

GLOSSARY

MINERAL – a naturally occurring inorganic element or compound having an orderly internal structure and characteristic chemical composition, crystal form, and physical properties (hardness, luster, streak, etc.). Examples of minerals include quartz, calcite, gypsum, biotite and galena.

ROCK – an aggregate of one or more minerals

IGNEOUS ROCK – a rock that solidified from molten or partly molten material, i.e. from magma. The term igneous comes from the Latin *ignis*, meaning fire. Igneous rocks are either *plutonic*, having formed deep in the earth by crystallization of magma, or *volcanic*, formed at the surface or near surface by volcanic activity. Examples of plutonic rocks include granite and gabbro; examples of volcanic rocks include basalt and rhyolite.

SEDIMENTARY ROCK – a layered rock resulting from the consolidation of sediment. Examples of sedimentary rocks include sandstone, limestone and conglomerate.

METAMORPHIC ROCK – A rock that is formed from a pre-existing rock by mineralogical, chemical, and/or structural changes in response to changes in temperature, pressure, stress, and/or chemical environment, generally at depth in the earth's crust. Examples include schist, slate, marble.

Some terms used to describe minerals:

Cleavage – the tendency of minerals to break preferentially in certain directions, corresponding to its crystal structure.

Hardness – the resistance of a mineral to scratching. Hardness is measured using the Mohs scale, on which ten minerals are arranged in order of hardness, from talc (1) to diamond (10).

Luster – the sheen on a freshly broken mineral surface. Examples of luster include metallic, glassy, earthy, and resinous.

Specific Gravity – the ratio of the weight of a given volume of mineral to the weight of an equal volume of water. Specific gravity is related to density.

Streak – the color of a mineral in its powdered form, usually obtained by rubbing the mineral on a streak plate and observing the mark that it leaves. Streak is most useful for identifying metallic minerals.

Some terms used to describe rocks:

Aphanitic texture – used to describe igneous rocks that are very fine grained with individual minerals too small to be distinguished by the naked eye. Volcanic rocks are often aphanitic.

Felsic – igneous rocks rich in feldspar and quartz, they are generally light colored.

Gneissic – banded texture resulting from the recrystallization of dark and light minerals during metamorphism.

Mafic – igneous rocks composed mainly of ferromagnesian minerals (amphibole, pyroxene, biotite, or olivine), they are dark colored rocks.

Phaneritic texture – used to describe igneous rocks that have individual crystals readily visible to the naked eye. Plutonic rocks are often phaneritic.

Schistosity – metamorphic texture where the coarse grained, platy minerals (e.g., biotite) show preferred orientation in parallel planes.

Ultramafic – igneous rocks that are extremely rich in ferromagnesian minerals and almost depleted in silica. They are very dark colored rocks.

Other useful terms

Alluvial Fan – a fan-shaped deposit of sand and gravel deposited by a stream at the base of a mountain, usually in arid or semi-arid climates.

Batholith – a large pluton that has more than 100km² of exposed surface and no known floor.

Caldera – a large, basin-shaped depression formed by the inward collapse of a volcano after an eruption.

Country Rock – pre-existing rocks into which plutonic rocks intrude.

Desert Varnish – a thin, shiny bluish- black coating composed largely of iron and manganese oxides.

Dike – an igneous intrusion that cuts across the country rock.

Fault – a fracture or fracture zone along which there has been displacement of the sides relative to one another.

Fold – a bend in bedding or other planar features in rocks, usually resulting from deformation.

Foliation – layering, or banding, in some metamorphic rocks caused by the subparallel alignment of platy minerals (e.g., mica).

Lithification – the process of turning sediment into a rock.

Matrix – the fine-grained sediment filling spaces between coarser grains in a sedimentary rock.

Native Element – a mineral consisting of a single chemical element, e.g. Gold, Diamond.

Pluton – an igneous intrusion.

Silicate – a mineral containing silicon and oxygen; they represent the largest of all the mineral groups.

Sill – a tabular intrusion that parallels the layers in the surrounding country rock.

Sorting – the separation of minerals in a sediment load by grain size.

Talus – coarsely broken rock debris from rock falls or landslides.

Vesicles – gas bubbles in igneous rocks.

Viscosity – resistance of a fluid (magma) to flow.

Xenolith – a rock caught in magma as an inclusion.