Ammolites: Fossil Jewelry

A student project for G0324
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Contents

- Gemological Properties of Ammolite
- Ammonite Fossils
- Mining ammolite
- Ammolite as Jewelry
Gemological Properties of Ammolite

- Mineral Type: Aragonite
- Chemical Composition: Calcium Carbonate with 3 to 4% trace minerals
  - Refractive Index: 1.52 to 1.67
  - Specific Gravity: 2.8 to 3.05
    - Hardness: 4 to 4.5
- Crystal Structure: Orthorhombic.
  - Cleavage: Pinacoidal.
- Luster: Vitreous to Resinous
Ammolite is a rare opal-like organic gemstone found primarily along the eastern slopes of the Rocky Mountains in Canada. It is made of the fossilized shells of ammonites, which are composed primarily of aragonite.
Fossil Mother of Pearl

http://www.ammolitemine.com/ammolite.htm
Ammonites

• Ammonite fossils are extinct marine mollusks, which died out in the Late Cretaceous Period, 65 million years ago.

• Ammonites shared this environment with sharks, turtles, plesiosaurs and mosasaurs, as well as lobsters, oysters and clams.
Ammolite Mines

For more information about ammolite mines, visit these websites.

- http://www.ammolitemine.com/
- http://ammonite-factory.com/ammolite-history/ammolite-mining/
Ammonites are extracted from the Bearpaw Shale Formation.

First the glacial overburden is removed, exposing the iron rich Bearpaw Formation. Then another twenty feet of shale is excavated to get through the oxidized ground & into the ammonite bearing layers.
Ammonites are extracted from the Bearpaw Shale Formation.

Highly specialized Ammolite mining analysts are trained to “spot” the Ammolite gem layer. Once located, the Ammolite gems are carefully uncovered and removed by mining personnel using hand held tools.
This video shows how Ammolites are found in open pit mines and are extracted individually by miners and backhoes.
Ammolite as Jewelry

Natural stones - A layer of gem ammolite is naturally bonded to matrix rock or more rarely, it is a solid two sided piece of gem. These are cut en cabochon with standard or freeform shapes. It is sold by carat weight.

http://www.ammolitemine.com/ammolite.htm
Ammolite as Jewelry

However, ammolite is fragile and common are...

- **Ammolite Doublets** - A polished layer of ammolite bonded to a hard shale back. Cut in standard or freeform shapes; sold by weight or size.

- **Ammolite Triplets** - gem layer sandwiched between a protective backing and a hard spinel top. These stones are strongly recommended for applications that involve day to day wear, particularly ring settings. Calibrated and sold by size.
References


Photos

- http://www.ammolitemine.com/
- http://www.korite.com/
- http://ammonite-factory.com/ammolite-history/ammolite-mining/