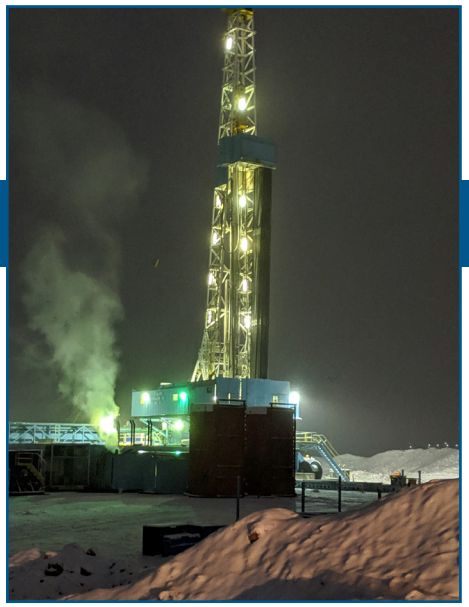
Coring Services

Coring the Hulett Sandstone/Lower Sundance

Reservoir Group Helps Expand Scientific Knowledge of the Hulett Sandstone in Wyoming



About the Wyoming CarbonSAFE Feasibility Project

Wyoming CarbonSAFE is focused on investigating the feasibility of practical, secure, permanent, geologic storage of carbon dioxide (CO^2) emissions from coal-based electricity generation facilities near Gillette, Wyoming. Potential storage zones being investigated are deep sandstone layers including the Muddy, Lakota and Fall River (Dakota Group), Lower Sundance, and Minnelusa Formations.

Customer Challenge:

The Hulett Sandstone/ Lower Sundance was deposited in the ancient Jurassic seas that covered Wyoming during a period when the sea levels fell. This sandstone was laid down in offshore bars, as beach and dune sands were pulled out into the ocean by near-shore waves and tidal forces. Though a sand body with zones of decent porosity and permeability, the Hulett Sandstone/Lower Sandstone has never truly been a target of subsurface (basinal) exploration or study. As the silty/shaly formations above the Hulett have very little organic content and the Triassic redbeds below are barren, the Hulett was sealed from being charged with hydrocarbons for over 150 million years. As such, it presents an ideal target for carbon sequestration studies as there are no minerals to disturb, but having never been an exploration target there is scarce available core data.

The Results:

Reservoir Group is currently helping to expand the scientific knowledge of the Hulett Sandstone in Wyoming as they have successfully recovered an entire Hulett core at a research well (UW PRB #1) in Northwest Wyoming. This core represents the first Hulett core ever targeted principally for scientific reservoir analysis, as well as being the first of its kind to be recovered in northern Wyoming specifically for public study. There were many operational challenges associated with core recovery of this sandstone, including limited operational data and geomechanical and fluid character.

The wellsite crew at Reservoir Group were able to recover 130′ of 4″ core (100% recovery) from the Hulett/Lower Sundance.

The University of Wyoming has extended a personal thank you to our Coring Technicians, Vic and Brian, for helping to push the boundaries of new science in Wyoming.

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