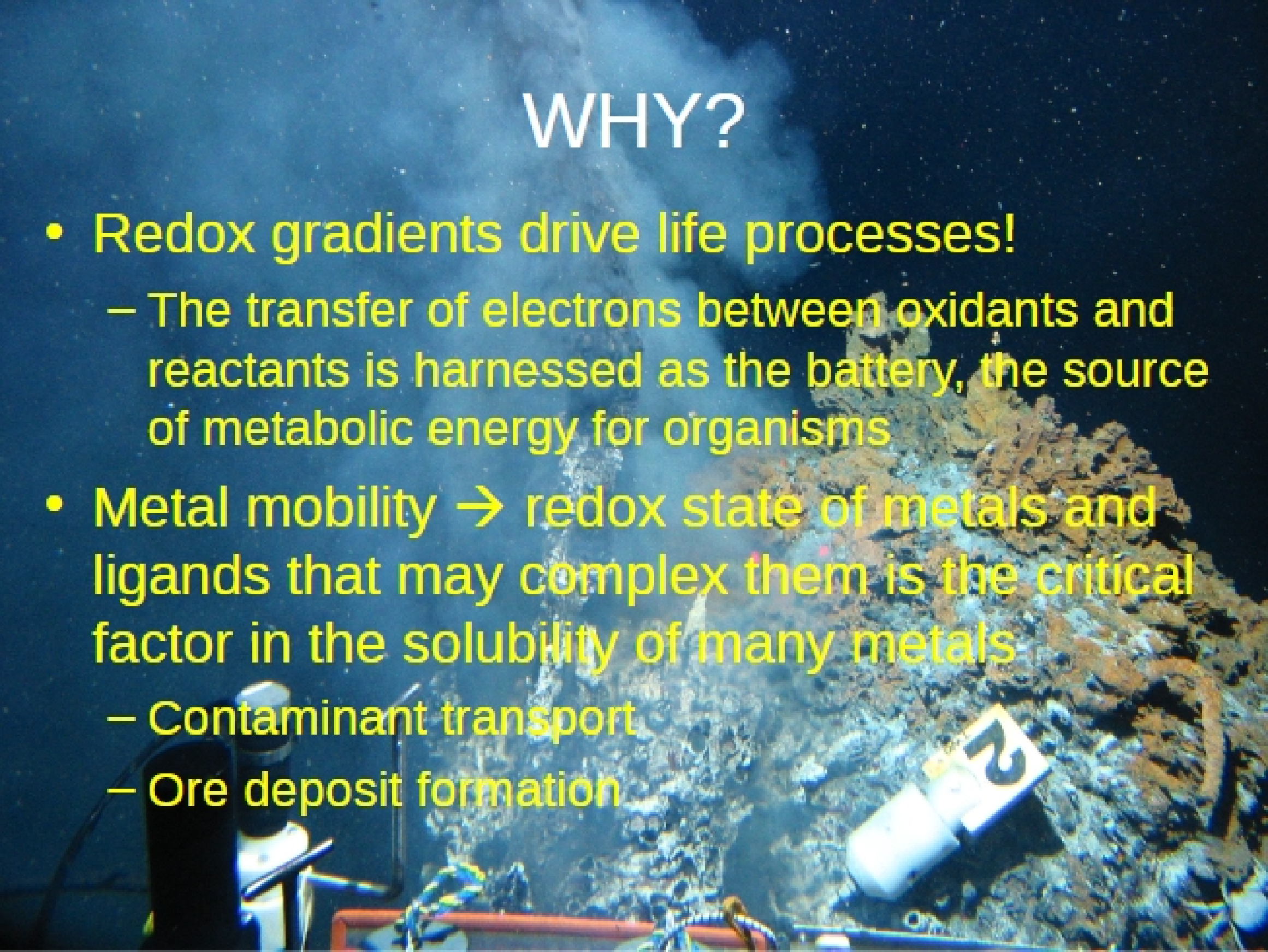


Redox Geochemistry



WHY?

- Redox gradients drive life processes!
 - The transfer of electrons between oxidants and reactants is harnessed as the battery, the source of metabolic energy for organisms
- Metal mobility → redox state of metals and ligands that may complex them is the critical factor in the solubility of many metals
 - Contaminant transport
 - Ore deposit formation



REDOX CLASSIFICATION OF NATURAL WATERS

Oxic waters - waters that contain measurable dissolved oxygen.

Suboxic waters - waters that lack measurable oxygen or sulfide, but do contain significant dissolved iron ($> \sim 0.1 \text{ mg L}^{-1}$).

Reducing waters (anoxic) - waters that contain both dissolved iron and sulfide.