

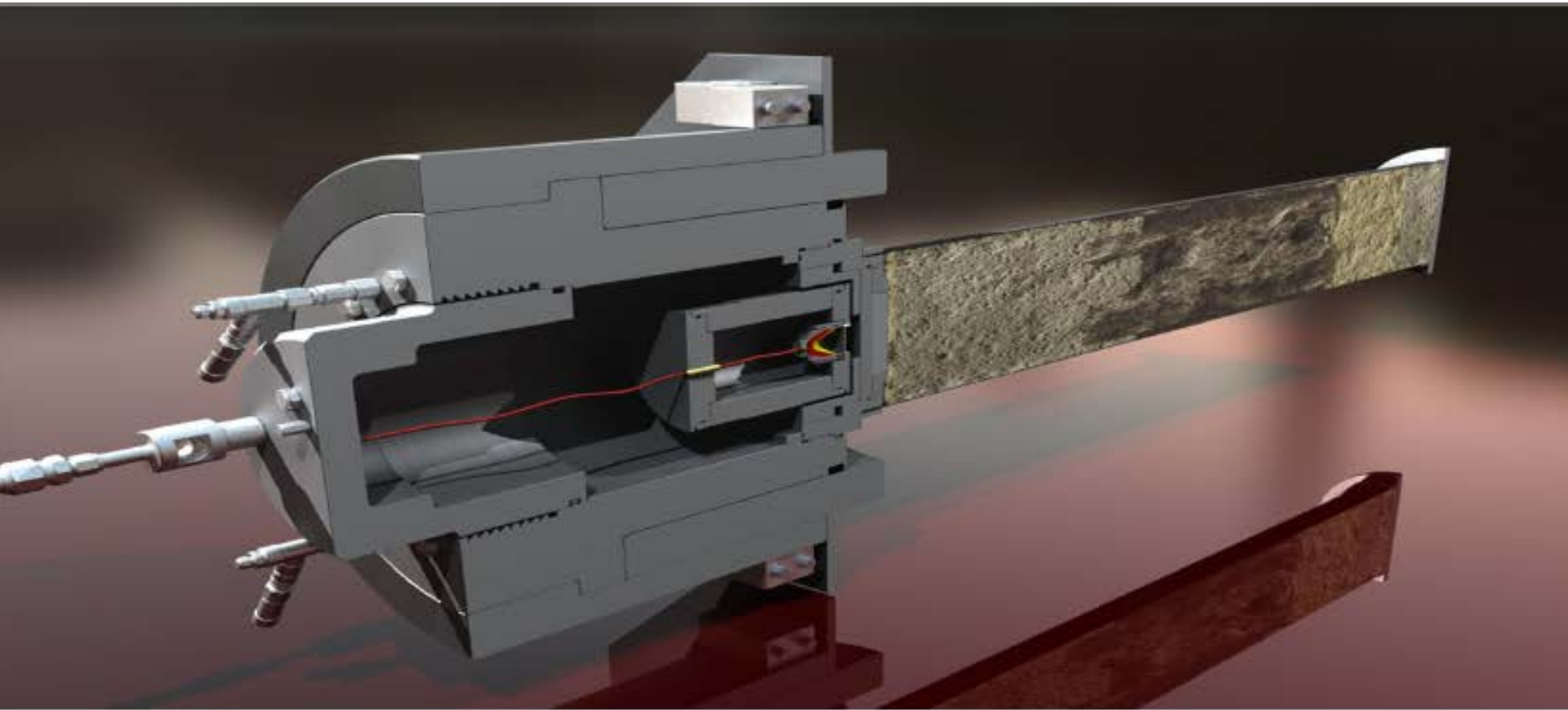


Unique Applications - Section IV

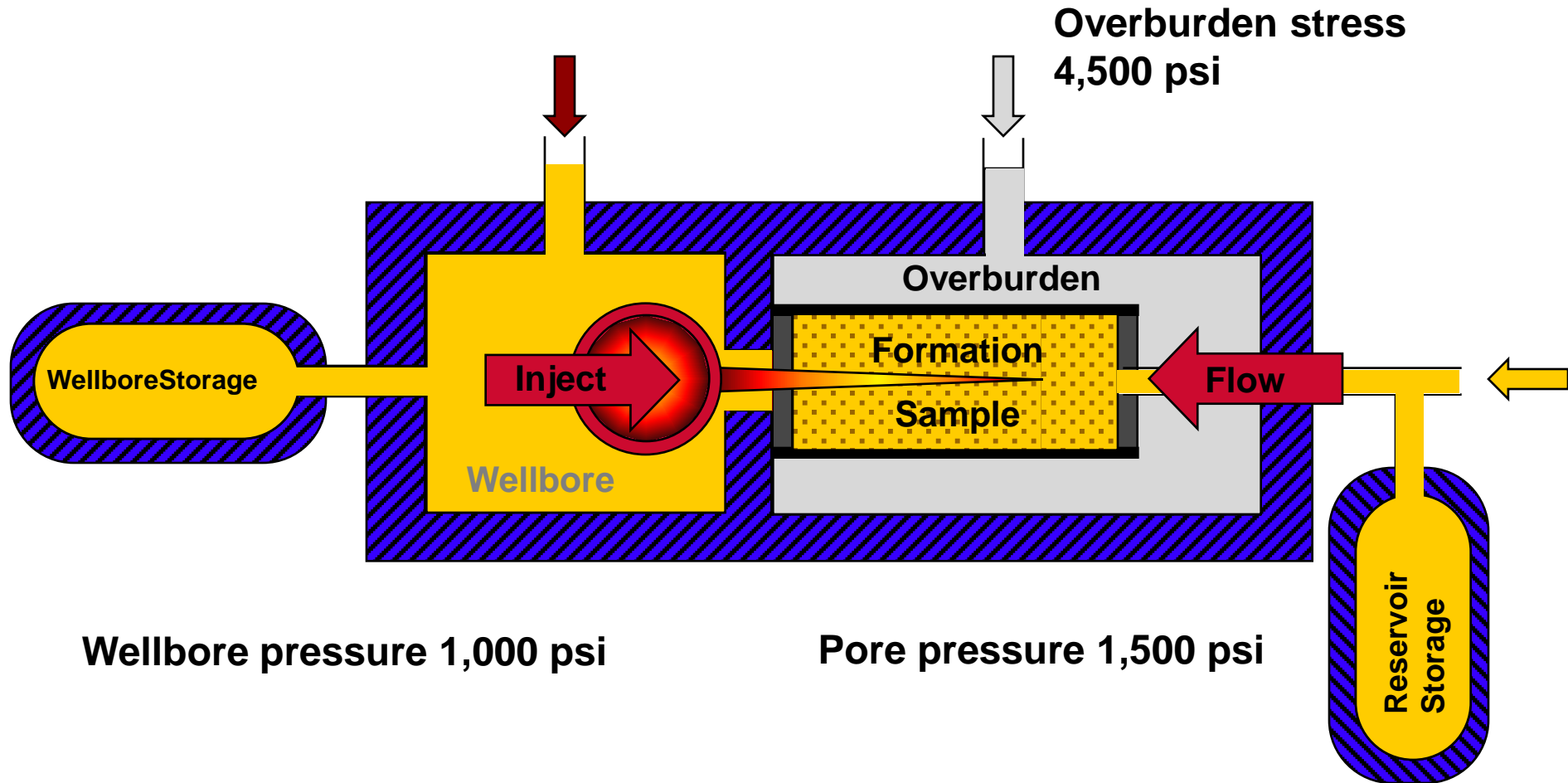
Darren Barlow
Regional Technical Manager

HALLIBURTON

Basics of Section IV

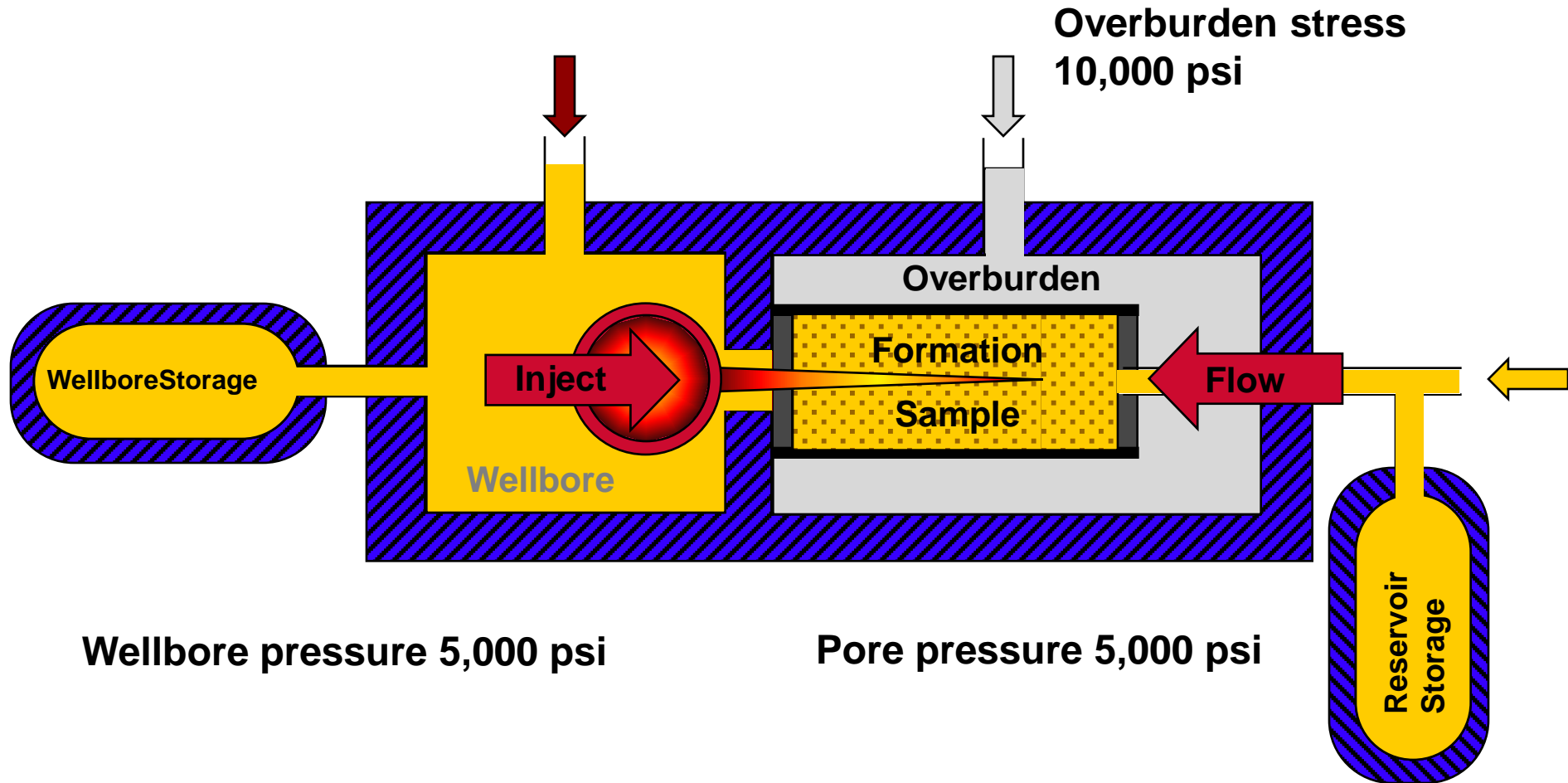


Perforation Flow Laboratory Schematic



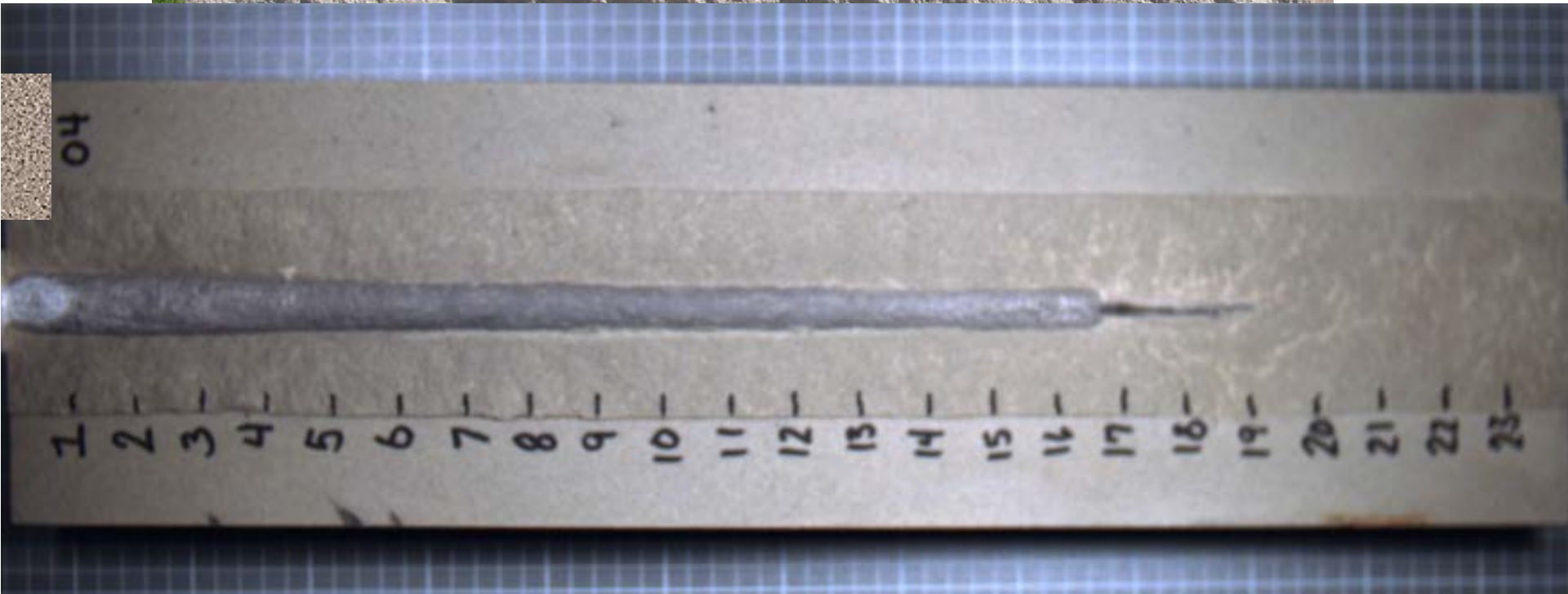
$$\text{Net Effective Stress} = \text{Overburden} - \text{Pore Pressure}$$

Perforation Flow Laboratory Schematic



$$\text{Net Effective Stress} = \text{Overburden} - \text{Pore Pressure}$$

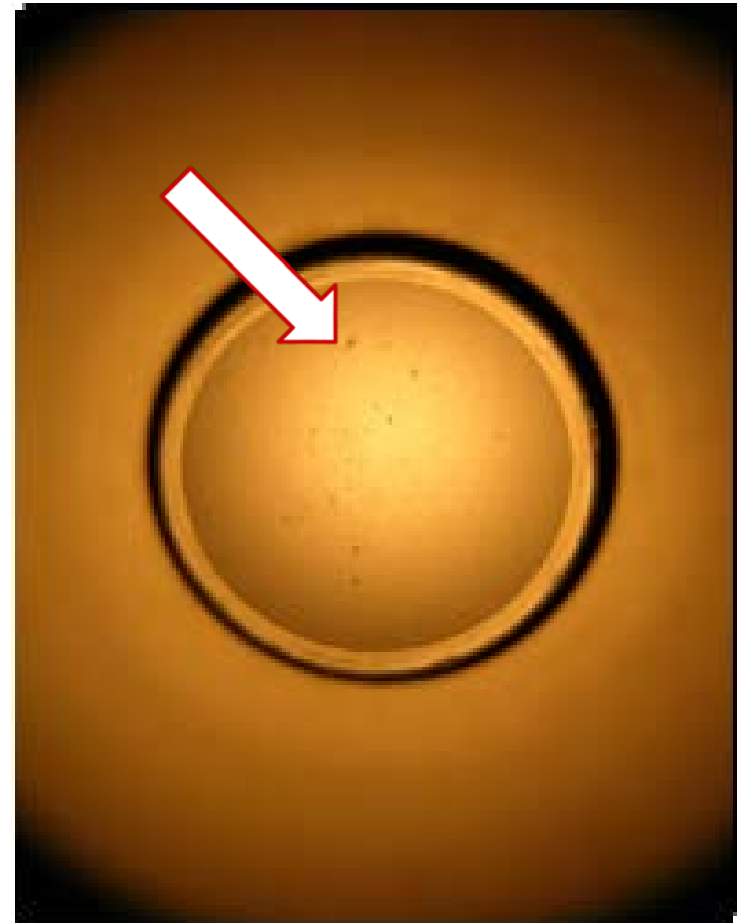
Cement Data Vs. Section IV



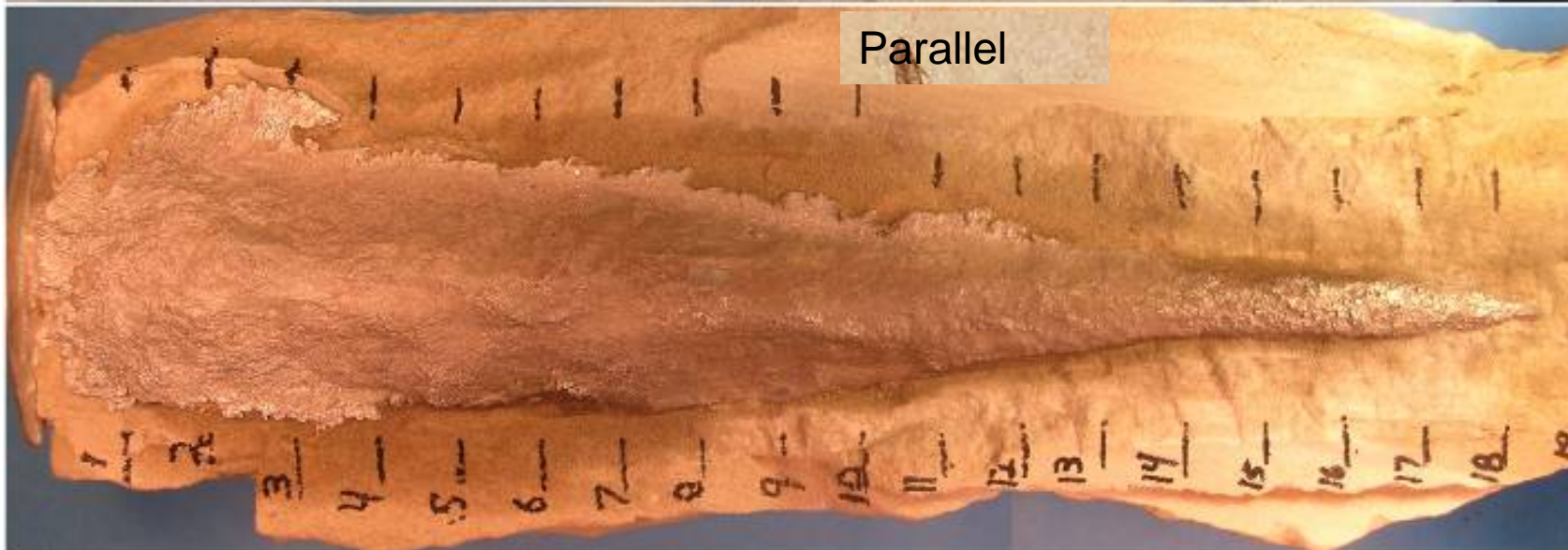


The Right Location

Location

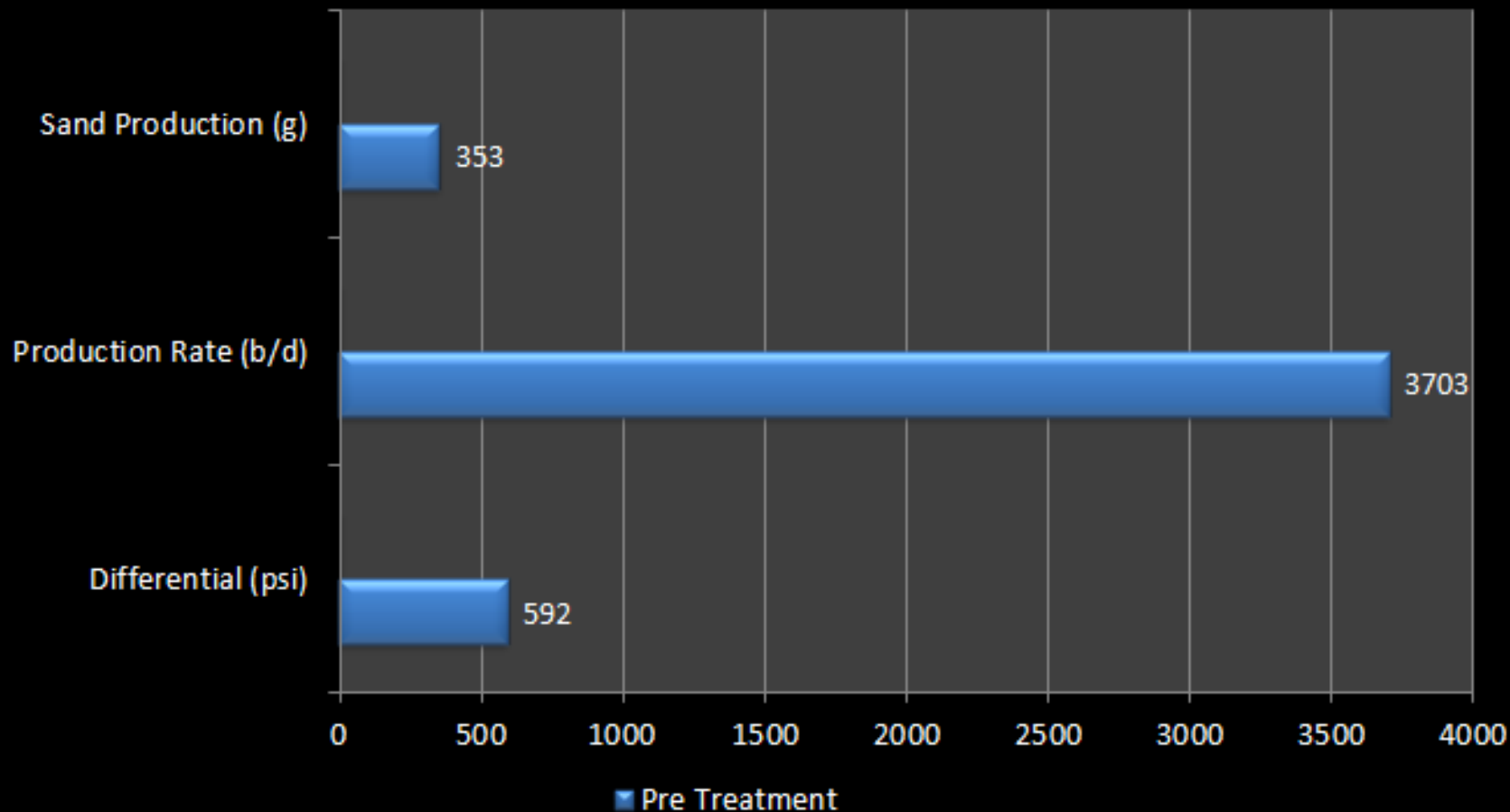


Sanding Production

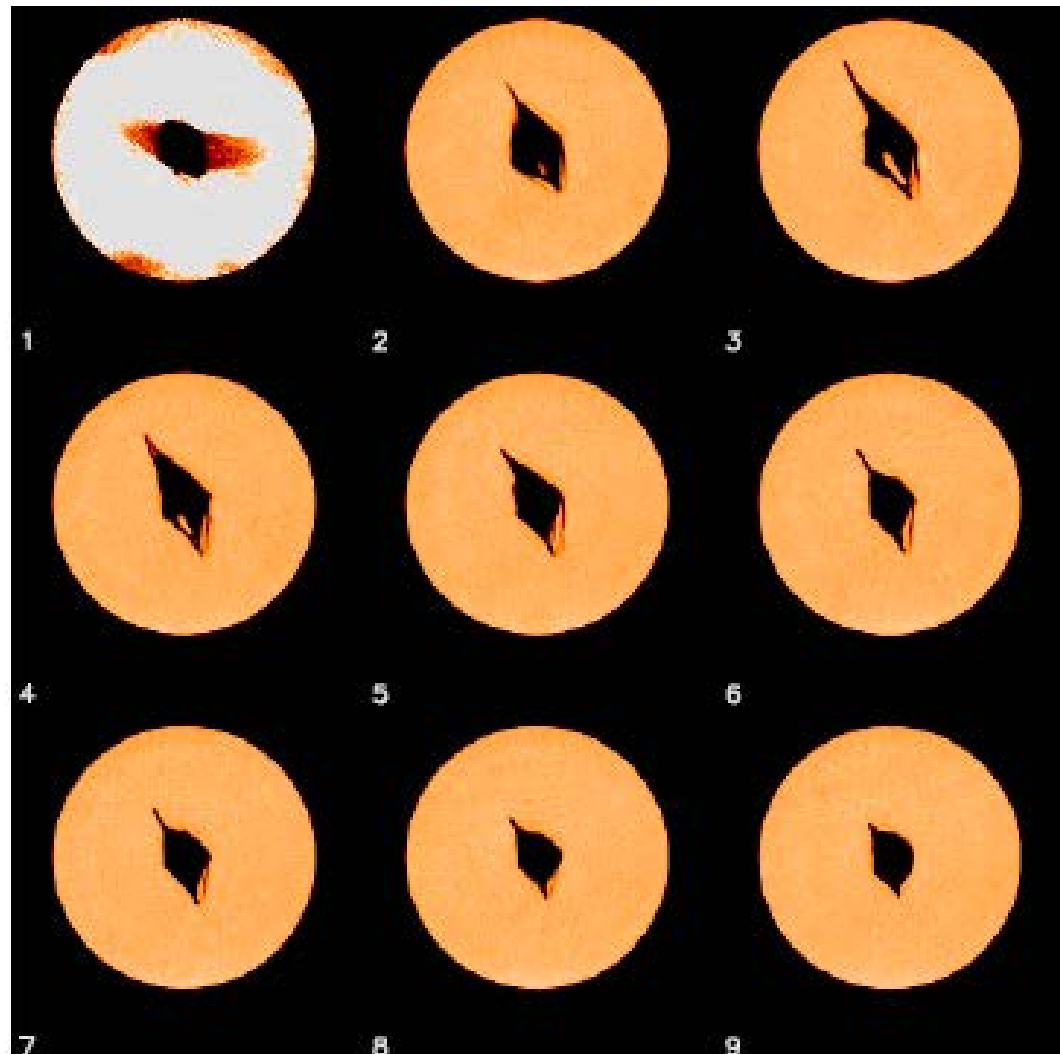
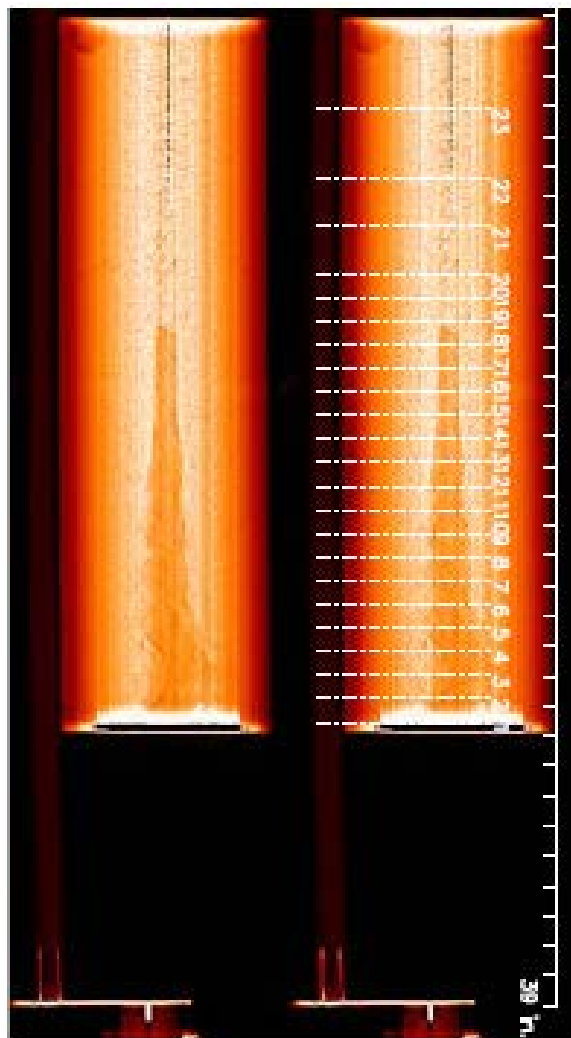


Sanding Production

Perpendicular Bedding Planes

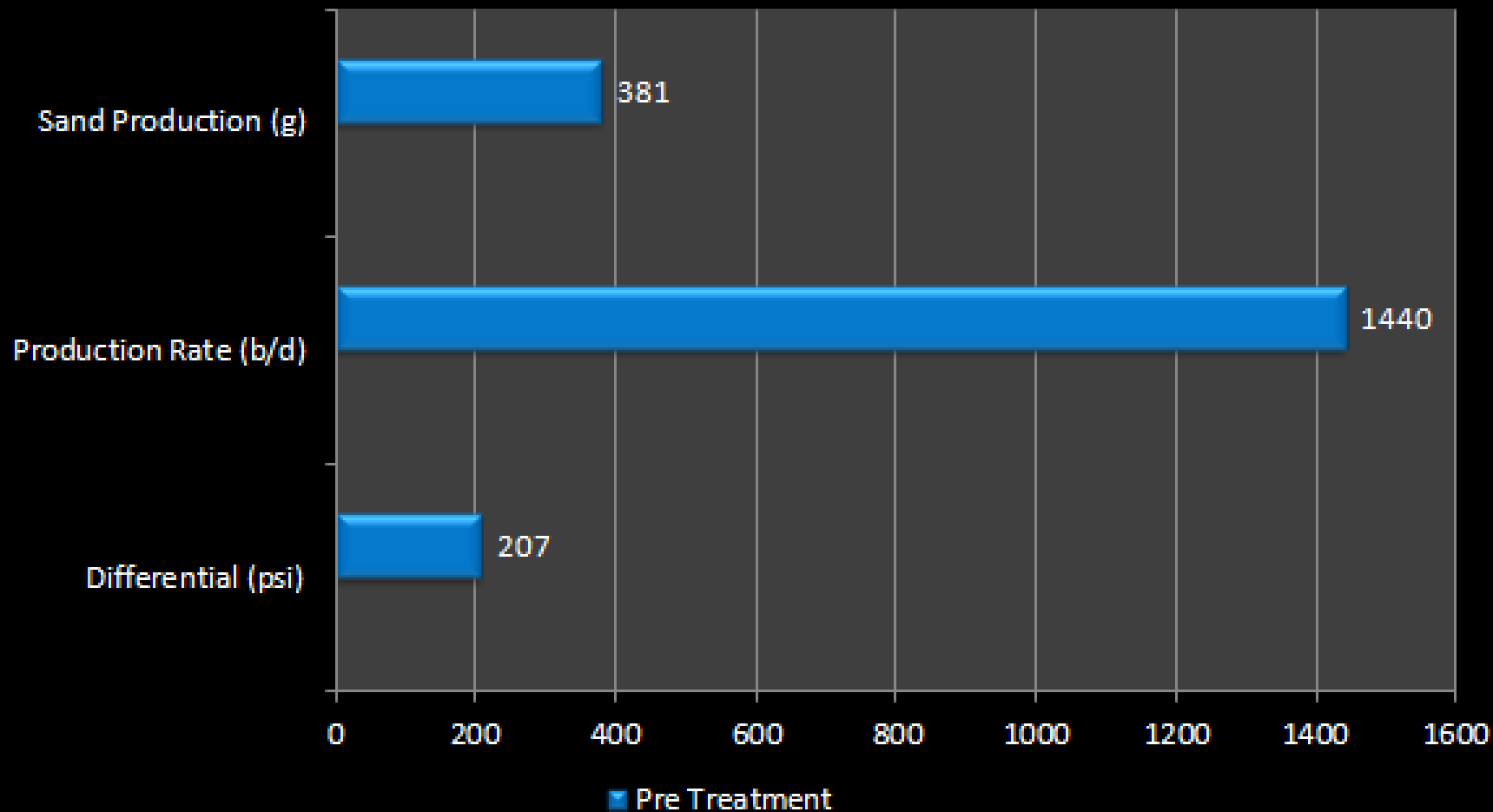


Erosion of the Perforation

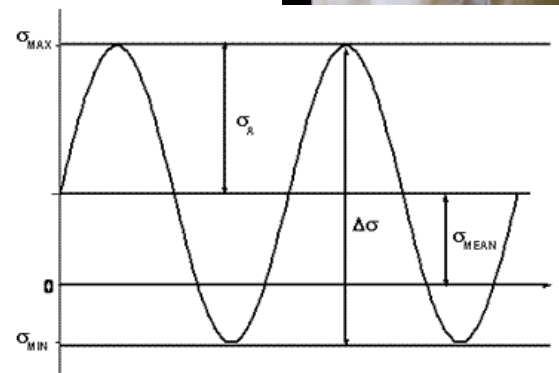
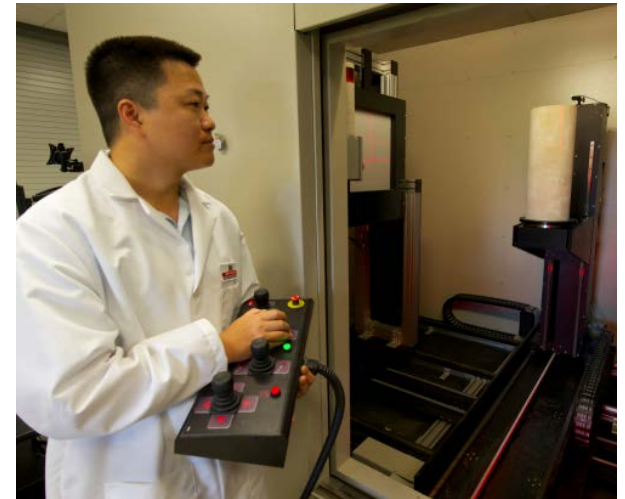
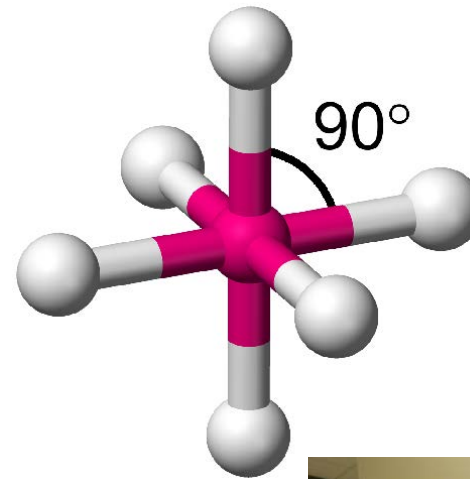


Sanding Production

Parallel Bedding Planes



Matching the Reservoir

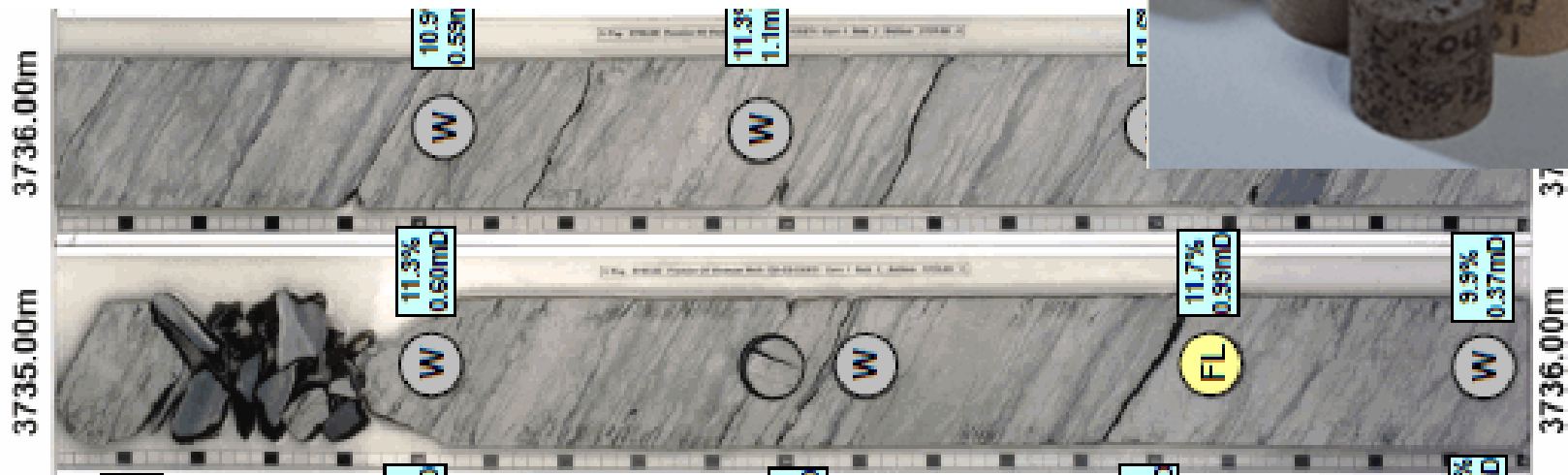




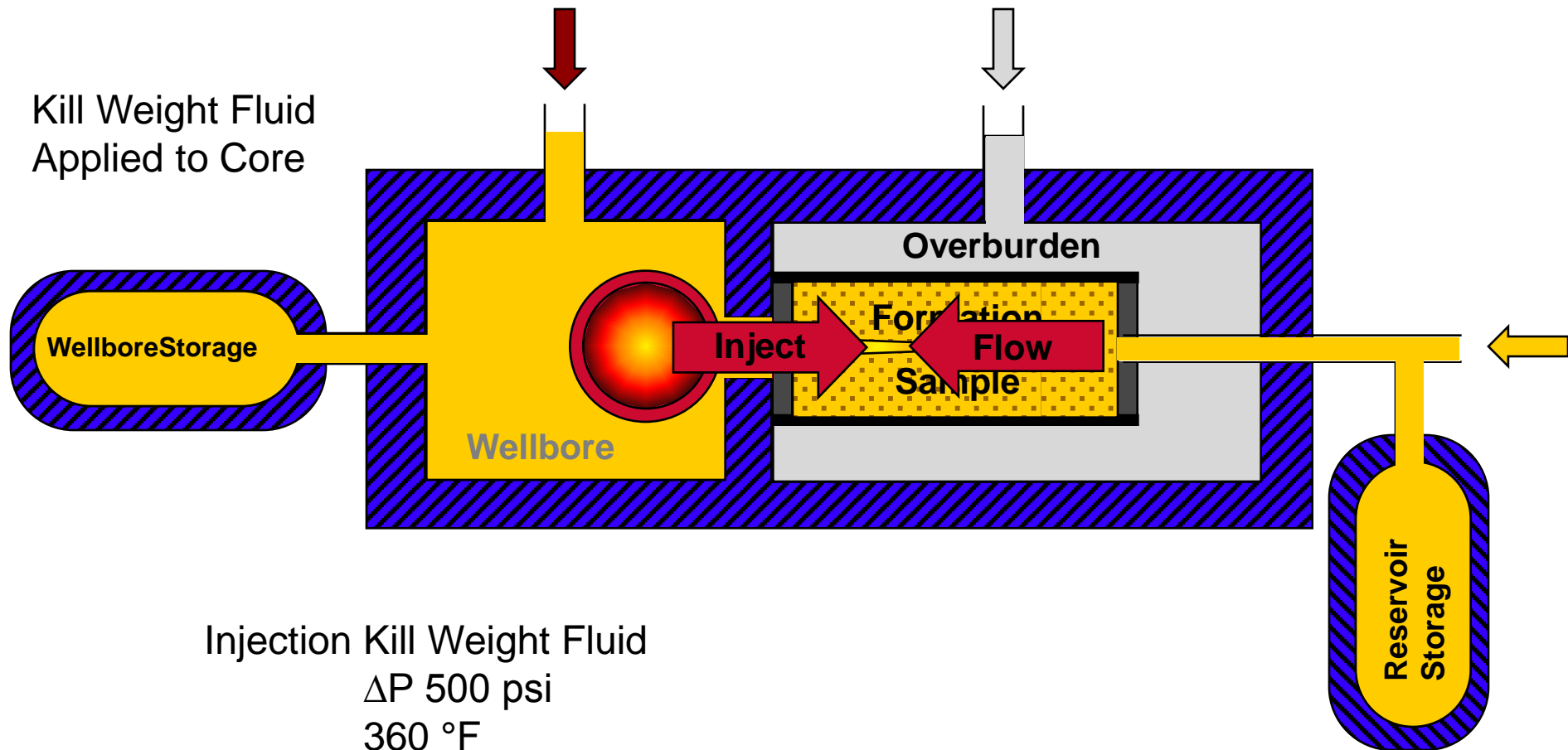
Kill Weight Fluid Analysis

Limitation of Permeability testing

- Core Analysis
- High Grading
- Full core Analysis



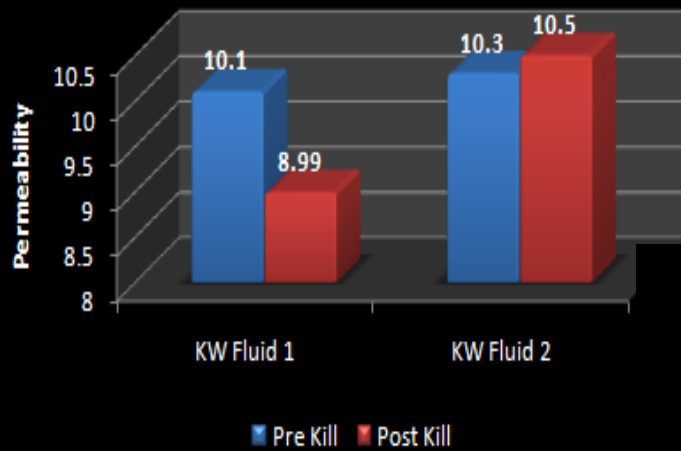
Kill Weight Selection – Return Permeability Analysis



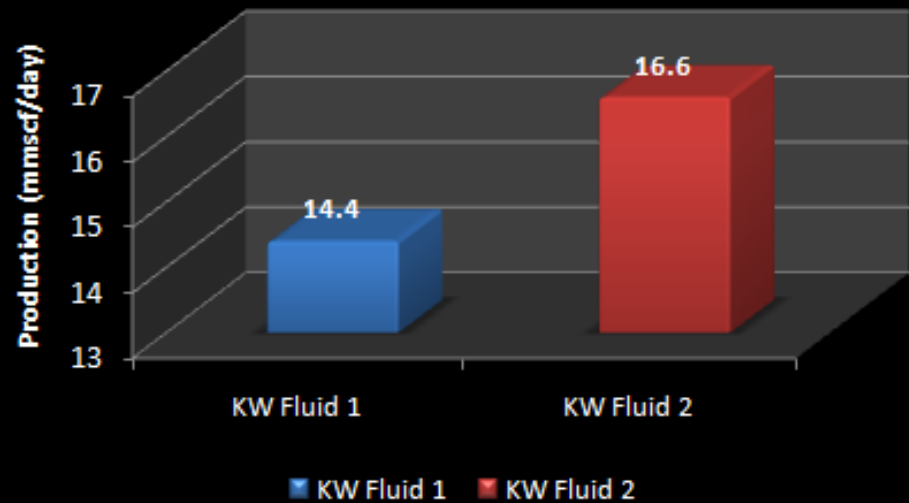
Injection Kill Weight Fluid
 ΔP 500 psi
360 °F
7 Days with Periodic Circulation

Return Permeability Testing

Permeability (S_{wi})- Pre and Post Kill
20 md Gas Sandstone



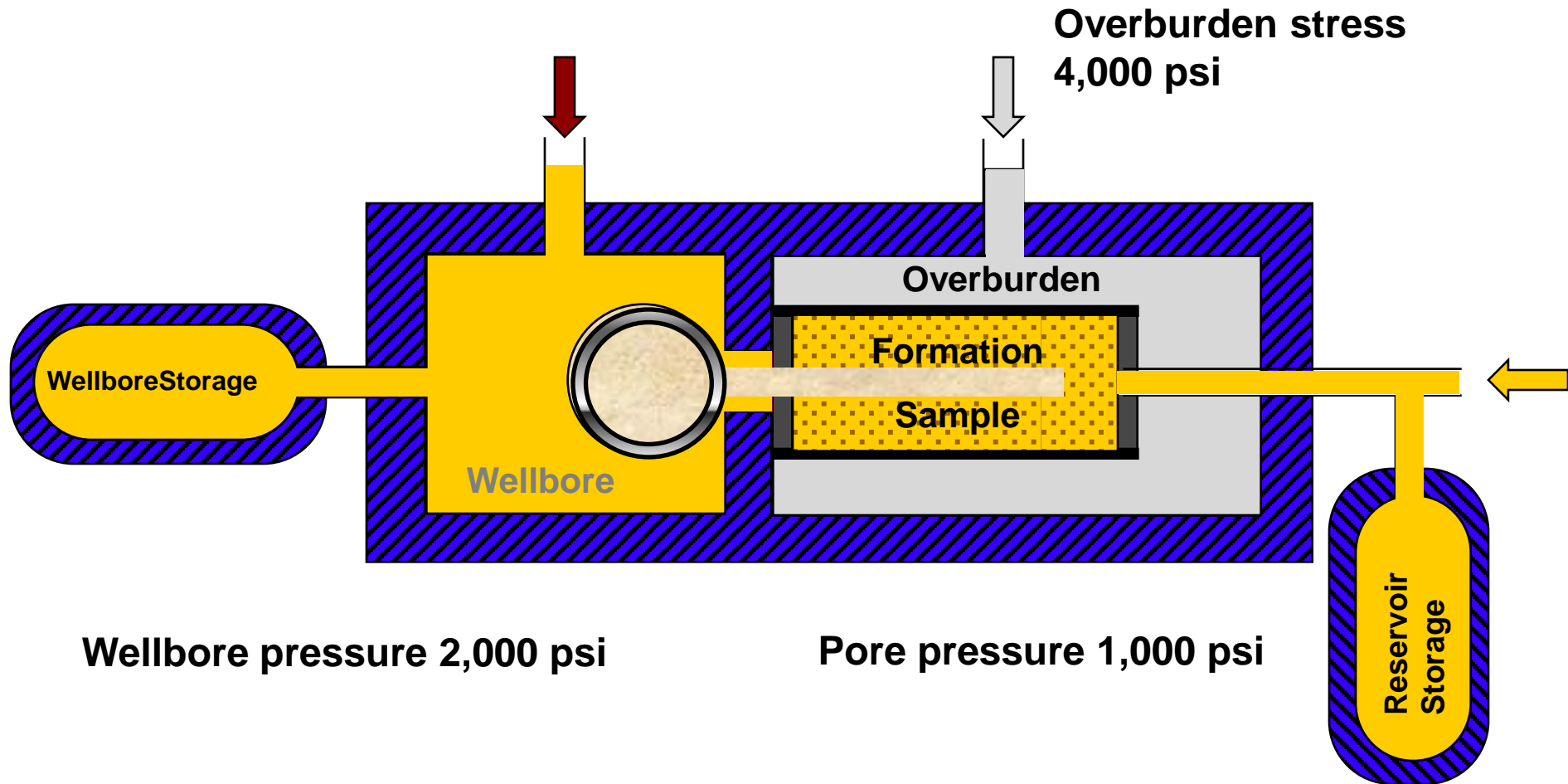
Potential Production Rate



Jetting



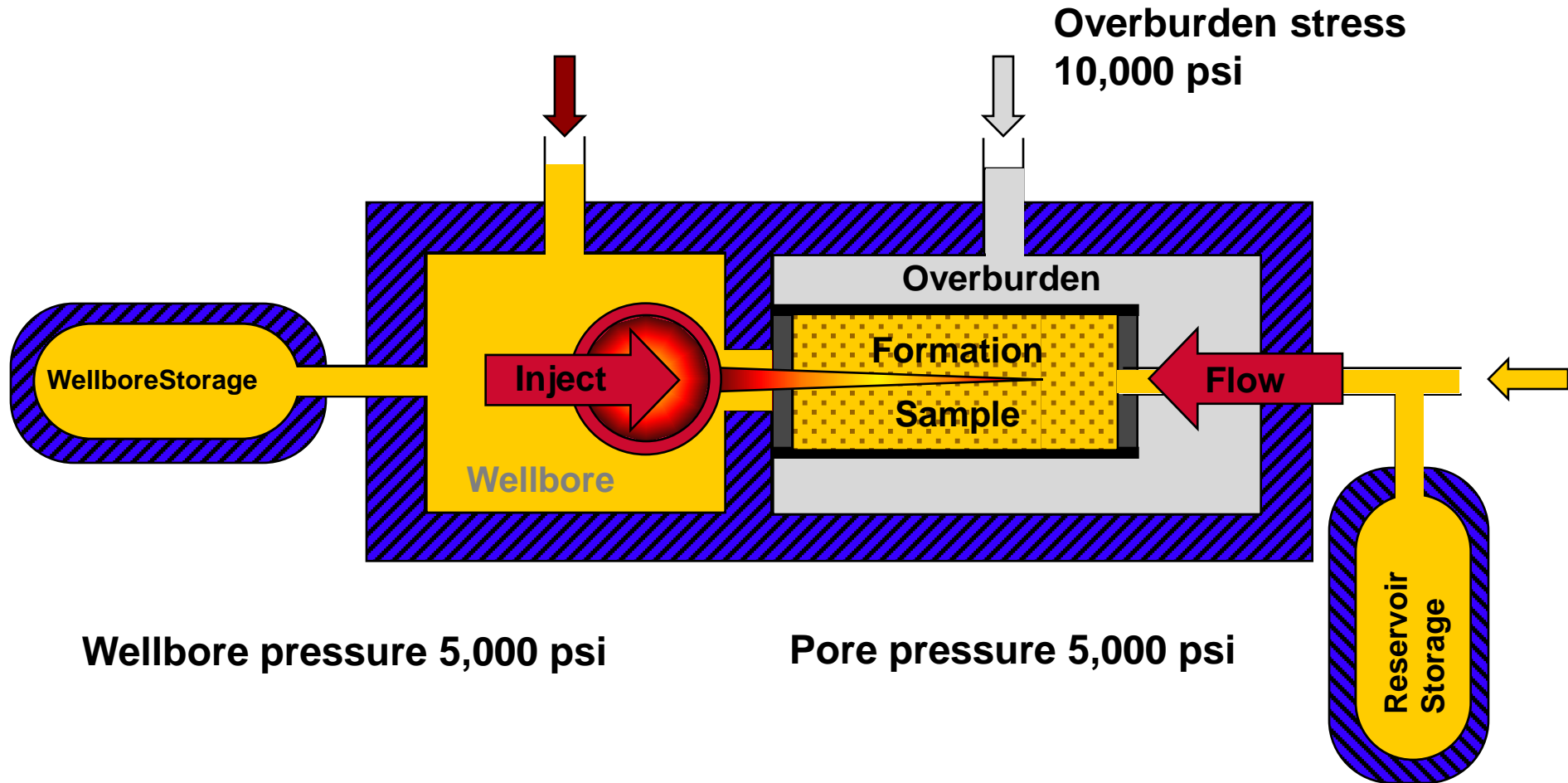
Perforation Flow Laboratory Schematic



The effects of Jet Perforating on Coil

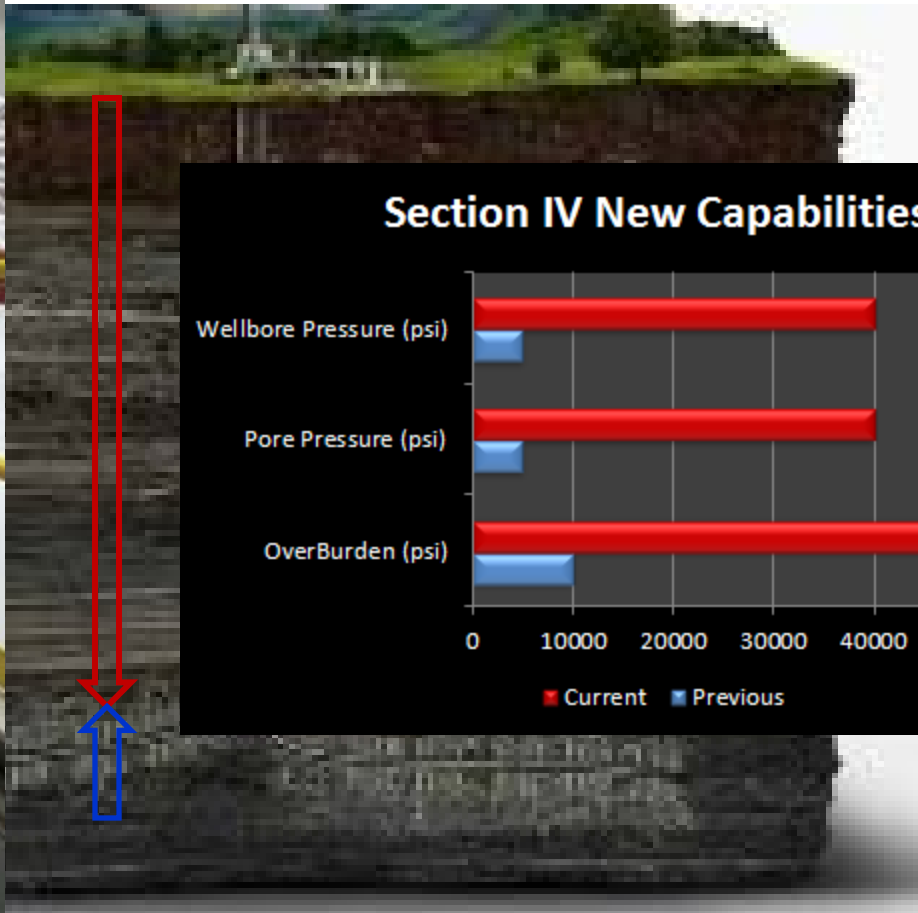


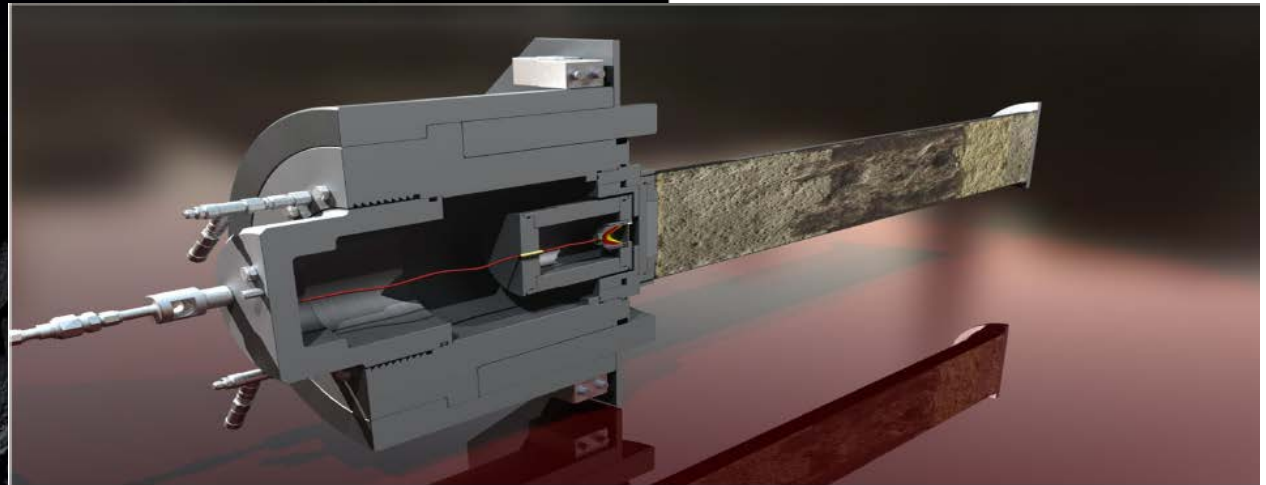
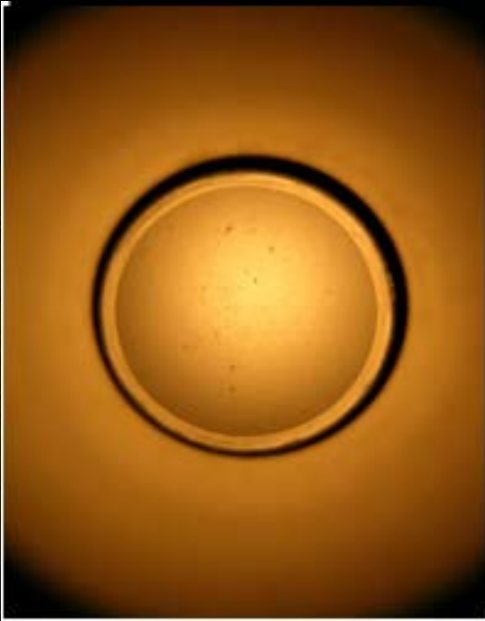
Perforation Flow Laboratory Schematic



$$\text{Net Effective Stress} = \text{Overburden} - \text{Pore Pressure}$$

Net Effective Stress = Overburden – Pore Pressure





Summary



**What Challenges do you have for
Section IV**

**Darren Barlow
Regional Technical Manager
Perforating**