

OKLAHOMA ROCKS!

Lesson 1: Truth Behind the Legends

The Ouachita Mountains are one of the more remote parts of Oklahoma and remain somewhat “mysterious” and unknown. Stories abound not just about the human history of the Ouachitas (e.g., buried treasure, ancient astronomical monoliths, etc.) but about the geology and geological history. Here are the facts behind some of the geological “legends” surrounding the Ouachita Mountains of Oklahoma.



The Ouachitas were once a mountain range rivaling the present-day Rockies.

Fact: Throughout most of their history, the deformed rocks that make up the Ouachitas were below sea level—a “submarine” mountain range. It was only about 300 million years ago that the mountain range emerged.

The Ouachitas are one of North America’s oldest mountain ranges.

Fact: The Ouachitas are old but not nearly as old as parts of the Appalachians.

The Ouachitas were once covered by glaciers.

Fact: There are, in fact, “rock glaciers” (a mass of boulders with a distinct lobate shape that is or was once cored by ice) in higher parts of the Oklahoma and Arkansas Ouachitas; however, these are probably the result of the permafrost (i.e., very cold) conditions that existed in the highest places in Oklahoma’s mountains.

Oklahoma has been thoroughly explored for oil and gas.

Fact: The Ouachitas remain largely unexplored for a variety of reasons: 1. Rugged topography and difficult access; 2. Any discoveries are likely to be deep and therefore expensive to find and produce; 3. Complex geology; and 4. Lack of infrastructure such as service roads and pipelines, should anyone discover something.

Question:

Parts of the Ouachita Mountains are remote and many local residents and visitors value the natural beauty of the area and relative isolation. Discuss the changes that would occur in peoples’ lifestyles if a major natural gas discovery were made in the area. Would the advantages of development outweigh the disadvantages?

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