

## **Biodiversity and Energy Online Mapping**

### **About the layers**

Layer: Marcellus Shale Depth to Base

Date of this document: 21 November 2013

Layer developed by: New York Natural Heritage Program, adapted from the Penn State Marcellus Center for Outreach and Research

#### **Short Description:**

This layer depicts the distance from ground surface to the bottom of the Marcellus Shale layer, in groups of 1000 foot intervals.

#### **Why this layer matters:**

Both shale depth and shale thickness influence the amount and quality of extractable natural gas in the Marcellus formation.

**Source:** These data were extracted from the publicly available maps provided by the Penn State Marcellus Center for Outreach and Research (<http://www.marcellus.psu.edu/resources/maps.php>). The northern boundary, where the shale bed is exposed at ground level, was modified based on the New York State Bedrock Geology map, available here (<http://www.nysm.nysed.gov/gis/>).

This layer is only a very rough representation of the depth of the shale layer and should only be interpreted at very coarse scales.

#### **Processing Overview:**

1. The map provided by the Marcellus Center (see Figure 2, below) was georeferenced in ArcGIS using many reference points scattered throughout the state.
2. Each boundary was hand-digitized at about 1:400,000 scale.
3. Boundaries at the north end were modified so that they fall within the Marcellus Formation as defined by the NYS Geology Map (Material = Dh<sub>m</sub>, Dh<sub>mr</sub>).

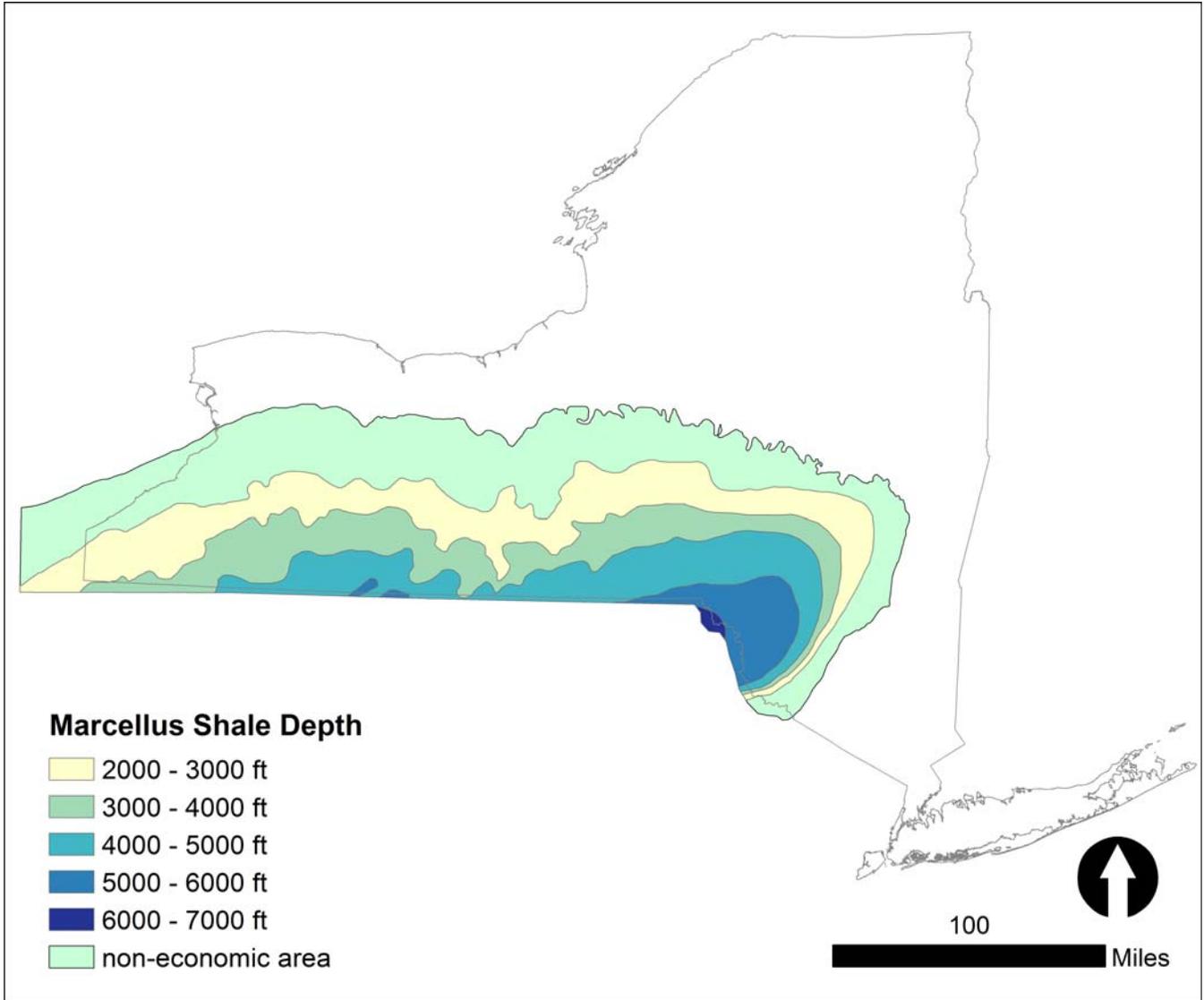


Figure 1.

This project was conducted by The Nature Conservancy of New York in close collaboration with The New York Natural Heritage Program, a program of the State University of New York School of Environmental Science and Forestry. This project is made possible with funding from the New York State Energy Research and Development Authority.

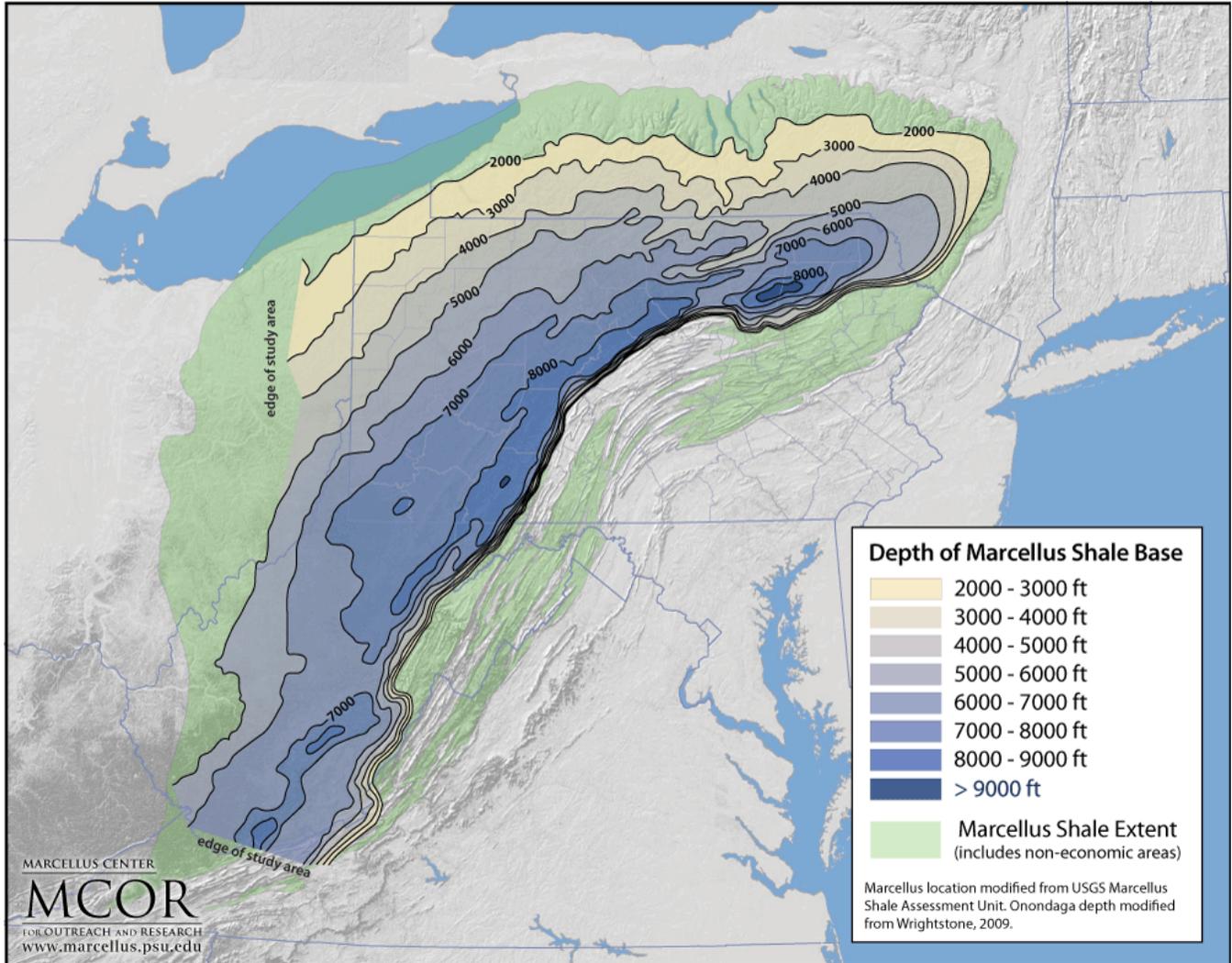


Figure 2.

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