

# CO<sub>2</sub> Mineralization for *in situ* Storage and *ex situ* Enhanced Metals Recovery



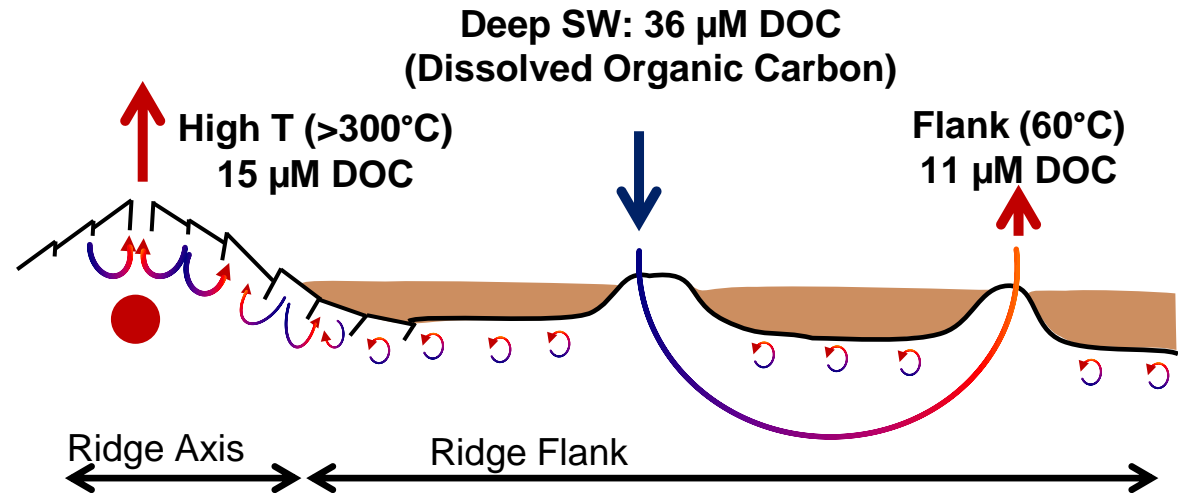
**Susan Lang**  
Associate Professor  
University of South Carolina  
slang@geol.sc.edu

## Technology or focus area

- Carbon cycling in hydrothermal systems
- Water-rock-microbe interactions
- Organic geochemistry; isotopic analysis

## Ideas, Interests, Concepts to be Explored

### Sequestering carbon in its organic form



Deep SW: 36 μM DOC  
(Dissolved Organic Carbon)

High T (>300°C)  
15 μM DOC

Flank (60°C)  
11 μM DOC

Ridge Axis      Ridge Flank

### DOC loss

Mafic, high temperature (>300°C)	60 – 70%
Mafic, ridge flank (~60°C)	60 – 70%
Ultramafic, all temperatures	> 95 %

- B.S. Chemistry, MIT
- Ph.D. Chemical Oceanography, Univ Washington
- Postdoc, Scripps Inst. of Oceanography
- Research Associate, ETH-Zürich
- Faculty, University of South Carolina