

PROPERTY OF THE
HOUSTON ARCHEOLOGICAL SOCIETY

Tracking The Mexican Army
Through The Mar De Lodo (Sea of Mud)

April 29 - May 9, 1836

41WH92, 41WH93, 41WH94, 41WH95
WHARTON COUNTY, TEXAS

Joe D. Hudgins
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INTRODUCTION

This report, second of a series, covers information from four (4) sites occupied by the Mexican Army April 29, 1836 to May 9, 1836. The sites are located in an area which extends approximately five miles along the southwest bank of Middle Bernard Creek in northeast Wharton County, Texas. The first report, Badger site (41WH91), was published by the Houston Archeological Society (Hudgins and Dimmick, 1998).

December, 1996, a farmer reported finding two iron cannon balls near the Middle Bernard Creek. With the landowner's permission, members of the Houston and the Ft. Bend County archeological societies used metal detectors to do a preliminary survey near the discovery site of the two cannon balls. Additional metal artifacts were located that have been linked to the Mexican Army of 1836. This information, reported to Texas Archeological Research Laboratory in Austin, was designated as Anderson-Reed site and assigned trinomial 41WH92.

Between January 1997 and March 2000, extensive surveys were conducted using metal detectors. Three additional sites were located in the region and recorded Nottawa site (41WH93), Isenhower site (41WH94) and Higgins site 41WH95).

The Mexican forces, numbering over 2,500 men under the command of General Vicente Filisola, attempted to traverse the region along the southwest margin of Middle Bernard Creek enroute to the Atascosito Crossing on the Colorado River. Heavy rains had occurred April 26-27, 1836, which turned that region's soil into a virtual quagmire. Mules, men, wagons, carts, cannons and other equipment became hopelessly mired in the mud. These conditions created a situation which caused materials and equipment to be lost or abandoned by the Mexican Army.

Participants in the survey include: Gregg Dimmick, Joe D. Hudgins, Terry Kieler, Gene Marik, Ed Person and John Wicke.

GEOGRAPHIC and ECOLOGICAL SETTING

Sites 41WH92, 41WH93, 41WH94 and 41WH95 are located in a region of the Texas coastal plains, approximately 50 miles inland from the Gulf of Mexico. During the 19th century, the Texas coastal plains were described as void of trees or shrubs and virtually flat with numerous small mounds called pimple or mima mounds. During periods of heavy rains, the area would become inundated with water and these small mounds provided the only resting place for man or beast (Weniger 1984:24-27).

The soils in the area of these sites are classified as Edna-Crowley and Crowley. They are poorly drained, having an upper layer of fine sandy loam and lower layers of clay or sandy clay (McEwen and Crout 1974: 15-20). Indian grass (*Sorghastrum nutans*) and several of the Blue Stem varieties (*Andropogon*) were the dominate grasses and they could reach the height of two meters (Gould 1978: 15 & 211). These tall grasses often presented formidable obstacles to travelers. Mexican Army scouts, under the command of General Vincente Filisola, described the region as a forest full of reeds and high grasses, April, 1836 (Filisola 1837: 42).

Beginning early in the 20th century and continuing into the present 21st century, the area containing these four archeological sites has been used primarily for rice

HISTORICAL BACKGROUND

The historical events that occurred April 21-29, 1836 were published in an earlier report (Hudgins and Dimmick 1998:2-4) and are repeated in this report in a shorter form to present a clearer understanding of the location, activities and condition of the Mexican Army from April 21-May 9, 1836.

The writers found a conflict in dates. All sources agree on the dates involved except for early reports from General Filisola (1837). General Urrea points out in his diary (Casteñeda 1928:257) that Filisola's dates are incorrect by one day. Filisola himself corrects this error in later writings. Correct dates are used in this report. Serious researchers should obtain copies of the original Mexican documents.

APRIL 21: On this date in 1836, a Mexican force, under the Supreme Commander, General Antonio Lopez de Santa Anna, was defeated at the battle of San Jacinto by the Texian Army under the command of General Sam Houston. Two other large forces of the Mexican Army were encamped nearby. One group of 1,408 men, was at Old Fort on the west side of the Brazos River. The second group of 1,165 men, was under the command of General Jose' Urrea and were situated near the small settlements of Columbia and Brazoria (Filisola 1837:30).

APRIL 23: The news of General Santa Anna's defeat reached General Vincente Filisola at Old Fort. Filisola was Santa Anna's second in command and he assumed supreme command of the remaining Mexican Army. General Filisola issued an order for General Urrea to bring his troops to a location known as Mrs Powell's dwelling (Filisola 1837:40).

APRIL 25: Filisola's orders were carried out and all troops converged at Elizabeth Powell homesite, camping on Turkey Creek. Mrs Powell's was reported to be five leagues (one league =2.68 miles) from Old Fort. General Filisola called for a general staff meeting and sought their opinions regarding a plan of action. It was a unanimous agreement that they must recross the Colorado River, re-establish communications with the Mexican Government, and await aid from Mexico (Filisola 1846:233-234).

The combined Mexican forces now numbered 2,573 men, consisted of 2,196 infantrymen, 307 cavalymen, and 70 artillerymen (Filisola 1837:30). General Filisola's reorganization of the army gave second in command to General don Jacuín Ramírez y Sesma (Filisola 1837:19). General Antonio Gaona commanded the first division which constituted the Morelos battalion, Gaudalajara battalion, Guanajuato battalion and three pieces of artillery. The second division, under the command of General Eugenio Tolsa, was comprised of the Zapadores battalion, Primero activo de Mexico battalion, Queretaro battalion and three pieces of artillery. The reserve division, under the command of General Jose' Urrea, included the Jiménez battalion, San Luis battalion, all the cavalry units (Dolores, Tampico, Presidiales, Cuautla and Auxiliares de Guanajuato), and two pieces of artillery (San Luis battalion log, 1836).

In addition to the soldiers there was a large number of non-combatants who were sometimes referred to as "camp followers". They included women, muledrivers, wagon train drivers, boys and sutlers (de la Peña 1975: 22). In addition there were some 1,200 mules traveling with the army (Filisola 1837: 231).

APRIL 26: Three brigades started their march with General Urrea, with his brigade covering the rear. After two leagues they abandoned the road that went to San Felipe de Austin. After one more league they encountered one branch of several that form San Bernard river system. Only half of the troops had crossed this branch when the sky darkened and the rain became what can be described as a deluge (Filisola 1849:214).

APRIL 27:"The 27th dawned with persistent rain. Nevertheless, the march continued much later in the day, but we had traveled no more than five miles when we had to camp, it being impossible to cross the second Bernardo, which was greatly swollen. On this day we made our way through the mud, so the march was as laborious as it had been the day before..."(de la Pena 1975:160).

While camped near the second branch (West Bernard Creek) three Texian soldiers entered the Mexican camp to deliver a message. It stated General Santa Anna was alive and held prisoner (Castañeda 1928:258).

APRIL 28: General Urrea's scout recommended, as they could not cross the second of the Bernardos, they should turn back to the same little house where they had camped on the night of the 26th. The scout told of a crossing to a road called Contrabando in that vicinity, which would take them to the Atascosito crossing on the Colorado River. This was the crossing General Santa Anna used on his trip east. Filisola gave up his original plan to cross the Colorado at Cayce's and proceeded to Atascosito.

General Filisola (1837:19-20) stated "...not able to ford the stream, we counter-marched, with the right wing in advance, by the same road that we had come the day previous, and encamped on the right bank of the centre rivulet of the San Bernard (Middle Bernard Creek)...".

APRIL 29: De la Peña (1975:165) wrote in his diary, "...our misfortunes reached their limit. The wagons had been delayed since the previous day, and some of our sick who were in them died for lack of medicine and nourishment their condition required....The vanguard began to leave at eight in the morning, but by ten-thirty the rear guard still had not been able to march. Before the march began, armaments, munitions, nails, quick matches of rope, and other appurtenances of the artillery had been thrown into the creek to lighten the load on the wagons...".

The rear guard, under the command of General Urrea, arrived shortly after three in the afternoon to find the advancing Army had left the main road and were struggling to free themselves from a vast sea of mud. With the majority of his army unable to move at a steady pace, Filisola feared the Texians would reach the Astascosito crossing ahead of his men. He ordered General Urrea to leave his artillery, baggage and wagons; take his brigade with all due haste and take possession of the crossing. Urrea left just prior to seven in the morning and arrived at seven in the evening at Astascosito crossing (Castaneda 1928:261-262).

Filisola described the scene as "unlike anything that I have witnesses in 30 years of service; men, animals, cannons, all that can be named, were floating on a sea of mud. We did not doubt for a moment that the mules were secure in the mud because of the cargo they carried. This alone prevented them from disappearing....".

“Later I ordered the mules to be unloaded and that the soldiers, who were hip deep in mud, to carry the cargo on their shoulders to some small hillocks (prairie features). Later they extracted the mules, also almost up to their shoulders...” (Filisola 1849: 235-236).

APRIL 30: The army marched from early morning until darkness overtook them, advancing only three miles. Baggage mules struggled in the mud; wagons with artillery and supplies were buried above their axles; the cavalry and infantry immobile. De la Peña (1995: 165) writes in his diary, “...infantry continues its march, each corps leaving behind a picket to help pull out the artillery...loads abandoned yesterday were found...unlocked trunks, broken packs, destroyed ammunition boxes ...shrapnel containers could hardly be seen in the midst of the mud...”.

Essential provisions remaining consisted of a few bushels of dried beans and handful of salt. The prairie offered no available firewood, the rains kept the men wet, and many were weakened by dysentery with no medicine or physicians to render care (Filisola 1837:42-43). These conditions caused Filisola to decide to leave with the 1st and 2nd brigades and hasten to rejoin Urrea’s unit.

Filisola ordered Lieutenant Colonel D. Pedro Ampudia, commandant general of the artillery, together with twenty men and two officers from each unit left, to remain at this site and free the embedded artillery, carts and supplies; then retreat towards Mexico and rejoin the advancing main army (Filisola 1849: 237).

MAY 2: While Ampudia and his men were working to free the bogged equipment, a force of approximately 300 Texians approached from the rear of the scattered baggage. Unsure of the Texian’s intentions, Ampudia ordered two of the four-pounders, the only freed cannons, maneuvered to face the approaching unit. (Filisola 1837: 44).

The Texians, under command of Juan Seguín and Henry Karnes, carried orders not to instigate hostilities, but expedite recrossing of the Colorado River by the Mexican troops, and to allow colonists to investigate their homes and interests located on the left (east) bank. (De la Peña 1975: 170).

MAY 2-4: Several letters were exchanged between Filisola and Ampudia with Texian officer Sequin (Teja 1991: 136-139). Sequin receives two separate correspondence dated May 2. Filisola, who is waiting at the Atascocita crossing on the Colorado River, writes “...by couriers I learn you are coming on with a force....”.

Ampudia writes “...I am informed that there is a large force (of Texians camped) in the woods...”.

Sequin responds May 3 that the Texian Army vanguard will not move from the area until the Mexican Army has crossed the Colorado River.

On May 4, Ampudia writes Sequin, “...I forward to the sick the necessary suppliesuntil measures can be taken for their removal; inasmuch as those sick men are on the ground occupied by your camp, I hope you will in the future attend to them, as I have been informed you will....”.

MAY 9: Ampudia and his men finally managed to free most of the wagons and all the artillery from the mud and began their advance to Atascocita crossing where the Mexican Army was encamped. The only equipment left behind was twelve baggage wagons, a forge and a gun carriage (Filisola 1837: 44).

The Mexican Army that left Mrs Powell’s on April 26 were a well disciplined and formidable fighting force. However, they were soon rendered inept and in desperate conditions due to the heavy rains that occurred April 26-27. The Bernard Prairie, now a “sea of mud”, brought them to a state which General Filisola wrote in a report on May 14, “...the army is without clothing, the arms ruined, ammunition of every kind in bad condition, horses and mules badly used in the extreme; we have neither physician or apothecary; we are threatened with the epidemic of the season and innumerable sufferings....”(Filisola 1837:44-45).

METHOD OF ARTIFACT RECOVERY

The Global Positioning System (GPS) was used to determine site boundaries and general location for artifacts located in WH4192, 41WH93, 41WH94 and 41WH95. The region surveyed contains over 3,000 acres and planted in rice on a rotational schedule. Permanent datum points could not be established as individual fields, usually 180 to 320 acres, are not available when farmed. Only those fields left fallow could be surveyed; most are not contiguous.

Metal artifacts recovered from all four sites were located using metal detectors. Non-metal artifacts, such as ceramics, were collected from the surface. The majority of the metal artifacts were located at depths ranging from 10-25 cm.; however, several were recovered at depths of 60-90 cm.

Field records indicate that the majority of artifacts were concentrated in certain areas, but it was common to find artifacts scattered between the concentrations. Due to the limited accuracy of the GPS readings, only areas of concentration were recorded and maps only indicate the general areas of artifact concentrations (Fig. 1-4). A map (Fig. 5) indicating all four sites, including the Badger 41WH91 site, for reference.

After being cleaned and photographed, selected artifacts have been loaned for display to the Alamo in San Antonio, Texas, beginning mid-year 2000.

Weapons Analysis

The Mexican Army of 1836 was armed primarily with British made weapons. Records of arms purchased by the Mexican Government have not been found, but in 1833 the British Board of Ordnance had 440,000 India Pattern Brown Bess muskets in inventory that were considered obsolete. It is likely Britain sold these muskets to Mexico. The British India Pattern Brown Bess musket (Fig. 6) is .75 caliber and has a 39 inch barrel (Koury 1973:8). It was the main type of musket use by the Mexican soldier.

In addition to muskets, the Mexican Army had English Baker rifles (.62 caliber), carbines and pistols (Todish 1998:171). The Mexican Army, under the command of General Vicente Filisola, had artillery consisting of two 4-pounders, two 6-pounders, two 8-pounders and two howitzers, as late as April 25, 1836 (De la Pena 1975:162).

Most of the gun parts recovered from sites 41WH92, 41WH93, 41WH94, and 41WH95 are from British India Pattern Brown Bess muskets (Nesmith 1997). Small arms ammunition recovered was weighed and diameter measurements were recorded. Caliber estimation and type of weapon represented was determined by comparison to small arms ammunition excavated from site 41BX6 and examined by Samuel P. Nesmith (Fox 1988 & 1989: 57 & 59).

Artillery projectiles recovered from all four sites include solid cannon balls, canister shot and howitzer shells. Two solid iron cannon balls from 41WH93, have average weight of 2.8 kg (6 lbs 2 oz) and average diameter of 9.5 cm (3.62 in). A single solid brass cannon ball from 41WH92 weighs 2.7 kg (6 lbs) and is 8.45 cm (3.34 in) in diameter.

Canister shot recovered from all four sites were weighed and diameters measured. For this paper the shot averaging 2.5 cm in diameter is called light canister, while larger shot, averaging 3.3 cm in diameter are called heavy canister. The larger shot are often referred to by some writers as "grapeshot".

Five bronze howitzer shells were recovered from 41WH92 one from 41WH95. They average 15.8 cm (6.25 in) in diameter. The six shells are for a 7-inch howitzer as they compare with one found at 41BX677 (Labadie 1986:73) identified as a 7-inch howitzer shell.

SITE 41WH92

Site 41WH92 is the largest of the four sites in this report. It extends along the southwest side of the Middle Bernard Creek for approximately 3,500 meters and lies 250-1,000 meters inland from the creek bank. The site has been farmed in rice on a rotational system for many years. Plowing, land planing, and levee construction has resulted in extensive vertical and horizontal disturbance.

Artifacts recovered concentrated in five general areas, with some scattering of artifacts between areas detected. Areas of concentration labeled Areas A-E (Fig. 1). A complete inventory of artifacts from each area was recorded (Table 1).

ARTIFACTS

Metal artifacts recovered include musket parts, lead and brass musket shot of varying sizes, lead and brass cannister shot, and brass cannon shot, brass howitzer shells, brass and iron buckles, emblems and spanish-style horse shoes. Non-metal artifacts include several ceramic sherds and a gun flint.

Brass Trigger Guard & Brass Trigger Guard Fragments

Trigger guard and trigger guard fragments were recovered in all areas of 41WH92, except for Area B.

Fragments of two trigger guards were recovered from Area A. Fragment 1: rear portion of bow with rear tang attached; weighs 23 grams, and 3.7 cm long.

Fragment 2: forward portion of bow; has a fastening lug and sling swivel hole visible. It weighs 23.3 grams and is 3 cm long.

In Area C, two trigger guard fragments and one almost complete trigger guard was recovered. Fragment 1: represents forward end of bow with attachment lug and sling swivel hole present. It weighs 56.7 gram and is 7.7 cm long.

Fragment 2 (Fig. 7): almost complete specimen of trigger guard, the rear tang is missing but sling swivel hole and fastening lug are present. It weighs 112 grams and is 10.6 cm long. The front tang is bent downward at a 90 degree angle. In addition, four rear tang fragments were found, all four are broken at the screw holes.

Three fragments of trigger guards were found in Area D. One specimen is the front portion of a trigger guard with fastening lug attached. It weighs 28 grams and is 4.4 cm long. The other two specimens are rear tang fragments.

In Area E, one trigger guard fragment and one almost complete trigger guard was recovered, and one front tang and three rear tang fragments. Fragment 1: has the forward portion of the bow with the sling swivel hole and part of the fastening lug visible; weighing 28.9 grams and 5.2 cm long.

Fragment 2: almost complete trigger guard, rear tang missing with fastening lug, front tang and sling swivel hole present; weighs 93.4 grams and 11.6 cm long.

Brass Trigger Plate

One trigger plate from a musket with part of one side missing was recovered from Area C.

Brass Ramrod Pipes

One ramrod pipe was found in Area A. The specimen represents the second or third ramrod pipe and weighs 18.1 grams and is 4.8 cm long.

Seven ramrod pipes and fragments were recovered from Area C. Ramrod pipes 1-3: represent second or third ramrod pipes with average length of 4.8 cm and average weight of 20.9 grams. Ramrod pipe 3 (Fig. 10): has a fragment of iron ramrod inside the pipe which protrudes from both ends.

Three tailpipe fragments recovered in Area C. Fragment 1: tang missing; weighs 26 grams and 5.6 cm long. Fragment 2: missing tang; weighs 27.2 grams and 6.1 cm long. Fragment 3: tailpipe tang; weighs 4.4 grams and 4.2 cm long.

One forward ramrod pipe (Fig. 9) 10 cm long, weighing 33 grams was found in Area C. Broken in two pieces; front part measures 3.2 cm in length and rear part 6.9 cm in length.

In Area D one tailpipe with front tang missing was recovered. It weighs 29.5 grams and is 5.6 cm long.

One complete tailpipe recovered from Area E; weighs 38.4 grams, 11.4 cm long.

Brass Nose Caps

Two nose caps with brass pins present were recovered in Area C. Nose Cap 1: weighs 19.2 grams and measures 2.4 cm in length, 2.9 cm in width. Nose cap 2: (Fig. 12) weighs 16.2 grams, and is 2.4 cm in length, 3.1 in width.

A bent nose cap was recovered from Area E. It weighs 29.3 grams, 2.7 cm in length and 2.8 cm in width.

Brass Side Plate

The forward portion of a side plate, broken at the center screw hole, was located in Area D. It weighs 14.6 grams and is 5.9 cm long. This type side plate is believed to be from a New Land Service musket (Darling 1973: 52,53).

Brass Butt Plates

Two broken butt plates were recovered from Area C. Butt plate 1 (Fig. 15): upper tang missing; weighs 150.4 grams and is 12.8 cm long. Butt plate 2: lower portion of a butt plate, weighs 63.7 grams and is 7.4 cm long.

In Area D, two butt plate fragments were recovered. Fragment 1: top tang portion with fastening lug present; weighs 22.6 grams and 6.3 cm long. Fragment 2: a portion with tang missing, broken at lower screw hole; weighs 96.1 grams and is 7.8 cm long.

Three butt plate fragments were recovered in Area E. Fragments 1 & 2: lower portion of the butt plate and both are broken at lower screw hole. Fragment 3: upper part of the butt plate and is broken at lower screw hole with the tang missing and upper screw hole visible. It weighs 121.7 grams and is 8.4 cm long.

Gun Flint

One dark gray gun flint (Fig. 20) was recovered from the surface in Area C. It weighs 14.7 grams and measures 3.4 cm in length, 2.8 cm in width and 1.2 cm in thickness.

Small Arms Ammunition

Four lead musket balls, ranging in diameter of 1.73 cm to 1.75 cm and weighing from 24.3 grams to 29.8 grams, were recovered from Area A. Oxidation was present but no mold seams or sprues are visible.

Sixteen lead musket balls were recovered from Area B. Six measure 1.47 cm to 1.63 cm in diameter; weighing 16.2 grams to 22.4 grams. Six are 1.73 cm to 1.75 cm in diameter, and 24.8 grams to 29.7 grams in weight. Two weigh 25.1 grams and 29.1 grams respectively, and are somewhat flattened in shape. Their weight suggest diameters between 1.68 cm and 1.75 cm. In addition, two smaller balls were found. One measures .81 cm in diameter and 2.9 grams in weight and one 1.35 cm diameter, 13.5 grams weight with a 2 mm wide compression mark which suggests it could have been rammed down a musket barrel.

Fifty-five lead musket balls and two brass musket balls were recovered from Area C. The lead balls have diameters ranging 1.63 cm to 1.80 cm, and weigh 24.5 grams to 32.9 grams and have some oxidation. The two brass balls (Fig. 24, A, B) measure 1.73 cm and 1.88 cm in diameter and weigh 26.8 grams and 34.7 grams respectively. Both have partial sprues remaining.

Three smaller lead balls were also recovered in Area C measuring .33, .33 and .43 cm in diameters and weighing 2.9, 3.1 and 6.9 grams respectively.

Eight lead balls were found in Area D. Seven measure 1.68 cm to 1.78 cm in diameter and weigh 24.9 grams to 32 grams. One smaller lead ball is 1.42 cm diameter and weighs 16.4 grams. All have some oxidation.

Three lead balls were found in Area E, all having a diameter of 1.7 cm. Their average weight is 27 grams and there is some oxidation.

Lead, Brass and Iron Canister Shot

A canister shot is a projectile consisting of a cylinder containing numerous small balls of various sizes, using available metal, that can be fired from a cannon. Both light and heavy canister shot were recovered from all areas of site 41WH92 except for Area E. Raised casting seams and numerous pits are visible on most of the shot recovered, suggesting they were poorly cast, and most were not perfectly round in shape, making diameter measurements difficult.

Recovered from Area A were fifty-nine brass, light canister shot. Their diameters range 2.1 cm to 2.7 cm, and weights of 53.7 grams to 79.3 grams with a 66.4 grams average, with some casting sprues visible; see examples (Fig. 26). One lead, light canister shot recovered is 2.1 cm in diameter and weighs 55.8 grams. Also, thirty-one brass, heavy canister shot that measure 3.1 cm to 3.6 cm with weights ranging from 131.5 grams to 174.8 grams; average of 152.9 grams; see examples (Fig. 27). Two severely oxidized iron canister shot (Fig. 28) measured 4.7 cm and 4.8 cm in diameter, weigh 371 grams and 373.5 grams respectively.

In Area B, twenty brass, light canister shot were recovered with diameters of 2.3 cm to 2.8 cm and weights from 51.5 grams to 74.4 grams, with average weight of 66.2 grams. Six lead, light canister shot (Fig. 25) weighed an average of 55.1 grams.

In Area C, eighteen brass and three lead canister shot was found. Twelve were brass, light canister shot measuring 2.1 cm to 2.6 cm, weighing 56.4 grams to 71.8 grams, with average weight of 64.9 grams. Six were brass, heavy canister measuring 3.1 cm to 3.4 cm, weighing 132.7 grams to 151.1 grams, with average weight of 145.3 grams. Three lead, light canister shot weigh an average of 83.2 grams.

One-hundred and ten brass, light canister shot were recovered in Area D. Weights of individual shot range from 45.1 grams to 70.7 grams with average weight of 61.5 grams.

Of the fifty-nine brass canister shot from Area A, twenty-four canister shot were located together in a small area at a depth of 40-60 cm below the surface. Of the one-hundred and ten canister shot from Area D, eighty-one brass shot were located together in a small area 60 cm to 1 meter below the surface. The depth may indicate the canisters were intentionally buried.

Solid Brass Cannon Ball

A solid brass cannon ball (Fig. 30) measuring 3.34 inches (8.45 cm) and weighing 6 pounds (2.7 km) was recovered from Area A.

Bronze Howitzer Shells

Three bronze howitzer shells, spherical in shape, with hollow interiors were recovered from Area A and appear to have been intentionally buried. Shell 1: was located 20.5 cm below surface; the other two were in a direct line beneath the first. Decending depths were: shell 2 at 36.5 cm, shell 3 at 52.5 cm.

Shell 1: measures 15.8 cm (approx. 6.25 in) in diameter, weighs 12.2 kg (27 lbs). with fuse opening diameter 2.4 cm; shell casing is 2.3 cm thick at that point.

Shell 2: measures 16.1 cm (approx. 6.25 in) in diameter, weighs 10.9 kg (24 lbs). Fuse opening diameter is 1.9 cm and shell casing is 2.0 cm thick.

Shell 3: (Fig. 32) measures 15.8 cm (approx. 6.25 in) in diameter and weighs 12.9 kg (28 lbs). Fuse opening diameter is 2.1 cm; shell casing thickness measures 2.8 cm at fuse hole. It has an elaborate mark, 7.8 cm by 3.8 cm, having numerous lines chiseled onto the shell casing at mid-line.

Very faint casting seams are visible on all three shells. Shells 2 & 3: have an iron oxide spot directly opposite the fuse opening. A portion of a hollow wooden fuse is broken off flush at the fuse opening on all three shells; all contained solidified gun powder, which was removed and saved for future analysis.

Two bronze, hollow howitzer shells, spherical in shape were recovered from Area C. Both contained solidified gun powder, which was removed. Shell 1: (Fig. 31) measures 15.8 cm in diameter (approx. 6.25 in) and weighs 11.4 kg (25 lbs). It was located 26 cm below the surface in sandy, clay soil. The remains of a hollow wooden fuse is visible in the fuse opening. A design, consisting of three intersecting lines measuring 62 cm by 73 cm by 74 cm in length, resembling an astrisk is chiseled onto the casing at mid-line.

(This shell was recovered three weeks prior to the others. It contained a fragment of the wooden fuse in the fuse hole which created concern about the possiblility of it containing viable gun powder. Acting on the advice of the Office of the State Archeologist, the howitzer shell was taken to a remote area where it was buried and destroyed by personnel from the United States Army stationed at Fort Sam Houston, San Antonio, Texas. The powder was inert and the shell failed to explode. The charge placed by bomb crew shattered the howitzer shell into various size fragments. The majority of these fragments were recovered from the hole and were used to partially reconstruct the shell.)

Shell 2: (Fig. 33) measures 15.7 cm (approx. 6.25 in) and weighs 10.9 kg (24 lbs). It was located in sandy, clay soil at a depth of 53 cm below the surface and directly below shell 1. The casing thickness is 2.1 cm, measured at the fuse opening. The fuse opening is 2.2 cm and a portion of a hollow wooden fuse is visible in the fuse hole. There is mark chiseled onto the shell casing which consists of four lines. Two lines, 2.6 cm in length, converge to form the letter "V", with a smaller line 1.4 cm midpoint below the convergence, so it reads "A". A fourth line, 2.6 cm in length, is above and touching the apex of the "A".

Buttons

Two brass buttons were recovered in Area A. Button 1: measures 14 mm in diameter and weighs 2.2 grams. It is of one piece construction with flat face and has complete shank on back, attached by brazing (Albert 1997:7). Face and back are plain. Button 2 (Fig. 41): measures 23 mm in diameter and weighs 4.3 grams and is severely oxidized. Face is convex, and a complete shank is attached to the back by brazing. Design on face features a flaming bomb. This button (sketch Fig. 42) is associated with Mexican artillery uniforms (Gaede 1996:12).

One button was recovered in Area C. It is of one piece construction with convex face and measures 21 mm in diameter and weighs 2.1 grams. The complete shank is fastened to back by brazing. Face and the back are plain.

Four brass buttons were found in Area E. Button 1 (Fig. 43): rounded, with hollow interior and measures 16 mm in diameter and weighs 2.6 grams. It is of three piece construction with back plate and shank. Face and back are plain. This type button is referred to as "bullet buttons" due to similarity to musket balls. They date to the early 19th century (Labadie, et al 1986:93).

Button 2 (Fig. 44): a "bullet button"; measures 17 mm in diameter and weighs 2.9 grams. This specimen has no shank and two halves of a round piece of wood came from inside the back of the button.

Button 3: one piece construction with shank brazed to back. It measures 18 mm in diameter and weighs 3.3 grams. Face is convex with raised floral design. The backmark reads "Orange Colour".

Button 4: one piece construction with shank brazed to back. It measures 21 mm and weighs 4.4 grams. Face of button is flat and backmark is unreadable.

Brass Buckles

Two brass buckles were located in Area C. Buckle 1 (Fig. 46): "D" shaped, measures 3.3 cm by 3 cm, weighs 12.3 grams. Tongue is absent. Buckle 2: rectangular in shape, measures 2.7 cm by 2.1 cm with heavily oxidized tongue. It weighs 5.6 grams.

Six brass buckles and two buckle fragments were located in Area D. Buckle 1: measures 2.9 cm by 1.9 cm, weighs 6.5 grams. It has a heavily oxidized tongue attached. Buckle 2: measures 2.9 cm by 2.3 cm, weighs 7.6 grams. Buckle 3: measures 2.9 cm by 2.2 cm, and weighs 6.6 grams. Buckle 4: measures 2.9 cm by 2.4 cm and weighs 7.3 grams. Buckle 5: broken into two parts. Together it measures 2.9 cm by 1.9 cm and weighs 6.5 grams. A heavily oxidized tongue is attached. Buckle 6: lighter construction, measures 2.9 cm by 1.9 cm and weighs 4.2 grams. Two corner pieces of two separate buckles recovered.

One brass buckle (Fig. 50) recovered from Area E is rectangular shape with a center bar, measures 4 cm by 3.2 cm and weighs 14.5 grams.

Brass Emblems

A brass emblem (Fig. 58), round in shape, no markings on the face or back, was recovered from Area D. It measures 5 cm. in diameter and weighs 8.9 grams. The back has two connector loops attached by brazing. Remnants of solder, possible for a third connector, is visible on the back. The emblem is less than 1 mm in thickness; its placement or use is unknown.

Three small brass fragments were recovered in Area E. Two fragments (Fig. 54) form a single unit, as they fit together to form the letter "P". The third piece (Fig. 55) appears to be a fragment of a letter but not a part of letter "P" unit. All three fragments (Fig. 56) have a small connector which extends from the back. The letter may have served as collar insignia with the "P" representing "permanete".

One of the two fragments which form a single unit is 1.6 cm by 1.5 cm and weighs 1.8 grams. The connector on the back is 2 mm in thickness and 6 mm in width and 6 mm in length, with a hole near the distal end that is 3 mm in diameter. The companion fragment is 2.5 cm by .4 cm and weighs 1.6 grams. The connector on the back is 2 mm thick, 5 mm wide and 7 mm in length. The diameter of the hole, near distal end of the connector, is 3 mm.

The third fragment, 1.6 cm by 1.2 cm, weighs 1.4 grams. The connector is 2 mm thick, 5 mm wide and 6 mm in length. The diameter of connector hole is 2 mm.

Brass Sword Guard

A brass sword guard (Fig. 61) was recovered from Area A. It weighs 102.9 grams and measures 8.5 cm by 2.6 cm by 2.6 cm. Blade slot is shape of hour glass and measures 2.2 cm by 1.1 cm at widest point. One portion contains an oxidized area measuring 2.7 cm by 2 cm. The specimen is similar to a Baker Rifle "sword bayonet" (Todish 1998:172).

Iron Spanish-style Horse or Mule Shoes

Two heavily oxidized spanish-style horse or mule shoes (Fig. 63:A,B) were recovered in Area C. Shoe 1: measures 8.5 cm in width, measured to the outside margins, and 10.3 in length, measured from toe to heel. The branch of the shoe is 2.9 cm in width, with four square nail holes in each branch. There are fragments of square shoe nails remaining in the nail holes.

Shoe 2: weighs 57.2 grams and is heavily oxidized. It measures 8 cm in width, measured to the outside margins, and 7.5 cm in length, measured from toe to heel. Each branch of the shoe measures 2.7 cm in width, with three square nail holes in each margin. Fragments of square shoe nails remain in the nail holes.

Two iron spanish-style horse or mule shoes were recovered from Area E. Shoe 1: one intact branch 2.5 cm in width, with four square nail holes. The broken branch is 2.7 cm wide with three square nail holes. Length, toe to heel, is 9 cm.

Shoe 2: heavily oxidized, weighs 84 grams and measures 11.2 cm wide, measuring from the outside margins, and 12.7 cm in length, toe to heel. Each branch is 2.5 cm wide and has four square nail holes in each side.

Lead Cylindrical-shaped Objects

Two solid lead objects, cylindrical in shape, were recovered in Area C. Object 1 (Fig. 65): 6.2 cm in length, 1.9 cm in diameter and weighs 180.5 grams. Object 2: 4.7 cm in length, 1.9 cm in diameter and weighs 118.9 grams and has been cut at an angle. Both have small grooves around their circumferences with about five grooves for each centimeter of length. Their use and purpose is unknown.

Utensils

Two brass fragments of spoons were recovered in Area B. Fragment 1: one half of a bowl with part of the handle attached. The bowl fragment measures 3.7 cm in length and 3.5 cm in width. The handle is 2.5 cm in length and has a maximum width of 1.2 cm. There is a trace of silver plating remaining.

Fragment 2 (Fig. 67,B): has traces of silver plating and bowl measures 2.4 cm in width and 3.7 cm in length. A portion of the handle is attached and is 2.9 cm in length with the distal 1.4 cm of the handle twisted by design.

Ceramic Sherds

Four ceramic sherds were recovered from Area B. Sherd 1: deep blue transfer-printed represents a rim of a plate or platter.

Sherd 2: deep blue transfer-printed; unknown vessel.

Sherd 3: undecorated refined, white earthenware; unknown pattern and vessel.

Sherd 4: handpainted lid fragment; unknown pattern

SITE 41WH93

Site 41WH93 is the second largest in area of the four sites in this report. It extends along the Middle Bernard Creek for a distance of approximately 2,800 meters and extends inland from the creek bank for a maximum distance of 1,000 meters. The location of the site is approximately one kilometer downstream from 41WH92. This region that has been farmed in rice for many years, causing considerable vertical and horizontal disturbance to the soil.

The majority of metal artifacts were located by using a metal detector in three general areas of the site. Areas are labeled Area A-C (Fig. 2). Artifacts include musket parts, musket balls, canister shot, cannon balls, buckles, buttons, emblem, spanish-style horse or mule shoes, and utensil fragments. The non-metal artifacts consist of two ceramic sherds. A complete inventory of artifacts for each area was recorded (Table 2).

ARTIFACTS

Brass Trigger Guard Fragments

The rear portion of a bow from a brass trigger guard was recovered from Area A. A fragment of a rear tang from a brass trigger guard was recovered from Area B. A brass trigger guard bottom, fragment of a front tang with fastening lug present and three rear tang fragments from brass guards were recovered from Area C.

Brass Trigger Plate

A brass trigger plate (Fig. 8) including a fragment of the iron trigger in place was recovered from Area C. It measured 5.7 cm by 1.6 cm and weighs 19.4 grams.

Brass Ramrod Pipes

Rear part of a brass tang from a terminal ramrod pipe was recovered in Area A. From Area C, a unbroken terminal ramrod pipe (Fig. 11) with portion of an iron ramrod inside. It weighs 49.8 grams and measures 10.5 cm.

Brass Nose Cap

A brass nose cap with pin attached was recovered from Area C. It measures 2.6 cm by 2.2 cm and weighs 15.5 grams.

Brass Side Plates

One brass side plate (Fig. 13) was recovered from Area C; 10.8 cm in length, weighing 32.2 grams and is broken at the center screw hole. This type sideplate was made for a New Land Service Brown Bess musket (Darling 1971:53). Also recovered was a brass sideplate from India Pattern Brown Bess musket broken in two pieces. Total length of combined pieces measures 8.8 cm (Fig. 14).

Brass Buttplate

The lower portion of a brass buttplate with screw hole was located in Area C.

Musket Lockplate

The proximal end of an iron lockplate, broken at hammer screw hole, was recovered in Area B. Musket type identification not possible due to severe oxidation.

Iron Hammer

A reinforced iron musket hammer (Fig. 17) with absent cap and cap screw was located in Area B.

Frizzen and Frizzen Spring

A heavily oxidized iron frizzen and frizzen spring (Fig. 18,19) were recovered from Area B.

Small Arms Ammunition

Four musket balls (Fig. 23) were recovered from Area A that measure 1.0 cm, 1.0 cm, .9 cm, 1.2 cm in diameter. Two have partial sprues remaining.

Twenty-two lead balls were recovered in Area B. Eighteen range from 1.65 cm to 1.78 cm in diameter and 24.3 grams to 31.3 grams in weight. Two are 1.24 cm in diameter and 9.6 grams in weight, and two measure .86 cm in diameter and weigh 3.2 grams each.

Thirty-seven lead balls were recovered from Area C. Thirty-five have diameters from 1.65 cm to 1.9 cm and weigh 22.7 to 34.5 grams. One smaller ball measures 1.4 cm in diameter and weighs 19 grams.

Lead Pads

Two fragments of lead pads (Fig. 21) were recovered from Area B. Pad 1 measures 3.3 cm by 4.5 cm, weighs 4.8 grams and is oval in shape. Pad 2 measures 3.2 cm by 2.7 cm, weighs 2.7 grams and is irregular in shape. These pads were wrapped around the base of a gun flint to keep it secure between the cap and the jaw of a musket hammer.

Canister Shot

Two brass canister shot, with average weight of 58.8 grams, were recovered from Area B. Both shot is distorted, preventing accurate diameter measurement. Compared to shot found in 41WH92 with the same weight, these appear to be light canister shot.

Five brass canister shot, with average weight of 82 grams, were recovered from Area C. Diameter measurements were not recorded due to considerable distortion, but their weight suggests they are light canister shot. Five lead canister shot found in this area are also distorted and weigh an average of 83 grams and appear to be light canister shot.

Buttons

Five brass buttons and one pewter button were recovered from Area B. Button 1: brass, one piece construction with brazen attached shank. It measures 18 mm and weighs 1.9 grams with face and back moderately pitted. The backmark reads "Orange Gilt Colour".

Button 2 (Fig. 40): brass, one piece construction measuring 12 mm in diameter and weighs 1.0 grams. Centered on the face is a raised six-pointed star, 4 mm in diameter, surrounded by six, equally spaced, dots. Face has raised rim measuring 1 mm in width. A backmark is evident but, due to heavy oxidation, it is not readable and the shank is broken.

Buttons 3 & 4: brass, one piece construction with shanks present. They measure 15 mm in diameter and weigh 2.5 grams each; shanks present. Their face is flat and each has a raised numeral 6 followed by a small dot located behind and toward the bottom of the number as seen in example (Fig. 45).

Button 5: brass, one piece construction, with a flat face and shank still present. It measures 22 mm in diameter and weighs 5.1 grams. The backmark reads "Fine Treble Gilt HG & CO". Henry Grillery and Company produced buttons 1807-1808 (McGuinn 1978:21).

Button 6: plain one piece construction of pewter with two fastening holes. Diameter is 19 mm, weighs 1.2 grams and is heavily oxidized.

Six brass buttons and one pewter button was recovered from Area C.

Button 1 (Fig. 39): brass, one piece construction, measures 17 mm in diameter and weighs 1.8 grams. Face has floral pattern consisting of thirteen petals and a backmark is present but unreadable due to excessive corrosion. The shank loop is absent.

Button 2: brass, one piece construction, plain with a flat face, and measures 18 mm in diameter and weighs 2.1 grams. A backmark reads "Warranted Rich Orange" with shank present.

Button 3: brass, three-piece construction, round, hollow "bullet button", measuring 18 mm in diameter and weighing 3.9 grams, with shank intact.

Button 4: brass, three-piece construction, round, hollow "bullet button", measuring 17 mm in diameter, weighing 3.4 grams. A fragment of the shank remains.

Button 5: brass, two-piece construction, round, hollow "bullet button", measuring 18 mm in diameter and weighing 3.9 grams with shank missing.

Button 6: brass, round, hollow "bullet button", measuring 19 mm in diameter and weighing 2.0 grams. Back plate and shank are absent. A smooth hole 3 mm in diameter has been drilled or punched through the face.

Button 7: pewter, one piece construction measuring 15 mm in diameter and weighs .7 grams. The face is convex with a 4 mm wide by 2 mm deep circular depression with two fastening holes. The concave back has no backmark.

Brass Buckles

Three brass buckles and a single brass buckle fragment were recovered from Area B. Buckle 1: has two clipped corners and tongue absent. It measures 2.8 cm by 1.9 cm and weighs 5.7 grams. Buckle 2: measures 3 cm by 2.3 cm and weigh 10.3 grams and has a heavily oxidized tongue present. Buckle 3: oval in shape and measures 6.9 cm by 1.7 cm and weighs 20.6 grams. The buckle fragment is from an oval buckle similiar to Buckle 3.

Two buckles were recovered from Area C. Buckle 1 is brass and measures 2.7 cm by 2.4 cm and weighs 5.1 grams. Buckle 2 is iron, rectangle in shape and heavily oxidized. It measures 5 cm by 4.4 cm and weighs 18.7 grams.

Brass Emblems

A brass emblem (Fig. 57) was recovered in Area B. It is in the shape of an exploding bomb, but is broken where the flames come from the base. The base is round, representing the bomb, and is 3.1 cm in diameter. The top is fan-shaped, which represents the flame of the explosion, and is 2.7 cm in height and 4.6 cm in width. The flame is represented by eighteen rays extending outward from the top of the base. The face is slightly convex and the back has two prong-type connectors attached to the top and bottom of the round "bomb" base. The connectors are 10 mm in length, 7 mm wide and 2 mm thick. Near the distal end of both connectors are round holes 2 mm in diameter. The entire emblem is 5.8 cm in height, 3.5 mm in thickness and weighs 40.1 grams. This emblem is believed to have been attached to the outer flap of a leather cartridge box or on the front of a shako worn by a Mexican Army grenadier.

A brass emblem (Fig. 59) 6.1 cm in diameter was recovered from Area C. It has an attached raised, circular detail, 1.4 cm in diameter, in the center of the face. Forty-two lines radiate outward from the center area of the face to the outside rim. It weighs 54.4 grams and measures 2 mm in thickness. The back of the emblem is plan and had two "prong-type" connectors, but only one remains. It measures 1.4 cm in length, 1 cm in width, 2 mm thick, with a hole 6 mm in diameter in its distal end. The distance between the two connectors is 5.4 cm.

Brass Cross-Belt Plate

A brass cross-belt plate (Fig. 60) was recovered from Area B, that is almost identical to one found in site 41WH91 (Hudgins and Dimmick 1998:Fig. 41). It is rectangular in shape with “clipped” corners. All of the outside edges are slightly beveled. It measures 6.3 cm by 4.8 cm and weighs 62.8 grams. The letter “M” is scrolled onto face of plate, and below the letter and just above the bottom edge is a small round hole believed to have secured the chain for a brush and musket vent pick. There are two “prong-type” connectors on the back, which are 1.7 cm in length, 1.2 cm in width and 3 mm thick. Holes near the distal end of the connectors are 3 mm in diameter. The scrolled letter “M” could represent either the Moralos Battalion or Activo Primero Mexico Battalion (Hardin and Young: 1998).

Iron Cannon Balls

Two solid iron cannon balls, heavily oxidized, were recovered from Area C. Cannon ball 1 (Fig. 29): weighs 2.8 kg (6 lbs 2 oz); diameter of 9.6 cm (3.64 in). Cannon ball 2: weighs 2.7 kg (5 lbs 14 oz); diameter of 9.4 cm (3.58 in).

Spanish-Style Horse or Mule Shoes

One broken, worn and heavily oxidized spanish-style horse or mule shoe and one shoe fragment were recovered in Area C. The unbroken shoe branch is 3 cm wide. One side has four square holes, with two holes visible in the opposite broken branch side. The length from heel to toe is 8 cm and width is 8.1 cm. The toe of the shoe exhibits considerable wear. Measurements of the heavily oxidized shoe fragment were not recorded.

Brass Rosettes

Two brass rosettes (Fig. 62), designed to be bridle decorations, were recovered from Area B. The back of each rosette is concave and the face has a layered, gradually reducing in size, series of four circles. The base or lower circle is 3.4 cm in diameter and the pinnacle or upper circle is .8 cm. One rosette (Fig. 62) has two connectors opposite each other that extend outward .9 cm from each edge and are .9 cm in width. Each connector has a 5 mm hole near the distal end. Connectors are absent from the other rosette.

Brass Tack

A square brass tack was recovered from Area C. Overall length is 1.7 cm and weighs 1.4 grams. The tack head measures 8 mm by 8 mm square and is 1.5 mm thick. The shank, 3 mm square at proximal, tapers to end in a fine point.

Metal Utensils

Five utensil fragments were recovered from Area C. Item 1 (Fig. 67,D): the bowl of a large spoon and measures 8 cm from the proximal point, where it connects to the handle, to the distal end. It measures .5 cm wide and weighs 21.1 grams. Only a 2.5 cm length portion of the handle remains attached to the bowl. Two lines are engraved along the edge of the front and back sides of the handle.

Item 2 (Fig. 67,C) is an nearly complete bowl of a spoon that measures 4 cm in length and 3.3 cm in width, with a 1.7 cm in length handle fragment attached. It weighs 11.7 grams and traces of silver plating remain.

Item 3: a badly damaged spoon bowl 7 cm in length, is 3 cm in width, and weighs 13.4 grams. There is some evidence of silver plating.

Item 4 (Fig. 67,A): a utensil handle 11.4 cm in length that tapers from 2.4 cm in width at the distal end or tip to .7 cm width at the proximal base where it is broken. It weighs 17.8 grams and much of the silver plating is evident. Both front and back of the handle have ornate, embossed designs of leaves and berries.

Item 5: the handle of a utensil, badly bent, 4.5 cm in length. The top is convex by design, having three angled sections creating the arch. It measures 1.9 cm at its widest, near the distal end, and 1 cm at the proximal break point. It weighs 8.9 grams and most of the silver plating is evident.

SITE 41WH94

Site 41WH94 extends along the Middle Bernard Creek for a distance of approximately 800 meters and extends inland from the creek bank a distance of approximately 500 meters. The location is approximately 800 meters upstream from site 41WH92. This region has been farmed in rice many years.

Artifacts recovered were located in one general Area A (Fig. 3) and include: musket balls, canister shot, buckles, buttons, ceramic sherds, candlestick, and tack. A complete inventory of artifacts was recorded (Table 3).

ARTIFACTS

Small Arms Ammunition

The four lead musket balls recovered are 1.75 cm in diameter, and weigh 25.6 grams.

Brass Canister Shot

Two brass canister shot were recovered. Specimen 1: 2.5 cm in diameter and weighs 64.6 grams. Specimen 2: weighs 63.4 grams. Both are light canister.

Buttons

Nine brass buttons were recovered. Buttons 1-7: nearly identical in appearance, averaging 4.6 grams in weight and 20 mm in diameter. Their faces are flat with no markings, with backmark that reads "Rich Gilt Standard"; example (Fig. 38). There are designs of flowers and leaves on the backs, and shanks are present. Remnants of gilt are visible on some buttons.

Button 8: measures 18 mm in diameter and weighs 3.1 grams. It is one-piece construction, with stamped or pressed disk, referred to as "struck" (Albert 1997:7). The face is slightly concave and the back slightly convex. The backmark reads "Rich Gilt" and the shank is absent.

Button 9: one piece construction with brazed shank present. It measures 5 mm in diameter and weighs 1.1 grams. The face is flat; no markings front or back.

Buckles

Three brass buckles and one iron buckle were recovered. Buckle 1 (Fig. 53): brass and rectangular in shape, with “clipped” corners, center bar, but no tongue. It measures 3.8 cm by 3.2 cm in diameter and weighs 11.7 grams.

Buckle 2: brass, rectangular in shape; with “clipped” corners and no tongue. It measures 3.6 cm by 3.1 cm and weighs 12 grams.

Buckle 3: brass, rectangular in shape, measures 3 cm by 2.5 cm; weighs 10 grams

Buckle 4: iron, rectangular in shape, measures 4.1 cm by 3 cm; heavily oxidized.

Brass Tack

Square brass tack, 1.2 cm overall length, with head 9 mm by 9 mm and 1.5 mm thick. The shank is 3 mm square at proximal end, and tapers to a fine point.

Brass Candlestick

A brass cylindrical candlestick (Fig. 66) recovered measures 10.5 cm in length. Round drip pan at distal end measures 4.7 cm diameter. The round base is 5 cm in diameter and has an oxidized area on the back side of the base, suggesting attachment to iron object. Approximately 1.5 cm above base is narrow, rectangular shaped slot 3.5 cm in length. Inside the candlestick, near the base of the slot, is a platform with sharp metal point to secure a candle. A small brass knob is attached to platform which allows a candle to be adjusted in height as it burns.

Ceramic Sherds

Seven ceramic sherds recovered and identification established by Sandra Pollen, Brazosport Archeological Society. Sherds 1 & 2: blue transfer-printed; represent rim fragments of plates or platters.

Sherds 3 & 4: deep blue transfer-printed; unknown vessel types.

Sherd 5: green edgeware; represents rim fragment from a plate or platter.

Sherds 6 & 7: deep blue transfer-printed; represent rim fragments from plates or platters.

SITE 41WH95

Site 41WH95 is located between sites 41WH92 and 41WH94, and extends along the Middle Bernard Creek for a distance of approximately 600 meters and extends inland from the bank of the creek a maximum distance of 700 meters. This site has been farmed in rice for many years. Artifacts recovered were generally found in three areas, Areas A-C (Fig. 4). Artifacts include: musket parts, musket balls, buttons and a spanish-style horse or mule shoe.

ARTIFACTS

Musket Parts

The forward part of a brass trigger guard (India Pattern) was recovered from Area A. The front tang and fastening lug area present. A fragment of the sling swivel screw remains in swivel hole. It is 6.8 cm long and weighs 95.5 grams.

Recovered from Area B: a fragment of a heavily oxidized iron lockplate with frizzen spring and flashpan present, and a heavily oxidized iron hammer fragment.

A heavily oxidized iron musket lockplate (Fig. 16) recovered in Area C measures 10.4 cm in length. Proximal end of lock and most mechanisms missing.

Small Arms Ammunition

Forty-three lead balls were recovered from Area A. Forty-one measure 1.55 cm to 1.78 cm in diameter and weigh 24.7 grams to 31.3 grams; some have visible casting sprues; examples (Fig. 22 A-D). Two smaller lead balls were found in Area A, one 1.06 cm in diameter and weighs 7 grams and the other is 1.12 cm in diameter and weighs 8.2 grams.

Twenty-two lead balls were recovered from Area B that range from 1.63 cm to 1.75 cm in diameter and 23.3 to 30.6 grams in weight.

Eighteen lead balls were recovered from Area C. Ten measure 1.75 cm to 1.85 cm in diameter. Two measure 1.62 cm and five smaller balls measure 1.03

Canister Shot

One brass canister 169.1 grams in weight and one iron canister 3.7 cm in diameter weighing 172.7 grams were recovered from Area A; both heavy canister.

Bronze Howitzer Shell

A spherical shaped bronze howitzer shell (Fig. 34) was recovered from Area C at a depth of 30 cm below surface in sandy, clay soil. The shell weighs 11.5 kg (25.2 lbs) with a diameter of 15.8 cm (approx. 6.25 in) in diameter. The diameter of fuse opening measures 2.1 cm and the shell casing (Fig. 35) is 2.2 cm thick.

The shell has a mark, consisting of three lines, chiseled onto the casing at mid-line near the casting seam. Two lines, 2.7 cm in length, converge to form the letter "V". The third line is horizontal and located at base of "V". There is an oxidized stain, 1.9 cm in diameter, located opposite the fuse hole.

A well preserved wooden fuse (Fig. 36), 11.5 cm in length, was removed from the shell. The fuse head measures 2.6 cm in diameter and 2.5 cm in length. There is a "cup" shaped indentation at the top and a small string coiled around the fuse head, which is knotted at both ends. Remaining portion of the fuse below the head is cylindrical in shape; measures 9 cm in length and 2.2 cm in diameter. It tapers to a diameter of 1.4 cm at distal end. A round hole, .7 cm, had been drilled through entire length of the fuse and both fuse and shell contains solidified gun powder.

Conflicting inventory information makes it difficult to determine when shells were loaded with gun powder. The 1833 Mexican Army inventory for artillery ammunitions lists "shells of bronze, 7-inch, loaded", but in a separate listing for the same shells they are listed as unloaded (Young, personal communication, 1999). One report suggests that early 19th century Howitzer shells were not filled with powder until just prior to use and fuses were not inserted until ready to fire (Manucy 1949:67).

Buttons

Two brass buttons were recovered from Area A. Button 1: round, hollow "bullet button" 18 mm in diameter and weighing 4 grams. It is three piece construction with backplate and shank missing.

Button 2: measures 21 mm in diameter and weighs 3.5 grams. It is one piece construction with shank present. The backmark is illegible.

One brass button (Fig. 37) was recovered from Area B. It is one piece construction with shank present. The flat face has a slightly raised design of an eagle perched on a cactus plant. The eagle's head is facing left with a snake in its beak. The words "REPUBLICA MEXICANA" form a circle around the outer edge of the button.

Buckles

Six brass buckles and four brass buckle fragments were recovered in Area A. Buckle 1 (Fig. 49): has rounded corners and a center bar with tongue absent. It measures 4.6 cm by 3.7 cm and weighs 24.4 grams.

Buckle 2 (Fig. 48): has "clipped" corners and raised center bar, with tongue absent. It measures 4.5 cm by 3.7 cm and weighs 17.6 grams.

Buckle 3: rectangular in shape with "clipped" corners and raised center bar. It measures 3 cm by 3.7 cm and weighs 11.2 grams.

Buckle 4 (Fig. 47): "D" shaped, measures 5.6 cm by 3.6 cm; weighs 22 grams.

Buckle 5 (Fig. 51): has two "clipped" corners and two rounded corners. It measures 3 cm by 3.4 cm and weighs 15.2 grams.

Buckle 6 (Fig. 52): measures 2.4 cm by 2.9 cm; weighs 7.6 grams.

Spanish-style Horse or Mule Shoe

Fragment of an iron spanish-style horse or mule shoe was recovered in Area C. It measures 8.4 cm from heel to toe and weighs 27.7 grams; severely oxidized. One branch is 2.8 cm wide with four square nail holes; while other side is absent.

Brass Tacks

Eight square brass tacks were recovered from Area A; only five were complete. The heads measure 8 mm by 8 mm and are 1.5 mm thick. The average overall length is 1.8 cm and average weight is 1.3 grams. The shank measures 3 mm square at proximal end and tapers to a point; example (Fig. 64)

SUMMARY AND CONCLUSION

On the morning of April 29, 1836, the Mexican Army, under the command of General Vincente Filisola, was ordered to march to the Atascocito Crossing on the Colorado River. He then ordered General Urrea to take his troops, with all due haste, to go in advance and take possession of the crossing.

The vanguard of Filisola's army began to leave their position of the 29th, located on the Middle Bernard Creek, at eight in the morning. The road and surrounding area was exceptionally difficult to travel due to previous heavy rains. After a short distance, the road was abandoned in an effort to find better traveling conditions, but the attempt was unsuccessful. By nightfall, the army had advanced only three miles from their original location.

Due to the quagmire condition of the area, wagons with artillery and supplies sank in the mud over their axels. Mules had to be unloaded, and the soldiers carried the cargo to higher ground. General Filisola ordered the heavy equipment to be left behind so his troops could continue their journey to rejoin with General Urrea's forces. Before leaving on April 30, Filisola ordered Lieutenant Colonel D. Pedro Ampudia, commandant general of the artillery, together with men and officers from each unit to remain and free the artillery, carts and supplies.

On May 2, while Ampudia and his men were working to free the equipment, a force of about 300 Texians, under the command of Juan Seguin and Henry Karnes, approached the rear guard. Unsure of the Texian's intentions, Ampudia ordered two of the 4-pounder cannons to be maneuvered to face the approaching Texian force.

May 9, Ampudia's unit finally managed to free most of the wagons and all the artillery, and they began their advance to Atascocito.

Artifacts recovered from sites 41WH92, 41WH93, 41WH94, and 41WH95 represent the items abandoned by the Mexican Army April 30 - May 9, 1836. These items include parts from flintlock muskets, small arms ammunition, canister shot, solid cannon balls, howitzer shells, buttons, buckles, emblems, as well as ceramic and utensil remnants.

Most of the musket parts recovered are from the .75 caliber British India Pattern Brown Bess musket. Small arms ammunition recovered differ in sizes. Musket balls measuring 1.7 cm in diameter to 1.75 cm in diameter, or about .69 caliber, were for the .75 caliber India Pattern musket. Lead balls measuring 1.5 cm in diameter to 1.65 cm in diameter, or about .59 caliber to .64 caliber, were for rifles, pistols and carbines.

Canister shot, recovered from the sites, were generally two sizes and are referred to in the paper as light and heavy shot. The three, solid-shot, cannon balls recovered were not identified as to the size of cannon. The six howitzer shells were for a 7-inch howitzer.

It is the writers' opinion that Lieutenant Colonel D. Pedro Ampudia intended not to surrender the equipment to the advancing Texians. The howitzer shells, loaded with gun powder and fuses in place, suggest Ampudia's men managed to extract howitzers as well as the two 4-pounders from the mud to face the Texians.

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TABLE I
ARTIFACT INVENTORY: ANDERSON-REED SITE (41WH92)

Area A

2	Trigger guard fragments (brass)
1	Second or third ramrod pipe (brass)
44	Musket balls (lead)
93	Canister shot: 90 (brass), 1 (lead), 2 (iron)
1	Solid shot cannon ball (brass)
3	Howitzer shells (bronze)
2	Buttons (brass)
1	Probable sword guard fragment (brass)

Area B

16	Musket balls (lead)
26	Canister shot: 20 (brass), 6 (lead)
2	Spoon fragments (brass w/silver plating)

Area C

4	Trigger guard rear tangs (brass)
1	Trigger plate (brass)
1	Trigger guard with rear tang missing (brass)
2	Trigger guard fragments (brass)
2	Nose caps with pins attached (brass)
2	Second or third ramrod pipes (brass)
1	Second or third ramrod pipe (brass) with fragment of iron ramrod attached
1	Front ramrod pipe fragment (brass)
3	Tailpipes with tangs missing (brass)
3	Buttplate fragments (brass)
1	Gun flint (dark gray)
57	Musket balls: 55 (lead), 2 (brass)
2	Howitzer shells (bronze)
2	Buckles (brass)
2	Horse shoes (spanish style)
1	Button (brass)
2	Solid, cylindrical shaped units (lead)

Area D

- 1 Buttplate tang (brass)
- 1 Buttplate with tang missing (brass)
- 1 Rear tang from trigger guard (brass)
- 3 Trigger guard fragments (brass)
- 1 Tailpipe (brass)
- 1 Sideplate (brass)
- 8 Musket balls (lead)
- 110 Canister shot (brass)
- 8 Buckles (brass)
- 2 Blue transfer-printed ceramic sherds:
 - 1 rim fragment, 1 body fragment
- 1 Hand-painted ceramic sherd: lid fragment
- 1 Undecorated refined white earthenware sherd:
 - body fragment

Area E

- 2 Rear tangs from trigger guards (brass)
- 1 Front tang from trigger guard (brass)
- 1 Tailpipe (brass)
- 1 Nose cap with pin attached (brass)
- 1 Trigger guard with rear tang missing (brass)
- 1 Trigger guard fragment (brass)
- 3 Musket balls (lead)
- 1 Brass buckle (brass)
- 2 Horse shoes (spanish-style)
- 4 Buttons (brass)
- 3 Emblem fragments (brass)

TABLE 2
ARTIFACT INVENTORY: NOTTAWA SITE (41WH93)

Area A

- 1 Tang from tailpipe (brass)
- 1 Trigger guard fragment (brass)
- 7 Musket balls (lead)

Area B

- 1 Rear tang from trigger guard (brass)
- 1 Musket lockplate fragment (iron)
- 1 Musket hammer (iron)
- 1 Musket frizzen (iron)
- 22 Musket balls (lead)
- 2 Canister shot (brass)
- 3 Buckles (brass)
- 2 Buckle fragments (brass)
- 2 Bridle rosettes (brass)
- 1 Cross-belt plate (brass)
- 1 Emblem (brass)
- 6 Buttons: 5 (brass), 1 (pewter)
- 2 Gun flint pads (lead)

Area C

- 3 Rear tangs from trigger guards (brass)
- 1 Front tang from trigger guard (brass)
- 1 Trigger plate (brass) with attached iron trigger fragment
- 1 Trigger guard fragment (brass)
- 1 Tailpipe fragment (brass)
- 1 Tailpipe (brass) with part of iron ramrod inside
- 1 Nose cap with pin (brass)
- 1 Buttplate fragment (brass)
- 3 Sideplate fragments (brass)
- 1 Sideplate (brass), broken at center screw hole
- 1 Frizzen (iron)

Area C (continued)

- 37 Musket balls (lead)
- 5 Canister shot (brass)
- 2 Solid shot cannon balls (lead)
- 2 Buckles: 1 (iron), 1 (brass)
- 1 Horse shoe (spanish style)
- 7 Buttons: 6 (brass), 1 (pewter)
- 1 Tack (brass)
- 1 Emblem (brass)
- 5 Utensil fragments (silver plated)
- 2 Brown "Dipt" waste bowl sherds (crossmend)
with common cable "worm" slip decoration

TABLE 3
ARTIFACT INVENTORY: ISENHOWER SITE (41WH94)

Area A

4	Musket balls (lead)
2	Canister shot (brass)
4	Buckles: 3 (brass), 1 (iron)
9	Buttons (brass)
1	Tack (brass)
1	Candle holder (brass)
7	Blue transfer-printed sherds: 5 rim fragments, 2 body fragments
1	Green edgeware sherd: rim fragment

TABLE 4
ARTIFACT INVENTORY: HIGGINS SITE (41WH95)

Area A

1	Trigger guard fragment (brass)
43	Musket balls (lead)
1	Canister shot (brass)
1	Howitzer shell (brass)
5	Buckles (brass)
2	Buckle fragments (brass)
8	Tack (brass)

Area B

1	Lockplate fragment (iron)
1	Musket hammer (iron)
22	Musket balls (lead)
1	Spur fragment (iron)
2	Buttons (brass)

Area C

1	Lockplate (iron)
18	Musket balls (lead)
1	Horse shoe fragment (spanish-style)

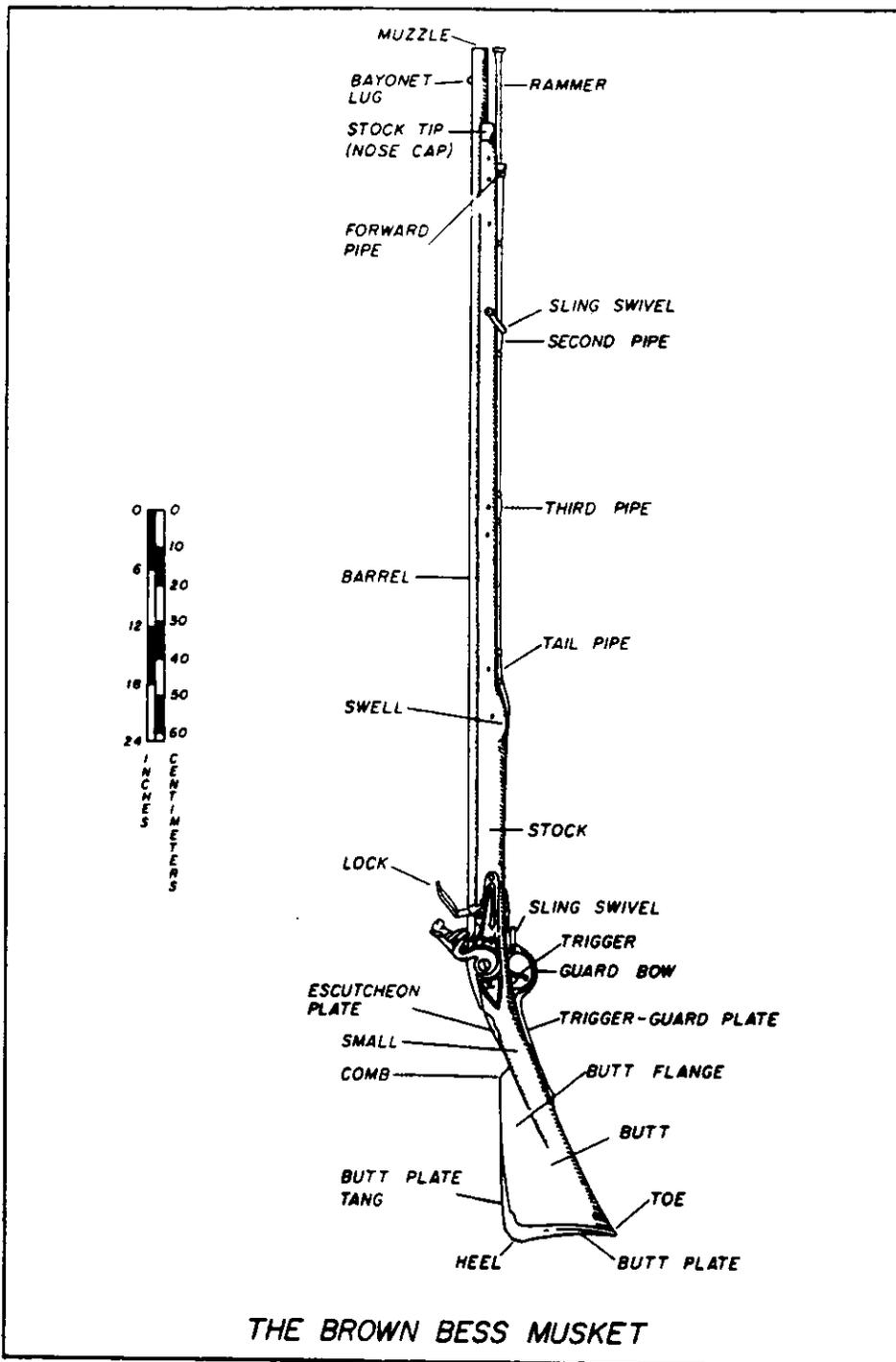


Figure 6: Diagram of Brown Bess Musket Detailing the location of parts. Adapted from Neumann (1967:1) and Labadie, et al (1986:66)

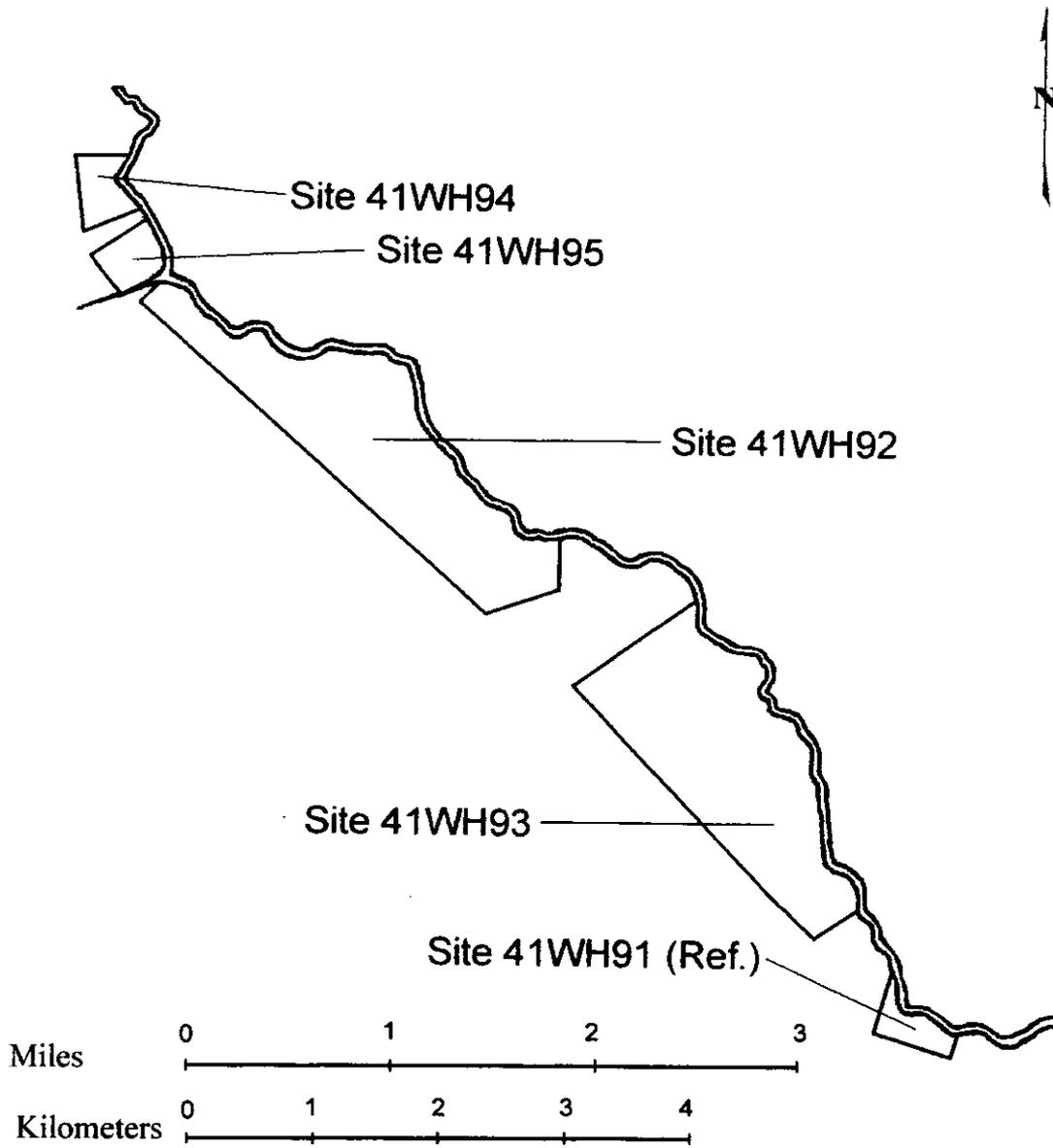


Figure 5: Map indicating all four sites, including the Badger site 41WH91 as a reference

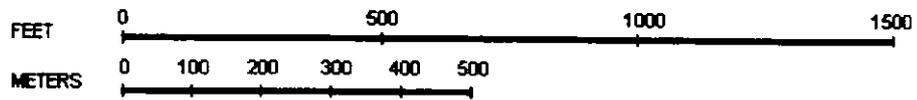
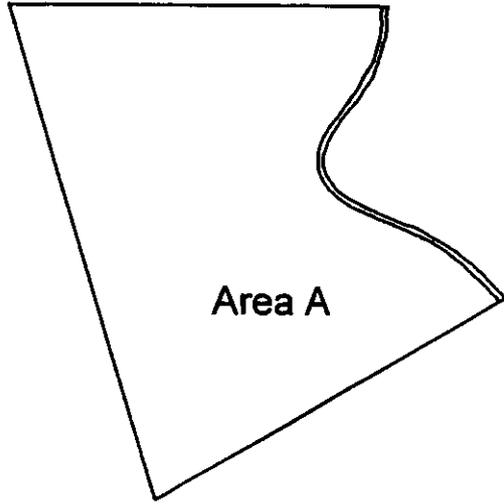


Figure 4: Site 41WH95 Area A

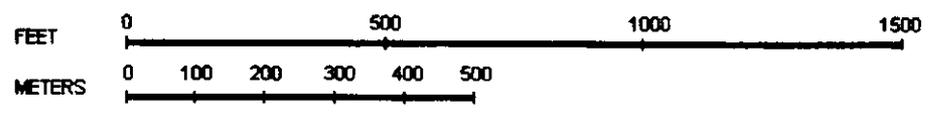
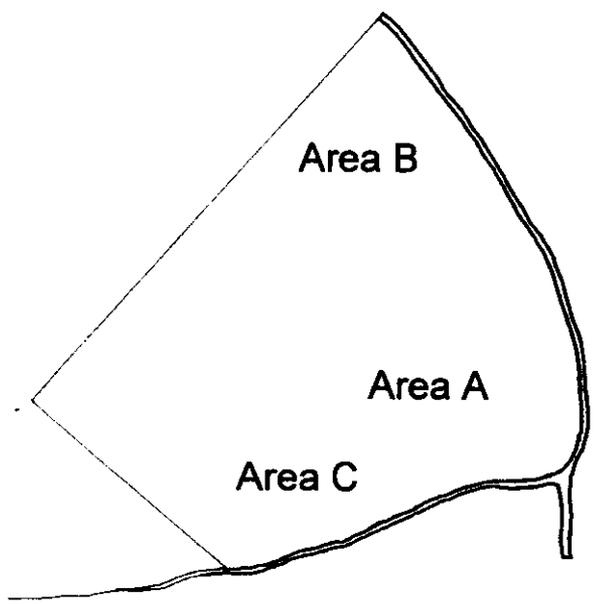


Figure 3: Site 41WH94 Areas A-C

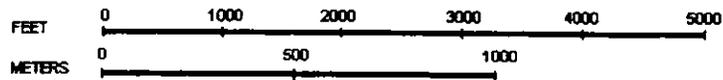
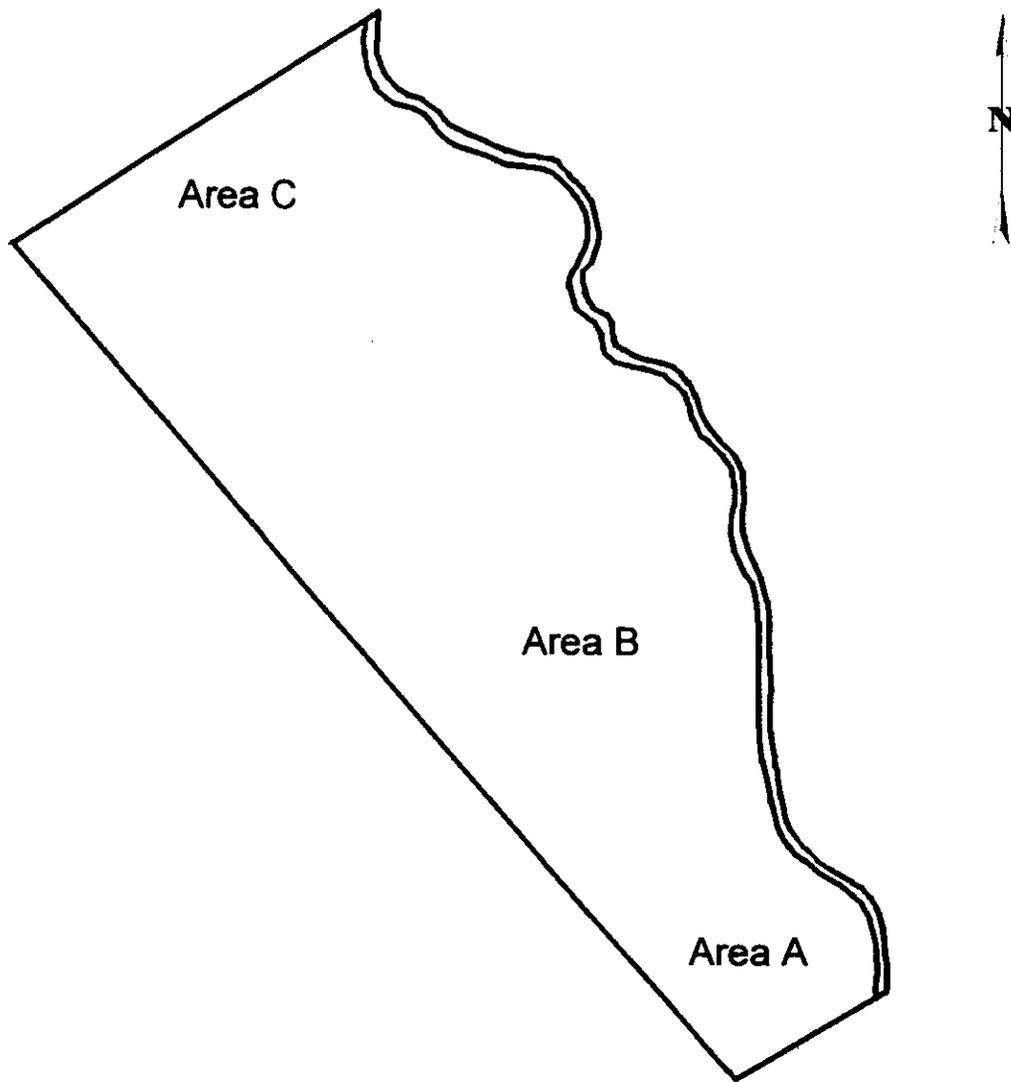


Figure 2: Site 41WH93 Areas A-C

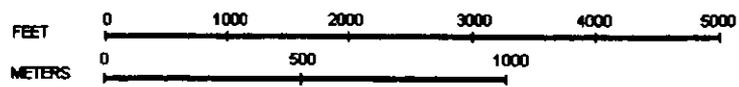
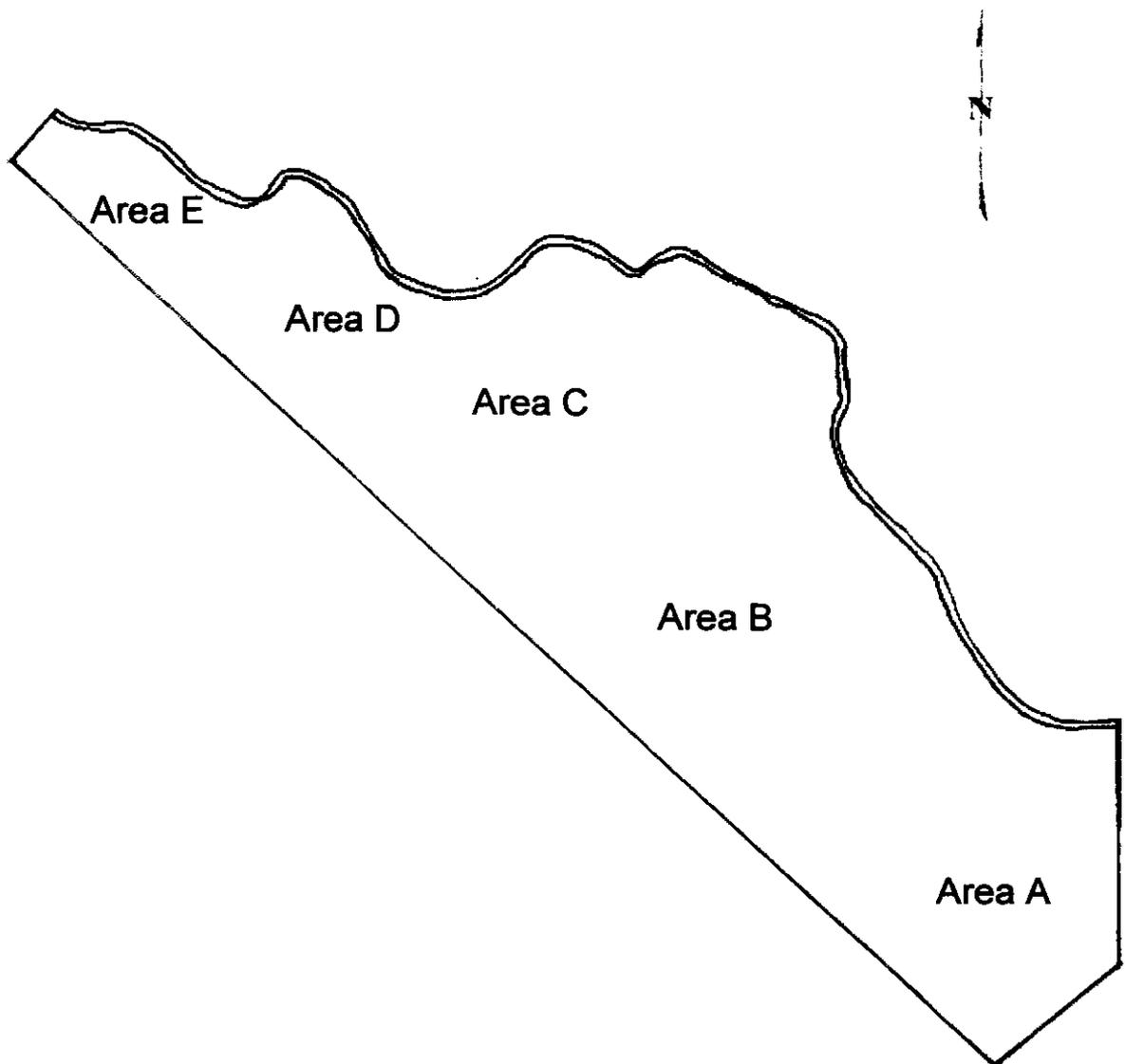


Figure 1: Site 41WH92 Areas A-E

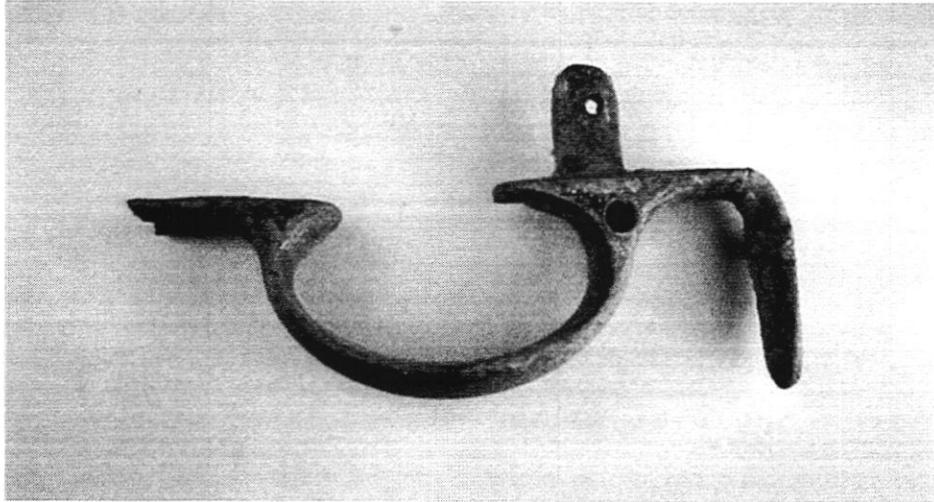
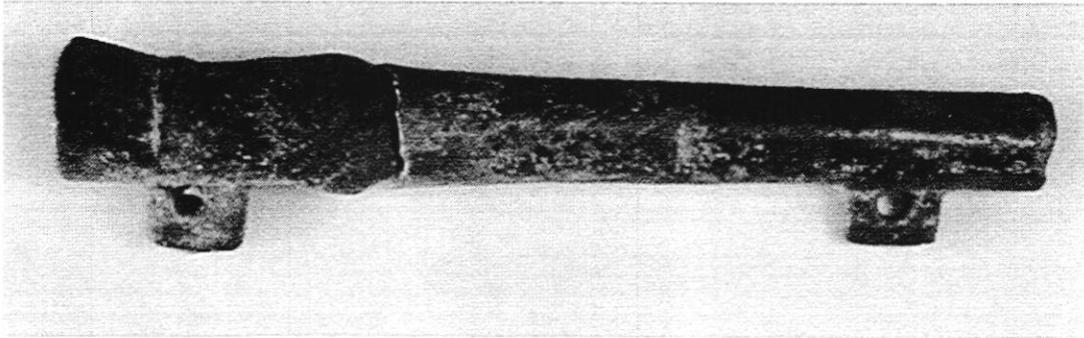


Figure 7: Brass Trigger Guard
(rear tang missing)

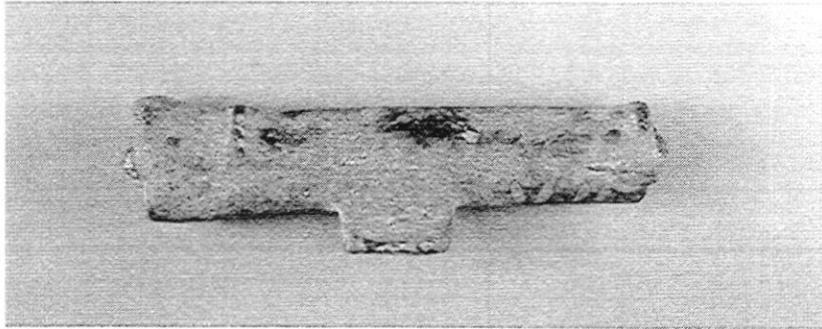


Figure 8: Brass Trigger Plate,
including fragment of iron trigger



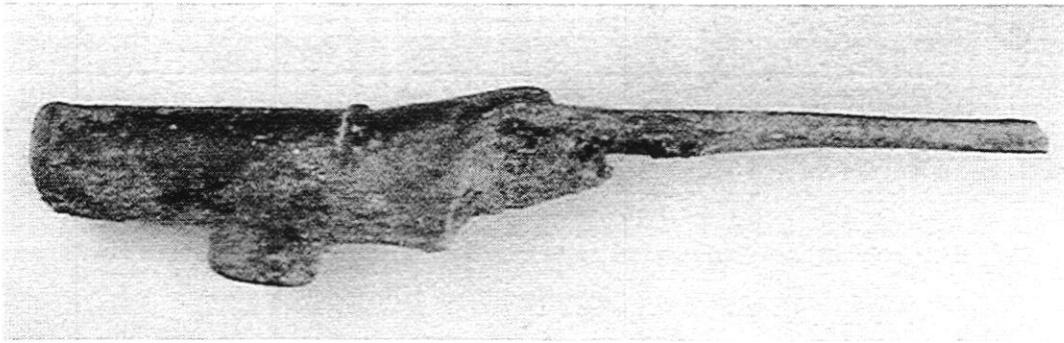
cm 0 1 2 3 4 5

Figure 9: Brass Forward Ramrod Pipe
(broken)



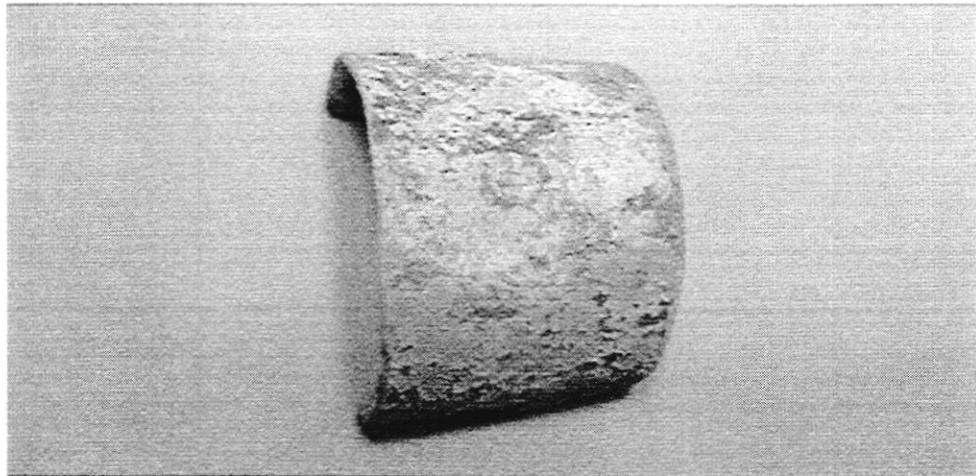
cm 0 1 2 3 4 5

Figure 10: Brass Second or Third
Ramrod Pipe, including fragment of
the iron ramrod



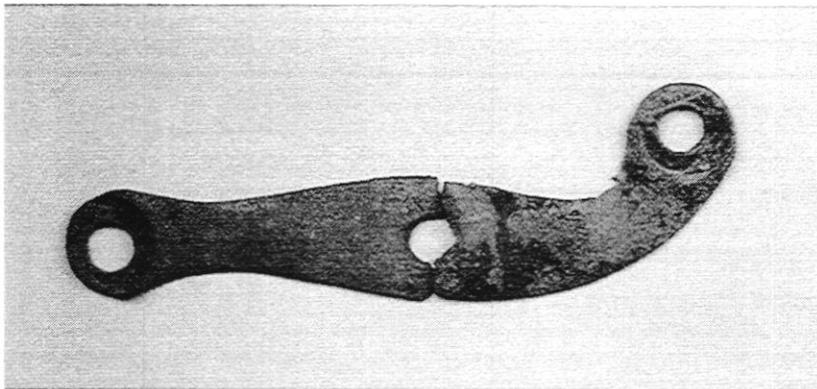
cm 0 1 2 3 4 5

Figure 11: Brass Terminal Ramrod Pipe,
including fragment of iron ramrod



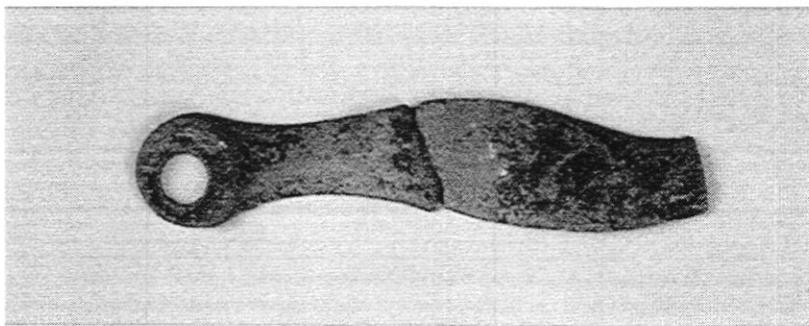
cm 0 1 2 3

Figure 12: Brass Nose Cap, with pin



cm 0 5

Figure 13: Brass Side Plate
(broken at center screw hole)



cm 0 5

Figure 14: Brass Side Plate
(broken in three pieces, one end missing)

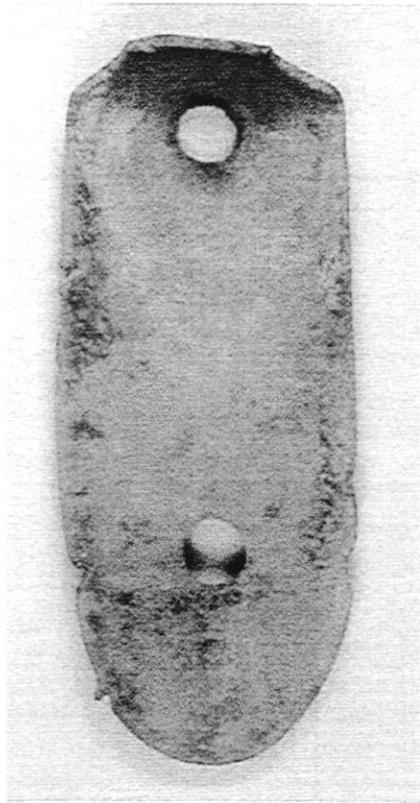


Figure 15: Brass Butt Plate
(upper tang is missing)

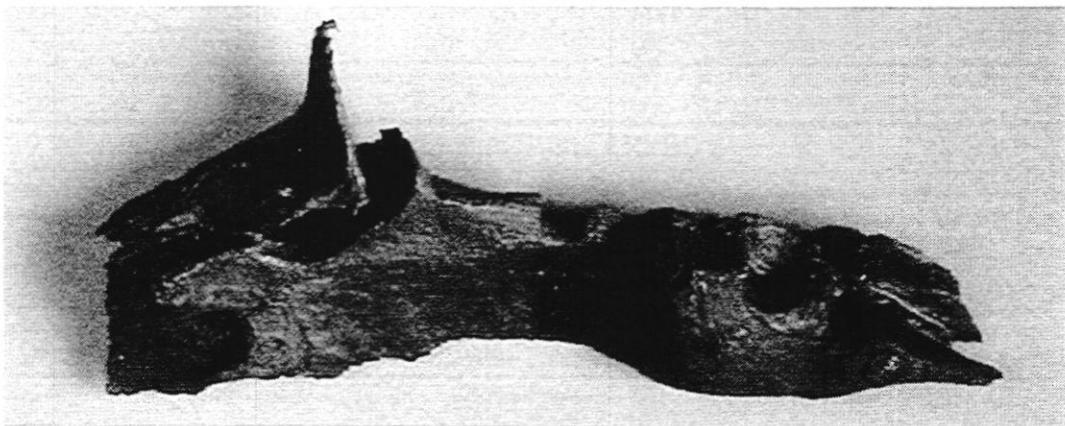
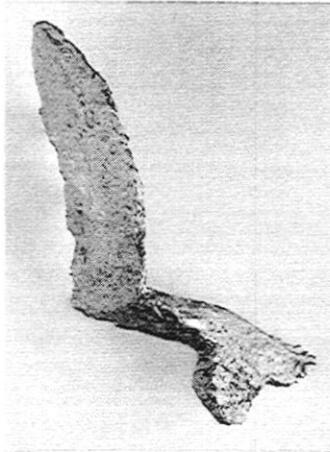


Figure 16: Iron Lock Plate
(broken at proximal end, most of
the mechanisms absent)



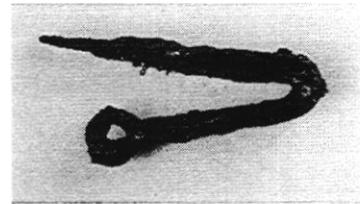
cm 0 1 2

Figure 17:
Iron Hammer



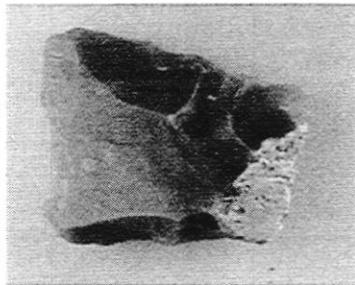
cm 0 1 2 3

Figure 18:
Iron Frizzen



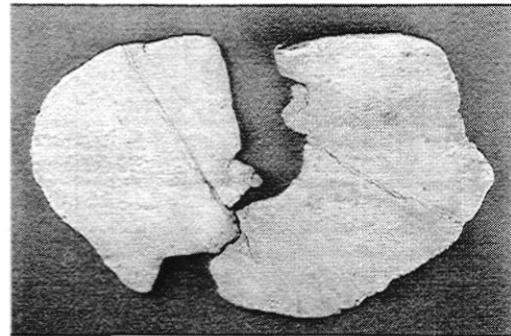
cm 0 1 2 3

Figure 19:
Iron Frizzen Spring



cm 0 1 2

Figure 20: Gun Flint



cm 0 1 2 3

Figure 21: Lead Flint Pads

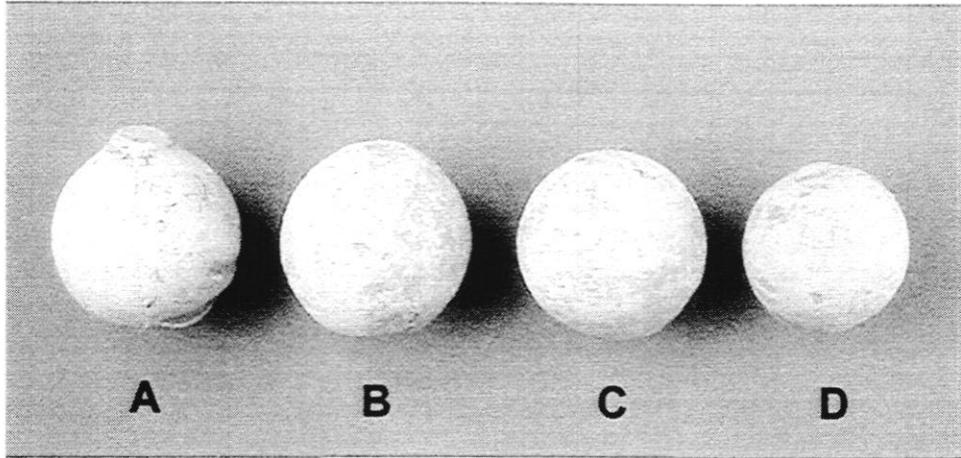


Figure 22: Lead Musket Balls
 A-1.78 cm (.69 caliber) B-1.78 cm (.69 caliber)
 C-1.75 cm (.69 caliber) D-1.55 cm (.59 caliber)

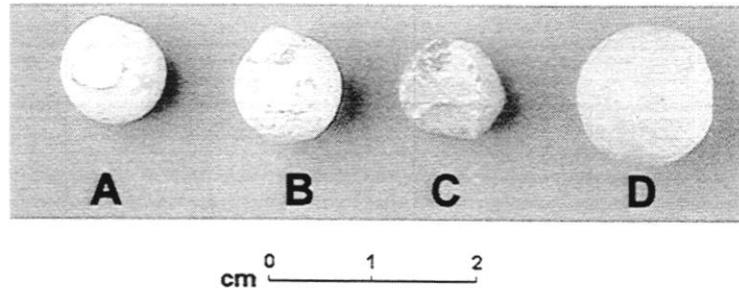


Figure 23: Lead musket Balls
 A,B- 1.0 cm C- .9 cm D- 1.27 cm

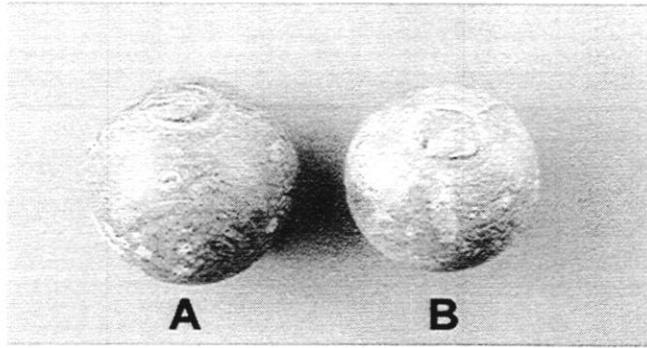


Figure 24: Brass Musket Balls
A- 1.88 cm B- 1.73 cm

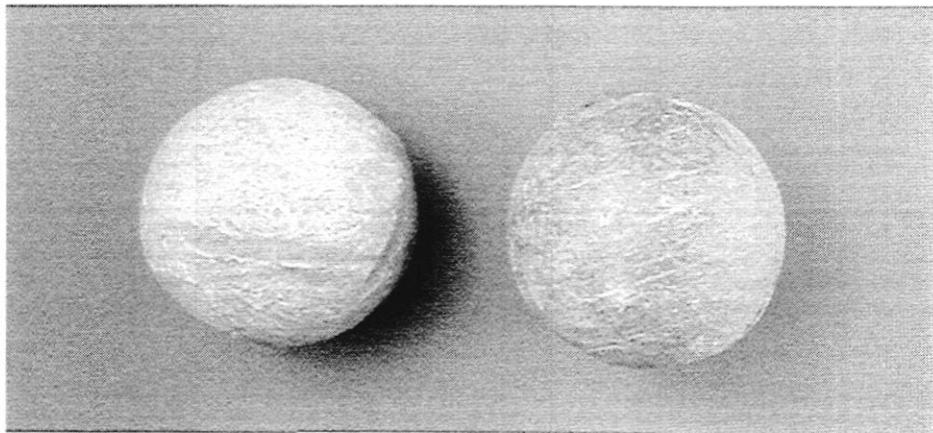
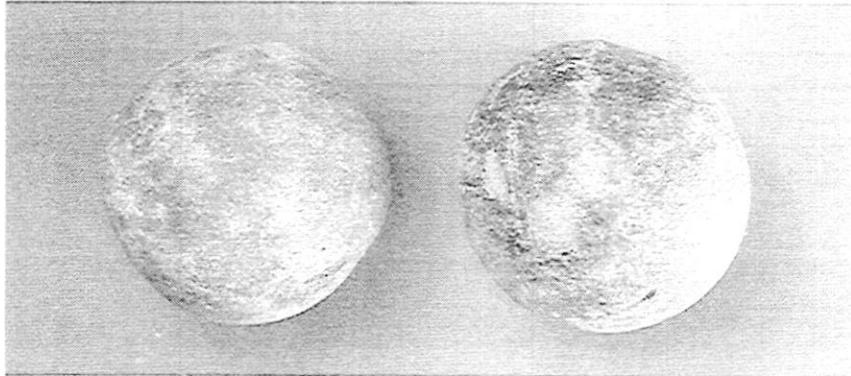
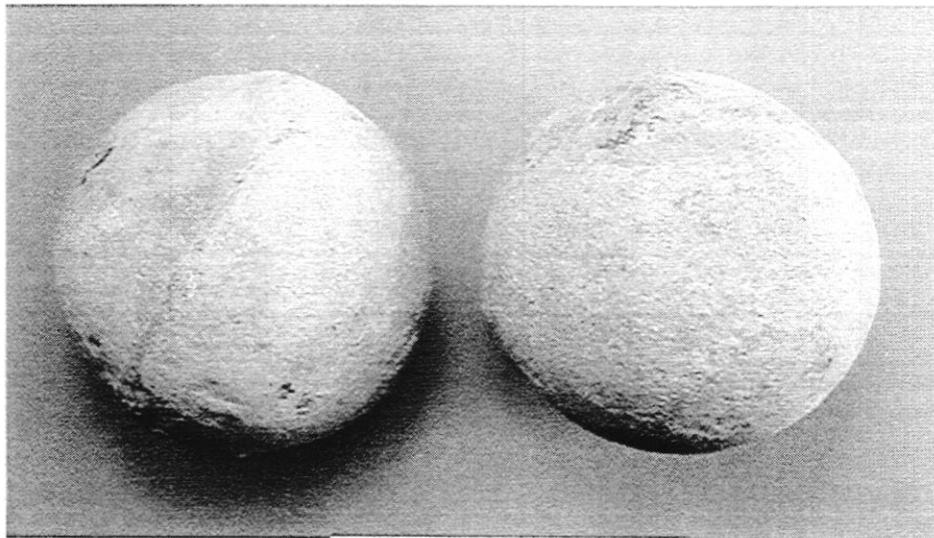


Figure 25: Lead, Light Canister Shot



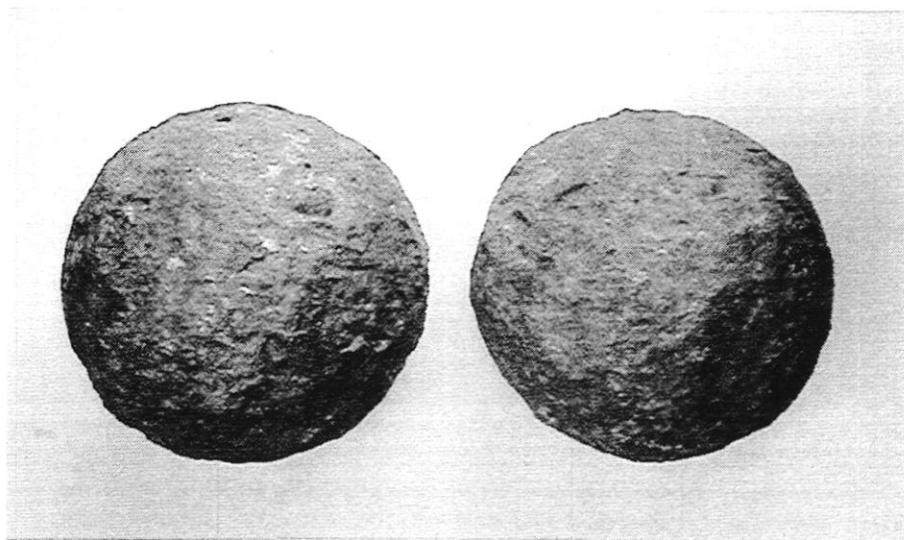
cm 0 1 2

Figure 26: Brass, Light Canister Shot



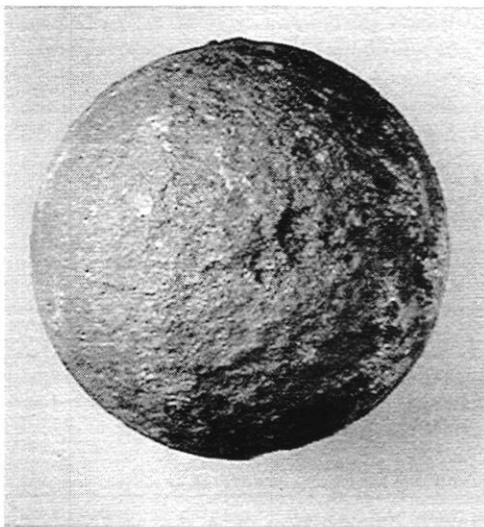
cm 0 1 2

Figure 27: Brass, Heavy Canister Shot



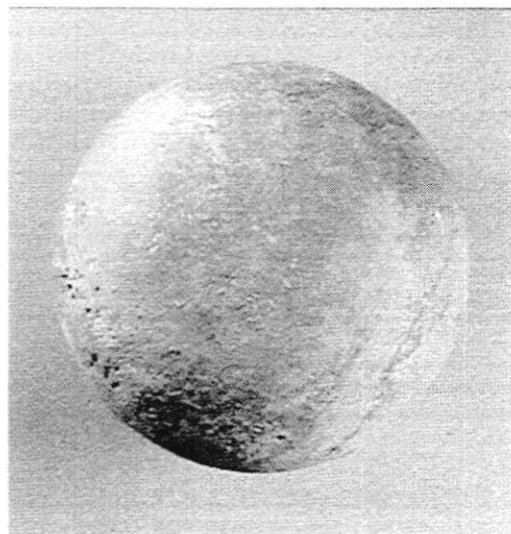
cm 0 1 2 3

Figure 28: Iron, Heavy Canister Shot



cm 0 5

Figure 29 : Solid Iron
Cannon Ball



cm 0 5

Figure 30 : Solid Brass
Cannon Ball

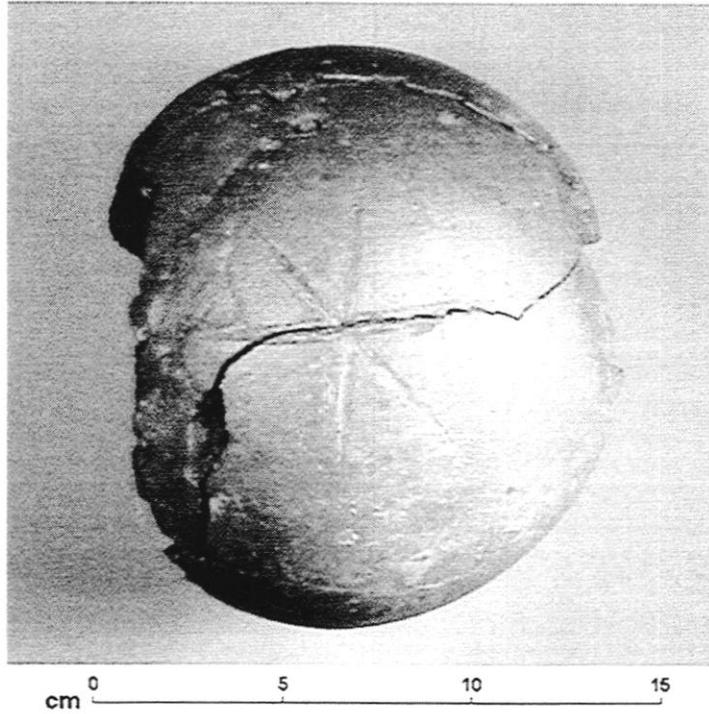


Figure 31: Bronze Howitzer Shell
(astrisk design)

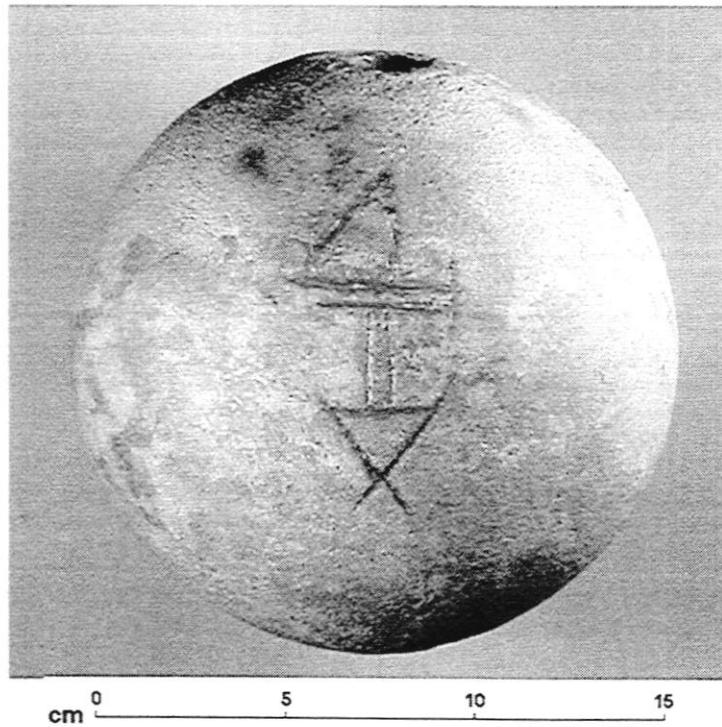
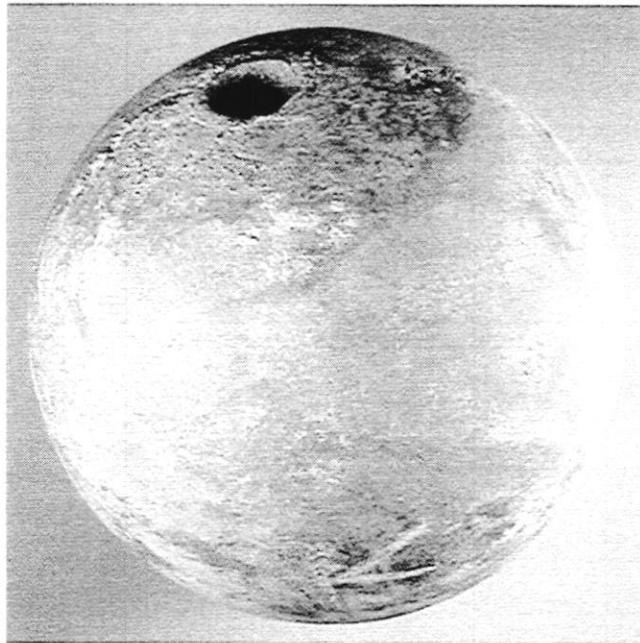
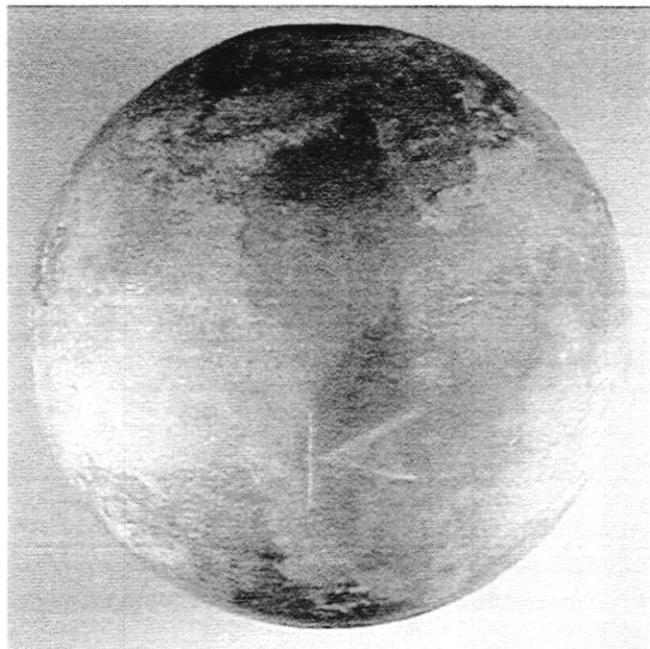


Figure 32: Bronze Howitzer Shell
(elaborate design)



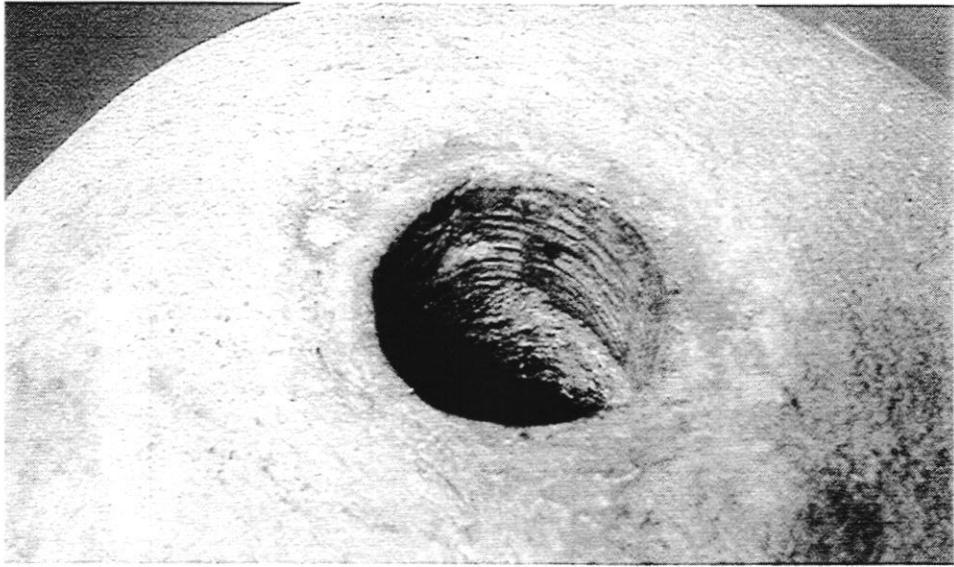
cm 0 5 10 15

Figure 33: Bronze Howitzer Shell
("A" design)



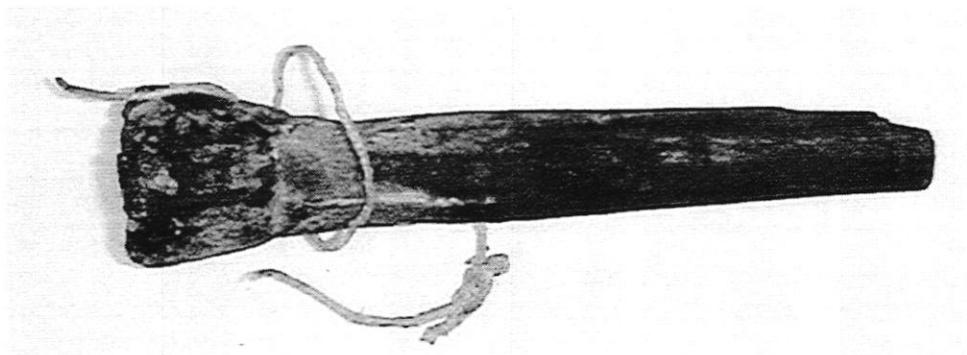
cm 0 5 10 15

Figure 34: Bronze Howitzer Shell
("V" design)



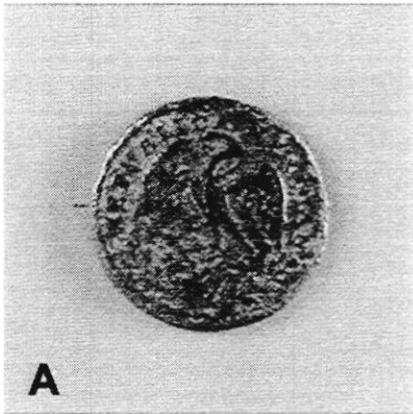
cm ⁰ ————— 1 ————— 2

Figure 35: Howitzer Shell Fuse Hole



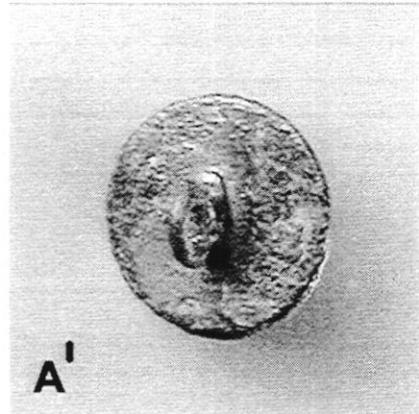
cm ⁰ ————— 5

Figure 36: Wooden Fuse From Howitzer Shell
(including knotted string)



cm 0 1 2

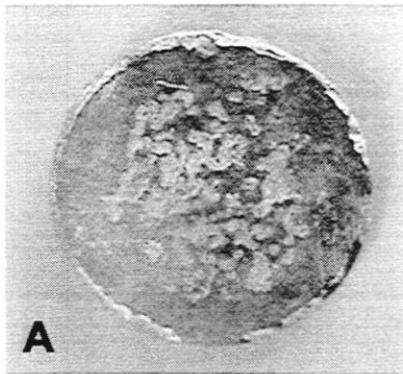
A-Eagle design &
Republica Mexicana



cm 0 1 2

A,1-Brazed shank

Figure 37:
Brass Button



cm 0 1 2

A-Pitted face



cm 0 1 2

A,1-Rich Gilt Standard
(backmark)

Figure 38:

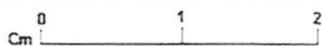


Figure 39: Brass Button
(floral design)



Figure 40: Brass Button
(star design)

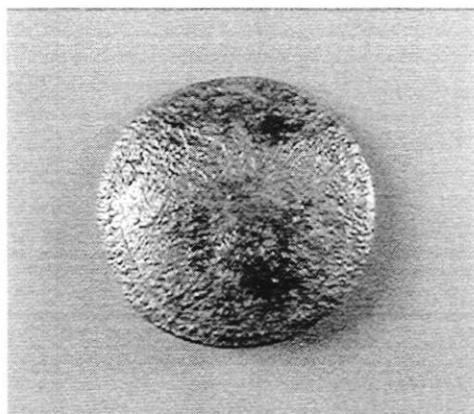


Figure 41: Brass Button
(flaming bomb design)



Figure 42: Button Sketch
(flaming bomb design)

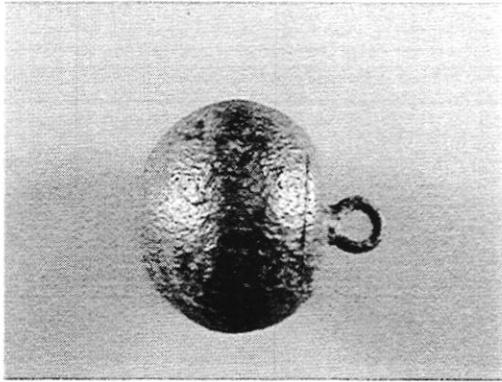


Figure 43: Bullet Button
(3-piece)

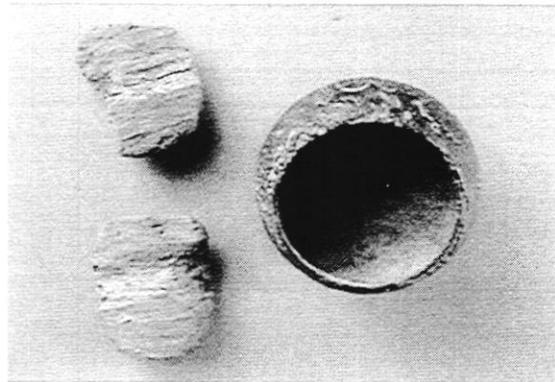
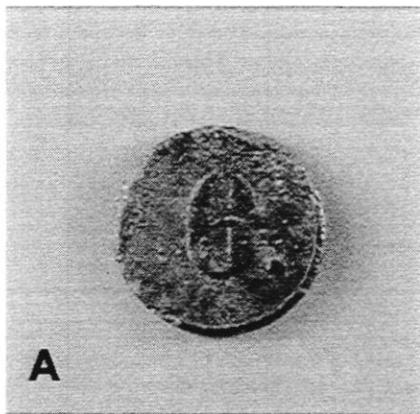
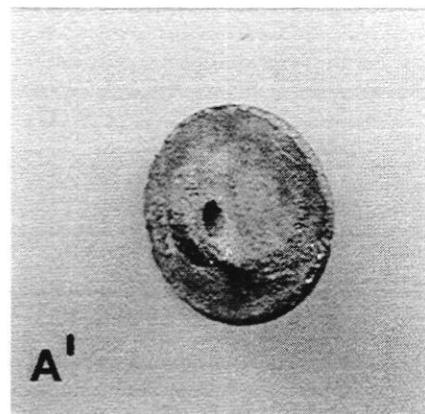


Figure 44: Bullet Button
(wood insert)



A-Face with 6.design



A,1-Back with shank

Figure 45:

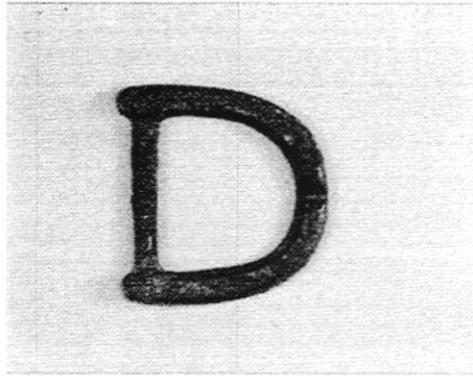


Figure 46: Brass Buckle
("D" shaped)

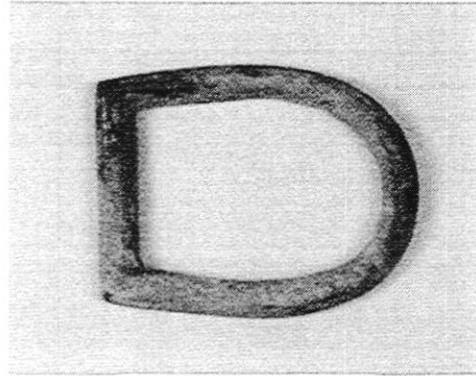


Figure 47: Brass Buckle
("D" shaped)

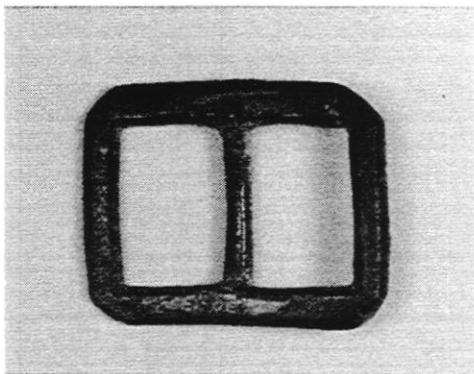


Figure 48: Brass Buckle
(clipped corners)

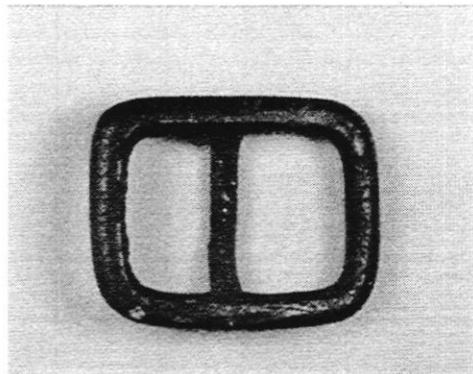


Figure 49: Brass Buckle
(rounded corners)

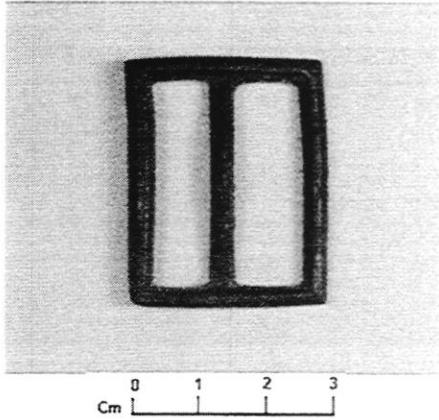


Figure 50: Brass Buckle
(rectangular shape)

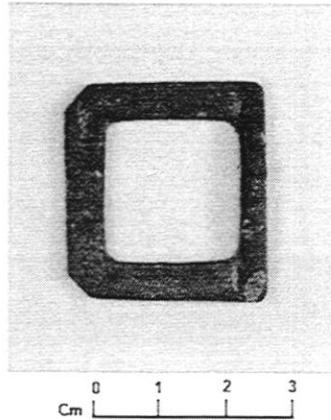


Figure 51: Brass Buckle
(clipped & rounded
corners)

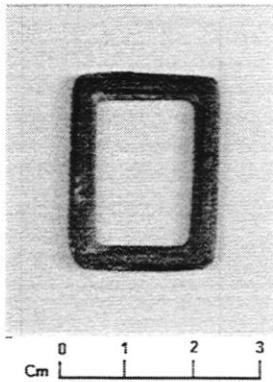


Figure 52: Brass Buckle
(slightly rounded
corners)

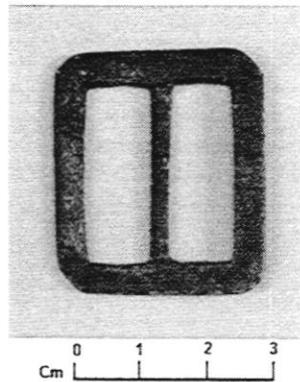
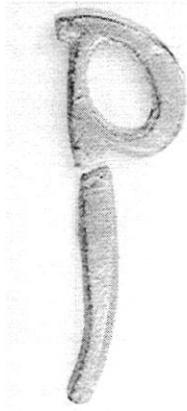
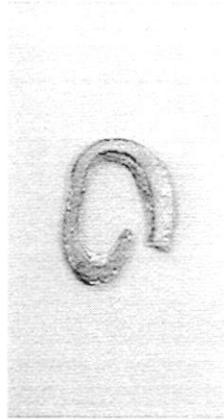


Figure 53: Brass Buckle
(clipped corners)



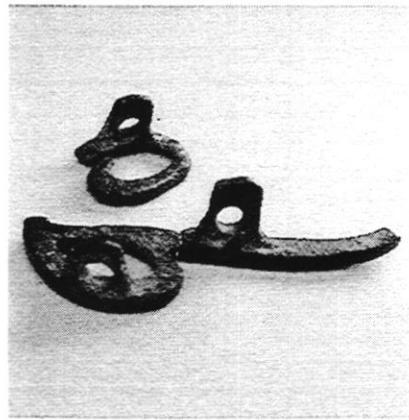
cm 0 1 2

Figure 54: Brass Emblem Fragments



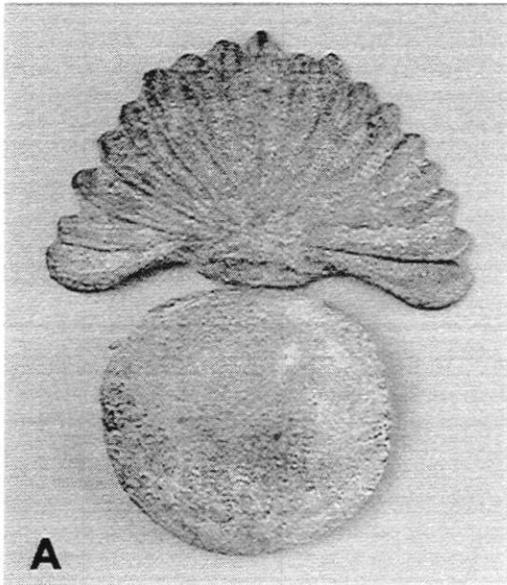
cm 0 1 2

Figure 55: Brass Emblem Fragment



cm 0 1 2 3

Figure 56: Backs (showing connectors)

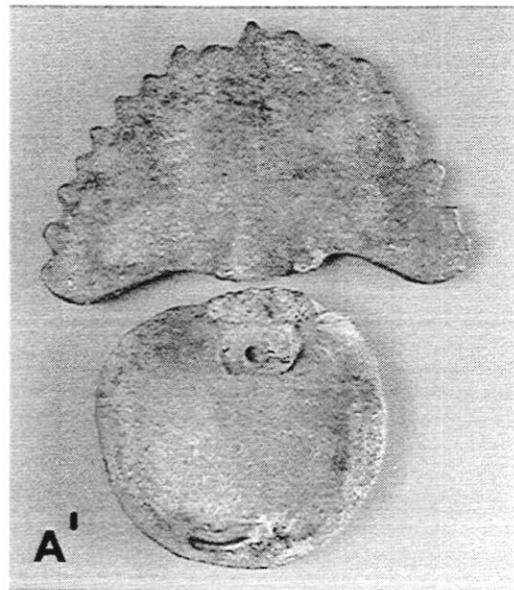


A

cm 0 1 2 3

Figure 57: Brass Emblem, exploding bomb design

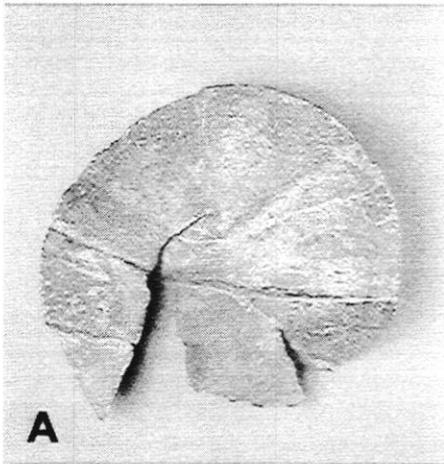
A-Face



A'

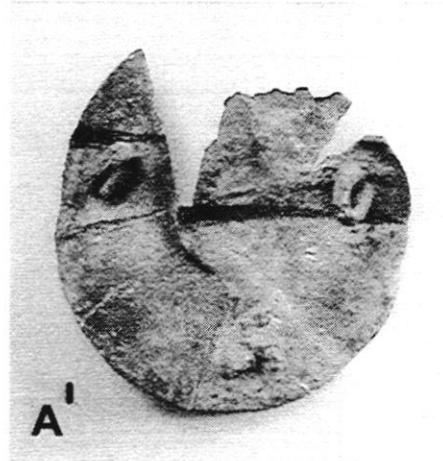
cm 0 1 2 3

A,1-Back with connectors



cm 0 1 2 3

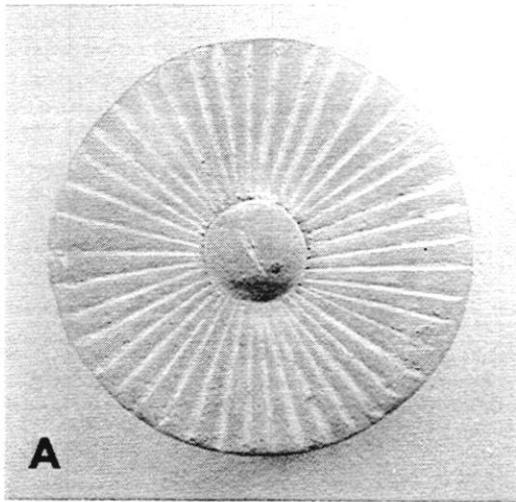
A-Face



cm 0 1 2 3

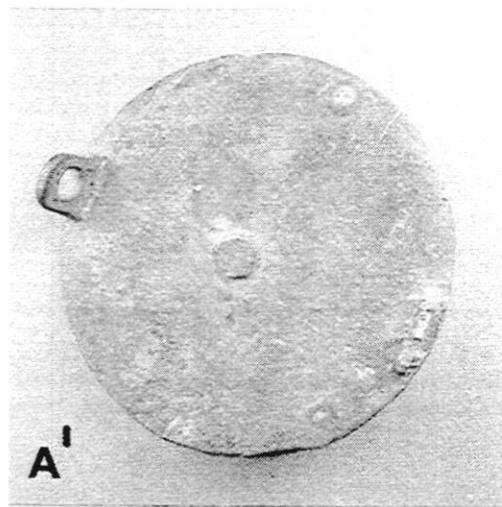
A,1-with three connectors

Figure 58:Brass Emblem



cm 0 1 2 3

A-with radiating design



cm 0 1 2 3

A,1-Back with connectors

Figure 59:Brass Emblem

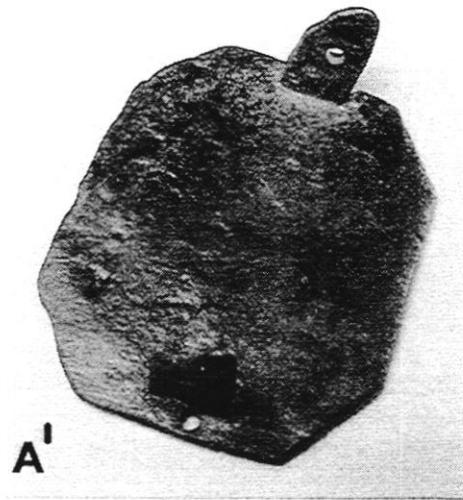
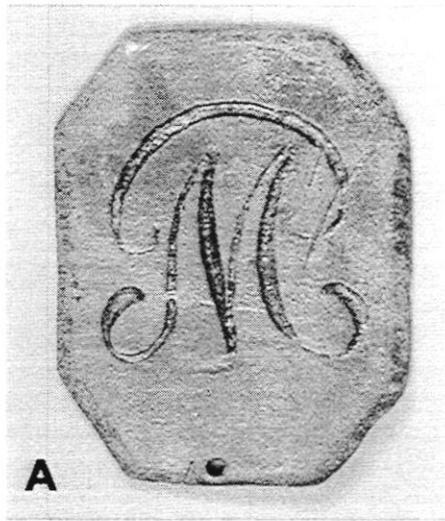


Figure 60: Brass Cross-Belt Plate

A-with scrolled "M"

A,1-Back with connectors

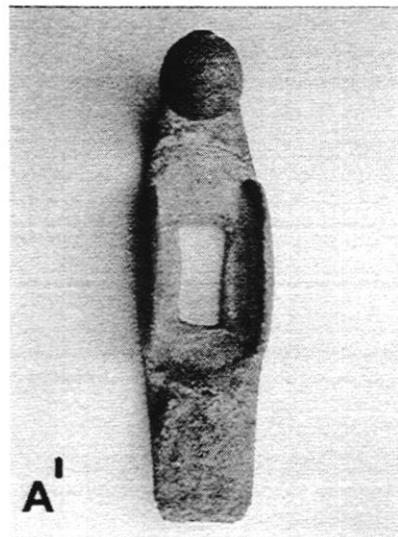
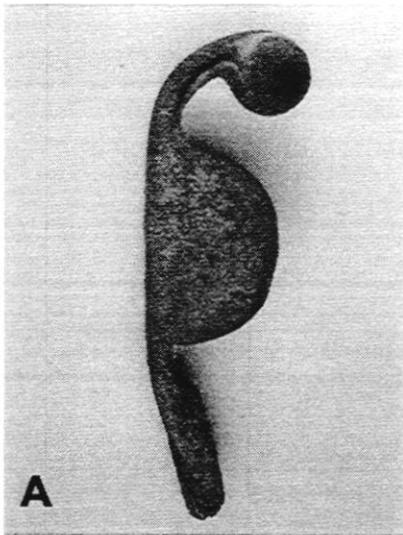
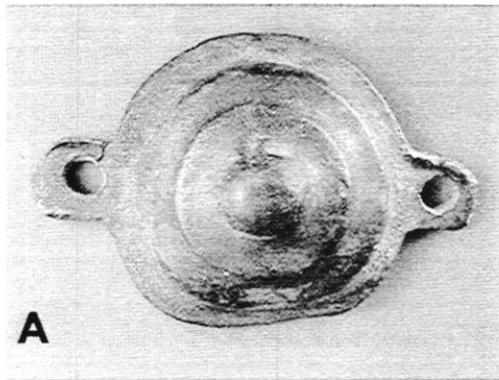


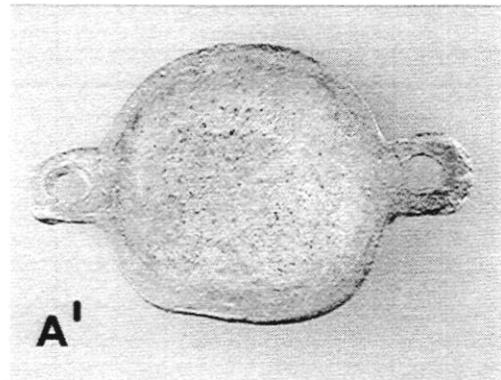
Figure 61: Brass Sword Guard

A-side view

A,1-front view



cm 0 1 2 3

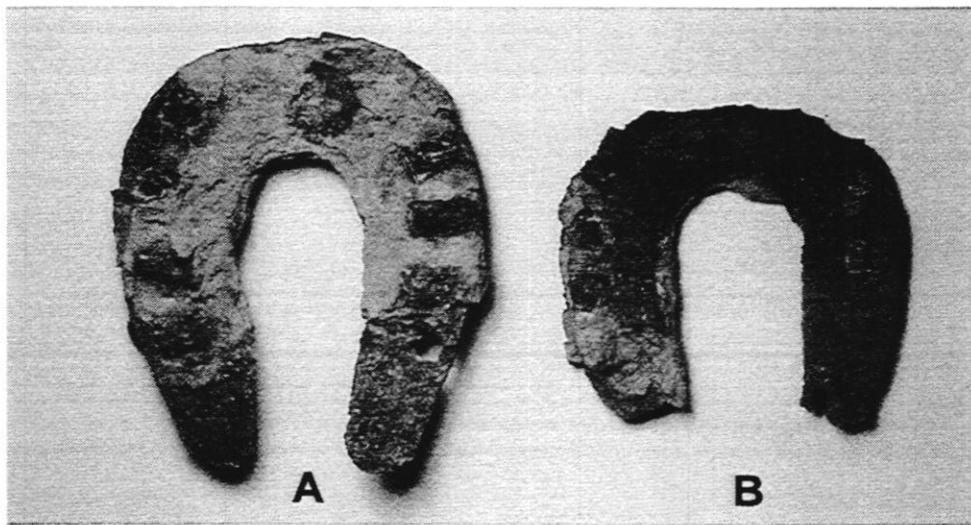


cm 0 1 2 3

Figure 62: Brass Rosette

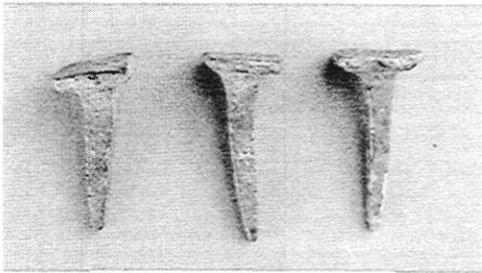
A-convex face

A,1-concave back



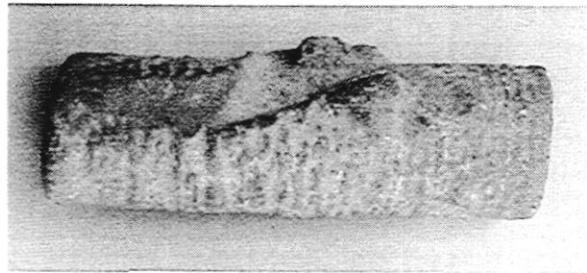
cm 0 5 10

Figure 63:A,B-Iron Spanish-style Horse or Mule Shoes



cm 0 1 2

Figure 64: Brass Tacks



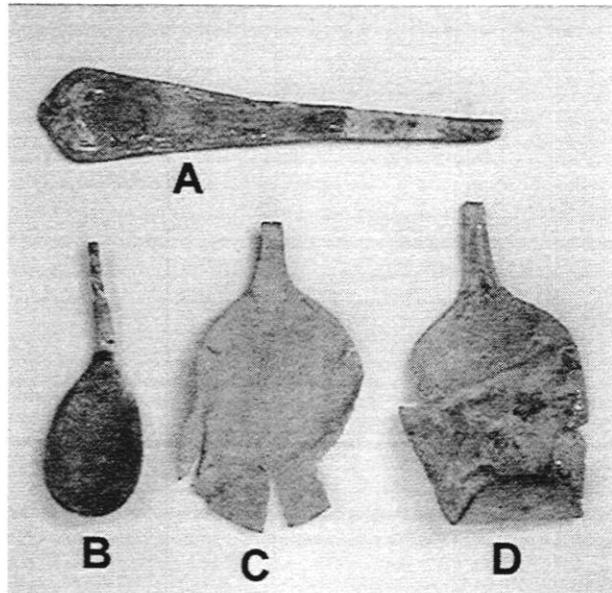
cm 0 1 2 3

Figure 65: Solid Lead Object



cm 0 5

Figure 66: Brass
Candlestick



cm 0 5 10

Figure 67: A-D, Utensils
A-utensil handle B-Spoon
C,D-spoon bowls