

# IGNEOUS LANDSCAPES

NAME \_\_\_\_\_

Igneous rocks may be either  or .  rocks are formed by magma cooling before reaching the surface of the earth. The larger the body of magma and the deeper it cools then the  it will cool, resulting in  crystals - eg: .

**Batholiths** are   which cool at great depth (up to  KM or more (eg , and ). They tend to form  ground since the  is a  rock, though relative relief depends on the  scale on which processes have operated. Around the batholith, a zone of rock is altered () by the  and  of the intruded molten magma. This zone is called the   where some valuable minerals localising in veins (eg:  & ) and usually becomes more  than before due to the alteration.

**Planar** ( like) intrusions may be either along a bedding plane () called  or across bedding planes () called . Both follow  of weakness, though  tend to be thicker and longer since   are more continuous lines of weakness than . They are also usually more resistant than surrounding rock (not always) and therefore tend to form  when denudation occurs, and not . Because of their smaller size, they tend to have  than batholiths. When they meet the surface at an angle, they will tend to form a  (eg: the  , when they are more resistant than other rock and enough  has lapsed for  to occur. Because  tend to be longer and thicker than , they therefore tend to be more  crystalline and more .

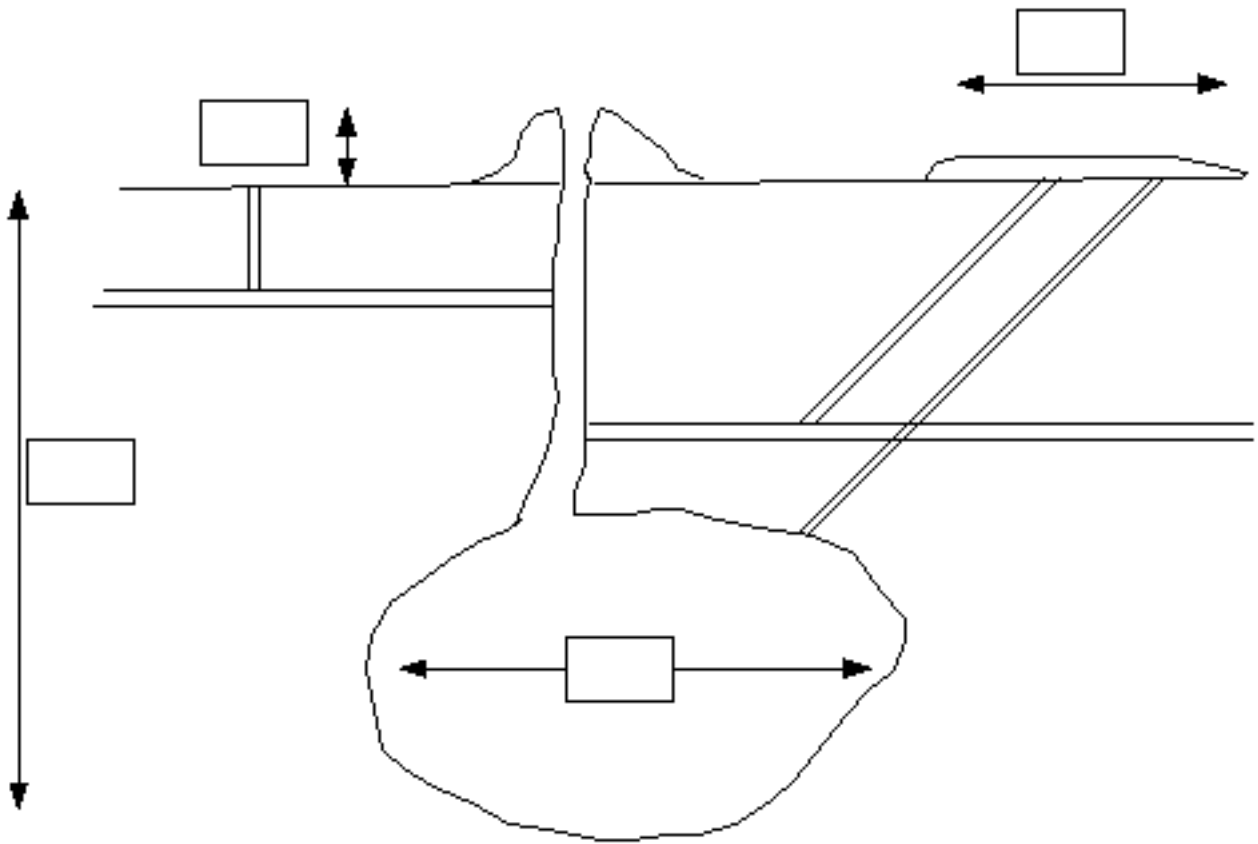
will appear on a geological map as a linear feature and may be from  m to  m thick.

tend to have a more extensive surface outcrop, and may be much thicker (the   is up to  m thick.. Batholiths will appear as very  areas.

**RESULTING SURFACE TOPOGRAPHY** depends on:-

OF

# Igneous Landscapes



Label the diagram using the following words

BATHOLITH

DYKE

DYKE

SILL

EXTRUSIONS

DYKE

SILL

SILL

COMPOSITE CONE  
VOLCANO

MOST  
RECENT  
DYKE

VENT

LAVA FLOW or  
BASALT PLATEAU