CO_2 Storage Opportunities in the Northern Shelf of the Permian Basin

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Introduction to Riley Permian

- Riley Permian is a growth-oriented, independent oil and natural gas company with operations focused in Texas and New Mexico
- Core business operations focus on **modern horizontal drilling and completions** applied to the conventional formations in the Permian Basin
- Innovative, financially strong and self-funding company, with capital available for new business ventures associated with **carbon capture (CCUS)**

Select Company Metrics	
Net Acres	*~40K*
2022 Operating Cash Flow	*$170MM*
Equity Market Cap(1)	*~$760MM*
Enterprise Value(1)	*~$1.2BN*
Dividend Yield(1)	*3.6%*

(1) Equity Market Cap and Dividend Yield based on share price as of 6/16/23. Enterprise Value based on market cap plus debt and cash balance as of 3/31/23 plus $330MM of financing related to the New Mexico Acquisition.

ESG Highlights

Committed to ESG engagement while responsibly producing some of the world's most demanded natural resources

Environmental

- Formed JV to use produced gas for onsite power generation which will reduce emissions
- Pursuing CCUS activities to capture and store industrial CO_2
- 2022 device replacement project resulted in a 92% reduction in methane emissions from pneumatic devices

Social

- Providing low-cost, reliable and secure energy to society
- U.S.-based workforce, with zero offshoring of employed labor, producing U.S. natural resources
- Zero recordable employee injuries in 2021 and 2022

Governance

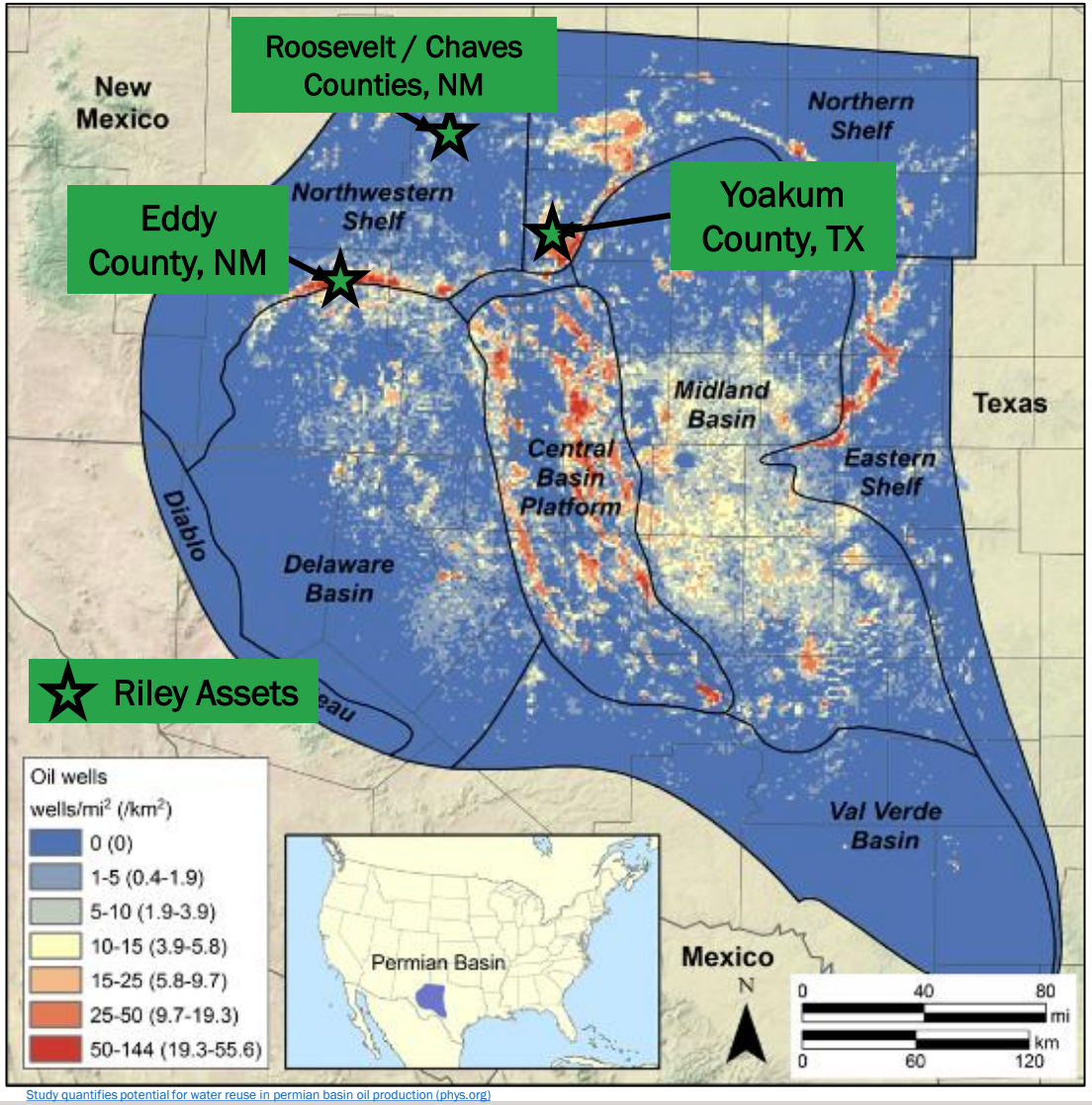
- Prioritizing long-term corporate sustainability and creating value for shareholders
- Balanced board of directors: significant shareholder representation; 4 of 6 directors are independent
- 100% of committee representation is from independent directors

Riley Permian Is an Ideal Storage Partner for CCUS

1	**Company Focus on CCUS**	• Management focus to assess technical and commercial feasibility • Established partnership with CUSP • Corporate goals of providing both low-cost and lower-carbon intensive energy
2	**Optimal Geology and Ample Capacity for CO_2 Storage**	• Multiple geologic intervals, excellent regional seal, and minimal fault leak risk • Estimated risked storage capacity is compliant with DOE requirements for hub status • Minimal seismicity risk (absence of deep-seated faults)
3	**Ideal Geography for CO_2 Projects**	• Located at the intersection of the most robust CO_2 pipeline network in the U.S. • Diverse collection of regional emitters • Reduces greenfield infrastructure construction needs, capital costs and time
4	**Project Readiness**	• EOR operations are fully permitted and operational • Assessing siting and other commercial aspects for permanent storage • Phase I and II have completed internally; Carbonsafe III ready

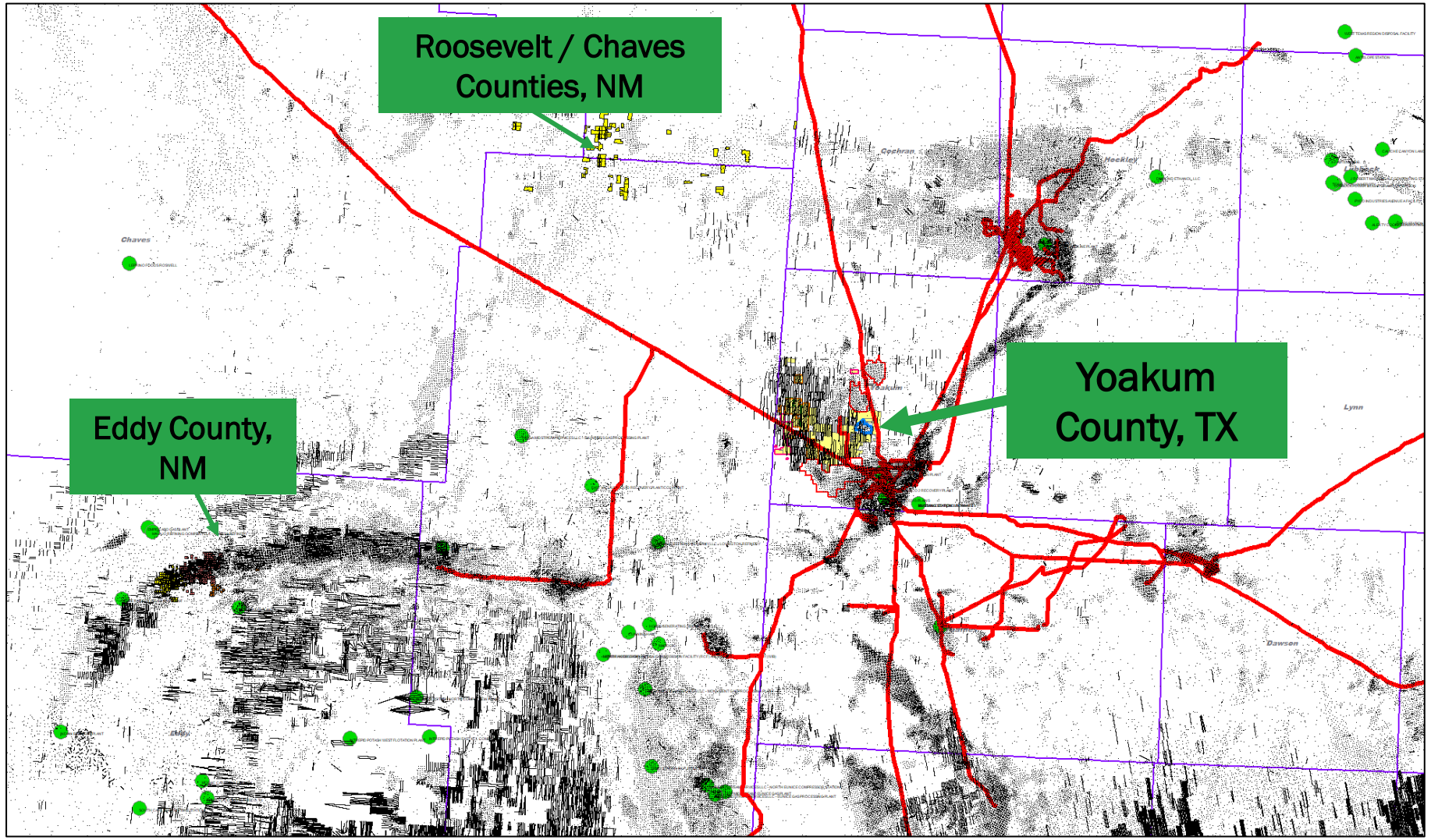
Optimal Geology for Storage on the Permian Shelf

- Proven track record for storage
- Dense well control implies stacked saline aquifers
- Relatively shallow reservoir targeting is ideal for EOR and reduces drilling costs



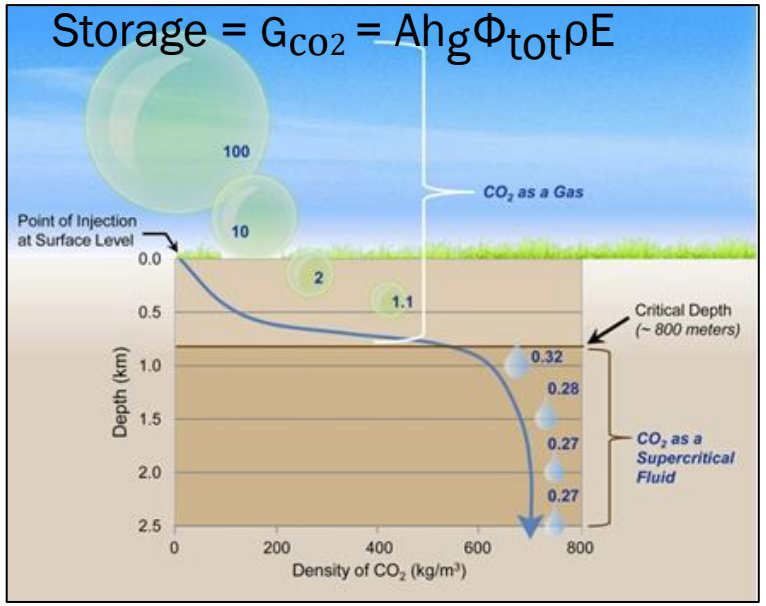
Study quantifies potential for water reuse in permian basin oil production (phys.org)

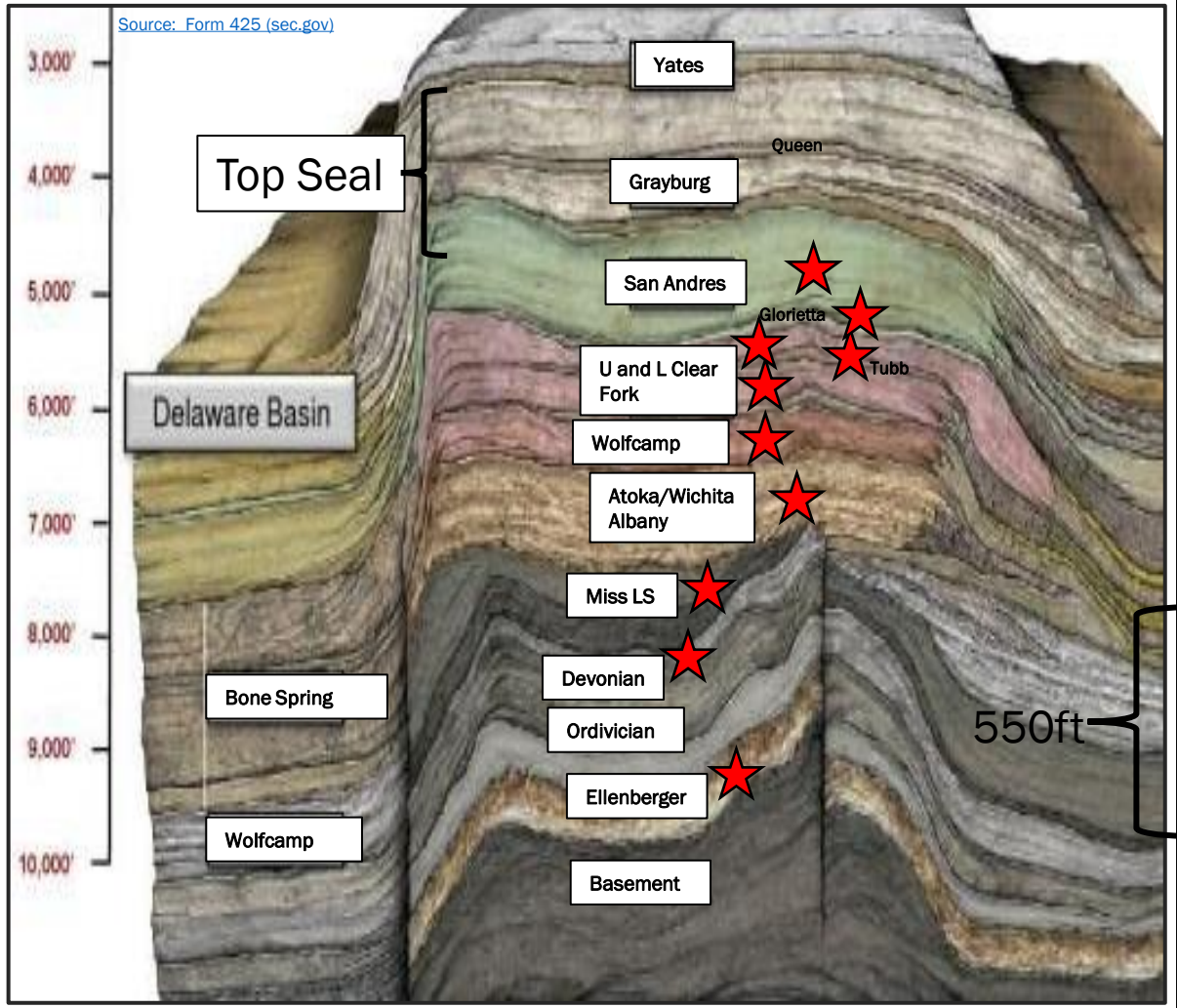
Ideal Geography with CO2 Pipeline Network

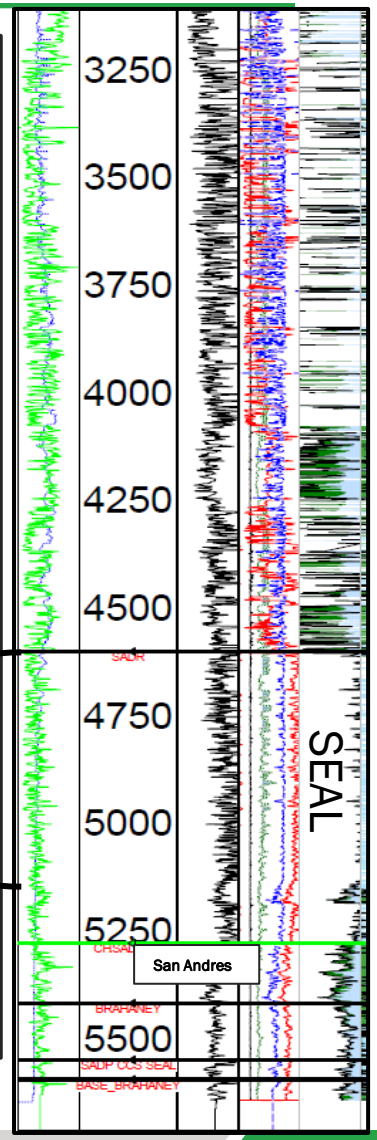


Ample Capacity for Storage on the Permian Shelf

- Riley has estimated the storage potential within the core acreage, and we are expanding our acreage footprint
- Ample capacity for a DOE/EPA defined storage hub
- San Andres EOR is an important consideration going forward
- Top seal is excellent for system containment with no fault risk in the top seal which has been confirmed on seismic 3D data.



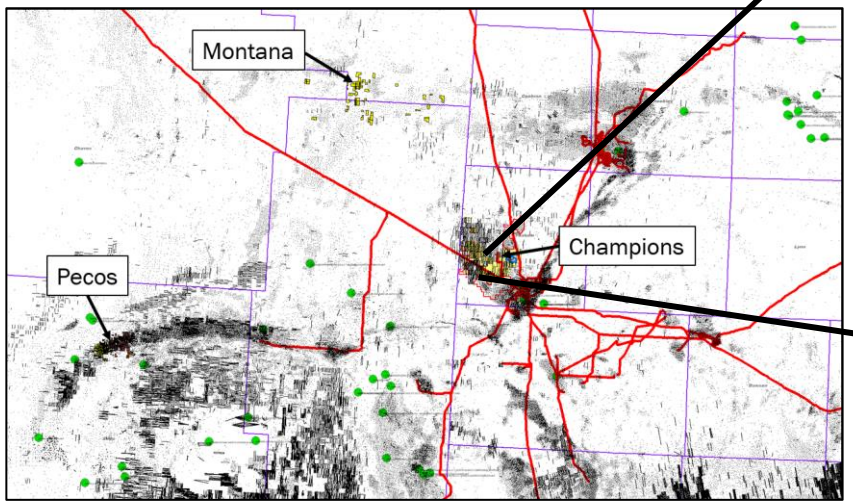


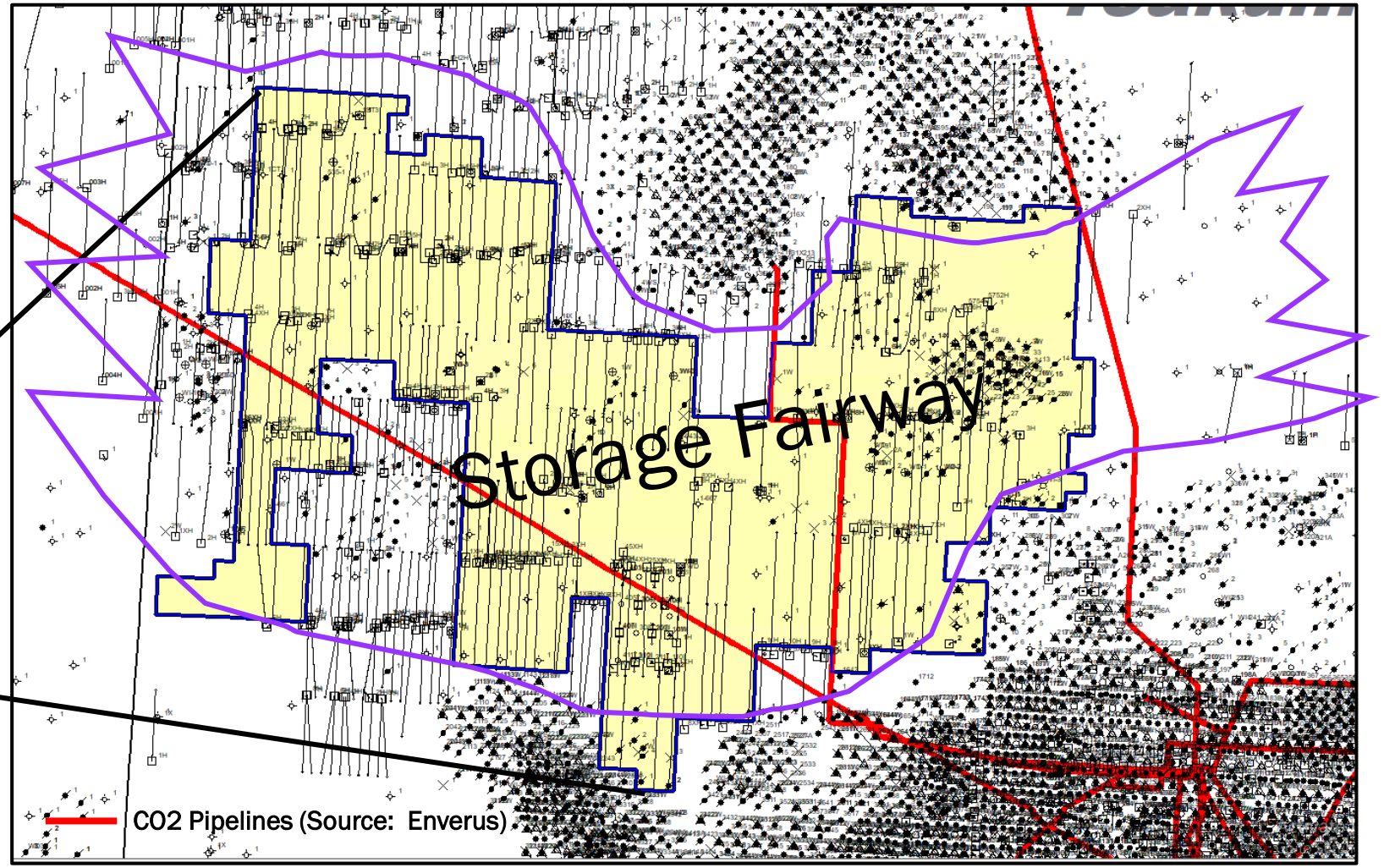


GCO2: *Estimate of saline formation storage capacity*
A: *Area*
hg: *Gross thickness of saline formations for CO2 storage*
Φ : *Average total porosity of entire saline formation*
ρ: *Density of CO2 evaluated and pressure and temperature at specific geologic unit depth*
E: *CO2 storage efficiency factor which reflects estimated CO2 storage percent of the rock volume*

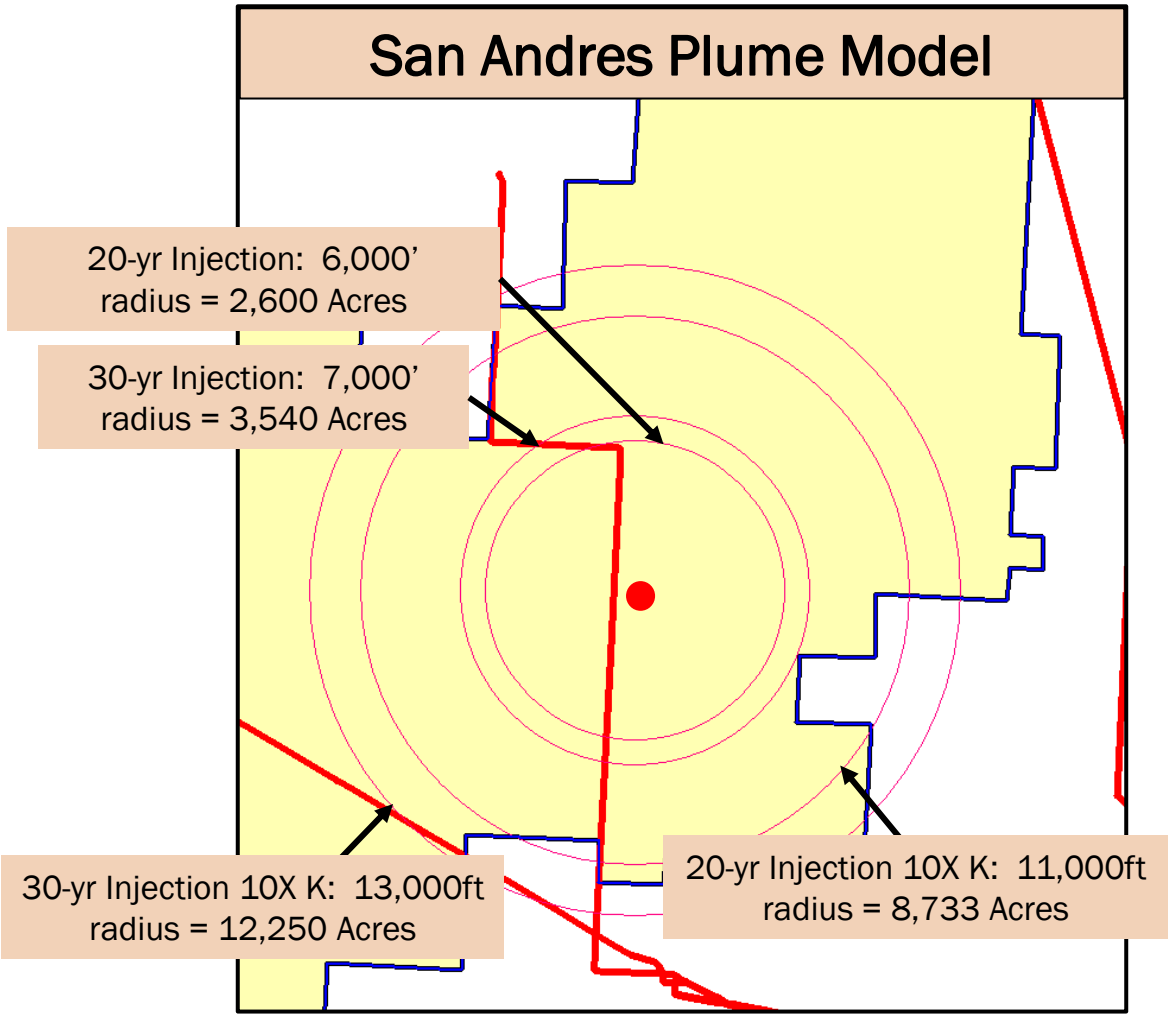
Riley Permian's Yoakum County, Texas Asset

- Contiguous acreage (30K+ acres)
- Storage AOI has low vertical well density, hence lower risk for legacy wellbore escape paths for injected CO_2
- Large seismic data coverage, with no vertical fault leaks detected

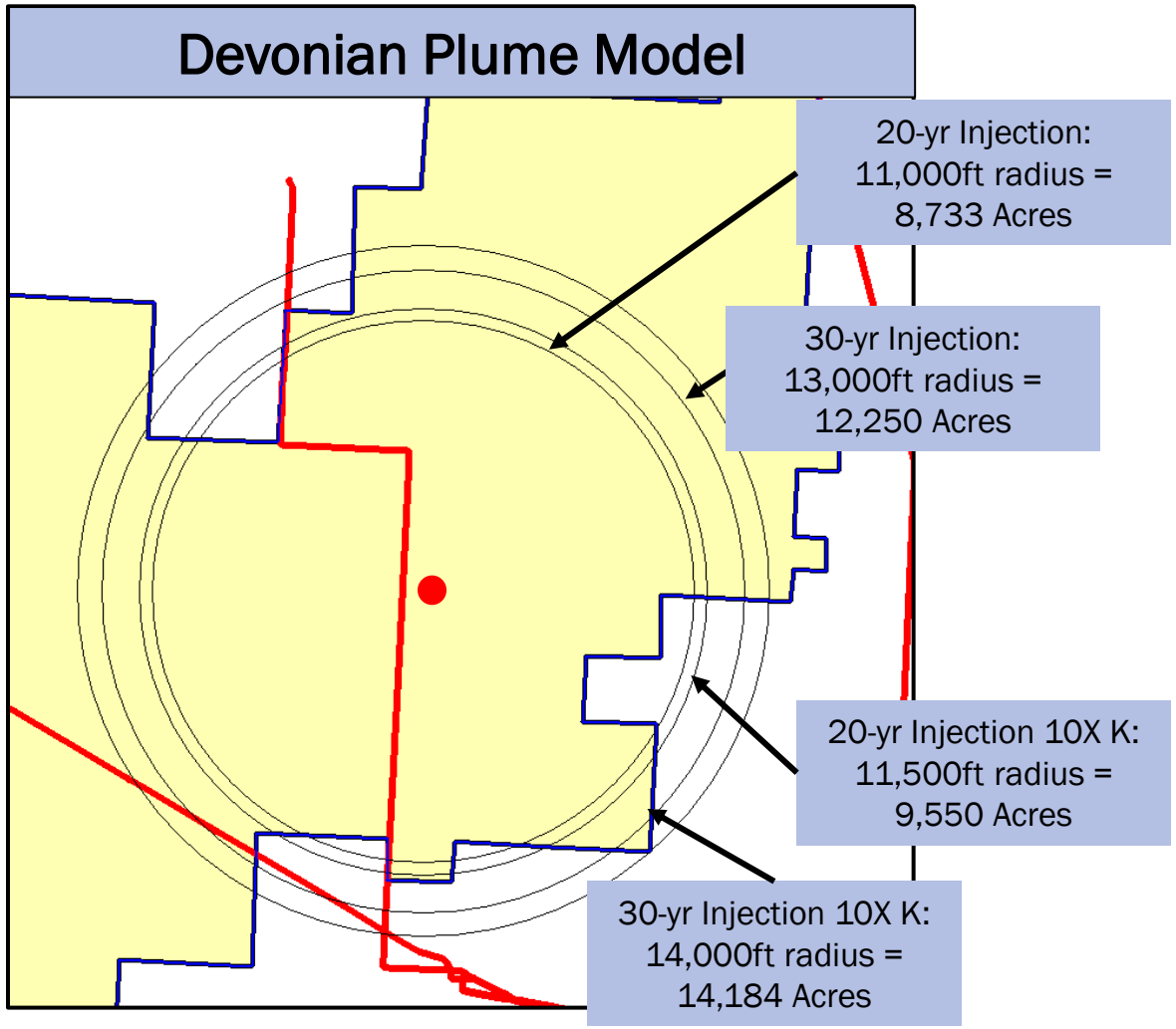




Storage Well Simulations over Project Lives



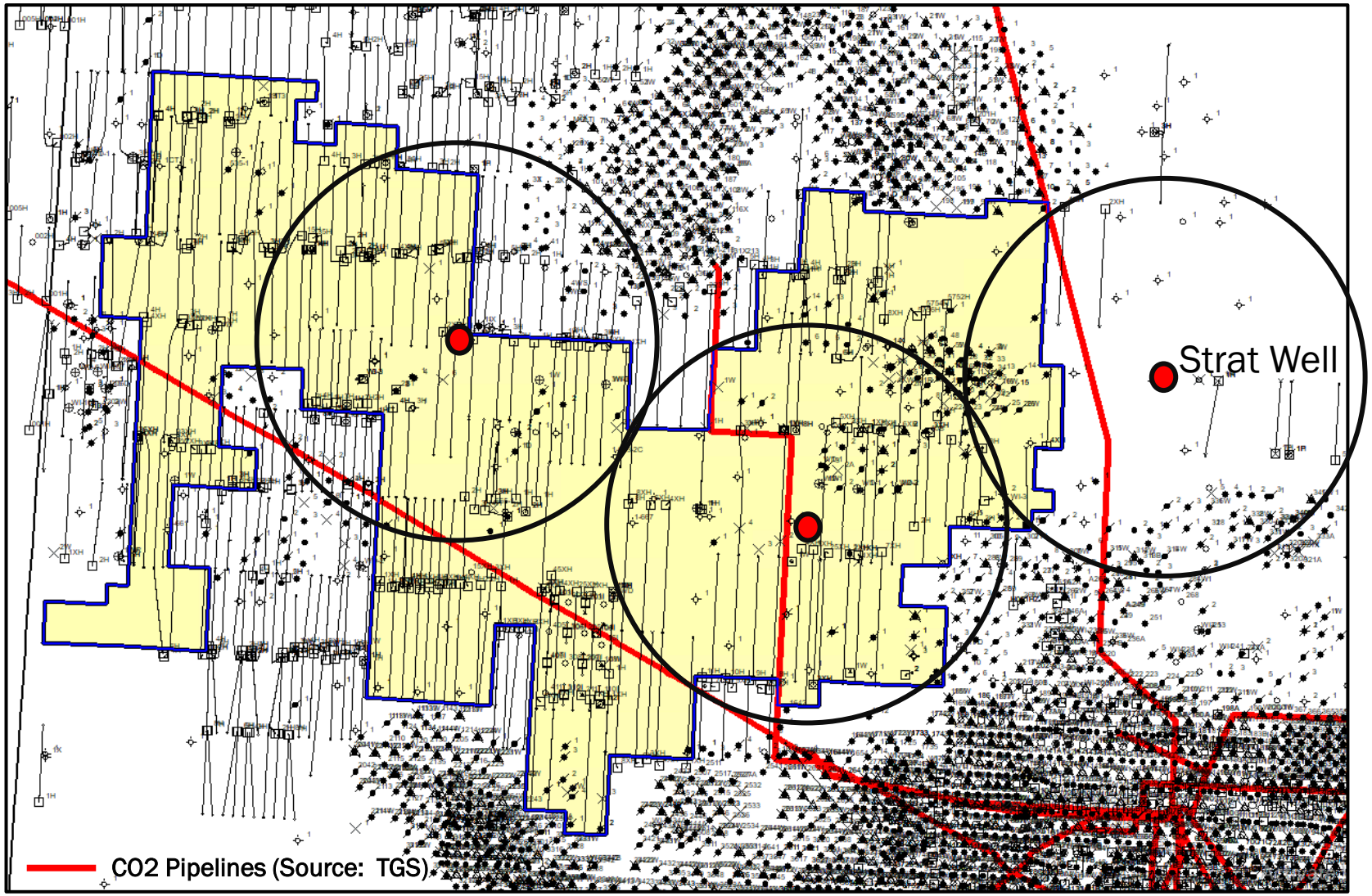
~ 3MMcfpd Base Case



~ 15MMcfpd Base Case

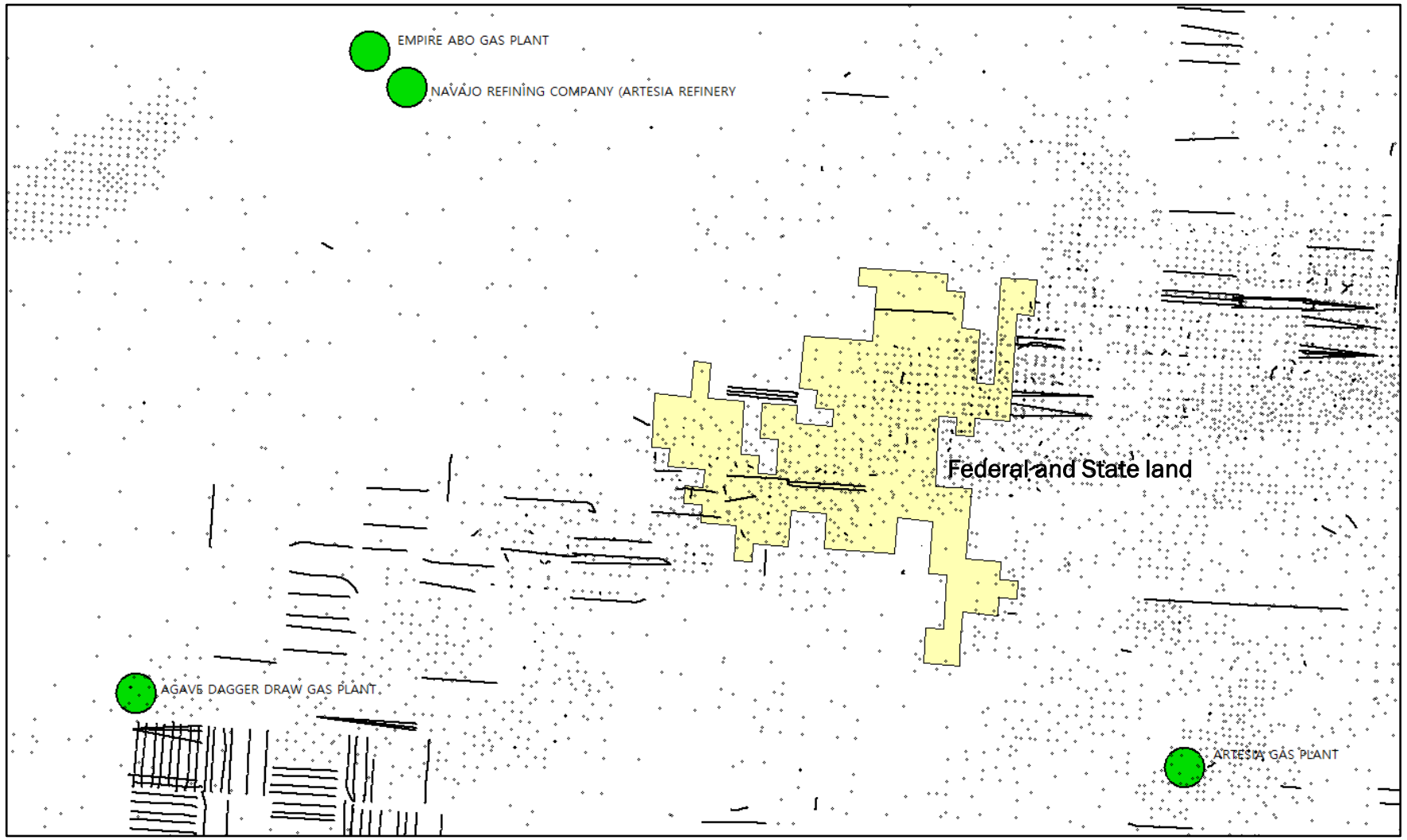
Hypothetical Class VI Well Plumes

- Opening multiple storage reservoirs at the same time will decrease the plume aerial extent
- Using conservative base case plume size for planning purposes
- Lower leakage risk with lower old vertical well control in operational area



New Mexico Asset and Options for Sources

- Emitters include:
  - Empire Abo Gas Plant
  - Navajo Refining Company LLC – Artesia Refinery
  - Agave Dagger Draw Gas Plant
  - Artesia Gas Plant
- Assessing storage potential; likely to be similar to Yoakum County
- Eastern portion of the asset is federal and state land (~7K acres) which could simplify counterparty matters



CCUS Real World Commercial Challenges

1	Nascent industry still figuring out sharing of credits and liabilities among various counterparties
2	Despite improvements with the IRA, permanent storage economics can be thin (entirely dependent on subsidies) following inflation-driven costs on equipment and higher interest rates
3	Post-combustion emitters arguably should be most targeted (highest level of emissions) but also present less efficient, highest cost of capture
4	Challenge of obtaining letters of support from emitters as they maintain optionality (or are overwhelmed with solicitations)