

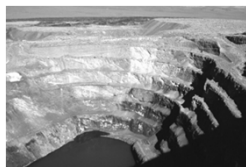
Geology & Nonrenewable Mineral Resources

Chapter 15 Miller

Land Use: How are Resources Extracted

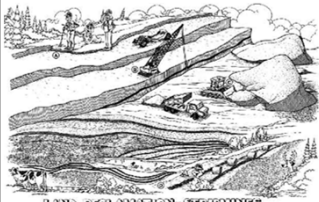
- Geologists research and identify potential sites

Mining 3 forms



1.

2.



LAND RECLAMATION-STRIPMINES



Mountaintop Removal

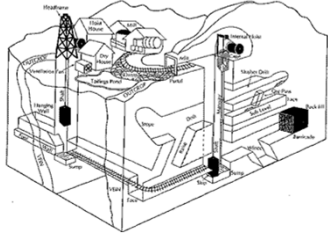
- ✦ The practice of blasting off the tops of mountains so machines called draglines can mine coal deposits.
- ✦ Mountaintops are dumped into nearby valleys and streams to create "valley fills," converting mountain landscapes covered in hardwood forests into fields of sparse grass.
- ✦ West Virginia, Kentucky and Virginia.
- ✦ Over 1,000 miles of streams have been buried by strip mine waste in Appalachia
- ✦ 75% of West Virginia's streams and rivers are polluted by mining and other industries.



Policy Issues with Mountaintop removal

- ➔ In 2002 the Bush administration rewrote the "Clean Water Act" so that it explicitly allowed mining companies to dump overburden into streams
- ➔ "Surface Mining Act" banned mining with 100 feet of a stream, this has been "clarified" by the administration to allow mining to occur at the stream level
- ➔ Between 1985 and 2001 700 miles of streams and 400,000 acres of watershed have been affected

3. Subsurface Mining very dangerous & expensive



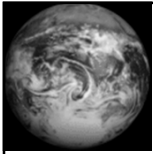
12 Miners died in mine explosion
In West Virginia January 2006



1872 Mining Law

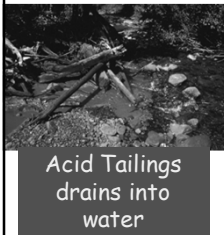
- Allows any mining company to take valuable minerals including gold, silver, and uranium from public lands without royalty payment to the taxpayer -- *unlike other mining industries that extract coal, oil or natural gas.*
- Gives away public minerals, offers public land for sale at \$5 an acre -- 1872 prices
- Applies to over 270 million acres of federal land, almost 1/4 of all the land in the U.S., or 2/3 of the federal government land
- Companies are not required to clean up their mining waste
- The U.S. Department of Interior estimates that there are 550,000 abandoned mines with a cost of \$70 billion to clean them up.

Since 1900 the per capita use of nonrenewable mineral resources in the U.S. has increased dramatically



Recycling aluminum cans produces

Environmental problems



Acid Tailings drains into water



Aerial photo showing pile of radioactive waste from abandoned uranium mill on banks of Colorado River
Moab, Utah
LA Times 2005



Cyanide heap Leaching



DANGER
CYANIDE
