Phase II and Phase III Archaeological Database and Inventory

MARYLAND HISTORICAL TRUST

Site Number: 18CE5 **Site Name:** Harlan Mill Steatite Quarry

Other name(s) Asbestos Hill, Harlan Mill Soapstone Quarry

Prehistoric ☑ Historic ☐ Unknown ☐

Brief Description: Transitional/ Late Archaic steatite quarry

Site Location and Environmental Data:

Maryland Archaeological Research Unit No. 16 SCS soil & sediment code CmD2

Latitude 39.6652 Longitude -75.8815 Physiographic province Eastern Piedmont Terrestrial site ☑ Underwater site ☐

Elevation 200 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	☐	High terrace	☐
Hilltop/bluff	☑	Rockshelter/ cave	☐
Interior flat	☐	Hillslope	☐
Upland flat	☐	Unknown	☐
Ridgetop	☐	Other	☐
Terrace	☐		
Low terrace	☐		

Ownership

Private	☑
Federal	☐
State of MD	☐
Regional/ county/city	☐
Unknown	☐

Nearest Surface Water

Name (if any) Little Elk Creek

Saltwater		Freshwater	
Ocean	☐	Stream/river	☑
Estuary/tidal river	☐	Swamp	☐
Tidewater/marsh	☐	Lake or pond	☐
		Spring	☐

Minimum distance to water is 61 m

Temporal & Ethnic Contextual Data:

Paleoindian site	☐	Woodland site	☐	Contact period site	☐	ca. 1820 - 1860	☐
Archaic site	☐	MD Adena	☐	ca. 1630 - 1675	☐	ca. 1860 - 1900	☐
Early archaic	☐	Early woodland	☐	ca. 1675 - 1720	☐	ca. 1900 - 1930	☐
MIddle archaic	☐	Mid. woodland	☐	ca. 1720 - 1780	☐	Post 1930	☐
Late archaic	Y	Late woodland	☐	ca. 1780 - 1820	☐		

Unknown prehistoric context ☐ Unknown historic context ☐ Unknown context ☐

Ethnic Associations (historic only)

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

Y=Confirmed, P=Possible

Site Function Contextual Data:

Prehistoric

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

Other context ☐

Historic

Urban/Rural?

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

Interpretive Sampling Data:

Prehistoric context samples		Soil samples taken	N
Flotation samples taken	N	Other samples taken	

Historic context samples		Soil samples taken	
Flotation samples taken		Other samples taken	

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Diagnostic Artifact Data:

Projectile Point Types

Clovis		Koens-Crispin	
Hardaway-Dalton		Perkiomen	
Palmer		Susquehana	
Kirk (notch)		Vernon	
Kirk (stem)		Piscataway	
Le Croy		Calvert	
Morrow Mntn		Selby Bay	
Guilford		Jacks Rf (notch)	
Brewerton		Jacks Rf (pent)	
Otter Creek		Madison/Potomac	
		Levanna	

All quantities exact or estimated minimal counts

Prehistoric Sherd Types

Marcey Creek		Popes Creek		Shepard		Keyser	
Dames Qtr		Coulbourn		Townsend		Yeocomico	
Selden Island		Watson		Minguannan		Monongahela	
Accokeek		Mockley		Sullivan Cove		Susquehannock	
Wolfe Neck		Clemson Island		Shenks Ferry			
Vinette		Page		Moyaone			
				Potomac Crk			

Historic Sherd Types

Earthenware

Astbury		Ironstone		Staffordshire		**Stoneware**	
Borderware		Jackfield		Tin Glazed		English Brown	
Buckley		Mn Mottled		Whiteware		Eng Dry-bodied	
Creamware		North Devon		**Porcelain**		Nottingham	
		Pearlware				Rhenish	
						Wt Salt-glazed	

Other Artifact & Feature Types:

Prehistoric Artifacts

Flaked stone	153	Other fired clay	
Ground stone		Human remain(s)	☐
Stone bowls	56	Modified faunal	
Fire-cracked rock		Unmod faunal	
Other lithics (all)	5	Oyster shell	☐
Ceramics (all)		Floral material	☐
Rimsherds		Uncommon Obj.	
		Other ☐	

Prehistoric Features

Mound(s)		Storage/trash pit	☐
Midden	☐	Burial(s)	☐
Shell midden	☐	Ossuary	☐
Postholes/molds	☐	Unknown	☐
House pattern(s)	☐	Other	☐
Palisade(s)	☐		
Hearth(s)	☑		
Lithic reduc area	☐		

Lithic Material

Fer quartzite	☐	Sil sandstone	☐		
Jasper	☑	Chalcedony	☐	European flint	☐
Chert	☑	Ironstone	☐	Basalt	☐
Rhyolite	☐	Argilite	☑	Unknown	☐
Quartz	☑	Steatite	☑	Other	☑
Quartzite	☐	Sandstone	☐	schist, gneiss	

☑ **Dated features present at site**

Hearth

Historic Artifacts

Pottery (all)		Tobacco related	
Glass (all)		Activity item(s)	
Architectural		Human remain(s)	☐
Furniture		Faunal material	☐
Arms		Misc. kitchen	
Clothing		Floral material	☐
Personal items		Misc.	
		Other ☐	

Historic Features

Const feature	☐	Privy/outhouse	☐	Depression/mound	☐
Foundation	☐	Well/cistern	☐	Burial(s)	☐
Cellar hole/cellar	☐	Trash pit/dump	☐	Railroad bed	☐
Hearth/chimney	☐	Sheet midden	☐	Earthworks	☐
Postholes/molds	☐	Planting feature	☐	Mill raceway	☐
Paling ditch/fence	☐	Road/walkway	☐	Wheel pit	☐
				Unknown	☐
				Other	☐

All quantities exact or estimated minimal counts

Radiocarbon Data:

Sample 1: 3330 +/- 160 years BP Reliability High

MI-2255: Charcoal sample from a hearth feature found on the quarry floor. Associated with argillite scrapers and other flaked stone quarry tools.

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 Archeological Society of Delaware

☐ Additional raw data may be available online

Summary Description:

The Harlan Mill Steatite Quarry Site (18CE5) is a steatite, or soapstone, quarry dated to the Late Archaic period. The quarry is situated on a small wooded knoll overlooking Little Elk Creek near Leeds in Cecil County. It is located within the Little Creek Historic District (MIHP #CE-1296). The unique geologic setting and raw material form distinguishes the site from other quarries in the region. The steatite is a uniformly greenish, schist material that is harder and grainer than other steatites. Crystalline inclusions and planar fibrous bands are common. Soils at the site are Chrome silt loam (15-25% slope) and the site area measures about 60 m by 60 m.

The Harlan-Gallagher dwelling (MIHP #CE-179) and a portion of the Harlan-Wilson Mill (MIHP #CE-652) are located near the eastern boundary of site 18CE5. The Harlan Mill, which was built ca. 1812, originally functioned as a cotton mill and later was converted to a paper mill. In ca. 1872, it became the Harlan & Brothers Paper Mill. The mill continued to operate until 1911 when it burned down. Sometime later, three asbestos prospect holes were dug at the site leading the local residents to refer to the knoll as “Asbestos Hill”.

Between 1959 and 1961, an avocational archeologist and member of the Eastern States Archeological Federation conducted surface survey, shovel pit testing, and the excavation of test units at the Harlan Mill Quarry site. The excavation was part of a larger project that began in 1955 to locate the raw material sources of artifacts that been excavated from the Minguannan Site (36CH3) located in Chester County, Pennsylvania. The entire top of the knoll was reportedly strewn with slabs of steatite and a few bowl fragments. No prehistoric quarry pits were visible on the surface. After sinking several test pits, an area thought to have been the remains of a long and curving quarry trench or pit was chosen for intensive excavation. A trench 2.44 m (8’) in length and 1.524 m (5’) deep was excavated into the face of the knoll. The slumped pit was found to contain 0.9144-1.524 m of quarry debris.

The quarry floor was encountered approximately 1.3 m below ground surface. The majority of the worked pieces and bowl fragments were taken from a 45.72-60.96 cm (18”-24”) layer. The zone beneath that contained slabs of steatite that had been broken off and an increasing amount of crushed and pulverized steatite. There were fewer bowl fragments and more tools in the lower levels of the trench. A hearth feature was identified on the quarry floor. It measured approximately 25.4 cm (10”) in diameter with a charcoal and burnt rock scatter extending to about 50.8 cm (20”) in diameter. The hearth was formed by a depression about 5.08 cm (2”) deep and composed of small, flat fragments of steatite, all of which were retained. Small twigs appeared to have been used for kindling to stoke the fire. Artifacts associated with the hearth included 2 argillite scrapers and 9 quarrying tools. In addition to the artifacts collected from the hearth feature, several other flaked stone tools and bowl fragments were collected from the surface of the site and during the excavations. Flaked stone tools included whetstones, chisels of various sizes, hand axes, picks, abraders, mauls, and hoe-like objects that were probably used for clearing debris during steatite removal. The tools were produced on quartz, Cecil black flint, Newark jasper, and harder grades of steatite and chlorite schist. The artifacts collected during the excavations totaled 153 quarry tools (recorded as flaked stone in the table above), a minimum estimate of 5 hearth stones recorded as other lithics in the table above, and 56 stone bowl preforms and fragments. The simpler, less intensive tool kit at 18CE5 was suggestive of a less labor intensive technological complex than that seen at other quarry sites in the region.

Soil samples were collected every 15.24 cm (6”) starting at the quarry floor level and up to the ground surface for pollen analysis. No details of that analysis were provided in the available literature regarding the site. Charcoal samples were also collected for radiocarbon dating from the hearth feature. One analyzed sample (M-2255) yielded a date of 3330 BP ± 160 years. This produced a calibrated date range of 2035-1257 BC using the Intcal09 program (to 2-sigma). These dates fall within the Late Archaic period.

The site was again investigated in 1985 during a survey of prehistoric steatite quarries in Cecil County that was being carried out by the staff of the University of Delaware Center for Archaeological Research and in part funded by the Maryland Historical Trust. The goal of the investigation into steatite quarry technology was to provide a new, more detailed perspective of the acquisition and consumption of the material by systematically collecting data to allow for a comprehensive description and comparative analysis. The research involved a comprehensive field survey of 5 quarries (2 in Cecil County and 3 in Pennsylvania) and a detailed inventory of all quarry-related steatite artifacts. The survey methods included: the location of the actual quarry area, the delineation of any internal activity areas, the collection of a representative sample of both utilized and non-utilized steatite material as well as any quarrying tools, and an examination of the vicinity of the quarry area in an attempt to identify quarry-related habitation sites. Preliminary observations based on the field visit were outlined in the original survey report. A more detailed analysis of the 1961 artifact assemblage and assessment of the extraction technology used at the site were provided in a later report. The results from the two reports are discussed together below.

The Harlan Mill quarry represented a highly specialized site, utilized for the initial procurement and primary production of a variety of steatite vessel forms. No finished vessels were collected from the vicinity of the quarry. Three methods of vessel manufacture were identified at the quarry site. The first was termed the “lump process” that involved utilization of a naturally occurring loose fragment of steatite. In the process, all exterior alteration was deferred until the interior concavity of the bowl was formed. The second process was called the “loaf process” and was based on the formation of the bowl preform directly on a larger steatite mass. A deep groove was cut in a oblong shape until the circumference of the preform was outlined. This resulted in the isolation of an oblong, or loaf-shaped, protuberance. Unlike the lump process, final removal of the loaf from the parent rock resulted in a significant alteration of the exterior of the vessel prior to formation of the interior of the bowl. The third and least intensive manufacturing strategy was called the “log process” due to the elongated and roughly cylindrical structure of the preforms. Initial extraction began with the formation of 2 deep, perpendicular grooves in the steatite thereby delineating a free-standing preform sufficiently sized for bowl formation. Once removed, the “log” preform underwent the same treatment as in the “loaf” process. The “log process” was more effective at producing larger vessels, rather than deep ones. Of the 35 rejected vessels/preforms collected from the Harlan Mill Quarry, 3 were produced using the “lump process”, 3 were produced using the “loaf process”, and 29 were produced using the “log process”.

The Harlan Mill Steatite Quarry Site (18CE5) is a steatite, or soapstone, quarry radiocarbon dated to the Late Archaic period. Primary reduction at the quarry meant that the transportation weight of the vessels was reduced and it insured that the material was suitable for the production of a finished vessel. The lack of evidence for significant habitation at the quarry site suggested that site visitation was by relatively small groups for a limited duration. It was postulated that the movement of late stage vessels represented a mixture of direct procurement forays or low quantity exchange systems. Site 18CE5 is a significant quarry site because it was the only quarries in the region that was discovered and excavated intact. Not only did the quarry provide a a remarkably complete view of steatite quarry technology, charcoal samples from a hearth feature identified on the quarry floor yielded the first, and possibly only, absolute dating of local quarry utilization. Because intact cultural features are known to be present at the site, any ground disturbing activities should be preceded by further archeological investigation.

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Brief Description: Transitional/ Late Archaic steatite quarry

External Reference Codes (Library ID Numbers):

00005724, 00005728, BASDE2, ESAF23, Site File