

LAB 5 – Sandstone and Mudstone Petrography

- Classification:
 - Use Williams et al. (1982) classification –
includes matrix – Fig. 5.6 in Boggs
 - Same QFR axes but...
 - Arenite: < 5% matrix
 - Wacke: 5 – 50 % matrix
 - Mudstone: > 50% matrix
 - Wacke: three types
 - Quartz wacke
 - Lithic wacke
 - Feldspathic wacke

- **Interpretation:**

- Weathering of source rock
- Sed. transport
- Deposition
- Burial (shallow vs. deep)
 - S = oxidation, carbonate cements (calcite)
 - tightening of grain packing (suturing)
 - silica cement (qtz precip. as overgrowths)
 - decrease porosity
 - bend flexible grains (i.e. mica)