

Exp. 356 sediment and rock descriptions



>50% carbonate
(major modifier [optional])+(principal name [required])+(minor modifier [optional]) (e.g., coral-rich grainstone with foraminifers)

Principal name

Based on Dunham (1962) with texture rank

Dolostone (>75% dolomite)

Limestone (use only with "dolomitic" major modifier and if Dunham lithology unclear)

Carbonate major modifier (prefix)
Optional use when major components can be identified

~10%-75% dolomite (use the prefix "dolomitic" with 1-7 Dunham lithology
If Dunham lithology unclear, use "limestone" (e.g. dolomitic limestone)

>25% ooids = prefix "oolitic"

>25% carbonate optional modifier

Prefix: nonskeletal grain rich (>25% nonbiogenic carbonate)

Prefix: skeletal (>25% biogenic carbonate)

If one component is >25%, use prefix "XXX rich"
Also list in "Fossils"

If not, list all skeletal components in "Fossils"
(can have more than one)

Carbonate minor modifier (suffix)
Optional use for components of interest

~10%-49% siliciclastics (e.g. with clay or silt or sand)
(if >50% use siliciclastic tree)

Named carbonate components up to ~25%. Includes fossil components <25% if noteworthy
(Note: skeletal carbonate and nonskeletal carbonate are siliciclastic minor modifiers only)

Volcaniclastics

Terrestrial plant fragments

- Color
- Bioturbation intensity
- Texture rank
- Structures
(sedimentary and diagenetic)
- Layering or bed thickness
- Lithologic boundaries
- Facies
- Fossils

Fossils

>50% siliciclastic
(major modifier [optional])+(principal name [required])+(minor modifier [optional]) (e.g., clayey sandstone with skeletal carbonate)

Principal name

Based on Wentworth (1922)

Siliciclastic major modifier (prefix)

Siliciclastic grain size modifier based on Shepard (1954)

>75% grain mineralogy (e.g., "quartz-rich sandstone")

Siliciclastic minor modifiers

~10%-49% carbonate (if >50% use carbonate tree)

"with skeletal carbonate", "with nonskeletal carbonate",
"with [a carbonate minor modifier]"

Optional: List any fossil components in "Fossils"

~10%-25% grain mineralogy "with mica" (e.g., silty sandstone with mica)

Volcaniclastics

Terrestrial plant fragments