**The Value of Ore Deposits**

**Industrial Minerals**

We know that ore minerals are minerals that are mined for their economic value, which is often the result of the metal they contain.

**Industrial Minerals** are minerals that are mined for their value and  
  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Examples: Talc is used in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Gypsum is used in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Graphite is used in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Considerations Before Mining**

Before extracting an ore or industrial mineral from a region, mining companies must consider:

* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the deposit.
* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the deposit.
* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the resource (e.g. gold vs. copper).

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of extraction.  
   
 Examples: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Techniques for Locating Resources**

Geologists use a variety of methods for locating areas that would be worthwhile to mine, such as…

Gravity Readings – Use devices that measure the strength of the Earth’s gravity in certain areas. High gravity readings suggest the   
  
presence of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ minerals like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Magnetic Readings – Use very sensitive compass-like devices to point   
  
to magnetic ore bodies like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Techniques for Locating Resources**

**Darn Good Field Work** – By examining what’s on the surface, a good geologist can infer what’s underground.  
 Examples: Surface Underground  
  
  
  
  
  
**Core Sampling** – After all the above methods are done, “core” samples are extracted using a diamond-tipped, hollow drill. Doing this   
  
in different locations and matching them up (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) gives geologists a really good idea of what’s below and where.