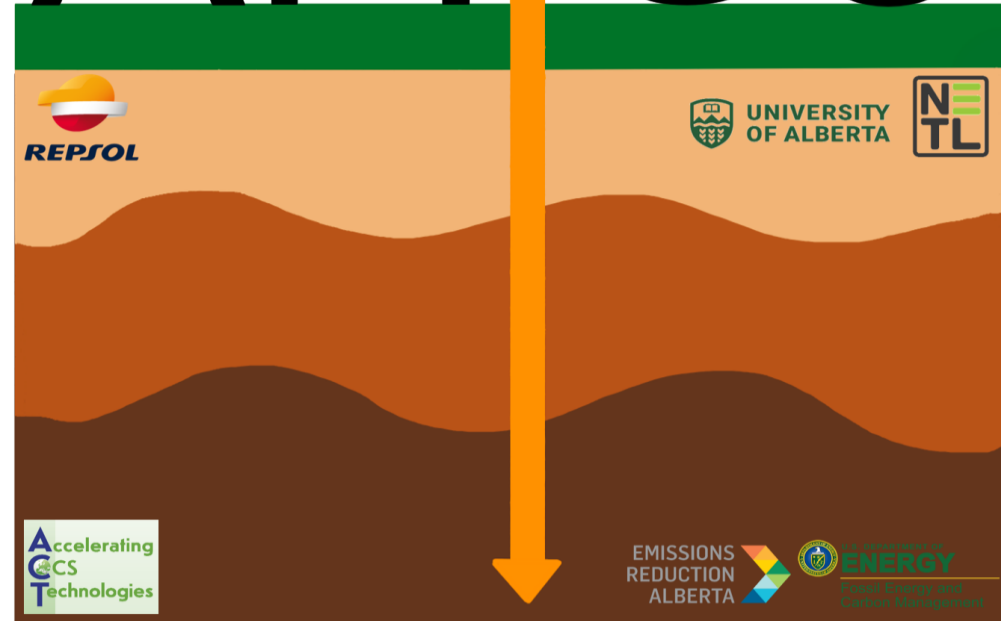


AMIGO



ACT

Co-funded by the
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Commission within
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7th ACT Knowledge Sharing Workshop 4-5 October 2023 Paris, France

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Companies



- Repsol   Peyto 
Exploration & Development Corp.

- National Technology Energy Lab



- University of Alberta



Project Objectives

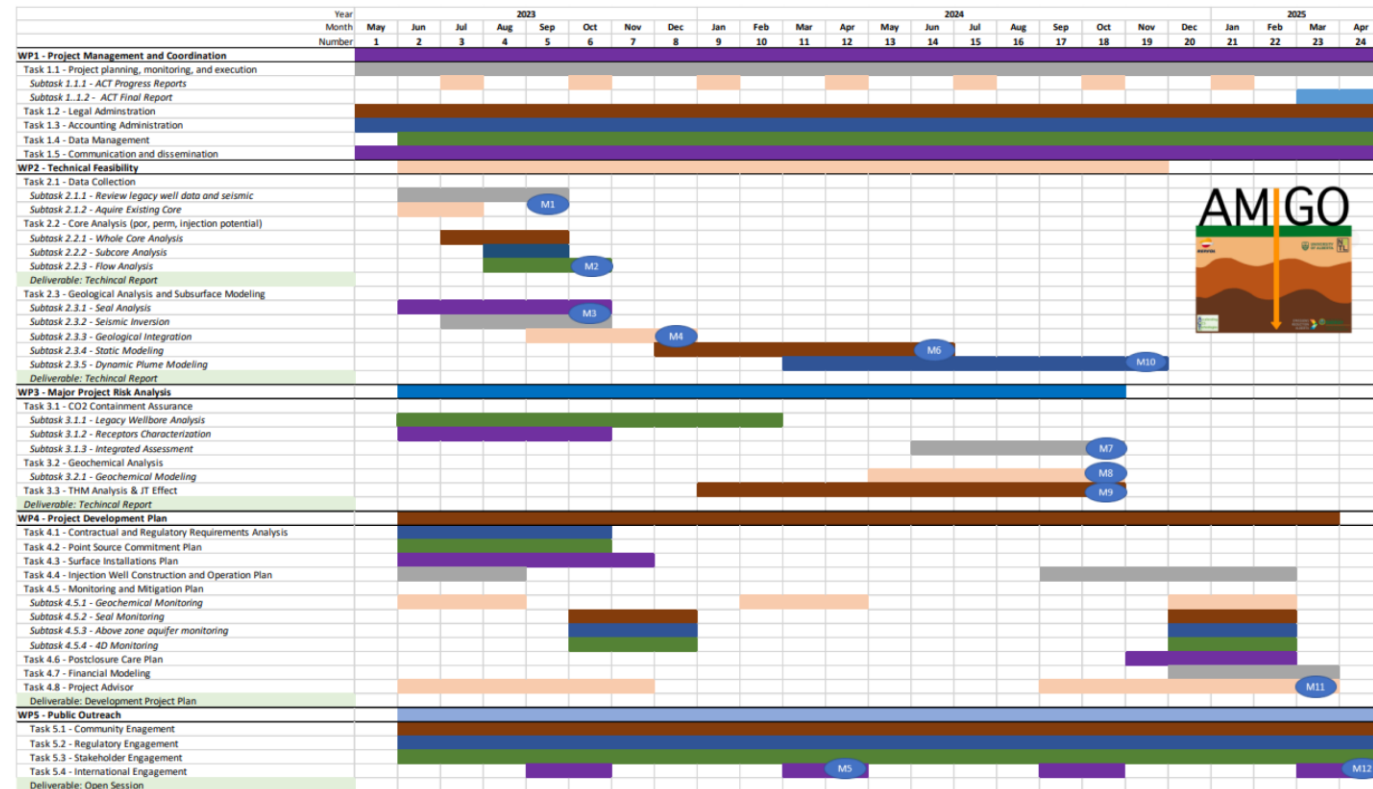


- Perform technical feasibility study and determine novel workflows for planning a CCS hub-scale project utilizing a pressure-depleted gas reservoir in Edson, Alberta that has a CO₂ storage capacity of >100 million tonnes
- Incorporate modern and emerging workflows and provide storage potential data
- Support provincial, federal, and international regulators in novel regulations for injecting CO₂ into depleted gas reservoirs

Project Administration



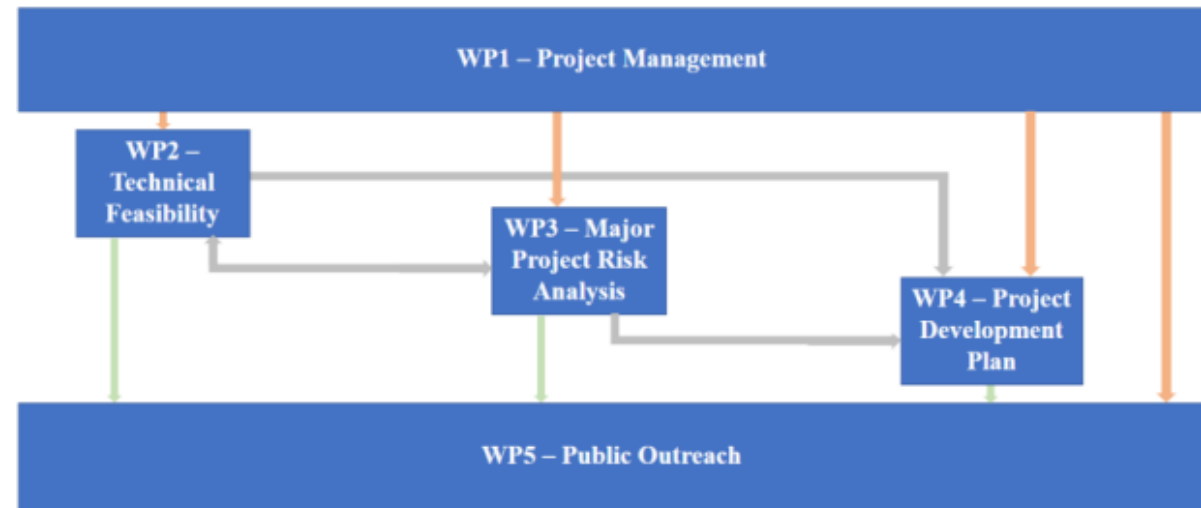
- Contribution Agreement with ERA (~~Repsol~~) → Peyto
- Consortium Agreement (3-way)
- Executing Biweekly meetings
- Formal Kickoff (May)



Project Milestones

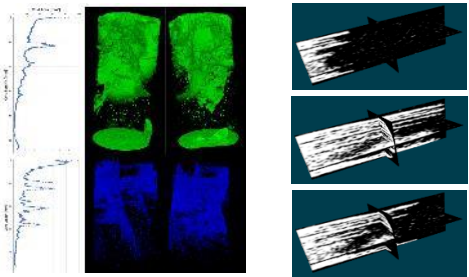


- Technical Report of the collection and review of input data
- Technical Report of the results of the core and other geologic analyses
- Interim Report from hosting open sessions and engaging with nearby communities, regulatory bodies, interested stakeholders, and international parties
- Technical Report of the static model results & CO₂ containment assurance
- Technical Report of the dynamic modeling results
- Project Development Plan -MMV plan, site plan, Amigo potential end users and remaining public outreach work required

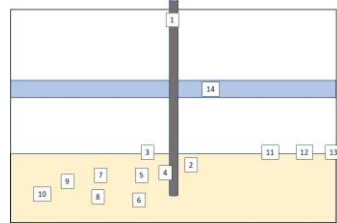




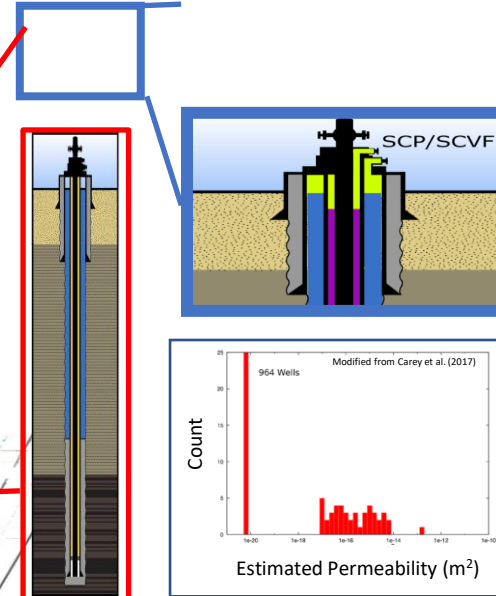
Advanced imaging and characterization of reservoir/seal core.



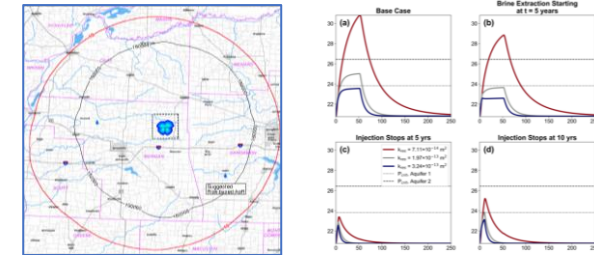
Investigate geochemical effects on reservoir, seal, and wells (CO_2 and H_2S)



Characterize Well Integrity



Quantitatively assess containment effectiveness and potential leakage risk



Insights to inform stakeholder decision making



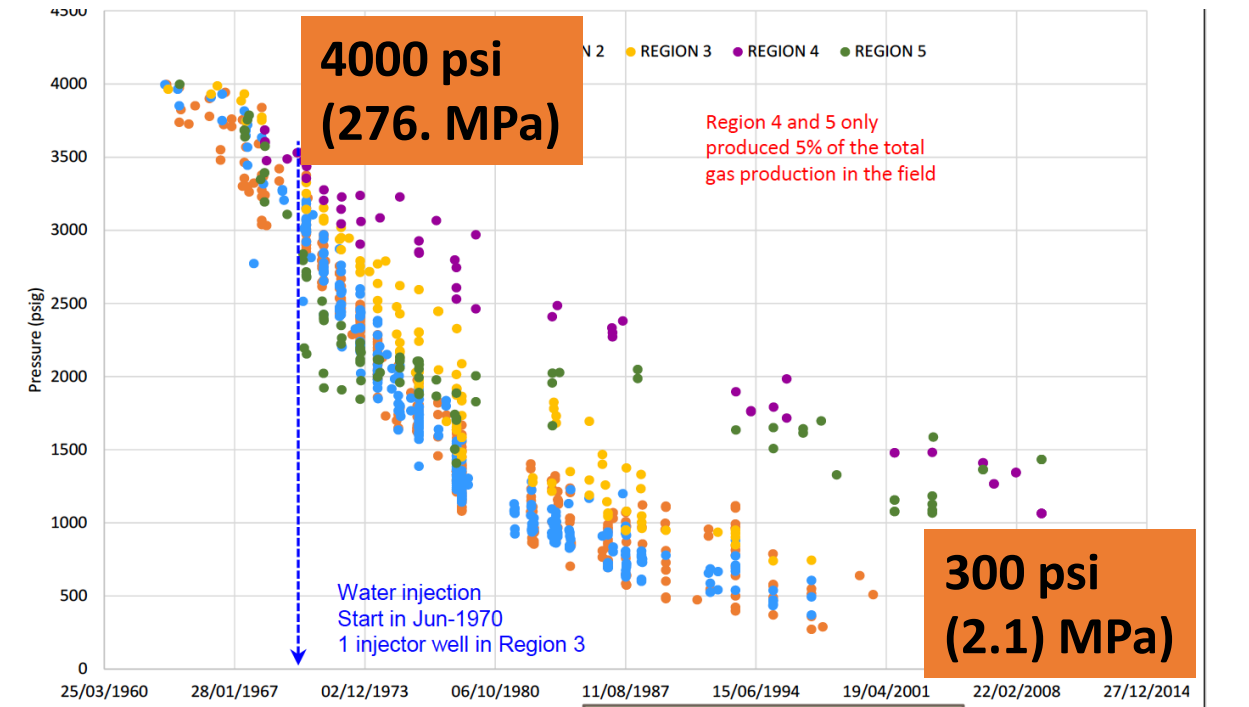
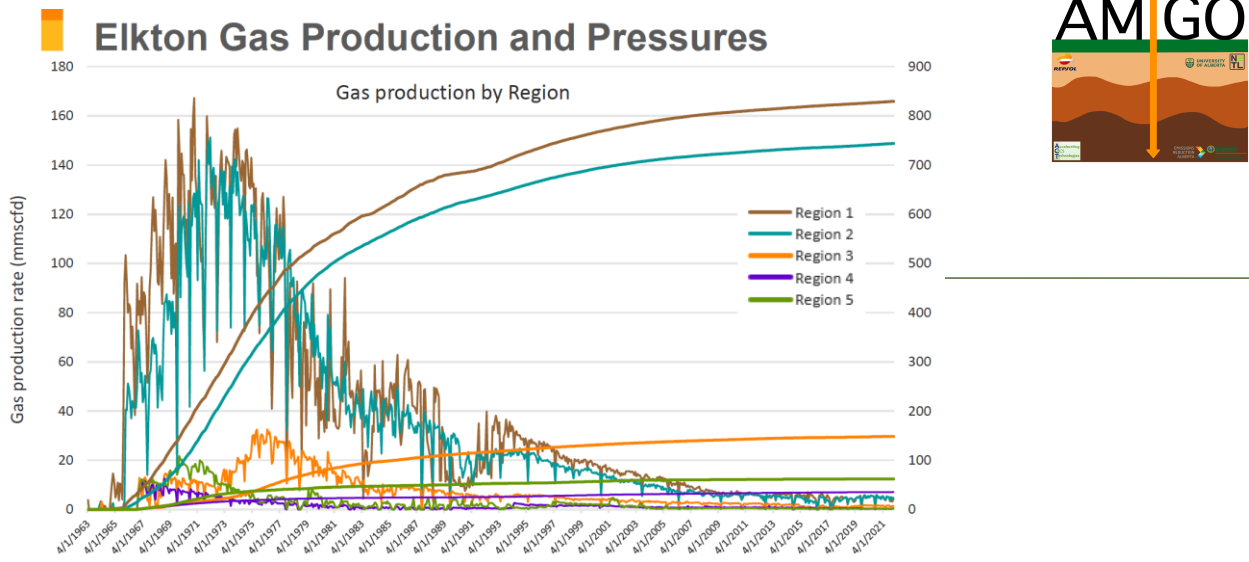
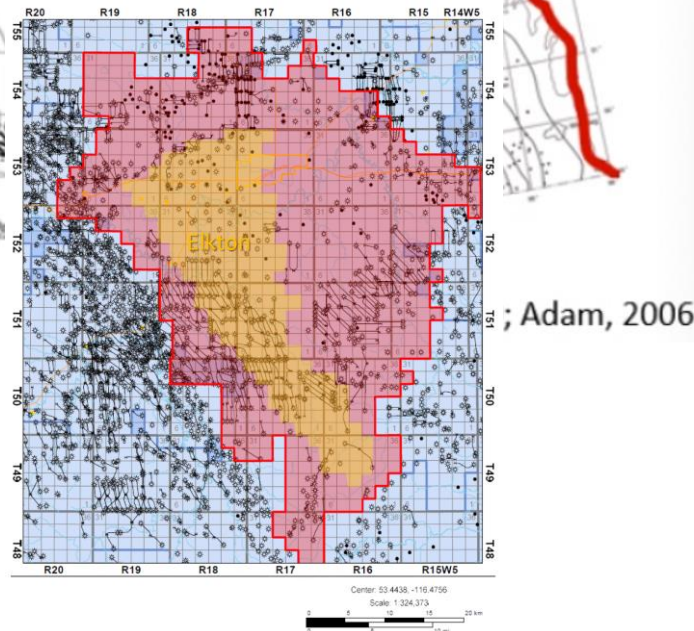
Simulate reservoir response (including JT effects)



Project Pictures



Inputs MatBal	
Gas gravity:	0.648
H2S (%):	2.240
CO2 (%):	4.640
Initial Pr (KPa):	26,752
Tr (F):	210
Water salinity (ppm):	57,000
Water compressibility:	6×10^{-6}
Rock compressibility:	1.75×10^{-6}
Gas compressibility:	0.950
Swirr(%):	10
Average porosity (%)	11.34



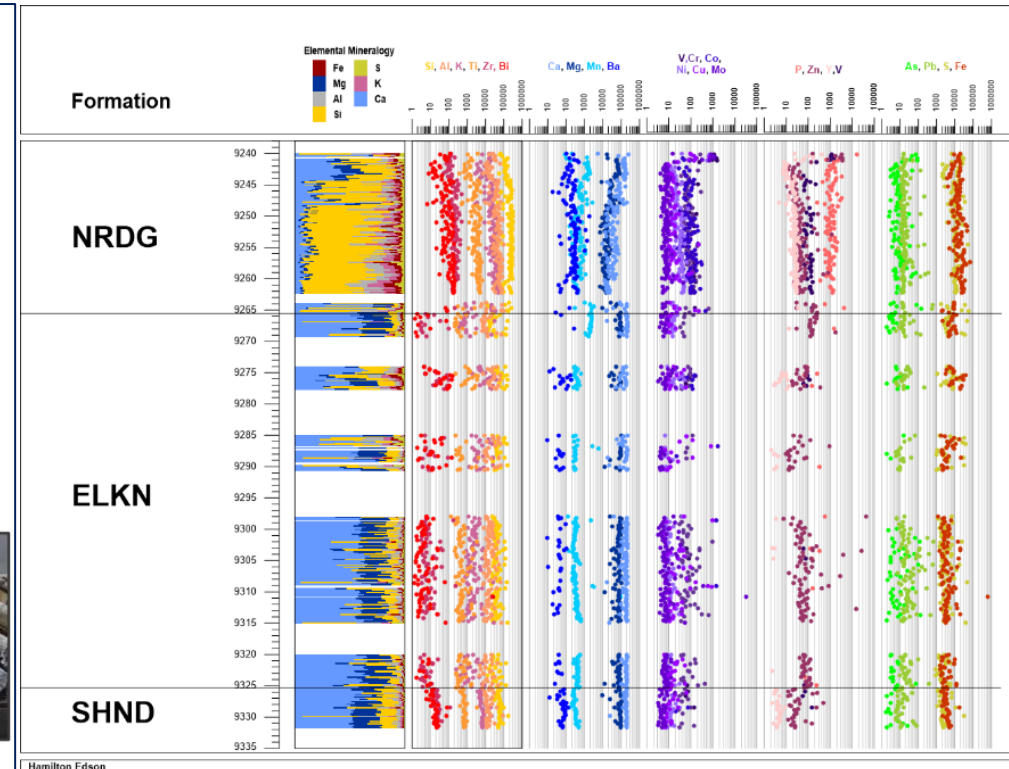
Progress on Core Characterization



Elemental mineralogy isolated to provide links to mineralogy

Brief Timeline Summary

- June 8th - Core viewing at the core research center with virtual links
- July 18th – Core picked up for shipment
- August 10th – Arrival of core at NETL
- August 23rd – Core reconstructed and plan developed*
- August 28th - Data collection at NETL started
- September 12th – Medical CT and XRF scanning completed at NETL



Next Steps



-
- Resolve transition from Repsol to Peyto
 - NETL Agreements
 - Finalize Consortium Agreement between partners
 - Continue with key first tasks are core and well integrity work