U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OPEN-FILE REPORT 01-360

Mineral Resources

Out of the ground...into our daily lives

soda ash
windows
glassware
fiberglass
detergents

cobalt
paints
magnets
engines
tools

tungsten
lights blubs
light fixtures
stained glass
paints

iron
faucets
tools
magnets

silica
abrasive and blasting sand
ceramics
plastics
glass

aluminum
refrigerators
automobiles
cans

gypsum
concrete
wallboard

coal tar
shampoos
asphalt

sand & gravel
concrete products
fill material
bricks
asphalt

fluorite
toothpaste
paint pigments

vermiculite
fire-protection boards
wallboard
fertilizers
ceramics

feldspar
plates
glassware
paper

sulfur
paints
fertilizers
rubber products

silver
photographic materials
mirrors
wiring
jewelry

zeolites
soil additives
water softeners
cat litter

gold
stereo components
jewelry
telephones
electronic components

titanium
white paints
toothpaste
enamel finishes

beryllium
stereos
fluorescent lights

petroleum products
plastics
automotive parts
natural gas
gasoline for cars

micas
lipstick
bricks
insulation for electrical motors
paints

halite
salts
ceramics
de-icing agents

boron
glass
insulation
soaps and detergents

chromium
toasters
car bumpers
stainless steel

calcium carbonate
wallboard
concrete products
toothpaste
glass
paper and paints

zinc
washing machines
galvanized steel
cameras
coins

coal
steel production
electricity
synthetic fabrics

graphite
pencils
refractory bricks
lubricants
fuel cells/batteries

molybdenum
lamps and fixtures
alloy wheels

copper
stoves
wiring
brass fixtures
plumbing
coins

lithium
ceramics
lubricants
batteries

clays
porcelain
sinks
bricks
paper

lead
electronic components
television screens
batteries

barium
spark plugs
rubber products
glass and plastics

nickel
clocks
stainless steel
copper-nickel alloys

MINERAL COMMODITIES

PRECIOUS METALS AND ELEMENTS
- gold
- platinum-group elements
- silver

NONFERROUS METALS

LIGHT METALS
- aluminum
- beryllium
- magnesium
- titanium

BASE METALS
- copper
- lead
- zinc

IRON AND FERROALLOYS
- chromium
- cobalt
- ferroalloy metals
- iron
- manganese
- molybdenum
- nickel
- tungsten

FERTILIZER AND CHEMICAL INDUSTRIAL MATERIALS
- limestone, dolomite, and lime
- lithium
- nitrogen compounds and nitrate
- phosphate
- potash
- salts
- sulfur

CONSTRUCTION AND MANUFACTURING MATERIALS

CONSTRUCTION MATERIALS
- concrete products
- crushed stone
- sand and gravel

DIMENSION STONE
- granite
- limestone
- marble
- sandstone
- slate

FILLERS, EXTENDERS, PIGMENTS, AND FILTERS
- asbestos
- barium
- calcium carbonate
- clays
- fluorite
- gypsum
- micas
- talc
- vermiculite
- zeolites

ABRASIVE AND REFRACTORY MATERIALS
- clays
- graphite
- silica sand

RAW MATERIALS FOR MAKING GLASS
- boron
- feldspar
- lithium
- silica
- soda ash

ENERGY RESOURCES (FOSSIL FUELS)
- coal
- coal tar
- natural gas
- oil shale
- petroleum and its products
- tar sand

Categories adapted from Kesler[1]

DEFINITIONS:

AGGREGATE — A rock or mineral material used separately and as a filler in cement, asphalt, plaster, and other materials.[1] **ALLOY** — A substance having metallic properties and composed of two or more chemical elements, of which at least one is a metal.[2] **ELEMENT** — A substance whose atoms have the same atomic number.[2] **FERROALLOY** — Any alloy made with iron.[1] **METAL** — A class of chemical elements, such as iron, gold, and aluminum, that have characteristic luster, are good conductors of heat and electricity, and are opaque, fusible, and generally malleable and ductile.[2] **MINERAL** — A naturally occurring, inorganic, crystalline solid with a regular chemical composition.[1] **ORE** — The naturally occurring material from which a mineral or minerals of economic value can be extracted. The term is generally but not always used to refer to materials containing metals and is often modified by the names of the valuable constituent; for example, iron ore.[2] **ROCK** — A naturally formed material composed of mineral(s); any hard consolidated material derived from the Earth.[2]

[1] Kesler, S.E., 1994, Mineral resources, economics, and the environment: New York, Macmillian College Publishing Company, Inc., 391 p.
[2] Hudson, T.L., Fox, F.D., and Plumlee, G.S., 1999, Metal mining and the environment: Alexandria, Virginia, American Geological Institute, AGI Environmental Awareness Series 3, 64 p.

By
Dave Frank, Judy Weathers, and John Galloway
Mineral Resource Team, Western Region
2001

Approved for publication October 2, 2001
Available on the World Wide Web at http://geopubs.wr.usgs.gov