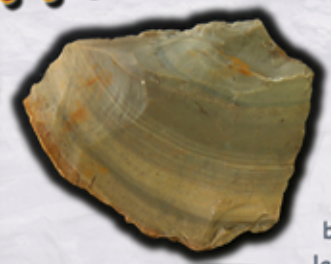
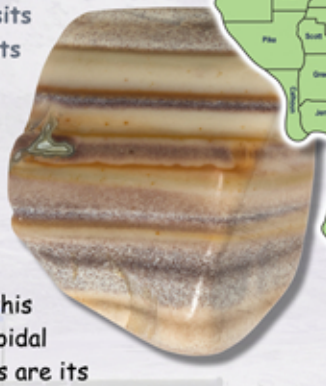
ILLINOIS' mining... Chert and Flint

Since the beginning of humans, stone natural resources have been used as tools to advance and support their culture.



Chert, is a cryptocrystalline (microscopic) variety of quartz.These rocks are also known as flint, jasper, agate, and chalcedony. These are based mostly on the color from impurities. Colors can range from white, gray, black, yellow, brown and pink. Chert is commonly found in layers or nodules in limestone deposits. Flint is a variety of chert but forms in chalk limestone deposits and is dark gray in color. Thick deposits of chert are found in Union and Alexander Counties.



One of the significant properties of this mineral is that it breaks with a conchoidal (glass like) fracture. Other properties are its strength and ability to cause a spark when struck against steel.

The historical value of chert has changed significantly over time. The crafting of chert into tools as far back as 10,000 years ago has been documented in Illinois. The chert was fashioned by a process called knapping into utilitarian, weaponry, and ceremonial items such as knives, hoes, arrow points, and maces.

Location Archaeologists have documented one notable area in Union County in southern Illinois where significant quarrying and its associated knapping trade industry occurred between 500 and 1000 A.D. These materials were traded with other Native American groups and have been found as far as Alabama, Louisiana, Missouri, Michigan, Wisconsin, and Oklahoma. There are many other areas throughout the state where chert weathered out of the bedrock, was gathered from streambeds and processed at nearby ridgetops.

Today limestone deposits are used as aggregates in the making of concrete and asphalt for roads and other structures. Chert is considered to be a liability as it absorbs water which interferes with asphalt binding and causes undesirable chemical reactions in concrete. In both instances, too much chert will cause surficial defects in road surfaces.

Illinois Department of Natural Resources

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