Carbon Mineralization in New Mexico

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https://co2rocks.net/

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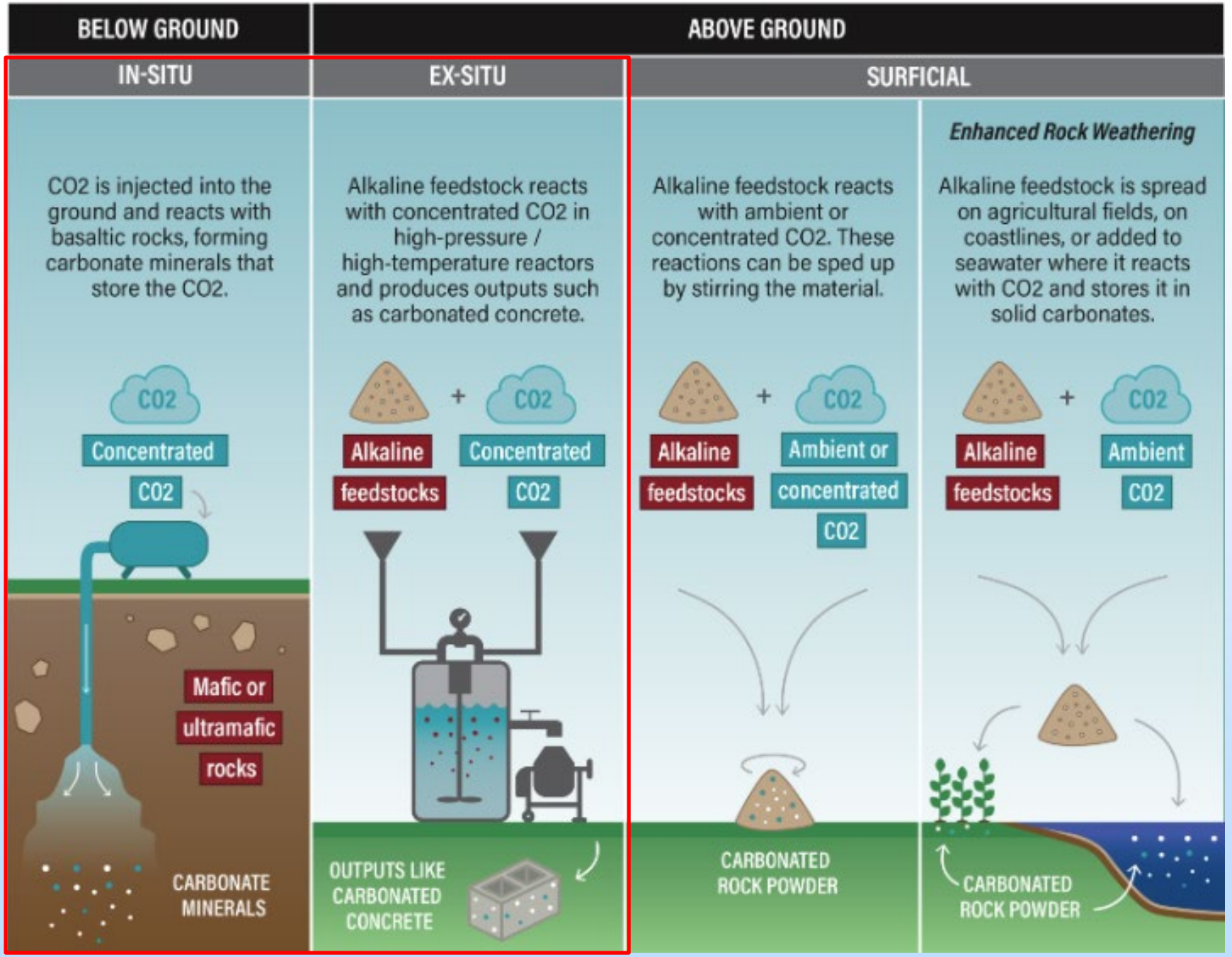
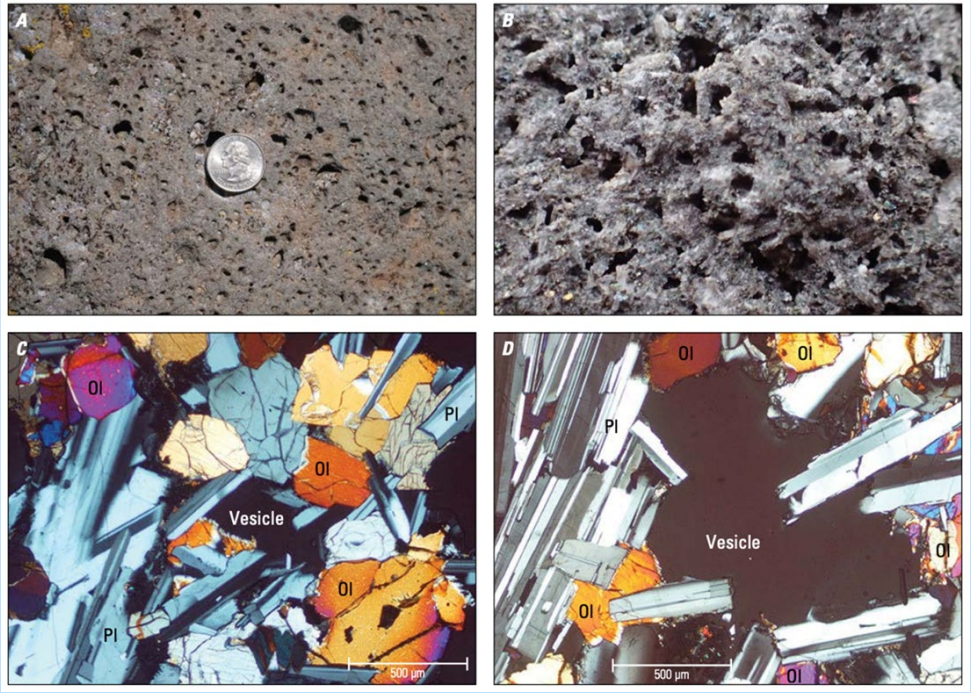
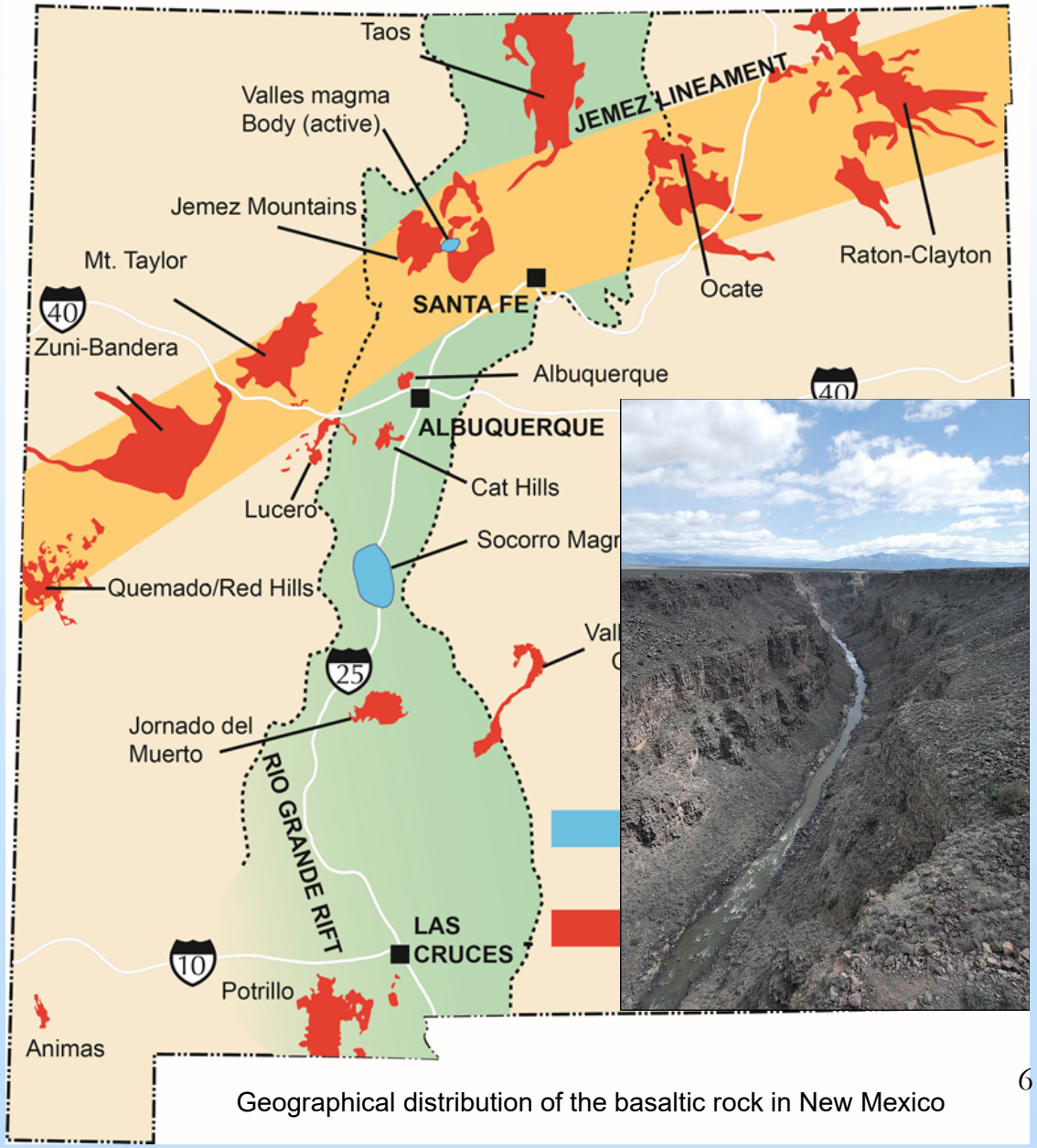
What is Carbon Mineralization?



Basalts in New Mexico

- Project Objective: Identify and access statewide resources for potential CO2 storage via mineralization processes, including basalt formations and related stratigraphic units, and mining wastes in the state of New Mexico, as well as identify and characterize potential targeted storage sites/complexes to provide insights on storage capacity.





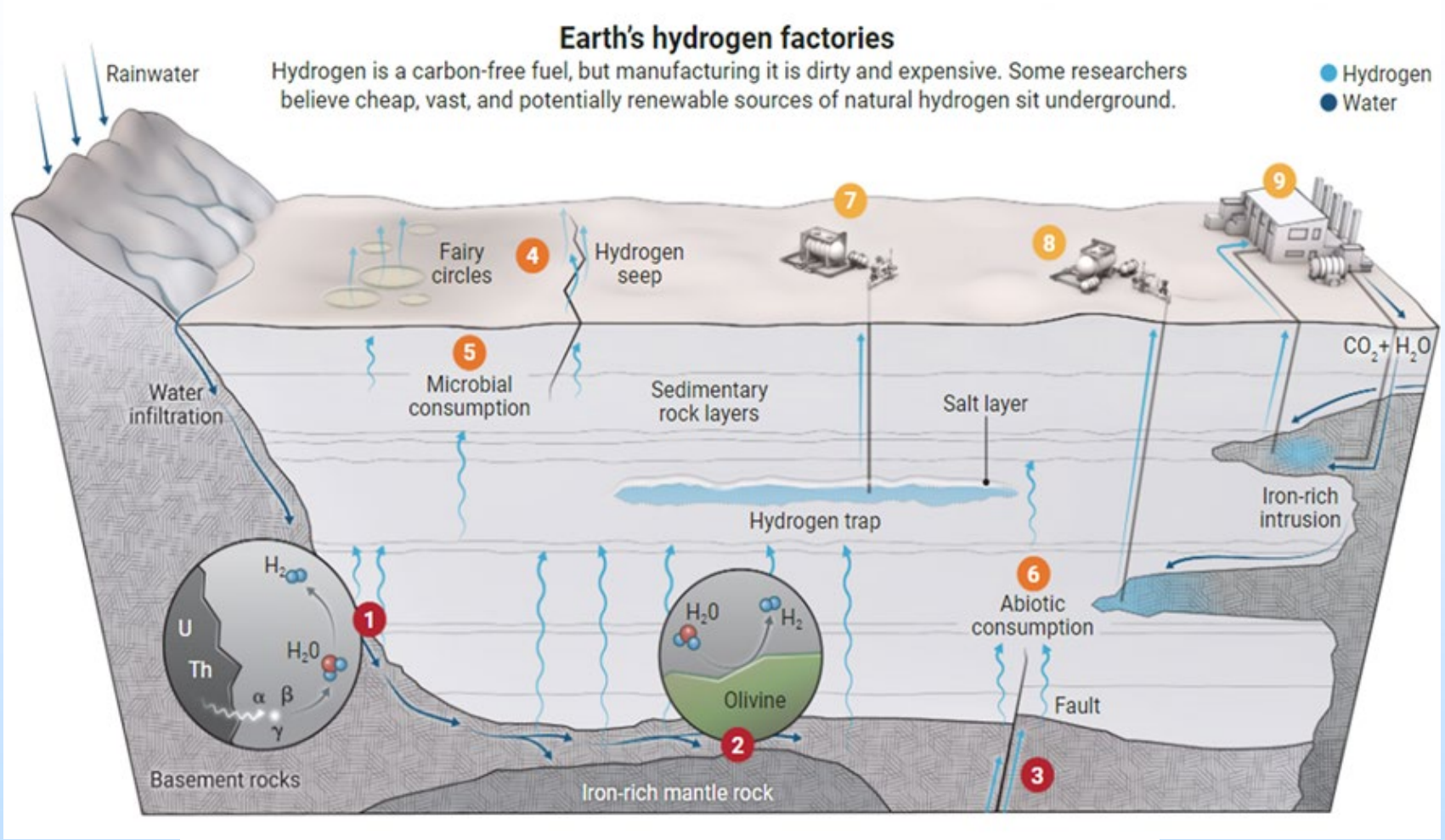
Geographical distribution of the basaltic rock in New Mexico

Other opportunity on Basaltic Rocks?

Geological Hydrogen (White H2) Generation

Ultramafic Rocks -Olivine

Explore the potential to combine hydrogen generation with carbon mineralization for dual benefits



$$Mg_{1.82}Fe_{0.18}SiO_4 + wH_2O \rightarrow 0.5(Mg,Fe^{II},Fe^{III})_3(Si,Fe^{III})_2O_5(OH)_4 + x(Mg,Fe)(OH)_2 + yFe_3O_4 + zH_2$$

Olivine (Fo_{91}) → serpentine + brucite + magnetite

Mechanism: Fe(II) oxidizes to Fe(III) in water, releasing hydrogen

Thank you!