
Geological glossary

Alluvium — Loose deposits of clay, silt, sand and gravel laid down on floodplains by the action of rivers in the recent past.

Aquifer — Layers or lenses of permeable rock or unconsolidated sediments below or on the Earth's surface capable of storing and yielding water.

Bed — An individual layer of sediment or a stratum of sedimentary rock.

Conglomerate — Dominantly a rock comprised of well-rounded pebbles and sand grains.

Crinoid — Fossilised remains of shelly marine creatures, related to sea urchins, usually attached by a stem composed of discs (ossicles).

Cross-bedding also known as **current-bedding** — A feature of sedimentary rocks formed by the movement of sand grains in currents to produce layering oblique to the margins of the beds.

Deformation — Any natural process that bends, twists or fractures rocks.

Diorite — A medium- to coarse-grained intrusive igneous rock composed principally of the minerals plagioclase feldspar, hornblende, and/or pyroxene.

Dolomitic, dolomitised — Descriptive terms for a limestone that has had some of its calcium carbonate replaced by magnesium carbonate.

Erosional unconformity (see 'unconformity')

Fault, faulting — Fractures in the rocks that formed as a result of movements triggered by earthquakes.

Feldspar — A commonly occurring aluminium silicate mineral of potassium, sodium and calcium.

Floodplain — The flattish floor of a valley composed of alluvium and prone to flooding.

Granodiorite — A coarse-grained intrusive igneous rock similar to granite, but with more plagioclase feldspar than potassium feldspar.

Igneous rock — Rock formed when molten magma cools and solidifies. It includes extrusive rocks erupted from volcanoes (e.g. andesite) and intrusive rocks that cool beneath the Earth's surface (e.g. diorite).

Intrusion — A body of igneous rock formed from molten magma that has been introduced into pre-existing rock.

Laminae, lamination, laminated — The narrowest type of layering in sedimentary rocks, less than 1 cm in thickness.

Larvikite — A coarse grained, intrusive igneous rock named after the town of Larvik in Norway where it is found. Alternations of different feldspar minerals give it a characteristic blue colour. It is used widely as an ornamental facing stone.

Limestone — a rock usually formed in warm shallow seas and composed of the mineral calcite (CaCO₃). Limestones are usually fossiliferous and fossils are sometimes abundant.

Magma — Molten rock from the Earth's interior, which cools and solidifies to form igneous rocks.

Magmatic — Relating to, or derived from, magma.

Marine transgression — A marine transgression occurs when an influx of the sea covers areas of previously exposed land. Transgressions tend to be caused by the land subsiding.

Micaceous — Containing the mineral mica.

Mudstone — A fine-grained sedimentary rock originally composed of clay or mud.

Ooidal — descriptive term for a limestone containing ooids, or spherical to ellipsoidal grains of carbonate that are generally 0.25–2.00 mm in diameter.

Oxygen isotopes — The ratio of two isotopes of oxygen that are present in some substances, such as polar ice or calcite in ocean core samples, is linked to water temperature of ancient oceans, which in turn reflects ancient climates.

Periglacial — A term applied to the climate of the region adjacent to an ice sheet. Such areas are likely to be permanently snow covered with ground frost to some depth (permafrost).

Pyroclastic flow — A rapid avalanching of ash and rock fragments down the flanks of an erupting volcano.

Quartz — The crystalline form of silica (silicon dioxide, SiO₂).

Quartzose — Term applied to sands and sandstones that are essentially composed of quartz.

Refractory — A material that retains its strength at high temperatures, usually above 1000°F (538°C).

Sandstone — A sedimentary rock composed of sand-sized grains (i.e. generally visible to the eye, but less than 2 mm in size). Volcaniclastic sandstone is where all of the grains are of volcanic origin.

Sedimentary rock — A rock that is commonly formed by the binding together (lithification) of sediment particles (e.g. sandstone, siltstone, mudstone).

Siltstone — A sedimentary rock composed of silt-sized grains (i.e. only just visible to the eye).

Subcrop — An area where an older formation and contained structures, such as faults, occurs directly below an unconformity.

Superficial deposits — Material laid down in geologically very recent times as a loose (unconsolidated) mantle across the bedrock.

Trace fossils — Structures in sedimentary rocks that are the result of activity by living organisms. They include burrows, footprints, tracks, trails, evidence of feeding and resting.

Tuff — A collective term for consolidated pyroclastic rocks (i.e. rocks formed directly from volcanic eruptions) with fragments less than 64 mm in mean diameter.

Unconformity — A surface of contact between two rock units, which represents a time gap in the geological record, usually due to a combination of erosion (erosional unconformity), tectonic activity and a cessation of sedimentation.

Volcaniclastic — A general term for rocks composed wholly or in part of volcanic fragments i.e. fragments originating from volcanic eruptions (pyroclastic material) or from the erosion of volcanoes (epiclastic material).