

Rocks and minerals in indiana

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Rocks and Minerals in Indiana

Introduction

Rocks comprise of mineral grains that are usually mixed with other components presenting dissimilar properties. Conversely, minerals are considered natural chemical compounds and the properties that certain minerals possess arise from atomic arrangements and element components. Indiana is considered wealthy due to abundant mineral repositories and rocks. Rocks and minerals present within the state are regarded as the basis for the wealthy state of the populace. Indiana has different minerals and rocks, with the commonest rocks being igneous, Paleozoic and metamorphic rocks. Additionally, minerals occur in abundance within this state. Estimates are that Indiana has approximately 100 different minerals, although other minerals exist in scarcity. This implies the state has more than 100 minerals considering the scarce mineral deposits that are present within the region. Despite the huge deposits of minerals across Indiana, only some minerals occur in large quantities. The most plentiful of the minerals in Indiana include calcite, clay minerals and quartz (Smith, Brookley and McGregor 12). The largest percentages of the minerals that are present in Indiana are widely dispersed while others are totally covered within the earth crust. Therefore, this makes economical utilization of these minerals impossible, especially in large-scale mining. Additionally, the process of mining and searching for these minerals can be uneconomical since the minerals occur sparingly. Calcite occurs in Indiana as one of the most abundant mineral. It is usually present in different rock layers. The mineral is considered the largest carbon depository and takes up the form of limestone coupled with marble.

Limestone is generated either through chemical precipitation of CaCO_3 or changes that transpire on various constituents in the period that diagenesis occurs. Conversely, marble is generated in the instance that limestone gets exposed to towering temperature and pressure. Nearly all the calcite that is present in Indiana is colorless or possesses yellow and brown shades. Calcite has hexagonal shaped crystals in case they are visible to the eye. The calcite present in Indiana has crystals that bear other minerals such as pyrite although this phenomenon rarely occurs. Outstanding specimens of calcite and other related mineral deposits are present in Indiana, with some possessing large crystals (IGS1).

Large crystals

http://igs.indiana.edu/ReferenceDocs/Calcite_card.pdf

The properties that calcite possesses makes the mineral exceptional during identification thus making it easier to recognize the mineral. Calcite possesses weak planes that enable crystals to break along these planes (IGS 1). Calcite occurs in various areas around Indiana. Some of these places include Southern Indiana, Bedford and other regions that have limestone deposits.

Cleavage fragment

http://igs.indiana.edu/ReferenceDocs/Calcite_card.pdf

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The limestone that emanates from Indiana region is considered freestone, implying that the limestone does not possess any regions that can cause

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splitting (Hill 1). Therefore, this implies that the limestone can be shaped into any form without cracking at the planes. Hence, the limestone from Indiana can be fashioned into any shaped or size in order to match the provided specifications. The limestone is often found in different colors and patterns, which can be either buff and gray ((IGS 1)).

The calcite from Indiana State formed throughout the Paleozoic Era in the geological period although the formation occurred for an extended period (Smith, Brookley and McGregor 13). The period through which formation of calcite transpired allowed the mineral to grow to the current state and abundance. Different levels of calcite formation occurred as rock formation progressed from the deepest layer to the top-most layer. The calcite that occurs in Indiana deposits is utilized for different purposes within and outside the state. The commonest use is construction although other uses such as acid neutralization are exhibited.

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