Decarbonatization While Increasing Oil Production Using CO_2

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Research Award Title: **Decarbonatization While Increasing Oil Production Using CO_2**
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Abstract: Carbon capture utilization and storage (CCUS) provides a key opportunity to reach climate change goals and enhance the US energy security. One example of such project is PetraNova, Texas. PetraNova has installed post combustion CO_2 capture on a 240 MW coal fired unit at the Parish power plant near Houston, Texas where 80 MMcf/d of captured CO_2 is transported and used for EOR in West Ranch oil field. There is an estimate of 1.6 MM tonnes/year CO_2 emission captured and stored with over 60 MMbbls of oil produced in 1 year. The ability to efficiently model and predict the storage capacity and oil recovery potential will have a monumental impact in the future CCUS projects. We have the modeling capabilities to demonstrate the feasibility of storage and co-optimize the stored volume and produced oil recovery for specific geological storage site.