

BIO

- **Graduated Georgia Institute of Technology in 1977 with BS in Civil Engineering**

- **Worked for 3 years for Halliburton as a field engineer**
- **Worked for 32 years for OXY or predecessor company as production engineer, drilling engineer, health and safety manager, regulatory affairs expert, health and safety audit manager, completion manager dealing with issues/projects in the following areas:**
 - US - Alabama, Mississippi, Louisiana, Texas, Oklahoma, New Mexico, Alaska, Wyoming, North Dakota, Kansas, California.
 - International – Libya, South America, Middle East

- **Professional Affiliations:**
 - Former Chairman, Regulatory Practices Committee, New Mexico Oil & Gas Association
 - Former Member, Regulatory Practices Committee, Texas Mid-Continent Oil & Gas Association

- **Member, Society of Petroleum Engineers**
- **Registered Professional Engineer in Texas (1997)**
- **Applicant for Certification as a Professional Health and Safety Auditor**

- **As part of my experience, I have worked on the regulatory issues associated with numerous CO2 injection projects in Texas and New Mexico, including the North Hobbs Unit.**

- **Current Position – Director, Regulatory Affairs**

BEFORE THE OIL CONSERVATION
COMMISSION
Santa Fe, New Mexico
Exhibit No. 3
Submitted by: OXY
Hearing Date: May 9, 2013

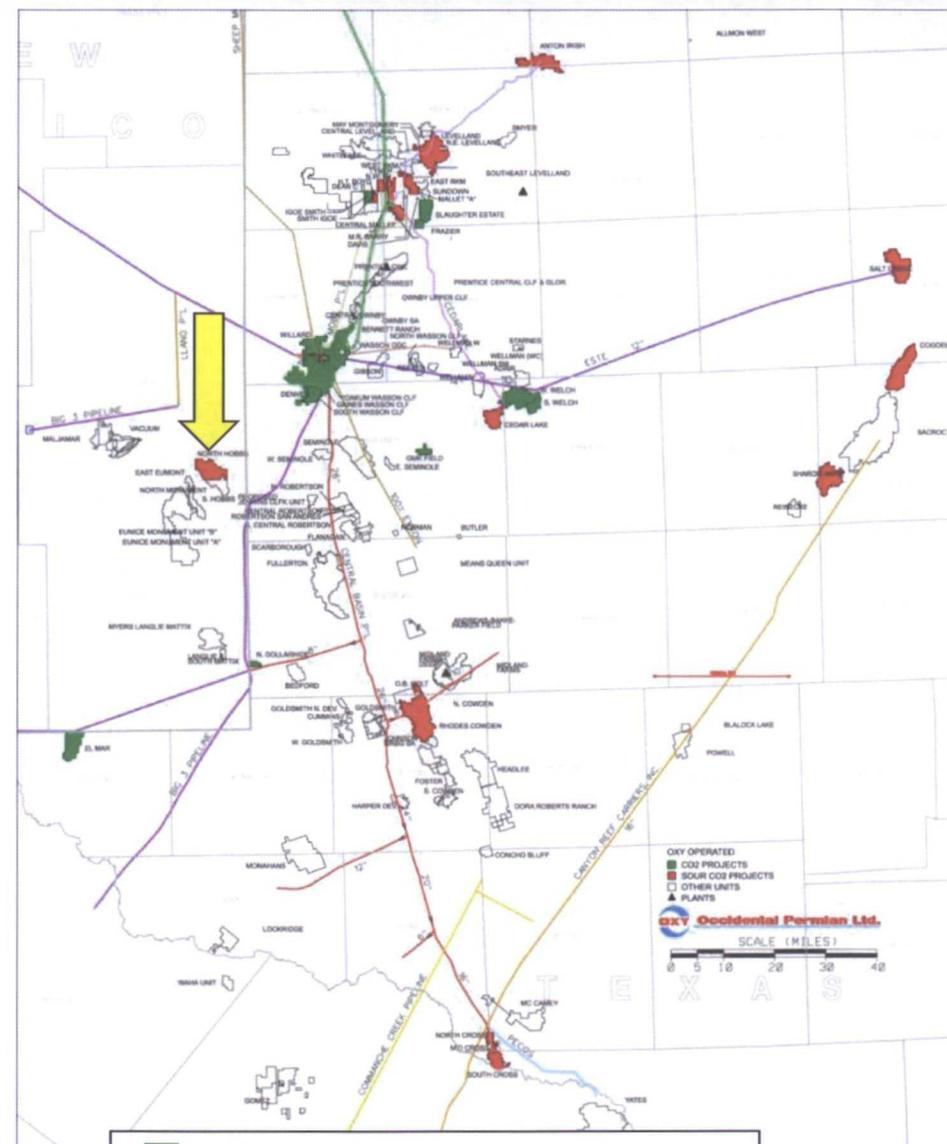


Worldwide Oil and Gas Producing Areas



OXY's CO₂ Floods in the Permian Basin

- Largest Oil Producer in Permian Basin (60% comes from CO₂-related EOR projects)
- We operate 28 Active CO₂ Floods (the most in Permian Basin):
 - CO₂ Injection of 550 BCF annually
 - 15 Floods with Produced Gas Reinjection, requiring more than 2500 injection wells, 65% injecting >100 ppm
 - No produced gas injection inside city limits
- Major CO₂ Source Field (Bravo Dome)
- Over 9000 employees and contactors
- Drilled over 550 wells on operated properties in 2012

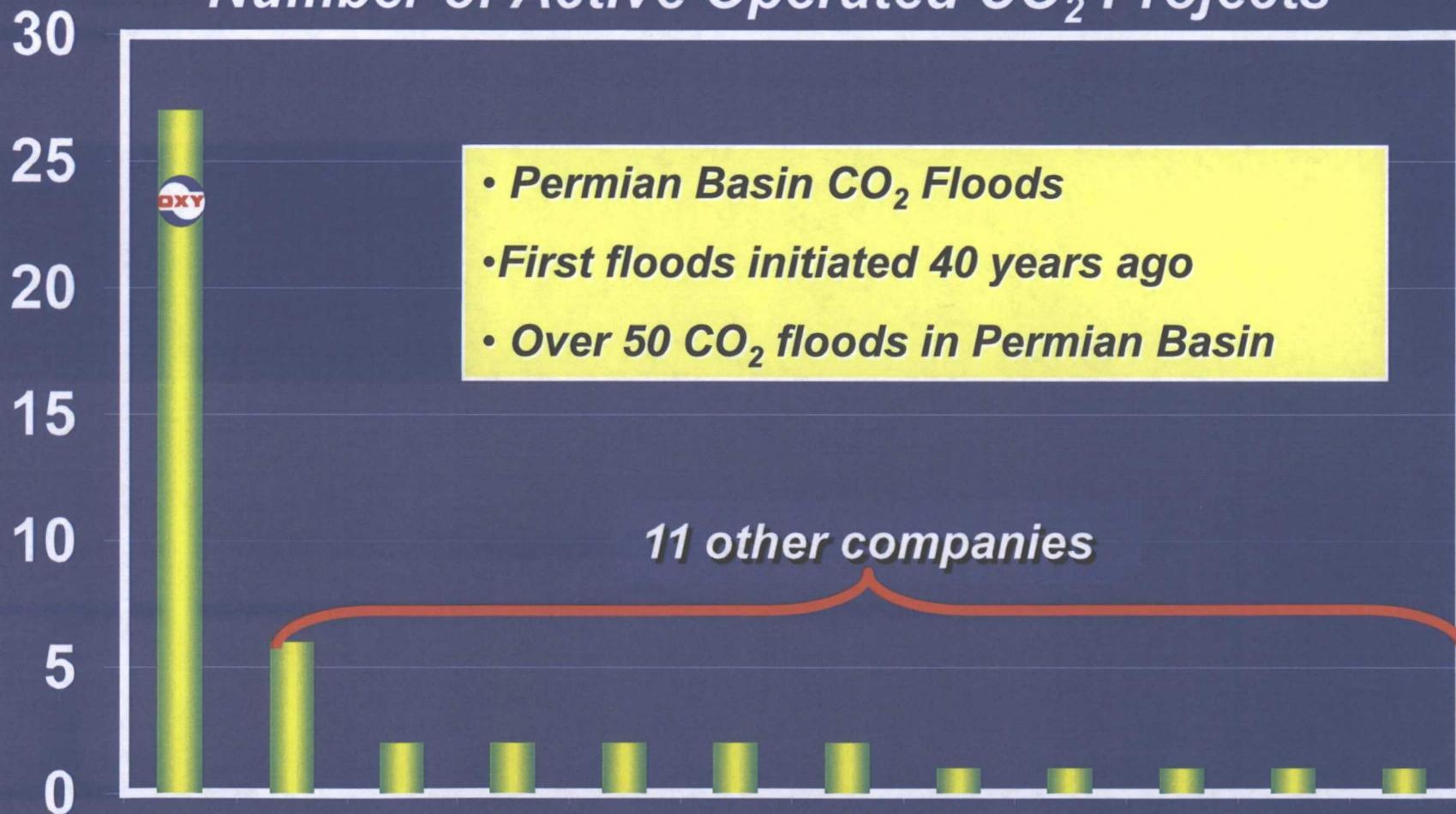


CO₂ Projects
CO₂ Project with Produced Gas Reinjection

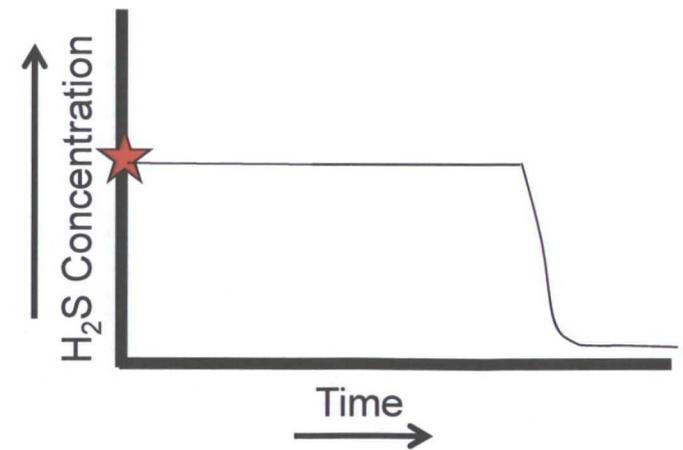
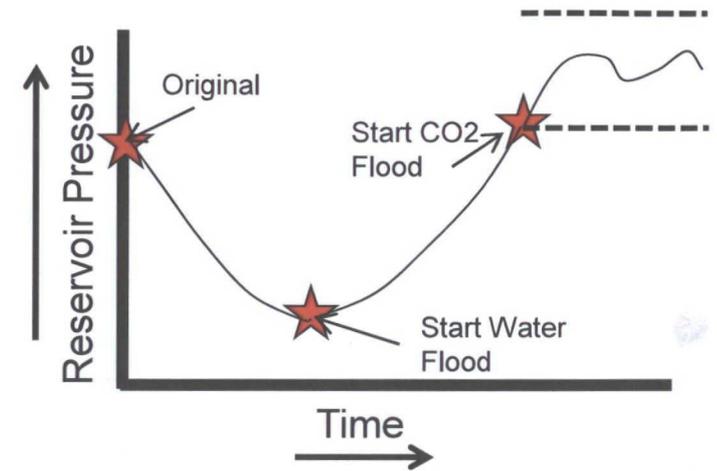
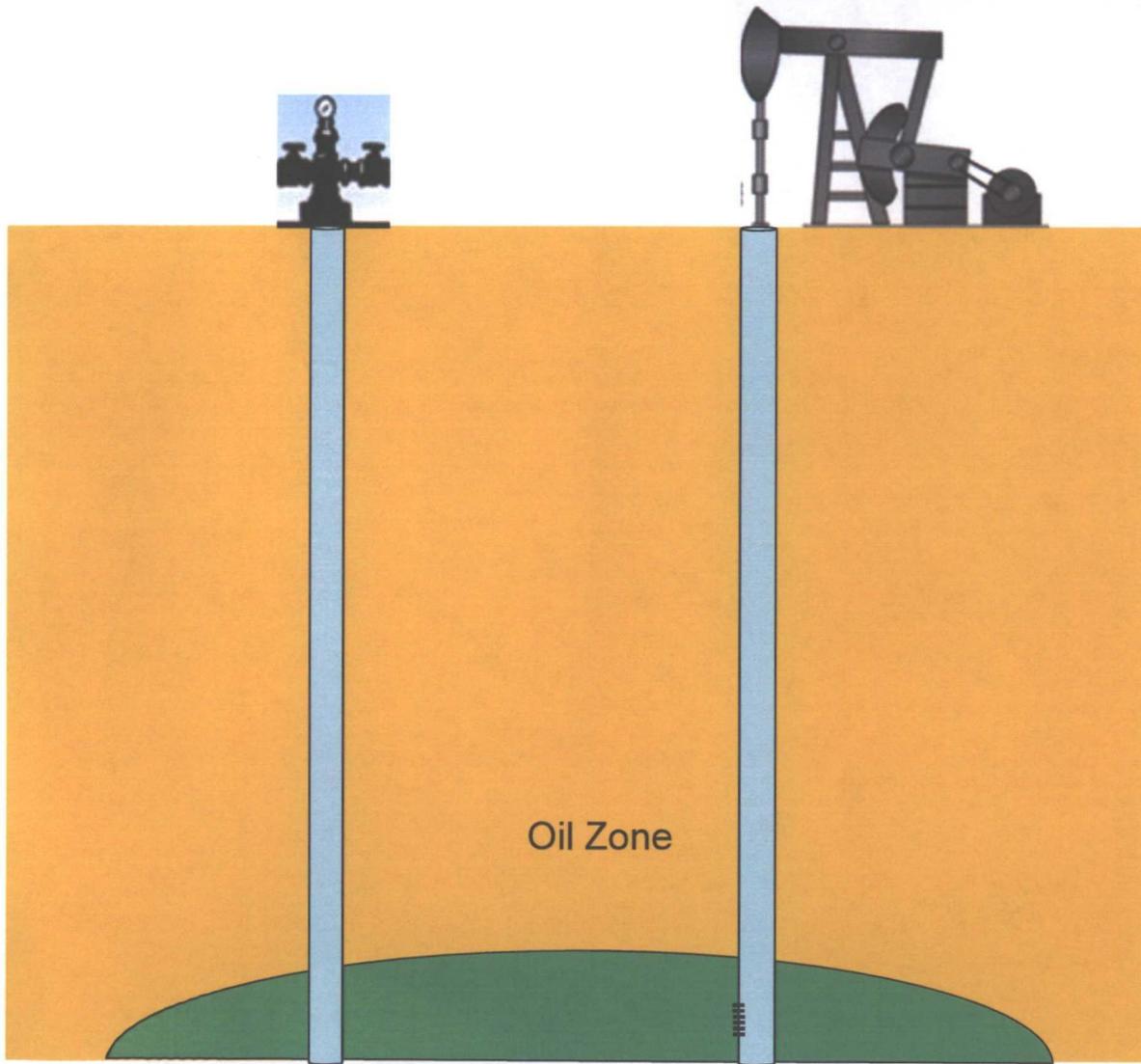


Permian Basin CO₂ Floods

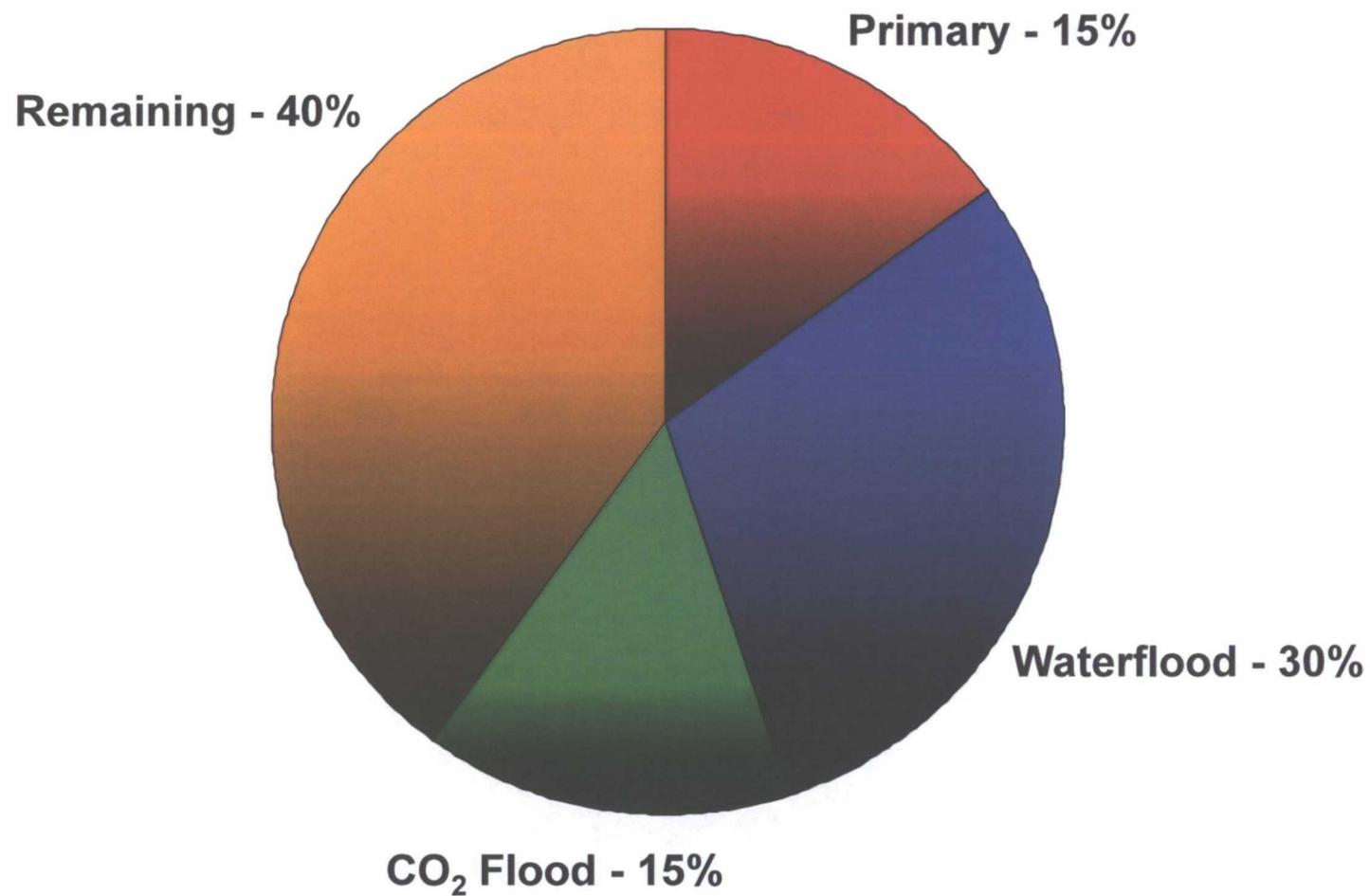
Number of Active Operated CO₂ Projects

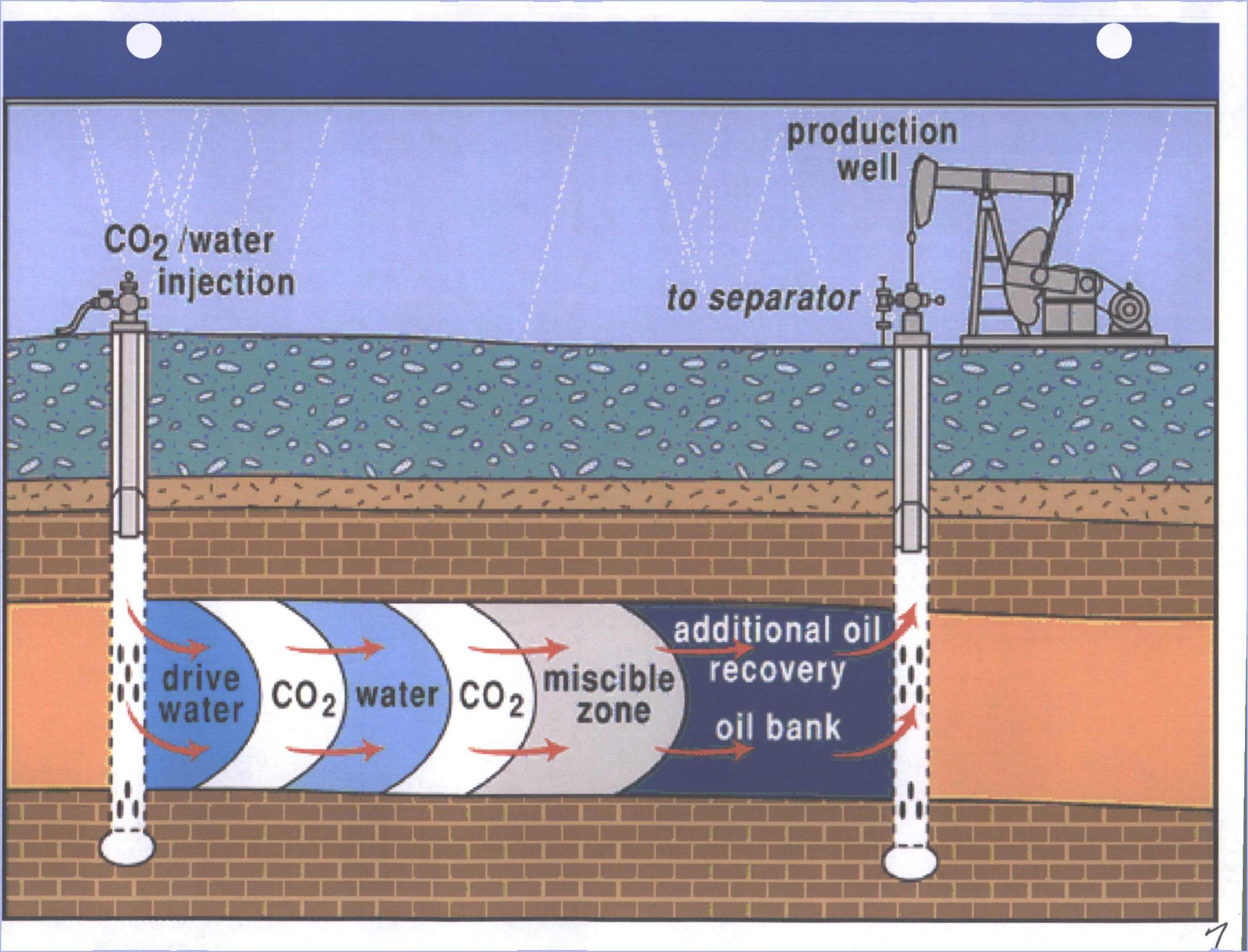


Life cycle of an oil reservoir

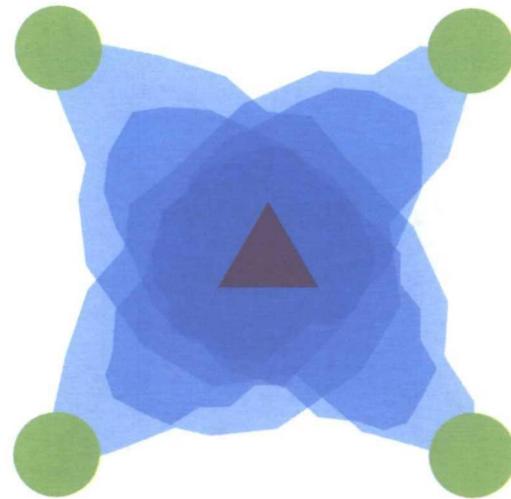


Typical Recovery Efficiencies





Pattern Flooding



● Producer

▲ Injector

Acid Gas Disposal versus EOR Injection

	Acid Gas Disposal	EOR Injection
H2S Concentrations	HIGH	LOW
Source of H2S	Non-Native	Native
Impact on Parties in Affected Area	Usually don't get a share of the production	Participate in the production
Target Reservoir	Depth >4400', non-productive, laterally extensive, undeveloped	Productive, contained, well developed
Affected Area of Reservoir	Based on injection volume & reservoir characteristics	Based on pattern size
Number of wells in operation	Very few	Thousands
Pressure Considerations	Can increase based on volume disposed	Maintained within a specified range

Relief Requested

- **Expand injection authority to include injection of CO2 and the reinjection of produced CO2, water and gases including methane, natural gas liquids and hydrogen sulfide;**
- **Modify surface pressure limits**
- **Increase the GOR limit**
- **Grant an exception to the requirement that injection commence in one year**
- **Provide a streamlined permitted process to update the Area-of-Review for any well commencing injection more than 5 years from now**
- **Allow for a 5-year MIT frequency for any TA'd well equipped with real-time pressure monitoring**
- **Change the packer setting depth requirement**
- **Remove the requirement that a CBL be run before putting a well on injection or anytime rods or tubing are pulled**
- **Allow for administrative approval of additional injection wells in the project area per Rule 8**
- **Qualify the project for the recovered oil tax rate**