



Phase II and Phase III Archaeological Database and Inventory

Site Number: 18WA288

Site Name: Antietam Furnace Complex

Prehistoric

Other name(s) (Commonly called Mt. Aetna Furnace)

Historic

Unknown

Brief Description:

18th century iron furnace complex, ruins

Site Location and Environmental Data:

Maryland Archaeological Research Unit No. 19

SCS soil & sediment code EdD2

Latitude 39.6026

Longitude -77.5895

Physiographic province Great Valley

Terrestrial site

Underwater site

Elevation m

Site slope 11-20%

Ethnobotany profile available

Maritime site

Site setting

-Site Setting restricted

-Lat/Long accurate to within 1 sq. mile, user may need to make slight adjustments in mapping to account for sites near state/county lines or streams

Topography

- Floodplain
- Hilltop/bluff
- Interior flat
- Upland flat
- Ridgetop
- Terrace
- Low terrace
- High terrace
- Rockshelter/cave
- Hillslope
- Unknown
- Other

Ownership

- Private
- Federal
- State of MD
- Regional/county/city
- Unknown

Nearest Surface Water

Name (if any) Unnamed tributary of Mt. A

- | Saltwater | Freshwater |
|--|--|
| Ocean <input type="checkbox"/> | Stream/river <input checked="" type="checkbox"/> |
| Estuary/tidal river <input type="checkbox"/> | Swamp <input type="checkbox"/> |
| Tidewater/marsh <input type="checkbox"/> | Lake or pond <input type="checkbox"/> |
| | Spring <input type="checkbox"/> |

Minimum distance to water is 92 m

Temporal & Ethnic Contextual Data:

- Paleoindian site
- Archaic site
- Early archaic
- Middle archaic
- Late archaic
- Unknown prehistoric context
- Woodland site
- MD Adena
- Early woodland
- Mid. woodland
- Late woodland

- Contact period site
- ca. 1820 - 1860
- ca. 1630 - 1675
- ca. 1675 - 1720
- ca. 1720 - 1780
- ca. 1780 - 1820
- Unknown historic context
- Unknown context
- ca. 1820 - 1860
- ca. 1860 - 1900
- ca. 1900 - 1930
- Post 1930
- Y

Ethnic Associations (historic only)

- Native American
- African American
- Anglo-American
- Hispanic
- Asian American
- Unknown
- Other

Y=Confirmed, P=Possible

Site Function Contextual Data:

- ### Prehistoric
- Multi-component
 - Village
 - Hamlet
 - Base camp
 - Rockshelter/cave
 - Earthen mound
 - Cairn
 - Burial area
 - Misc. ceremonial
 - Rock art
 - Shell midden
 - STU/lithic scatter
 - Quarry/extraction
 - Fish weir
 - Production area
 - Unknown
 - Other context

- | | | | |
|--|---|---|---|
| Historic | Furnace/forge <input checked="" type="checkbox"/> | Military | Post-in-ground <input type="checkbox"/> |
| Urban/Rural? Rural <input type="checkbox"/> | Other <input type="checkbox"/> | Battlefield <input type="checkbox"/> | Frame-built <input checked="" type="checkbox"/> |
| Domestic | Transportation | Fortification <input type="checkbox"/> | Masonry <input checked="" type="checkbox"/> |
| Homestead <input type="checkbox"/> | Canal-related <input type="checkbox"/> | Encampment <input type="checkbox"/> | Other structure <input type="checkbox"/> |
| Farmstead <input type="checkbox"/> | Road/railroad <input type="checkbox"/> | Townsite | Slave related |
| Mansion <input type="checkbox"/> | Wharf/landing <input type="checkbox"/> | Religious | Non-domestic agri |
| Plantation <input type="checkbox"/> | Maritime-related <input type="checkbox"/> | Church/mtg house <input type="checkbox"/> | Recreational |
| Row/townhome <input type="checkbox"/> | Bridge <input type="checkbox"/> | Ch support bldg <input type="checkbox"/> | Midden/dump |
| Cellar <input type="checkbox"/> | Ford <input type="checkbox"/> | Burial area | Artifact scatter |
| Privy <input type="checkbox"/> | Educational | Cemetery <input type="checkbox"/> | Spring or well |
| Industrial | Commercial | Sepulchre <input type="checkbox"/> | Unknown |
| Mining-related <input type="checkbox"/> | Trading post <input type="checkbox"/> | Isolated burial <input type="checkbox"/> | Other context |
| Quarry-related <input type="checkbox"/> | Store <input type="checkbox"/> | Bldg or foundation | <input checked="" type="checkbox"/> |
| Mill <input type="checkbox"/> | Tavern/inn <input type="checkbox"/> | Possible Structure <input type="checkbox"/> | furnace complex |
| Black/metalsmith <input type="checkbox"/> | | | |

Interpretive Sampling Data:

Prehistoric context samples Soil samples taken

Flotation samples taken Other samples taken

Historic context samples Soil samples taken U

Flotation samples taken U Other samples taken



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Diagnostic Artifact Data:

Projectile Point Types		Koens-Crispin	
Clovis	<input type="checkbox"/>	Perkiomen	<input type="checkbox"/>
Hardaway-Dalton	<input type="checkbox"/>	Susquehana	<input type="checkbox"/>
Palmer	<input type="checkbox"/>	Vernon	<input type="checkbox"/>
Kirk (notch)	<input type="checkbox"/>	Piscataway	<input type="checkbox"/>
Kirk (stem)	<input type="checkbox"/>	Calvert	<input type="checkbox"/>
Le Croy	<input type="checkbox"/>	Selby Bay	<input type="checkbox"/>
Morrow Mntn	<input type="checkbox"/>	Jacks Rf (notch)	<input type="checkbox"/>
Guilford	<input type="checkbox"/>	Jacks Rf (pent)	<input type="checkbox"/>
Brewerton	<input type="checkbox"/>	Madison/Potomac	<input type="checkbox"/>
Otter Creek	<input type="checkbox"/>	Levanna	<input type="checkbox"/>

Prehistoric Sherd Types

Marcey Creek	<input type="checkbox"/>	Popes Creek	<input type="checkbox"/>	Shepard	<input type="checkbox"/>	Keyser	<input type="checkbox"/>
Dames Qtr	<input type="checkbox"/>	Coulbourn	<input type="checkbox"/>	Townsend	<input type="checkbox"/>	Yeocomico	<input type="checkbox"/>
Selden Island	<input type="checkbox"/>	Watson	<input type="checkbox"/>	Minguannan	<input type="checkbox"/>	Monongahela	<input type="checkbox"/>
Accokeek	<input type="checkbox"/>	Mockley	<input type="checkbox"/>	Sullivan Cove	<input type="checkbox"/>	Susquehannock	<input type="checkbox"/>
Wolfe Neck	<input type="checkbox"/>	Clemson Island	<input type="checkbox"/>	Shenks Ferry	<input type="checkbox"/>		
Vinette	<input type="checkbox"/>	Page	<input type="checkbox"/>	Moyaone	<input type="checkbox"/>		
				Potomac Crk	<input type="checkbox"/>		

Historic Sherd Types

Earthenware		Ironstone	5	Staffordshire	<input type="checkbox"/>	Stoneware	
Astbury	<input type="checkbox"/>	Jackfield	<input type="checkbox"/>	Tin Glazed	5	English Brown	<input type="checkbox"/>
Borderware	<input type="checkbox"/>	Mn Mottled	<input type="checkbox"/>	Whiteware	53	Eng Dry-bodied	<input type="checkbox"/>
Buckley	<input type="checkbox"/>	North Devon	<input type="checkbox"/>	Porcelain	10	Nottingham	<input type="checkbox"/>
Creamware	13	Pearlware	3			Rhenish	<input type="checkbox"/>
						Wt Salt-glazed	38

All quantities exact or estimated minimal counts

Other Artifact & Feature Types:

Prehistoric Artifacts		Other fired clay	
Flaked stone	<input type="checkbox"/>	Human remain(s)	<input type="checkbox"/>
Ground stone	<input type="checkbox"/>	Modified faunal	<input type="checkbox"/>
Stone bowls	<input type="checkbox"/>	Unmod faunal	<input type="checkbox"/>
Fire-cracked rock	<input type="checkbox"/>	Oyster shell	<input type="checkbox"/>
Other lithics (all)	<input type="checkbox"/>	Floral material	<input type="checkbox"/>
Ceramics (all)	<input type="checkbox"/>	Uncommon Obj.	<input type="checkbox"/>
Rimsherds	<input type="checkbox"/>	Other	<input type="checkbox"/>

Prehistoric Features

Mound(s)	<input type="checkbox"/>	Storage/trash pit	<input type="checkbox"/>
Midden	<input type="checkbox"/>	Burial(s)	<input type="checkbox"/>
Shell midden	<input type="checkbox"/>	Ossuary	<input type="checkbox"/>
Postholes/molds	<input type="checkbox"/>	Unknown	<input type="checkbox"/>
House pattern(s)	<input type="checkbox"/>	Other	<input type="checkbox"/>
Palisade(s)	<input type="checkbox"/>		
Hearth(s)	<input type="checkbox"/>		
Lithic reduc area	<input type="checkbox"/>		

Lithic Material

Fer quartzite	<input type="checkbox"/>	Sil sandstone	<input type="checkbox"/>
Jasper	<input type="checkbox"/>	Chalcedony	<input type="checkbox"/>
Chert	<input type="checkbox"/>	Ironstone	<input type="checkbox"/>
Rhyolite	<input type="checkbox"/>	Argilite	<input type="checkbox"/>
Quartz	<input type="checkbox"/>	Steatite	<input type="checkbox"/>
Quartzite	<input type="checkbox"/>	Sandstone	<input type="checkbox"/>
		European flint	<input type="checkbox"/>
		Basalt	<input type="checkbox"/>
		Unknown	<input type="checkbox"/>
		Other	<input type="checkbox"/>

Dated features present at site

Numerous features containing diagnostic historic artifacts.

Historic Artifacts		Tobacco related	
Pottery (all)	321	Activity item(s)	354
Glass (all)	246	Human remain(s)	<input type="checkbox"/>
Architectural	1001	Faunal material	<input checked="" type="checkbox"/>
Furniture	<input type="checkbox"/>	Misc. kitchen	276
Arms	<input type="checkbox"/>	Floral material	<input type="checkbox"/>
Clothing	13	Misc.	<input type="checkbox"/>
Personal items	3	Other	<input type="checkbox"/>

Historic Features

Privy/outhouse	<input type="checkbox"/>	Depression/mound	<input type="checkbox"/>	Unknown	<input type="checkbox"/>
Const feature	<input type="checkbox"/>	Burial(s)	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>
Foundation	<input type="checkbox"/>	Trash pit/dump	<input type="checkbox"/>	furnacestack,,platform,flue,channel	
Cellar hole/cellar	<input type="checkbox"/>	Sheet midden	<input type="checkbox"/>		
Hearth/chimney	<input checked="" type="checkbox"/>	Planting feature	<input type="checkbox"/>		
Postholes/molds	<input type="checkbox"/>	Road/walkway	<input type="checkbox"/>	Wheel pit	<input checked="" type="checkbox"/>
Paling ditch/fence	<input type="checkbox"/>				

All quantities exact or estimated minimal counts

Radiocarbon Data:

Sample 1: +/- years BP Reliability Sample 2: +/- years BP Reliability Sample 3: +/- years BP Reliability

Sample 4: +/- years BP Reliability Sample 5: +/- years BP Reliability Sample 6: +/- years BP Reliability

Sample 7: +/- years BP Reliability Sample 8: +/- years BP Reliability Sample 9: +/- years BP Reliability

Additional radiocarbon results available



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External Samples/Data:

Collection curated at Washington County Historical Society

Additional raw data may be available online

Summary Description:

The Antietam Iron Furnace Complex (18WA288) is located near the town of Mt. Aetna, Maryland. The site is frequently referred to as the "Mt. Aetna Furnace". However, this name is problematic given that multiple furnaces have borne this name. The Antietam Iron Furnace is more properly described as the first iron furnace constructed at Mt. Aetna. The site is situated near the base of South Mountain where a high-grade iron ore (limonite) outcrops near the surface. Prior to archeological investigations the furnace site lay under a 20° slope covered with secondary plant growth.

Historical research documented the construction of Antietam Furnace in 1761 by William James. Throughout most of its history, however, the furnace operated under the ownership of Daniel and Samuel Hughes. During the American Revolution, the furnace played a very important role in the manufacture of cannons (of various sizes), cannonballs, and grapes shot. The Hughes secured contracts to supply artillery to both the Maryland Council of Safety and the Continental Congress in Philadelphia during the war. Numerous historical documents attest to the rapid changes at the site as it geared up to meet the demands of the Continental Army. Operations at the Antietam Furnace are believed to have ceased sometime before 1783. By the end of the revolution, the Hughes family possessed what was probably the largest iron works complex in western Maryland, as it included several furnaces, forges, and iron works.

The site was rediscovered accidentally by members of the Mt. Aetna Volunteer Fire Department (VFD) in 1976, during construction of an addition to their fire hall. While archeological inquiry could not be undertaken at that time, a few years later when the VFD began planning the construction of a shooting range, they sought assistance from the Maryland Historical Trust. MHT investigated the site with an exploratory trench and found that it was historically significant. Data recovery excavation was subsequently undertaken in the vicinity of the property to be impacted by the proposed shooting range.

Data recovery was conducted in three stages. Stage 1 work, carried out in the spring and summer of 1982, involved the excavation of thirty 2X2 meter units, three 1X2 meter units, and one 2X3 meter unit. The remnants of the furnace stack were identified and exposed on all sides, but excavation to its base was not completed until the following year. Other structural foundations and a considerable portion of a wheelpit were exposed and outlined. In addition, three backhoe trenches were placed in a field along the southern perimeter of the furnace complex to locate additional parts of the site and forested areas of the property were surface surveyed to the extent possible. A fourth backhoe trench was cut through the center of the complex in the spring/summer season. Excavations also continued in the units opened up earlier in the year. Following completion of the second field season, the Antietam Furnace Site was successfully nominated to the National Register of Historic Places. Excavations resumed at the site in the fall of 1983. Three additional 2X2 meter units were opened. Fieldwork demonstrated that more structural features existed in the central portion of the site and that they extended to a greater depth than had been presumed at the end of 1982.

Numerous features were encountered during the excavations at the Antietam Iron Furnace Complex. Prominent features include the furnace stack itself (quite small for the era), a stone capped channel to drain groundwater away from the furnace base, a series of features believed to have been bellows supports, and a large and well-constructed wheel pit and tailrace for supplying water power to the bellows. Additional features which may have been furnace support buildings/work areas were also excavated. These structures were covered by a heavy mantle of stone rubble and waste ore when the site was dismantled and abandoned as work moved to a new furnace (sometime before 1783).

The total number of artifacts recovered during the three field seasons at 18WA288 was approximately 2184 objects. Slag, iron casting overflow and waste, stone rubble, and brick fragments are not included in this tally. Excessive quantities of these artifacts were encountered, but only samples were retained. A total of 354 activity items were excavated, a majority of which are related to the historic iron production. Fifty-six unmarked pig iron fragments and 2 marked pigs were recovered at the site. A number of complete plates and plate fragments for iron stoves were excavated; 8 complete plates and 38 fragments from 5-plate stoves, and 1 partial plate from a 6-plate stove. The latter was not manufactured on site. Four other rectangular iron plates were also recovered. One-hundred and ninety-one iron hollowware fragments and one complete hollowware object (a pot) were excavated. One cannonball and one piece of grape shot were recovered. These are interpreted as activity items since they are not used as arms at the site, but are arms manufactured at the site, likely to satisfy the Revolutionary War contract (see above). Byproducts of the iron casting taking place at the site included 31 pieces of gate metal (runners, sprues, and wedges). As stated previously, large quantities of slag, and also casting overflow and waste were recovered, but only samples were retained. Tools thought to be related to iron manufacture include 10 iron chisels and wedges, a pointed iron bar, an iron file, 2 small hammerheads, a small wrought iron punch, and half of a small grinding stone. Six machine parts were encountered and 12 pieces of casting hardware as well. In addition to the activity items noted above, 3 wrought iron washers, 4 wrought iron nuts, a hardware staple, a wrought iron bar, a large monkey wrench, and 2 sections of chain were excavated. A total of 1001 architectural items were recovered including 14 pieces of furnace hardware, 928 hand wrought nails (mostly rose-headed, also L-headed and T headed), 18 cut wire nails, a charred wooden beam, and 40 fragments of window glass. Thirteen clothing items were recovered, 10 of which are copper alloy or pewter buttons. The remaining clothing objects were a copper alloy cuff link, an iron shoe buckle, and a copper alloy shoe buckle. The kitchen assemblage included a total of 803 objects. Ceramics made up a considerable proportion of that assemblage and included 5 sherds of Delftware, 13 sherds of creamware, 3 of pearlware, 53 sherds of whiteware, 5 of ironstone, 10 porcelain sherds, 108 of redware, 38 white salt-glazed stoneware sherds and 86 other stoneware sherds. Two-hundred and six pieces of kitchen glass (mostly bottle glass) were recovered. A total of 276 animal bones (many of which were cut) were excavated, most of which were cattle bones, followed by pigs, sheep and some dogs. Three personal objects were excavated including two pocketknives with bone bolsters and an iron razor. And finally, 10 tobacco-related objects were found. All were kaolin pipe fragments.

Without doubt the Antietam Furnace represents the earliest blast furnace constructed in Washington County, and perhaps in Western Maryland as a whole. The short duration of operations, together with the sealed nature of the furnace site, afforded an excellent opportunity to examine eighteenth century iron-smelting technology and its products. However, the research potential of the Antietam Furnace has by no means been exhausted. Hopefully the site will one day constitute an educational and recreational park for the people of Western Maryland and other interested visitors.

External Reference Codes (Library ID Numbers):

00006316