

heritage areas. Other designated areas in the Marcellus Shale formation include the Endless Mountains Heritage Region, the Oil Heritage Region, and the Rivers of Steel Heritage Area. Information on all of Pennsylvania's heritage areas can be found at [www.heritagepa.net](http://www.heritagepa.net).

### Burial Sites

In Pennsylvania, there is no one agency responsible for documentation of known burial grounds. However, known and unknown burial sites are common and warrant important consideration. In general, known burial sites should be avoided. Sometimes these sites were associated with a church that may no longer exist, so they may be neglected, in poor condition, and difficult to see. And the same is true of small family cemeteries that were once common in rural areas. Many of these were associated with farmsteads that no longer exist, and the grave stones and other markers have been removed.

Also hidden and completely undocumented are Native American graves. These are typically associated with late prehistoric to early historic period village sites and are of great concern to PHMC and present day Native groups. Such villages may or may have not been recorded previously.

Unknown burial sites are often abruptly discovered as work commences. If human remains are discovered, work on that location should stop and the developer should notify the Pennsylvania State Police and the county coroner. In addition, the Pennsylvania Department of Environmental Protection and PHMC's Bureau for Historic Preservation should be contacted.

### Best Practices for Landowners

- Landowners should consider including conditions in leases that require drillers to follow these best practices should historic or archeological resources be impacted before or after a site has been developed.

- Landowners should develop a site plan when a lease is signed. This plan should be made in consultation with a driller and should include any proposed road locations and drilling sites.

- Consult with CRGIS, county or local historical society, and county planning office.

- Be aware of the potential for discovering unknown resources.

- Record any resources with CRGIS and notify the county or local historical society and planning office.

- Become familiar with PHMC resources that can be of assistance by visiting [www.phmc.state.pa.us](http://www.phmc.state.pa.us) or calling (717)783-8946. The State Historic Preservation Plan is also available for information and guidance.

### Best Practices for Drilling Companies

- Collaborate with the landowner on site development and potential impact on historic and archaeological resources.

- Collaborate with other local and regional drillers to share related information should such sites be known or discovered during development.

- Many rural counties have unidentified historic and archaeological sites. To avoid unexpectedly coming across an unknown site or property, developers planning to establish drilling operations in one or two counties may want to support a preliminary survey to identify and document unknown sites in that area.

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- Become familiar with PHMC resources that can be of assistance by visiting [www.phmc.state.pa.us](http://www.phmc.state.pa.us) or calling (717)783-8946. The State Historic Preservation Plan is also available for information and guidance.

### The Pennsylvania Historical and Museum Commission

The Pennsylvania Historical and Museum Commission is the official history agency of the Commonwealth of Pennsylvania. Created in 1945, the agency is responsible for the collection, conservation, and interpretation of Pennsylvania's historic heritage. Each year hundreds of archaeological investigations are conducted in Pennsylvania in compliance with the 1966 National Historic Preservation Act and the Pennsylvania History Code. And, numerous structures, sites, and related resources are evaluated for listing in the National Register of Historic Places. However, most gas well development sites fall outside of federal or state law and policy when it comes to historic and archaeological resources. With the exceptions of projects that involve a federal permit—or when the project area is more than ten acres—proposed gas drilling projects do not come to PHMC for review for effects on historic and archaeological resources. As a result, neither developers nor PHMC are aware of historic and archaeological resources that could be impacted by such projects.

# Marcellus Shale Site Development

*The purpose of this guidance is to encourage gas extraction developers to site wells, basins, infrastructure, and pipelines in areas that avoid archaeological sites, burials, historic buildings, structures, and other resources that may be considered historically important.*

# Marcellus Shale Site Development

## Best Practices for Preserving Historic and Archaeological Resources



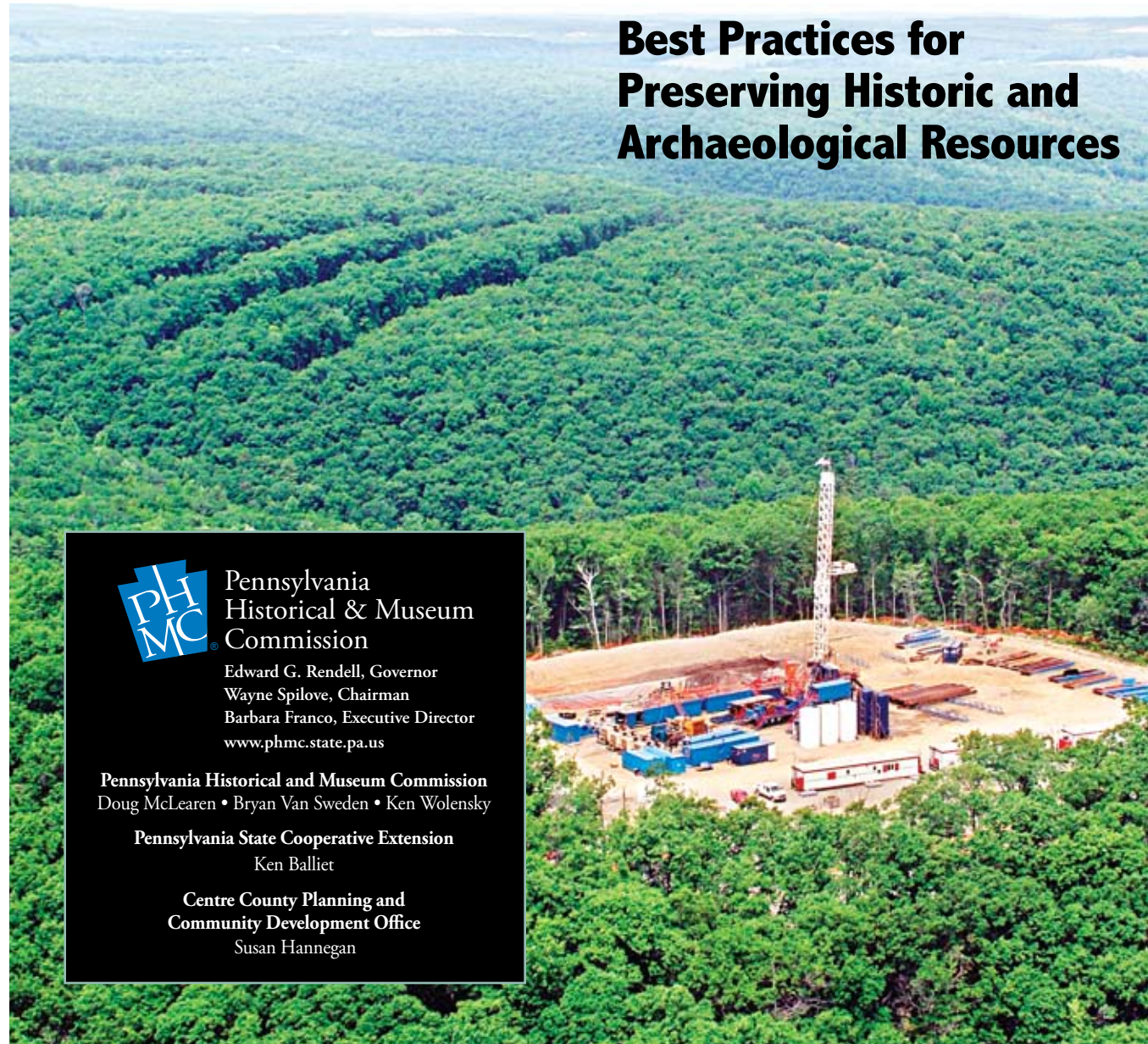
Pennsylvania  
Historical & Museum  
Commission

Edward G. Rendell, Governor  
Wayne Spilove, Chairman  
Barbara Franco, Executive Director  
[www.phmc.state.pa.us](http://www.phmc.state.pa.us)

Pennsylvania Historical and Museum Commission  
Doug McLearn • Bryan Van Sweden • Ken Wolensky

Pennsylvania State Cooperative Extension  
Ken Balliet

Centre County Planning and  
Community Development Office  
Susan Hannegan





The protection of historic and archaeological sites is the responsibility of all citizens, government agencies, and private developers. One of the responsibilities of the Pennsylvania Historical and Museum Commission (PHMC) is to assist all stakeholders in protecting the Commonwealth's historic and archaeological resources from undue harm.

PHMC's Bureau for Historic Preservation (BHP) has received phone calls, e-mails, and letters from the public expressing concern that historic and archaeological sites have been destroyed or damaged by the development of gas wells, basins, and pipelines. Often the impact on such sites was not an intended consequence of gas development, but it did happen nonetheless. When this issue was discussed with involved state agencies and other stakeholders, the consensus was that the most effective way to prevent negative impact on historic and archaeological resources was to inform and educate property owners and gas site developers about how to avoid and protect such resources. This publication recommends the best practices for preventing impacts on historic and archaeological resources when locating and leasing gas extraction sites and associated facilities.

## What are Historic and Archeological Resources?

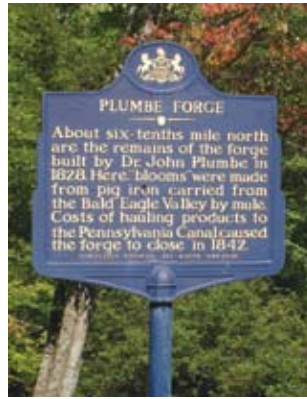
Pennsylvania has thousands of historic and archaeological resources ranging from those that are known, such as Native American archaeological sites, iron furnaces, colonial-era forts, historic homes and districts, and other archaeological sites—to those that haven't yet been discovered. Such resources may be associated with important events, people, industries, or ways-of-life; they often

can reveal important information about history and culture. Known sites may be listed in or determined eligible for the Pennsylvania or National Register of Historic Places. Others may have a State Historical Marker designating their statewide and national significance (go to [www.phmc.state.pa.us](http://www.phmc.state.pa.us) for more information on the National Register and Historical Marker Programs).

Unknown and undocumented sites are a challenge to protect. However, tools and resources are available to predict where such sites may be located and ways in which they can be protected.



An artifact uncovered from a western Pennsylvania late prehistoric village.



## Pre-Excavation Planning

Prior to drafting a final lease document between the gas well drilling company and the landowner, both parties should identify all important resources on the specified property. A site plan should note all known historic and archaeological resources, unique natural areas, waterways and water wells, landscapes, burial locations, and other resources of local importance. It is recommended that a site plan be part of the lease document.

Owners should consider including conditions in the lease document that require gas well developers to follow these best practices to avoid and protect historic and archaeological resources before, during, and after putting the well into operation.

Prior to meeting with the landowner and/or commencing site development, drillers should consult the following sources of information:

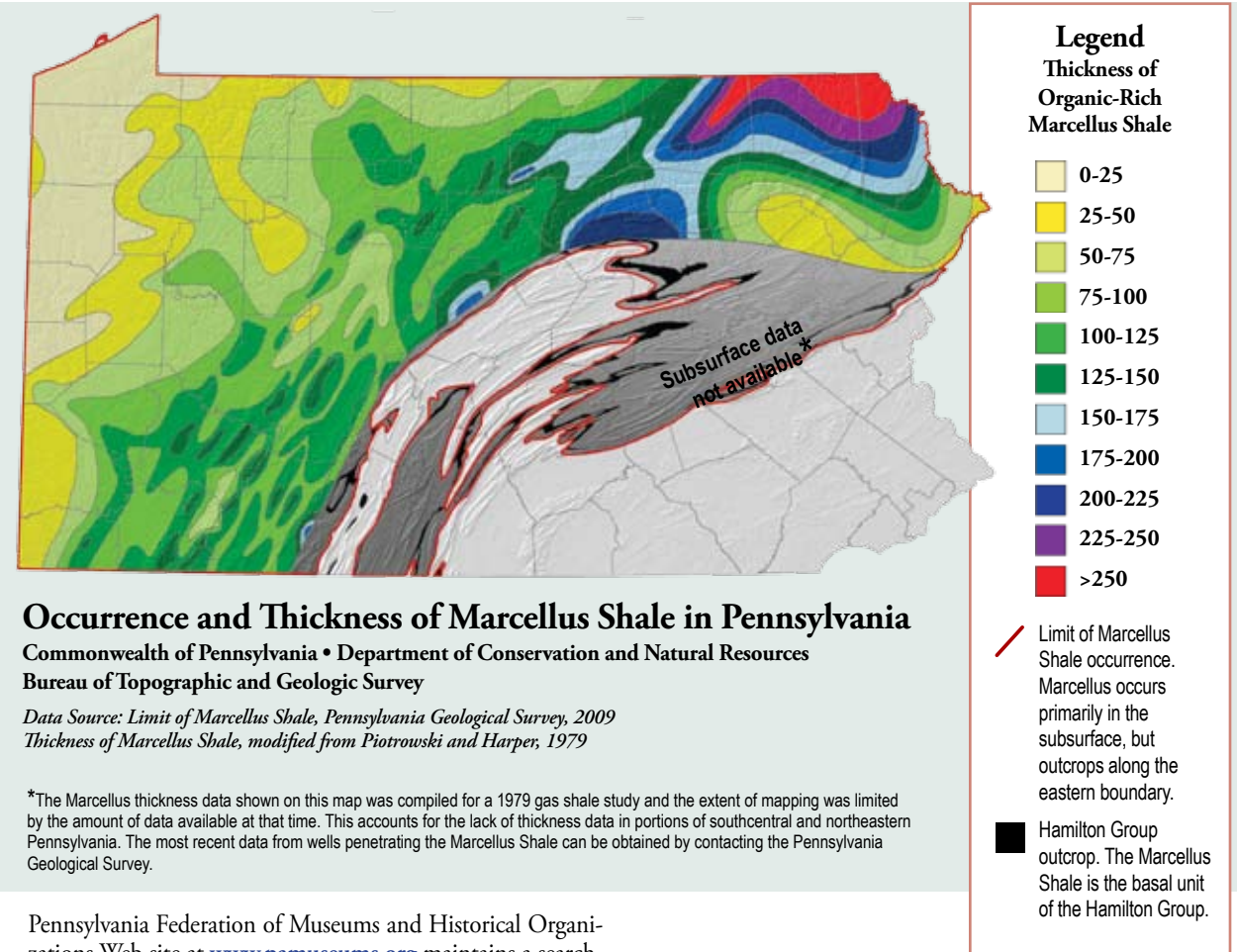
**1. Pennsylvania's Cultural Resources Geographic Information System (CRGIS).** CRGIS provides locational and historical information to the public on thousands of recorded known historic and archaeological resources in the Commonwealth. It can be accessed at [www.phmc.state.pa.us](http://www.phmc.state.pa.us) by clicking on Preservation Services, then on CRGIS.

Professional planners can apply for special access that allows them to determine whether any known sites are located within a specific area. These files represent resources that have been recorded by PHMC. It is important to remember that many parts of Pennsylvania have not been surveyed for historic resources and absence of data does not necessarily imply absence of resources.

Developers can contact PHMC's Bureau for Historic Preservation at (717) 783-8946, to be directed on how to access information on resources or for questions and concerns.

**2. The appropriate county historical society and/or county planning office** have maps and inventories of known cemeteries and archeological and historic resources that may be affected by gas well development. A listing of county historical societies and planning offices is available on the Internet.

County historical societies are listed in local and regional phone books and have Web sites. Moreover, the



Pennsylvania Federation of Museums and Historical Organizations Web site at [www.pamuseums.org](http://www.pamuseums.org) maintains a searchable listing of its member organizations.

Even if there are no known sites in the project area, historic maps can indicate the past location of farms, churches and cemeteries, railroads, mining facilities, and lumber and grist mills. Taking some time to review these maps can help developers know where they can expect to find sites that are likely to have ruins or archaeological features.

**3. County planning commissions and departments exist in all 67 Pennsylvania counties.** Contact information for each county is available online at [www.newpa.com](http://www.newpa.com).

Some county planning offices offer information, maps, and inventories of known historic and archaeological resources. County planning agencies also encourage growth and protect resources in accordance with the PA Municipalities Planning Code, Act of 1968, P.L. 805, No. 247, as reenacted and amended. This act specifies that a plan be prepared "for the protection of natural and historic resources to the extent

not preempted by federal or state law." It is this statement that enables planners to seek consensus with gas well developers for implementing "Best Practices for Preserving Archaeological and Historic Resources."

The December 1984 Oil and Gas Act states that planning and zoning cannot regulate the placement of gas wells; however, with the help of land owners, various public agencies and the gas drilling companies, mutual agreement can be reached to avoid archaeological and historic resources.

An additional resource on known historic sites is the Lumber Heritage Region's Management Action Plan. Volume 2, Appendix C of this plan includes a list of historic logging camps, mills, tanneries, and Civilian Conservation Corps (CCC) camps in the Lumber Heritage Region, which covers all or part of fifteen counties in northcentral Pennsylvania. This region is one of twelve designated state