SUBSURFACE ALLIANCE

DATA DRIVEN | SCIENCE BASED | FIT-FOR-PURPOSE

We are a network of subsurface specialists using a Team-of-Teams approach to efficiently solve problems that have a direct business impact in today's fast-paced and evolving energy industry.

CO_2 STORAGE SOLUTIONS

We offer comprehensive subsurface services to help mitigate risks at every stage of a CO_2 storage project.

We use state-of-the-art geoscience and engineering tools and workflows to deliver key technical requirements for Class VI permitting.

Our team evaluates each project from a multidisciplinary perspective to identify key subsurface risks and help design data collection and mitigation programs.

By honoring data, we improve the reliability of our predictions while reducing uncertainty.

We strive to provide high quality subsurface solutions for the energy industry by bridging the gap between geoscience and engineering

GEOSCIENCE

Integrated multiscale characterization and modeling of reservoir architecture, distributed properties, and faults / fractures transmissivity and stability

GEOMECHANICS

Physics-based modeling of subsurface in-situ stresses and mechanical properties to evaluate integrity of containment zone and assurance of safe operations

PETROPHYSICS

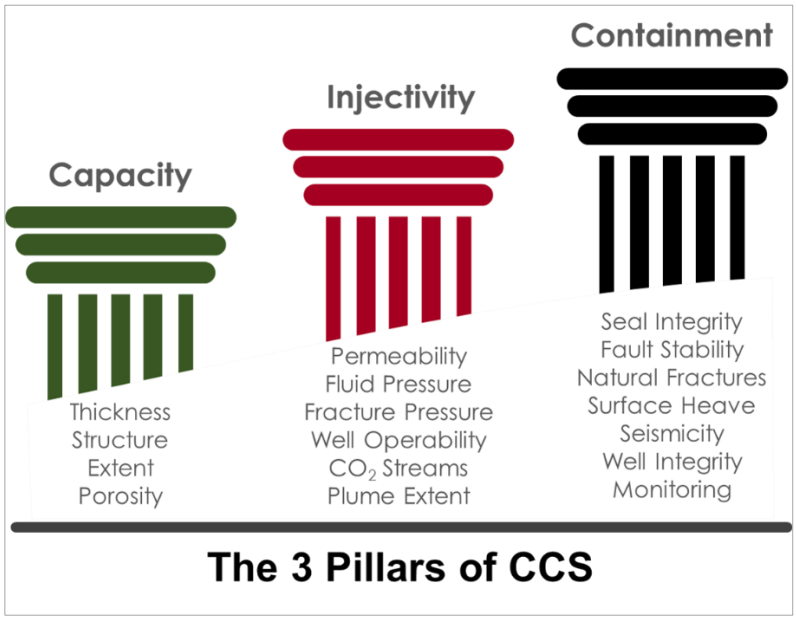
Rock typing, porosity, permeability and fluid composition to evaluate injectivity and storage

RESERVOIR SIMULATION

Injectivity and flow simulations leveraging geologic/geomechanical models to forecast plume extent and efficiency during the full life cycle of CO_2 storage

TECHNICAL SERVICES

Injecting CO_2 in the subsurface is a serious business. EPA Class VI program rules are amongst the strictest in the world and they truly require integration across disciplines. Subsurface Alliance can provide technical expertise and help customers expedite their permitting process.



FAULTS AND FRACTURES

We characterize faults and fractures to assess the likelihood of reactivation or propagation of fractures within and above the confining zone during injection operations.

GEOMECHANICS

We provide a full subsurface stress and pore pressure (1D or 3D) characterization to assess integrity of the confining zone(s) and integrity of injection wells to set safe operational parameters.

WELL OPERABILITY LIMITS

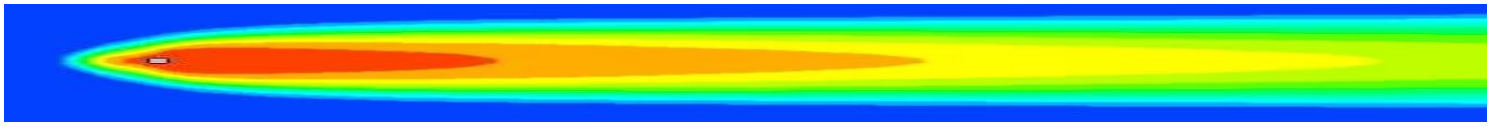
We can assist in calculating the confining zone fracture pressure (to inform injection pressure limits) and assess the physical-chemical characteristics of the injection / sealing zones and its fluids (to evaluate the compatibility between injected fluids and formation fluids and minerals).

SEAL INTEGRITY

We can assess seal integrity to evaluate the likelihood of fluid migrations across or along faults as well as through the sealing formation that could endanger underground sources of drinking water.

STORAGE CAPACITY

We can assist in estimating storage and flow capacity of the injection zone using reservoir simulations coupled with geomechanics to assess whether the formation has sufficient volume, porosity and permeability to accommodate the total anticipated volume of CO_2 to be injected at a specified rate.



CONTACT US

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Email us with any questions or inquiries. We would be happy to answer any questions, or even better, set up an initial consultation to frame a problem and see how we can help.

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www.subsurfacealliance.com