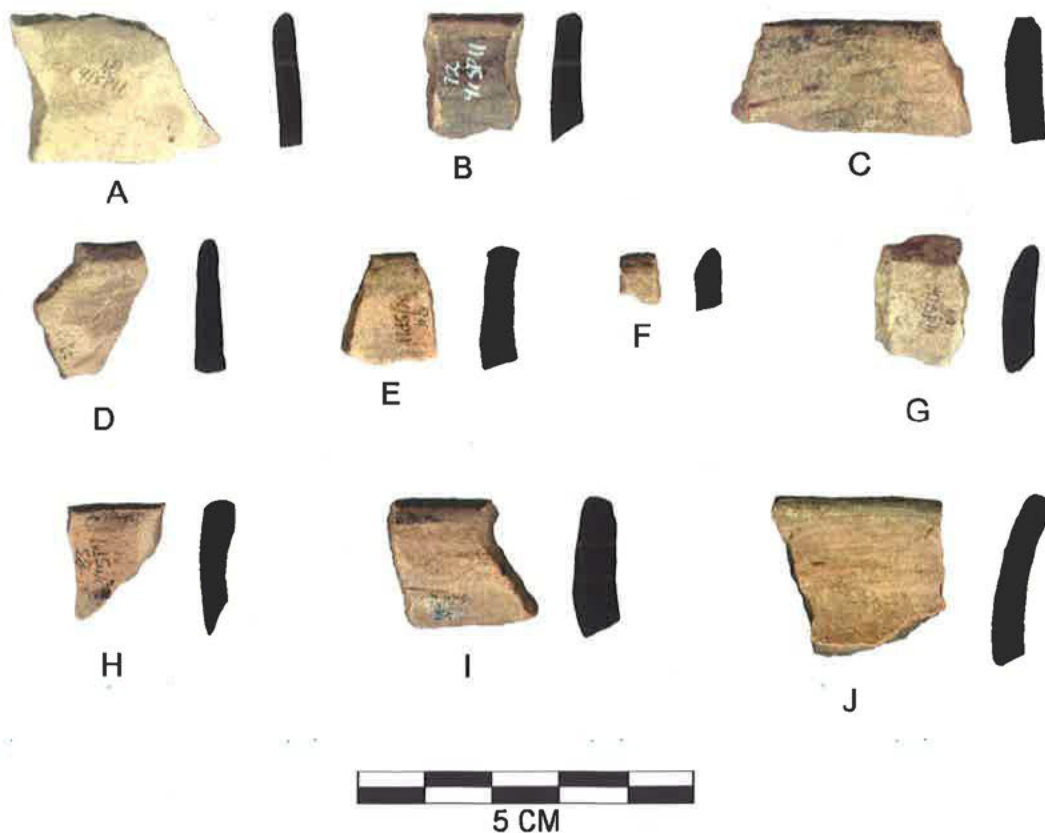


Figure 6. *Rimsherds with asphaltum lip band.*

apart, so many undecorated sherds may actually pertain to vessels with this kind of decoration. Two of the bodysherds with asphaltum squiggly lines bear a thin white slip on the exterior, under the painted design. Thus they represent a distinctive, black-on-white variation of the black-painted theme that has been more abundantly documented at other Rockport Phase sites (e.g., 41CL2 [Weinstein 2002] and 41AS92 [Ricklis 2000]), as well as among the sample of Karankawan pottery from Rosario Mission at Goliad, Texas (Ricklis 2000).

4. Vessel surface treatment (non-asphaltum). All but 5 of the rimsherds have smooth surfaces; in one instance the surface has been burnished to a dull polish. The other five sherds exhibit surface scoring, done when the clay was still wet with the edge of a ribbed bivalve shell such as a bay scallop or a cockle. This is a common surface treatment in Rockport pottery and probably represents a ready technique for roughly smoothing vessel surfaces after construction of the pot with clay coils.

5. Rim Profiles. Generally, Rockport vessels were of a limited range of shapes. Bowls, jars, and narrow-neck ollas, sometimes with bottle-like neck elongations were the common forms (Ricklis 1995b; 2000). Bowls and some jars had straight rims, while jars and ollas often had outflaring or everted rims. Jars occasionally had inverted or insloping rims that formed the perimeters of small openings or orifices. Among the rimsherds recovered in

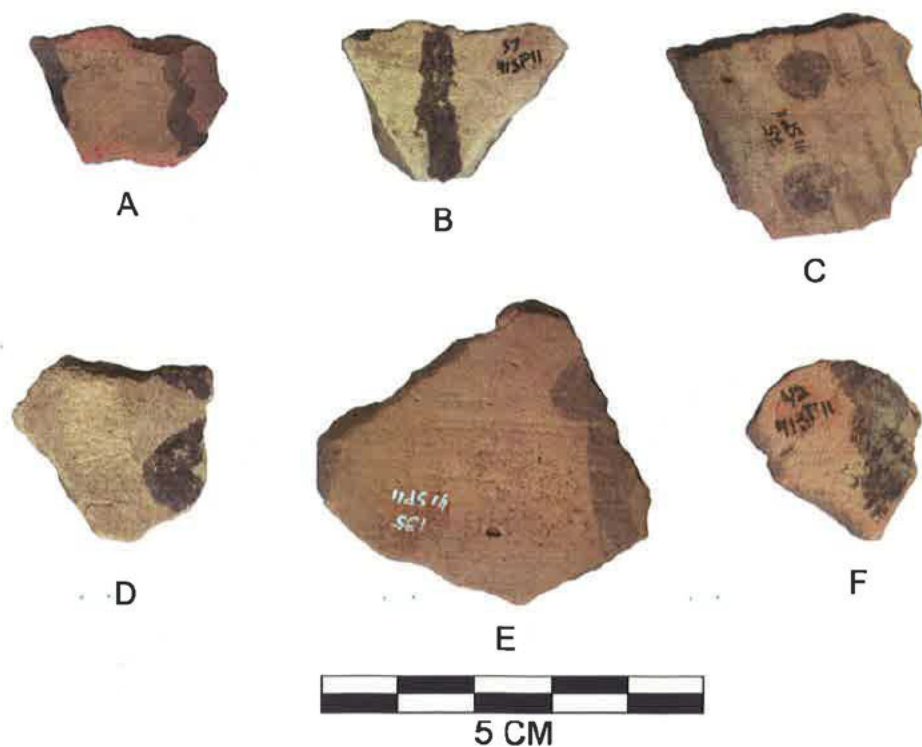


Figure 7. *Asphaltum-decorated potsherds. A, B, D, E and F exhibit vertical squiggly lines on exteriors; C has a pair of dots, probably part of a row of such.*

the 41SP11 testing, 14 (37.8%) are straight (bowls, jars), 17 (45.9%) are everted (jars, ollas) and 6 (16.2%) are inverted (small-mouth jars).

6. Vessel lip forms. Some variability is observable in the shape of lips on vessel rims. Three basic lip forms are identifiable in Rockport pottery: pointed lips, rounded lips and flat lips. In the rimsherd sample from 41SP11, 22 lips are rounded (59.5%), 12 are flat (32.4%) and three (8.1%) are pointed. Any possible significance of these attributes would be best viewed in relation to other sites to determine if they have either temporal or geographical significance.

These several observations clearly demonstrate that the Late Prehistoric ceramic material from 41SP11 is quite typical of the Rockport Phase. The abundance of asphaltum coating and decoration on oxidized-fired, sandy paste vessels is especially

diagnostic of this ceramic tradition. At the same time, it should be noted that some attributes common in the Rockport ceramic assemblage are not represented. This includes an absence of incised decoration on any of the rimsherds or neck sherds (Rockport Incised), as well as an absence of notches on vessel lips (Rockport Crenelated). These absences may simply reflect the small size of the rimsherd sample; a larger sample would be needed to draw confident conclusions on this matter.

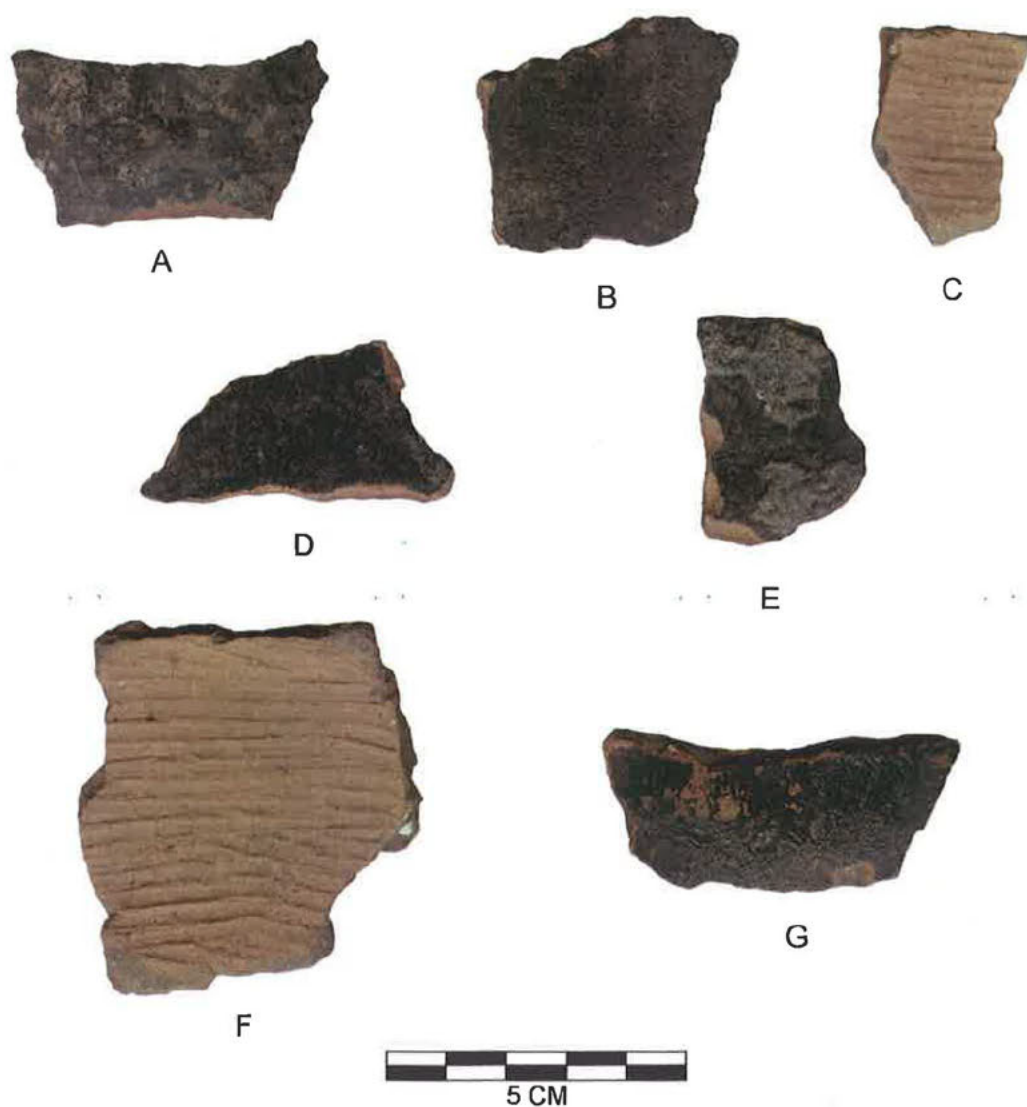


Figure 8 . Selection of bodysherds from 41SP11 test excavation. A, B, D, E and G exhibit asphaltum coating; C and F have ribbed bivalve shell scoring, done before vessel clay was dry.

Faunal Remains: Bone and Shell

Bone preservation at 41SP11 was good, though the faunal bone specimens were in general highly fragmented. A total of 464 fragments of animal bone was recovered, mostly from Block A (445 or 95.9%). An inventory of the numbers of specimens according to identifiable taxa is presented in Table 4. The taxa represented are rather Table 4. Identified faunal bone by 10-xm levels, Blocks A and B

Block A

Levels:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Deer (<i>Odocoileus virginianus</i>)																	
Deer-sized longbone frags.			3				3	4	3	4			1	1			
Humerus frag.									1								
Distal tibia frag.															1		
Astragalus											1						
Phalange											1						
Large mammal																	
Bison-sized longbone frags.						1	1										
Fish																	
Otoliths																	
Black drum (<i>Pogonias cromis</i>)		1	2	3	2	3	1		2	2	2						
Redfish (<i>Sciaenops ocellata</i>)		1		1		4						1					
Croaker (<i>Micropogon undulatus</i>)			2					1									
Sea trout (<i>Cynoscion nebulosis</i>)				2	2		1			1		1					
Sea catfish (<i>Auricus felis</i>)			1		1		4						1				
Vertebrae			2			2		1	1				1	1			
Vertebral spine elements			1	1	1	2	3			3			1				
Gill plate				1													
Gar vertebrae																	
Gar scale								1		1						1	
Gar vertebra												1	1	2			
Turtle carapace frags.								1					1				
Small undent. bone frags.	5	13	71	54	8	45	74	39	30	18	3	4	13	9	1	1	1
Vertebra frag.					1												

Block B

Levels:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Deer (<i>Odocoileus virginianus</i>)																
Cranial frag.										1						
Medium-sized mammal																
Vertebra frag.					1											
Turtle																
Vertebra					1											
Carapace Frag.													1			
Fish																
Otoliths																
Redfish (<i>Sciaenops ocellata</i>)		1														
Sea trout (<i>Cynoscion nebulosis</i>)			1													
Small unident. bone frags.			2		2	1	2			8						

typical of a Rockport Phase Group 1 shoreline site, insofar as fish remains are relatively abundant and terrestrial species, especially white-tailed deer (*Odocoileus virginianus*) are also present in significant quantities (cf., Ricklis 1996; Weinstein 2002). Species-diagnostic otoliths represent fish species commonly found on Group 1 sites, namely, black drum, redfish, speckled sea trout, Atlantic croaker and catfish. Clearly, fish were an important economic resource at 41SP11, though the overall faunal sample is too small for any firm conclusions about the specific ranking, or relative importance of various resources at the site.

It is significant that two thick (>7 mm) cortical longbone fragments are bison-sized, and these probably represent some importance for bison hunting. Bison bones have been found in some abundance at inland riverine Rockport Phase sites categorized as Group 2 sites (Ricklis 1988, 1992, 1996), where deer bones also tend to be abundant and fish remains are relatively scarce. However, bison bone is found in limited amounts at shoreline sites (Ricklis 1996), and it is likely that bison hunting took place inland on the coastal prairies and butchered elements of bison carcasses were brought back to shoreline fishing camps, as was probably the case at 41SP11.

Estuarine shellfish species represented by recovered shells include oyster (*Crassostrea virginica*), bay scallops (*Argopectin irradians*), sunray venus (*Macrocallista nimbosa*), and lightning whelk (*Busycon perversum*) (see Table 5). All of these are moderate-to-high salinity species that can be procured in Corpus Christi Bay, and have been found in abundance at Rockport Phase sites on nearby Ingleside Cove site (sites 41SP120 and 41SP43; see Story 1968; Ricklis 1996). As is the case with other classes of debris, shell specimens were far more abundant in Block A (235 specimens, or 94.8%) than in Block B (13 or 5.2%).

Table 5. Quantities of identified shells by 10-cm levels, Blocks A and B.

Block A

Levels:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Oyster (<i>Crassostrea virginica</i>)		1	1	1	1	1	2	4	1		5	2		2	1		
Scallop (<i>Argopectin irradians</i>)							3				1	4				1	
Lightning whelk (<i>Busycon perversum</i>)		5	2	1		2	1	6	4	4	5	1	2	1	1	1	
Sunray venus (<i>Macrocallista nimbosa</i>)		1	11	7	2	5	2		8	7	2	1	2	2		2	
Cross-barred venus (<i>Chione cancellata</i>)			1														
Small, unident. fragments	2	9	18	13	22	5	20	13	1	3	2		6	6			

Block B

Levels:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Oyster (<i>Crassostrea virginica</i>)			2													
Scallop (<i>Argopectin irradians</i>)																
Lightning whelk (<i>Busycon perversum</i>)																
Sunray venus (<i>Macrocallista nimbosa</i>)			1						1		1					
Cross-barred venus (<i>Chione cancellata</i>)																
Small, unident. fragments			1	1	1	3		1			1					

While it is apparent that shellfish were gathered during the Rockport Phase at 41SP11, presumably as a food resource, it is important to note that shells were found only sporadically scattered throughout the excavations. Compared to the profusions of shell found in Archaic shell middens along the Central Texas Coast, shell has low representation at 41SP11, and the site certainly does not have the character of a shell midden deposit. Indeed, the available evidence suggests that shellfish gathering was far less important during the Rockport Phase than it had been during the earlier Late Archaic period. An intensification of fishing (Ricklis and Blum 1997), perhaps combined with the influx of bison onto the coastal prairies during Late Prehistoric times, may have rendered shellfish gathering unnecessary in terms of caloric and protein dietary input. A marked reduction in shellfish deposition at sites during the Rockport Phase has been documented at both 41CL2 (Weinstein 2002) and 41SP120 on Ingleside Cove (Ricklis 1996).

The Horizontal and Vertical Distribution of Cultural Materials in Blocks A and B

Horizontal Patterning in Debris Concentration

Considerable horizontal variability in the densities of various classes of cultural material is indicated by marked differences in their quantities in Blocks A and B. As may be seen in Table 6, all formal tools came from Block A, and all classes of debris with the exception of lithic debitage have percentage representations from Block A of 89-96 percent. While the majority of the lithic debitage (71%) came from Block A, Block B contained a considerably larger proportion of debitage than it did other kinds of debris. Thus, Block A had a higher representation of potsherds, burned clay nodules, asphaltum pieces and faunal remains (bones, shellfish) than it did lithic debitage. While it would be inadvisable to overinterpret the limited data obtained from the test excavations, it is apparent that cultural debris density is variable across the site, possibly reflecting preferred locations for different activities. The relatively high density of pottery and faunal remains in Block A may indicate that this was a preferred location for domestic cooking and food processing activities. Block B, on the other hand, is located in what was an area not devoted to such activities, but in which some amount of flint knapping, probably tool resharpening (judging by the predominance of small, tertiary flakes) took place. These findings suggest that, while 41SP11 was presumably a recurrently occupied campsite, there was sufficient continuity in spatial arrangements of activities that meaningful inferences might be possible about this aspect of on-site human behavior.

Table 6. Comparisons of quantities of specimens in various debris classes, Blocks A and B, with percentages for each block in the class.

Class	Block A	Block B
Formal lithic tools	4 (100%)	0 (0%)
Lithic debitage	157 (71%)	63 (29%)
Potsherds	1183 (91%)	112 (9%)
Asphaltum pieces	207 (91%)	20 (9%)
Burned clay nodules	17 (89%)	2 (11%)
Faunal bone	445 (96%)	19 (4%)
Shells and shell fragments	235 (95%)	13 (5%)

Vertical Distribution of Debris in Blocks A and B

As may be seen in Tables 3, 4 and 5, all classes of debris were vertically unevenly distributed. Debris tended to be most abundant between Levels 3 and 11, that is, between 20 and 110 cm below the ground surface. This is interpreted as a correlation between debris and the relatively darker-colored Zone 2, which, as noted above, is believed to reflect anthropogenic introduction of organic materials into the natural sand sediment. The presence of a minority of the debris above and below these levels is assumed to be the result of bioturbation, mainly by pocket gophers, judging from the numerous burrows and krotivinas observed in the excavations.

Radiocarbon Date

A radiocarbon assay was run on a large whelk shell from Level 5 in Block A. After correction for the ^{13}C fraction, the resulting age is 550 ± 60 years before present (b.p.). For reasons explained in detail elsewhere (Ricklis 1999), an atmospheric calibration is believed to be appropriate for shallow-water estuarine shells from sites in the region. Based on the calibration program provided by the University of Köln, this result calibrates at 1 sigma to 626-533 b.p., or A.D. 1324-1416. This date falls well within the range estimated for the Rockport Phase.

Conclusions

Based on the data and discussion presented above, several basic conclusions can be made concerning 41SP11, as follows:

1. The evidence obtained during our testing supports the previous inference that 41SP11 is a single-component manifestation of the Rockport Phase. All prehistoric artifacts at the site can be assigned to the Rockport Phase. The chert arrow points, the end scraper and the expanded-base drill are all diagnostic of this period on the Central Texas coast, and the numerous potsherds all pertain to the Rockport ware that is especially diagnostic of this Phase. No artifacts were found

that can be ascribed to earlier Archaic or later Colonial-Period occupation of the site, and the single radiocarbon date obtained on whelk shell provides a date range of A.D. 1324-1416, in line with expectations for the Rockport Phase.

2. The faunal remains from the site are in accord with expectations for a "Group 1" Rockport Phase site. The abundance of fish remains reflects an important emphasis on fishing, while the presence of deer and probably bison bone show that this was significantly augmented by hunting.
3. The dramatic differences in artifact and faunal-remain densities between Blocks A and B shows that there is clear horizontal variability in debris density across the site suggests that 41SP11 may hold the potential for elucidating how living and activity space was organized during the Rockport Phase.

Research Issues that can be Addressed at 41SP11

The test excavations produced a sizeable collection of ceramic and lithic artifacts, and well-preserved faunal bone. More archaeological work at the site can, therefore, address a number of research issues:

1. Geographic variability in Rockport pottery. The large sample of nearly 1300 potsherds found in the two excavation units suggests that the site holds potential for defining the local nature of the Rockport pottery tradition and its similarities and differences with sample from other Rockport sites. The percentage of vessels with asphaltum coating/decoration is higher than that documented at various other Rockport Phase sites. Given that there is presently little understanding of variation in Rockport ware across space, an increased sample from the site could help to clarify this issue. The presently reported rimsherd sample contains no examples of incised decoration (Rockport Incised) or lip notching (Rockport Crenelated). The rather small number (N=37) of specimens recovered during the testing makes any conclusions premature at this time; however, if this absence proves to be real, it may have implications for clarifying sub-regional variation in ceramic decoration that ultimately might have meaning in terms of defining geographically bounded subdivisions within the Rockport Phase (Karankawan) population as expressed in stylistic attributes in pottery.
2. The range of lithic artifacts at a Group 1 site. Our findings suggest that 41SP11 contains a range of lithic artifacts. An increased sample size would help to define the kinds and functions of lithic tools at at Group 1 site in the Corpus Christi Bay area, and would provide data for comparisons with the large sample of such material recently reported for 41CL2 to the north near the Guadalupe River delta.
3. The above-mentioned horizontal variability in debris distribution at the site suggests that 41SP11 contains information on the spatial layout of activities and living space at a Group 1 site. Moreover, the light-colored sandy matrix may offer excellent opportunity for recognizing and recording features such as post molds and pits that could define house walls and storage facilities. Such data are presently extremely limited in the region, and little is know about the sizes and shapes of domiciliary structures at Rockport Phase Group 1 sites. Findings at the [REDACTED] provided such data for a Group 2 site,

but to date no such information is available for the larger and probably more populous Group 1 shoreline sites.

4. The good faunal bone preservation at 41SP11 suggests that zooarchaeological potential of the site is excellent. A larger sample of faunal remains would provide data on the ranking of food resources within the subsistence economy at the site that could be compared with data already available for sites such as 41SP120 on Ingleside Cove (Ricklis 1996) and 41CL2 near San Antonio Bay (Jackson 2002). Thus could an important data base be developed on possible economic variations at shoreline Group 1 sites of the Rockport Phase.
5. The radiocarbon date on whelk shell from Block A falls well into the expected range for the Rockport Phase. Given that there are few good radiocarbon dates on this cultural period, it appears that 41SP11 offers a good possibility to place it confidently within the chronological continuum for the Central coast region.

Recommendations

Because 41SP11 appears to have potential to address the above-listed research issues, it is considered as eligible for listing on the National Register of Historic Places and as a State Archeological Landmark. The site is one of only three or four Group 1 sites that remain in the Corpus Christi Bay area. For these reasons, it is recommended that it be avoided by any future construction activities that would negatively impact the site. If this is not possible, it is recommended that data recovery be carried out at the site at a scale and level of detail that can realize the research potential of the site.

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Detailed Topographic Map of the McGloin Bluff Site, 41SP11

**With an Explanatory Cover Letter Addressed to
Mr. Paul Carangelo, Port of Corpus Christi Authority**



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November 15, 2005

Paul Carangelo
Port of Corpus Christi Authority
Corpus Christi, Texas 78401

Dear Mr. Carangelo:

In accordance with our email proposals dated June 27, July 14 and July 28, 2005, please find attached five copies of a detailed map of archaeological site 41SP11, titled "McGloin Bluff Site, 41SP11". by Coastal Environments, Inc. (CEI). Also attached is the site boundary survey drawing titled "McGloin Bluff Archeological Survey" by RVE, Inc. RVE provided surveying services to CEI as a part of our contract. The principle purpose of the work was to precisely define the extent of 41SP11. Also included in the contract was mechanical brush clearing to provide clear lines of sight for the survey work by both RVE and CEI.

The CEI map shows the local topography at a 1-meter contour interval, with all elevations based on benchmark data supplied to us by RVE. The elevation of the benchmark is 14.88 feet (NAVD88) and the location of this benchmark, a TxDOT (No. S2050145) monument, is indicated on the RVE map; the location coordinates (NAD27) of this benchmark are:

N 791172.183
E 2414165.142

The site map prepared by CEI uses precisely the same metric grid coordinates as used in the RVE baseline. Thus, the RVE baseline, which is also shown on the CEI map, runs approximately east-west (and for which grid north is 23°24'41" east of magnetic north) and is set at 00.00 meters north-south. The grid coordinates on the CEI site map are all keyed to the RVE grid coordinates. Thus, the CEI grid point N00E350 is 0 meters north (i.e., exactly on the RVE baseline) and 350 meters east of the first east-west point on the RVE baseline (which is 0 meters east).

The boundaries of the archaeological site are based on the presence/absence of prehistoric/aboriginal material within the shovel tests dug in conjunction with our mapping work. The locations of these shovel tests are precisely plotted on our map. Based on this field work, the boundaries of the site have been determined by CEI to be located at the following grid points:

N25E00	N00E195
N05E50	S05E200
S35E50	N25E250
S05E100	S10E250
S35E100	N05E300
N00E140	S12E300
N05E130	N25E300
N05E130	N25E350
S15E10	S08E350

Each of these points was marked by CEI and at these points RVE inserted a 4-foot section of 5/8" rebar and RVE surveyed each point. The location of the 5/8" iron rods are shown on the RVE drawing and the site limits are indicated by dashed lines.

The grid points and resultant graphic outlines define the site boundaries that are set +5 meters outside or beyond our last positive shovel tests; the shovel tests were 10 meters apart. Given that the actual edges of the site can be assumed to fade out after the last positive shovel test (as opposed to "stop dead"), this degree of resolution is believed to be as accurate as can realistically be achieved.

The resultant outline of the site boundaries on the RVE survey were transferred to the CEI site map, with a smoothing of the angles in the dashed line that can be assumed to more realistically reflect the outline of the site boundaries than do the straight lines and sharp angles on the RVE map.

Based on the maps it appears that the site extends virtually the entire width of the Port of Corpus Christi Authority property, running approximately parallel to the Corpus Christi Bay shoreline, with one apparent 50-meter gap at about the mid-point of the property's width and another gap associated with a large gully near the eastern edge of the property.

The CEI map also shows the locations of the two excavation blocks (Blocks A and B) we excavated last year in testing the site.

It is my opinion that this is an exceptionally accurate map and that it reliably defines the site's extent. I believe that THC may require that any construction in the vicinity of the site will have to maintain a buffer zone between construction and the site boundary, given that the virtually pure

sand of the dune formation in which the site is located would be highly vulnerable to erosion if disturbed.

Sincerely,

A handwritten signature in black ink, reading "Robert A. Ricklis". The signature is written in a cursive style with a large, stylized 'R' and 'A'.

Robert A. Ricklis, Ph.D.
Branch Director and Principal Investigator

