Carbon Capture and Storage (CCS) can make significant cuts in Greenhouse Gas emissions, and will need to be part of the development of future energy resources worldwide. Depleted oil and gas fields, which generally have proven geologic traps, reservoirs and seals, are ideal sites for storage of injected CO2. However, storage in saline aquifers, which rely on other trapping mechanisms such as solubility, residual and mineral trapping may be volumetrically more significant trapping mechanisms worldwide. Monitoring the behavior of stored CO2 includes both direct and remote technologies that can be deployed on the surface and in boreholes. Other monitoring involves time-lapse seismic, microseismic, petrophysical and geochemical sampling, including tracer and isotope analysis. Systematic risk assessment for all storage sites considers both the engineered and natural systems. CCS will undoubtedly provide entirely new challenges to the way we evaluate and monetize our future energy resources. Can these challenges be turned into opportunities? Successful deployment of CCS will require top quality science, specific infrastructure, appropriate regulations, clarity on liability issues and acceptance by the community. Organizations and individuals suitably skilled in these aspects stand to benefit tremendously from CCS.

For more information visit www.uwyo.edu/ser or call 307-766-4295.