

## Project Name: Minipacker

**Customer:** Earth Sciences-Yucca Mountain Project

**Date:** 7/26/2001 to 1/31/2002

## Project team members:

Ken Chow [kpchow@lbl.gov](mailto:kpchow@lbl.gov)

Robin Lafever [relafever@lbl.gov](mailto:relafever@lbl.gov)

Jim Oneill [jwoneill@lbl.gov](mailto:jwoneill@lbl.gov)

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## Project:

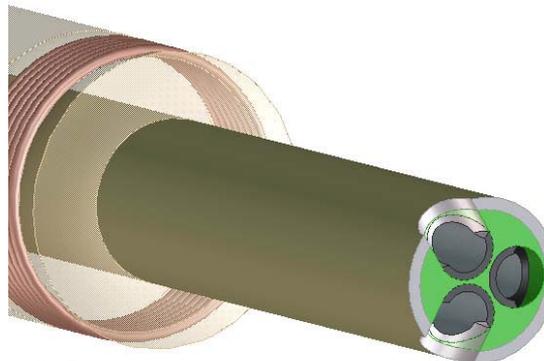
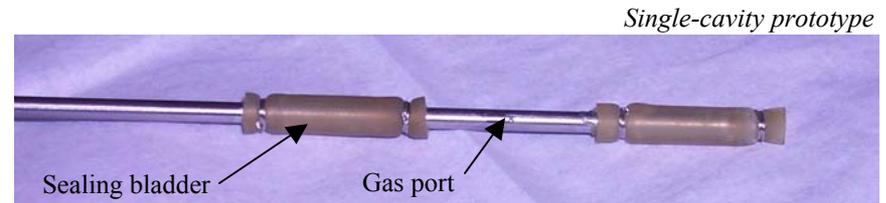
One method for studying gaseous flow in fractured rocks from the Yucca Mountain site involves drilling holes into excavated rocks and using packers to create cavities for the release and sensing of test gases. The Minipacker project required designing a packer that can be used to create three cavities in quarter-inch diameter holes up to one meter in depth.

## Capabilities Applied:

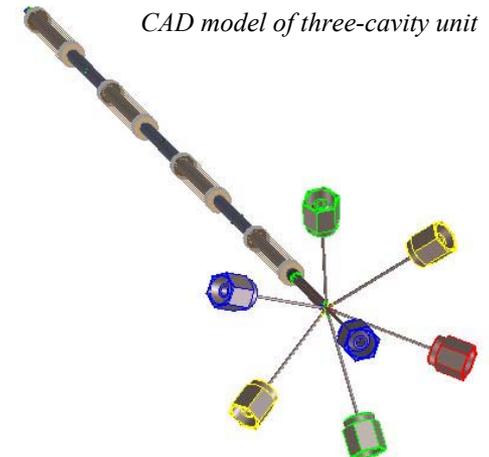
- Brainstorming of concepts
- Solid modeling
- Gas flow calculations
- Functional prototyping
- Collaboration with Technical Integration Group

## The Process:

DesignWorks brainstormed several concepts and modeled two solutions. A single-cavity functional prototype was developed and tested. A full scale, three-cavity unit is currently being fabricated by the Technical Integration Group.



*CAD model of single-cavity prototype*



*CAD model of three-cavity unit*