

Introduction of Oxygen Bubbles into Saturated Specimen

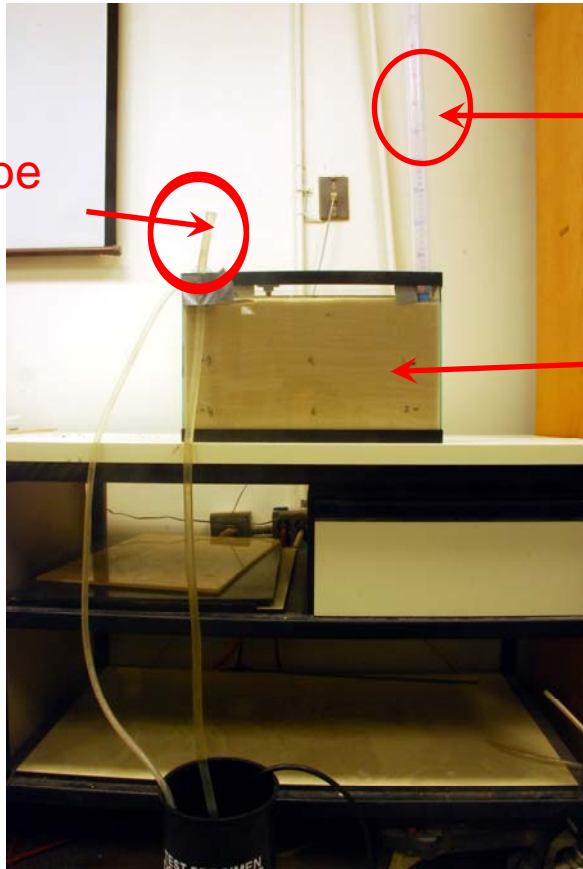
NSF Project: Liquefaction
Mitigation Using Entrapped Air
(Award #:CMS-0509894)

Introduction of bubbles into saturated specimen

Injection – Extraction technique under room temperature

Set up picture

Fully Saturated Specimen



Injection Tube

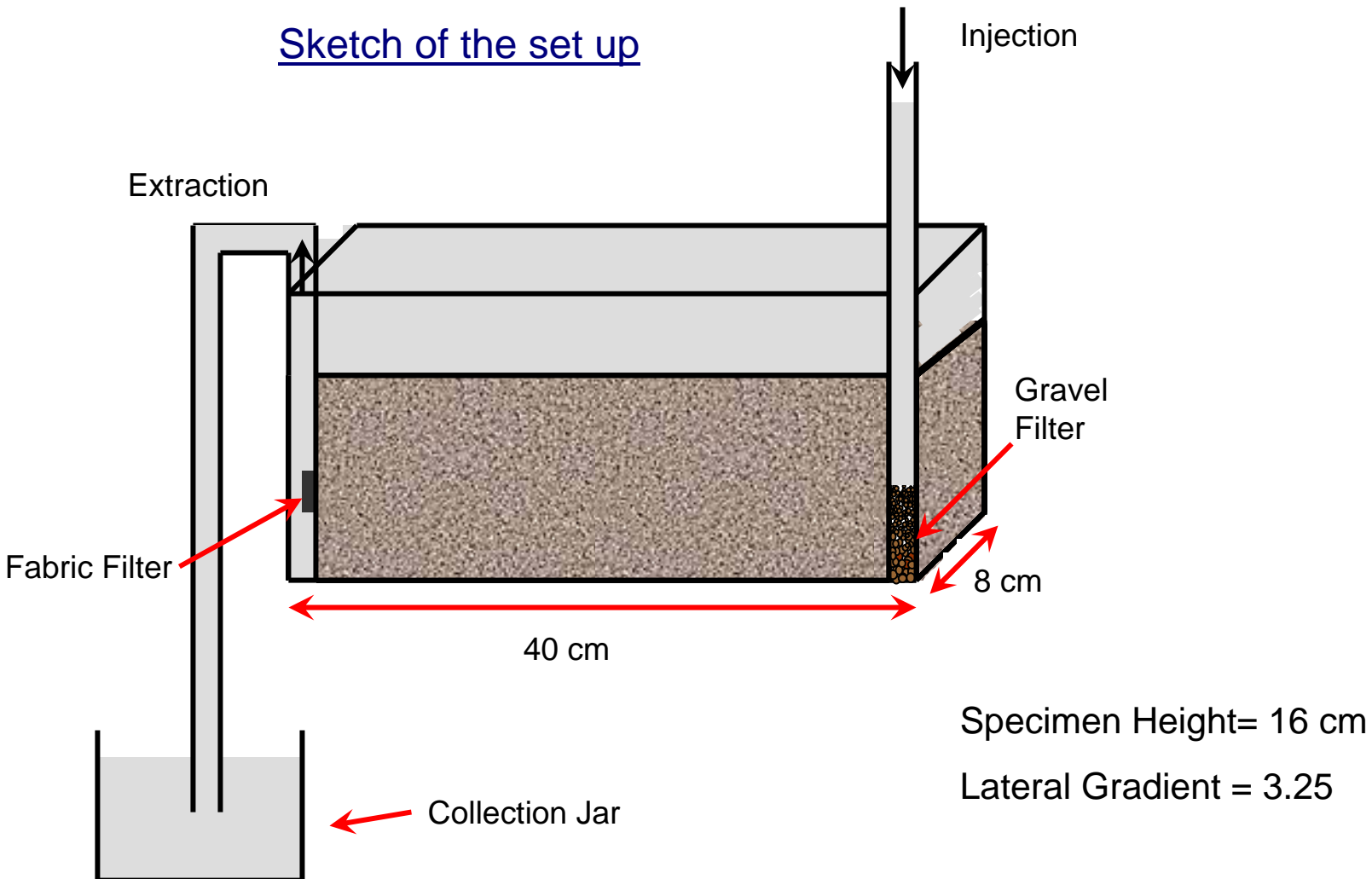
Fully Saturated Specimen

Extraction Tube

Introduction of bubbles into saturated specimen

Injection – Extraction technique under room temperature

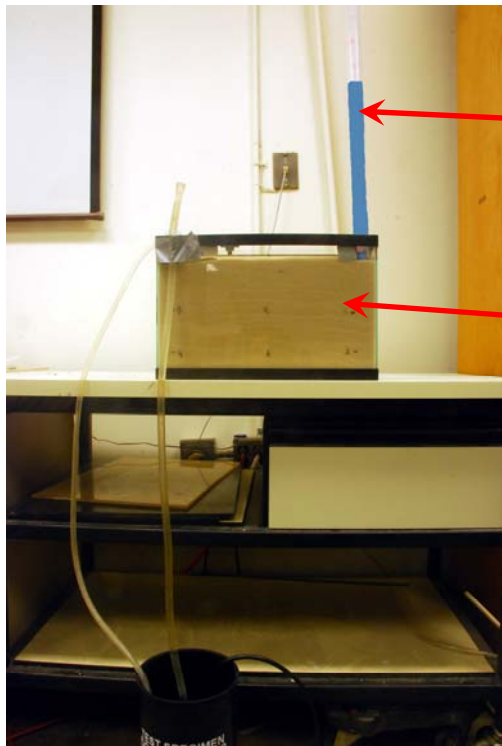
Sketch of the set up



Introduction of bubbles into saturated specimen

Injection – Extraction technique under room temperature

During the I-E procedure

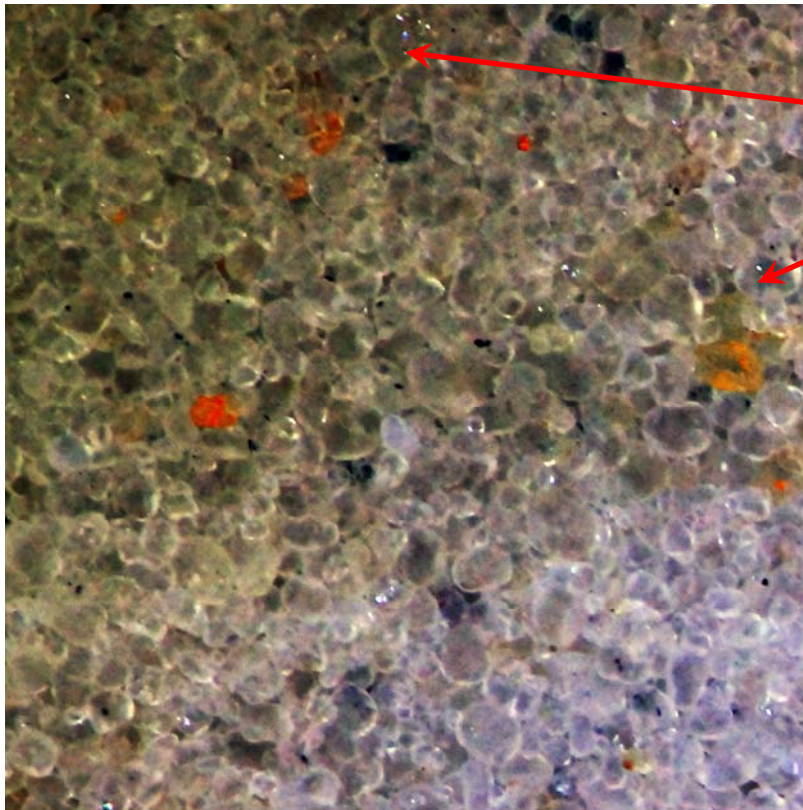


Dissolved Effluent
in Injection Tube

Fully Saturated Specimen

Introduction of bubbles into saturated specimen

Close-up image of the specimen



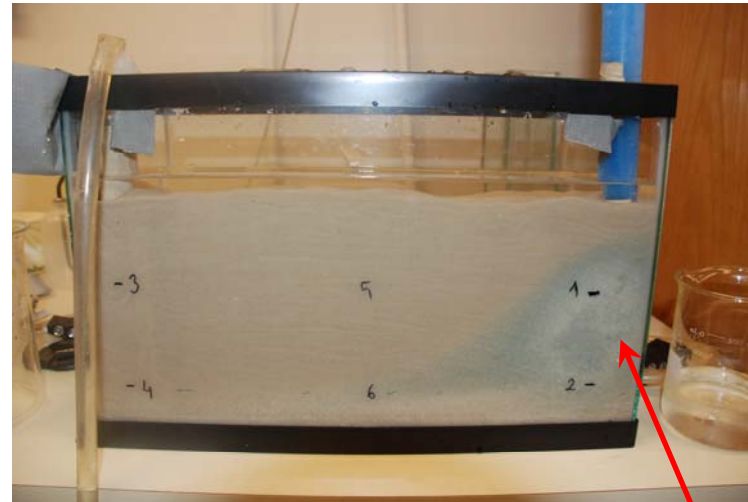
Barely seen bubbles
and the influence
distance was only 20
cm in lateral direction

Introduction of bubbles into saturated specimen

Injection – Extraction technique under 0°C temperature

Set up picture

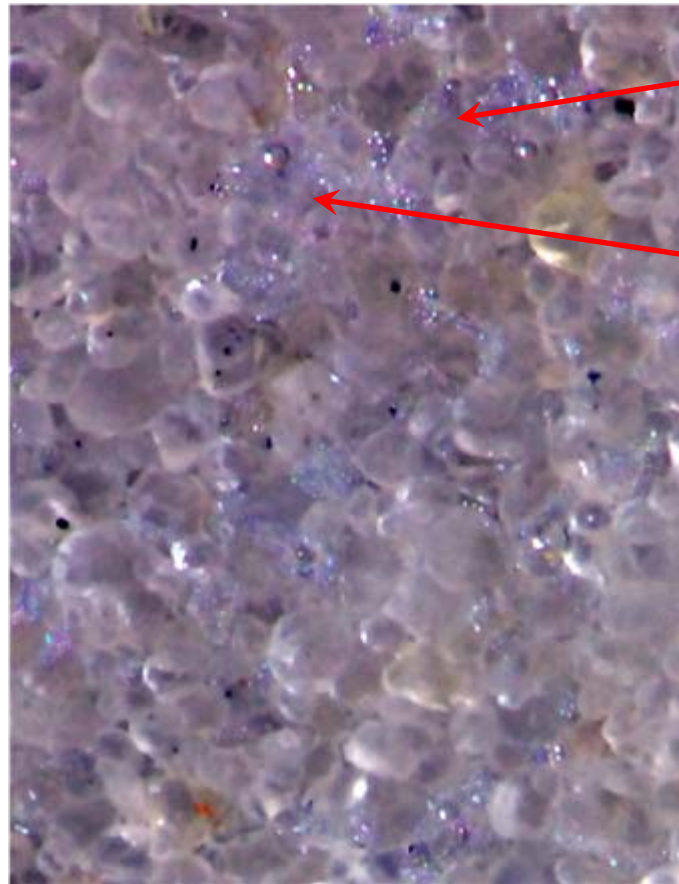
During the I-E procedure



Efferdent water solution
right after the experiment
started

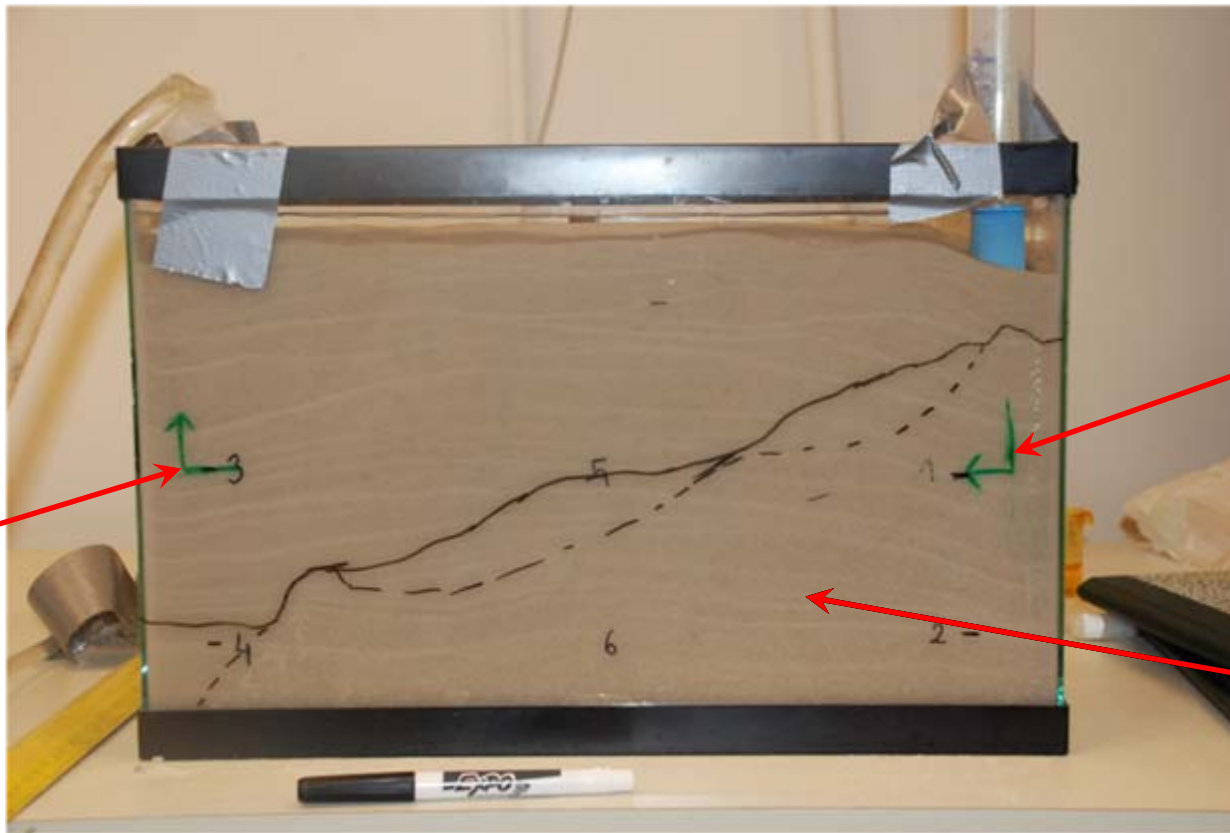
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Close-up image of the specimen



Bubble concentration was higher in the specimen.

Introduction of bubbles into saturated specimen



Injection Hole

Partially saturated zone, after waiting at least overnight

Extraction Hole