E. M. Barron Exhibit of Minerals and Gem Collections

Join us for a virtual tour of these rare and beautiful specimens
Colonel E. M. Barron (1903-1969) of El Paso, Texas, one-time State legislator and military man, turned his attention to minerals in later life, founding the Southern Gem Mining Company in the late 1940s.

Opportunities to acquire rare and beautiful minerals were abundant. Mexico was close by and over the years Barron built a remarkable personal collection of rare specimens from Mexico.

Barron bequeathed most of his collection to The University of Texas at Austin.
Barron’s interests focused early on Mexico but expanded to classic localities around the world. Each red dot represents a locality from which one, or more, of his minerals were extracted.
Minerals are naturally occurring, inorganic solids with definite chemical compositions and definite atomic structures (they are crystalline).

Halite (salt)

Chemical composition is the basis for grouping the exhibited minerals. Each display case is arranged by chemical class; carbonates, silicates etc.
Exhibit Display Cases

- 1. Introductory panel
- 2. Silicates
- 3. Native elements
- 4. Amethyst geode
- 5. Carbonates and phosphates [includes arsenates, vanadates and phosphates]
- 6. Tungsten and molybdates [focus- wulfenite]
- 7, 8. Gems
  - 7. Gems and gemstones
  - 8. Cut and color
- 9. Topaz
- 10. Agates

Numbers are located on the exhibit map (next slide)
Exhibit Map

More information about the specimens
More about individual specimens
Click on the case to see the topic
Now plan your visit to the Museum

# 10 Agates display case is located on the first floor
Silicates

- **Tourmaline**
Silicates

- Amazonite
Silicates

- Benitoite and neptunite
- Benitoite gemstones
Colorful Silicates

- Tanzanite
- Kunzite
- Citrine
- Gems of the collection
Silicates

- Quartz variety amethyst
Native Elements

- Gold nugget
- Gold filigree
Native Elements

• Silver
Native Elements

- Copper in calcite
Carbonates and Phosphates

• *First the carbonates*

• *This example is cerussite, lead carbonate*
Carbonates

- Aragonite
- Calcite
- Calcium carbonate in many forms
Colorful Carbonates

- Azurite
Colorful Carbonates

- Malachite
Colorful Carbonates

- Rhodochrosite
And now the phosphates

Metatorbernite
Phosphates

- Brazilianite
- Turquoise
- Lazulite
Arsenates

- Legrandite
- Scorodite
- Erythrite
Vanadates

- Descloisite
- Endlichite
- Vanadinite
Tungstates and Molybdates

- **Wulfenite**, a molybdate, with mimetite
Wulfenite

- Wulfenite with quartz
Wulfenite
Gems and Gemstones

The Gemological Institute of America (GIA) defines a gem as:

“A natural specimen of mineral or organic material used for personal adornment that possesses beauty, rarity and durability”.

A gemstone is a cut and polished gem.

The next slides detail some properties of gems and gemstone
Mohs hardness measures resistance to scratching

Diamond is the hardest
Cut, Color and Clarity

- Emerald

- Goshenite

- Aquamarine

- Golden beryl

This uncut beryl is known as ‘rough’

Beryl is found in several colors
Inclusions

- This quartz contains inclusions of another mineral, rutile
- Inclusions can increase the beauty of a gemstone
- Or they may lower the value of a gemstone
Topaz and Texas

Topaz is the state gem

The Lone Star cut is the official state cut

Blue Texas topaz is rare.
Most Texas topaz is white
Banded Iron

- A combination of minerals: a ROCK
Minerals and Gems

Visit the Museum and enjoy the beauty of these fascinating minerals. Notice their place in your everyday life.

To learn more about minerals, please visit:

http://www.utexas.edu/tmm/npl/mineralogy/

View more specimens from the Barron, and other fine collections, in the hall displays of The Jackson School of Geosciences.
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