

Located 165 km southeast of Calgary, the Field Research Station (FRS) is being constructed on land leased from Cenovus Energy Inc.



Although our key focus is the secure containment of carbon, work at the site will have results and applications far beyond CCS.

Within the energy sector, R & D work will be applicable to steam chamber containment, enhanced oil recovery, induced and natural fracturing, groundwater protection, well abandonment issues, shallow gas migration, fugitive emissions, acid gas disposal and induced seismicity risk analysis.

We are looking for clients and subscribers to join the Field Research Station. To become involved in research crucial to developing solutions to subsurface containment and monitoring challenges contact us.

**For more information on how to become a sponsor or client at the field research station:**

**Dr. Don Lawton, Director**  
Containment and Monitoring Institute  
E: don.lawton@cmcghg.com  
T: +1 403 210-6671

CaMI is a business division of CMC Research Institutes, a not for profit with one key mission: accelerating innovation to eliminate industrial greenhouse gas emissions. CMC Research Institutes provides a variety of programs and services to rapidly move concepts from the lab bench to the field while effectively managing risk every step of the way.

Project supported by:



Western Economic  
Diversification Canada

Diversification de l'économie  
de l'Ouest Canada



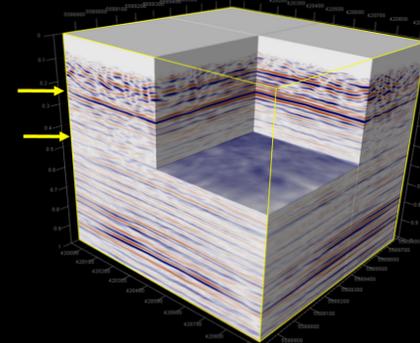
**CMC Research Institutes**  
3535 Research Road NW  
Calgary, AB, Canada T2L 2K8  
www.cmcghg.com



# CMC

Containment &  
Monitoring Institute

**Collaborating for secure carbon storage**



## ENSURING SECURE CONTAINMENT OF FLUIDS UNDERGROUND

Climate change is one of the most urgent challenges facing humanity today. A global effort is underway to develop innovative technologies and paths to reduce greenhouse gas (GHG) emissions.

One of these technologies is carbon capture and storage (CCS), a vital component of greenhouse gas reduction strategies in Canada and around the world. A key concern for commercial CCS operators is to ensure that groundwater does not become contaminated and that long-term liability is minimized.

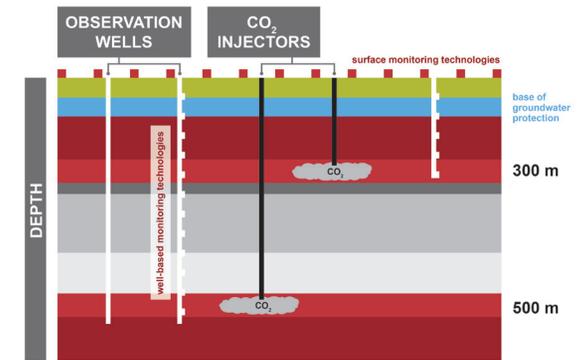
At the Containment and Monitoring Institute (CaMI), developing technologies and protocols for the safe, secure storage of underground fluids, including CO<sub>2</sub>, is our core business. We accelerate the development and scale-up of technologies and protocols to improve underground storage of CO<sub>2</sub> that will also lead to better monitoring of fossil fuel production.

## FIELD RESEARCH STATION - PARTNERSHIPS AT PLAY

CaMI's Field Research Station is a collaborative platform with the University of Calgary for the development and performance validation of technologies intended for measurement, monitoring and verification of subsurface fluids. The Field Research Station will operate for 10 years as a site where international researchers and technology developers can test tools and monitoring procedures.

Activities at the site aim to:

- Develop improved monitoring technologies
- Determine CO<sub>2</sub> detection thresholds
- Understand the fate of methane in aquifers
- Provide quantitative monitoring protocols to regulators and industry
- Provide on-site fuel cell for CO<sub>2</sub> and natural gas
- Offer valuable training for students and industry professionals



*Field Research Station Schematic*

Each year for the 10-year duration of the Field Research Station small amounts of CO<sub>2</sub> will be injected into two wells at depths of 300 and 500 metres. Adjacent observation wells will contain monitoring equipment and shallow water wells will be available for groundwater testing.

We are working to ensure a wide range of technologies and surveys are available on site including:

- 3D & 3C and VSP seismic surveys
- Microseismic surveys
- Full logging suites and core analysis
- Fibre-optic monitoring technologies
- Geomechanics analysis
- Geochemical sampling/tracers
- Groundwater monitoring surveys
- Environmental geophysical surveys
- Casing gas, soil and atmospheric surveys
- Tiltmetres & DGPS surveys
- InSAR imaging and interpretation
- Fuel cell for CO<sub>2</sub> supply and clean power demonstration

