



**ROVER PIPELINE**

An ENERGY TRANSFER Company

***ROVER PIPELINE LLC***

***Rover Pipeline Project***

***Unanticipated Discoveries Plan for  
Paleontological Resources***

***February 2015***

## **1.0 INTRODUCTION**

The Rover Pipeline Project is a new natural gas pipeline system that will consist of Supply Laterals and Mainlines, compressor stations, and associated meter stations and other aboveground facilities that will be located in parts of West Virginia, Pennsylvania, Ohio, and Michigan.

The Supply Laterals are located within the Appalachian Plateau Province in West Virginia, Pennsylvania and Eastern Ohio, as well as the un-glaciated Kanawha section and a short portion of the Glaciated Allegheny Plateau section. This area is a dissected plateau that has been severely eroded by creeks and rivers with well-developed steep relief.

Mainlines A and B transition out of the steeper terrain to moderate relief and then into lower topographic elevations and flatter relief of the Central Lowlands Province in north-central Ohio, and across the Ohio Till Plains section. This low-relief topographic surface was formed by deposits of glacial till, outwash plains, and glacial-lake plains. The glacial deposits that compose the ridges and plains have completely buried the pre-glacial topographic features of most of this area. The Market Segment continues under similar conditions into the Huron-Erie Lake Plains section in Michigan to the U.S.-Canadian border.

This unanticipated discovery plan provides procedures in the event paleontological resources are discovered during construction. This plan will be followed during construction on state lands, or on federal lands if they occur.

### **1.1 PALEONTOLOGICAL SETTING**

The Project is within an area of former large, shallow, tropical seas and peri-coastal environments that occurred during the Pennsylvanian to Permian age. Marine invertebrates flourished during this era and, after dying and falling to the bottoms of these seas, some organisms became fossilized in the sedimentary rock that later formed. Other fossils were also deposited by streams. Terrestrial and plant vertebrate fossils are also found in the Project area in widespread but scattered locations. Additionally, more recent Pleistocene vertebrate remains may be encountered in Project areas covered by glacial drift.

West Virginia does not regulate paleontological findings, and overall, it is unlikely that the segments of the Supply Lateral pipelines in West Virginia would cause a material impact to known or potential paleontological findings. The Pennsylvanian to Permian age cycles of marine to non-marine deposits of shale, siltstone and sandstone contain invertebrate fossils with occasional disseminated terrestrial plant fossils and some fragmented rare vertebrate remains (fish and amphibians). The Monongahela and Dunkard groups contain invertebrate fossils, some of which may be rare. None of these fossils are deemed significant.

The units encountered along the Burgettstown Lateral in Pennsylvania contain identifiable fossils. Most fossils are of non-unique invertebrate or plant fossils. Chances of discovering a unique set of fossils based on species, abundance, preservation method or locality is remote, but possible.

Non-glaciated areas of eastern Ohio contain Pennsylvanian to Permian units, some of which contain many marine to freshwater fossils. The Linton site in Jefferson County contains some of the oldest reptile remains known on the planet, as well as shark teeth, amphibian and fish remains. The Burgettstown Lateral does not go through the Linton site in Jefferson County.

Within the glaciatic regions of Ohio, important fossil discoveries are unlikely, but mammoth and mastodon remains may be encountered. Ohio does not have regulations regarding fossil protection unless encountered on federal or state land, although the Orton Geological Museum has requested to be contacted if any significant findings are uncovered.

The Michigan Geological Survey does not officially track fossils. The most likely fossils to be uncovered are those of mammals from the Pleistocene that may be uncovered in the surficial glacial drift, such as mammoths and mastodons.

## **2.0 PRECONSTRUCTION PLANNING**

Rover will provide training to all Environmental Inspectors regarding the presences of fossil resources and the procedures to be followed when an unanticipated paleontological resource is discovered during construction activities.

## **3.0 UNANTICIPATED DISCOVERIES OF PALEONTOLOGICAL RESOURCES**

If any unanticipated paleontological resources are discovered, they will most likely be isolated bones, teeth, or jaws, which would not cause delays in construction activities. There is a slight chance that substantial and scientifically significant articulated remains of vertebrate fossils of marine reptiles may be encountered in excavations in areas underlain by fossil bearing formations. If that occurs the following people will be contacted, based on State location.

- **West Virginia:** Mitch Blake with West Virginia Geological and Economic Survey: (304) 594-2331 [blake@geosrv.wvnet.edu](mailto:blake@geosrv.wvnet.edu).
- **Pennsylvania:** William Kochanov (as initial contact) with Pennsylvania Department of Natural Resources: (717) 702-2033 [wkochanov@pa.gov](mailto:wkochanov@pa.gov).
- **Ohio:** Dale Gnidovec, Curator at Orton Geological Museum, Ohio State University o: (614) 292-6896 [gnidovec.1@osu.edu](mailto:gnidovec.1@osu.edu). Dr. Bill Ausich also at OSU (614) 292-3353 [ausich.1@osu.edu](mailto:ausich.1@osu.edu).
- **Michigan:** Dr. William Harrison (269) 387-8691, [william.harrison\\_iii@wmich.edu](mailto:william.harrison_iii@wmich.edu). Dr. Peter Voice (269) 387-5446 or (269) 387-8617, [peter.voice@wmich.edu](mailto:peter.voice@wmich.edu).