

# Oil & Gas Innovation in New Mexico

New Mexico Legislature, Interim Economic Development & Policy Committee

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# EOG Resources, Inc: A Continued Commitment to New Mexico

- Operates in the Permian and the San Juan Basins
- Innovates as a key to sustainable operations
- Leverages data for continuous operational improvements: "Apple of Oil"



### **Location Selection: Surface Considerations**

- Staking a well site
  - Topographical considerations
  - Archeological/cultural resources surveys
  - Endangered or threatened animal species
  - Endangered or special status plant species



Source: www.cehmm.org



# Well Planning and Resource Conservation Through Innovation

Fixed wing aircraft and drones

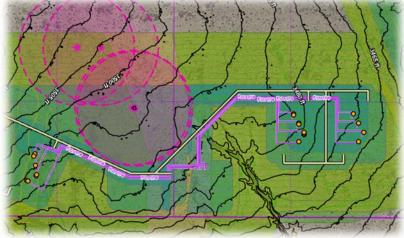
- 3D Visualization, modeling, animations, and depiction of terrain
- 360-degree panoramic views of project and high resolution near surface photos
- Drone imagery and data is uploaded into an active web portal
  - Increased transparency with BLM and NMSLO
  - Increased safety and efficiency





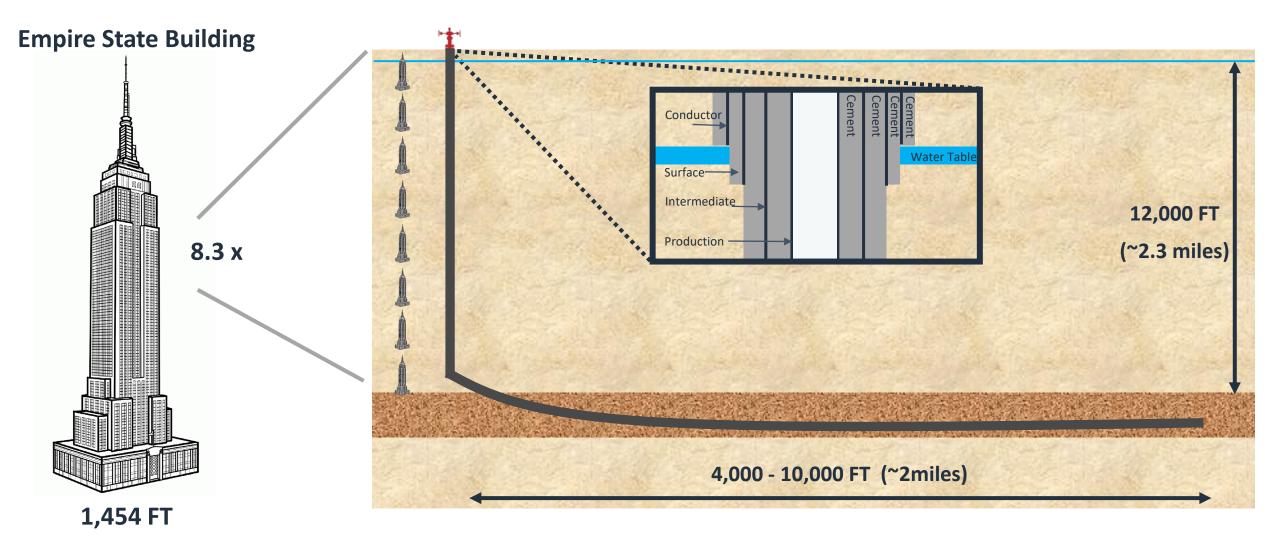








# Where Does Hydraulic Fracturing Occur?



# Tackling GHG Emissions with Innovation: Electric Frac

Natural Gas-Powered Hydraulic Fracturing in New Mexico

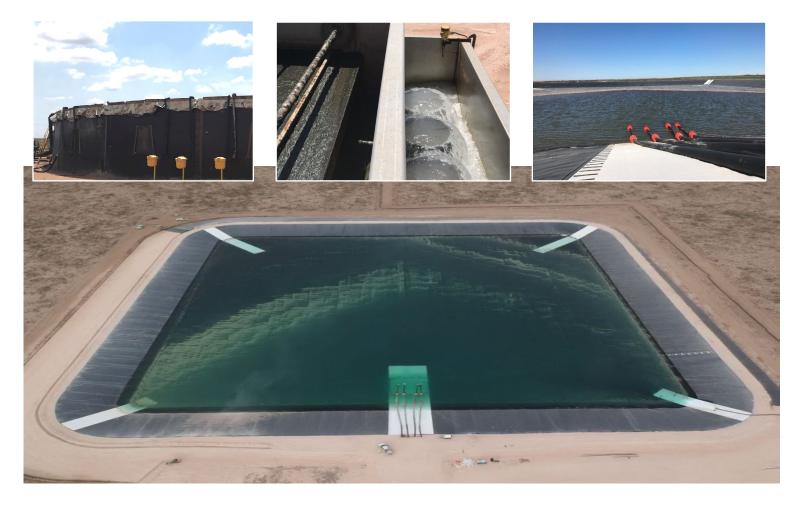


### Advantages:

- Smaller footprint
- Utilizes field gas for power generation
- No fuel deliveries
- Less truck traffic
- 87.5% noise reduction

### Water Conservation Through Innovation: Water Reuse Systems

Significant Reductions for Fresh Water Demand in New Mexico

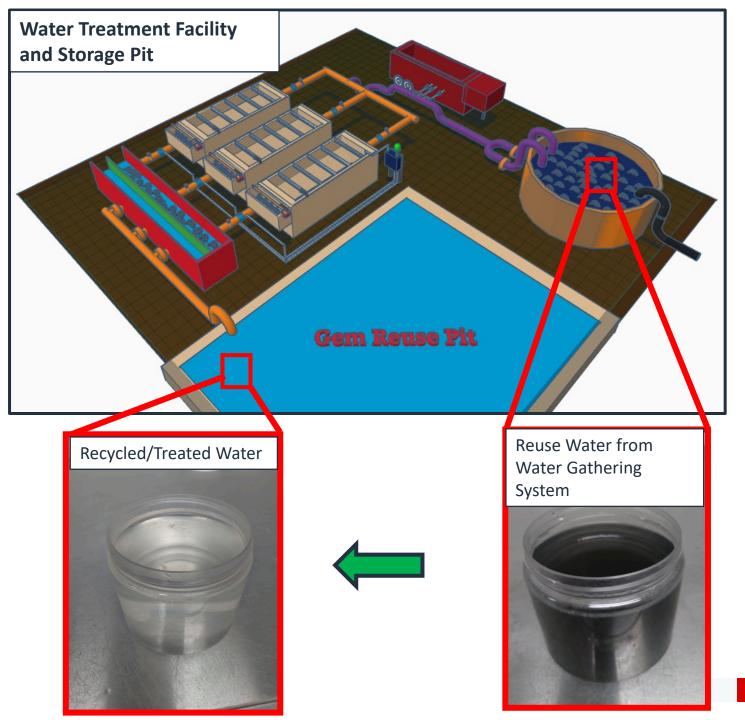


### **Considerations:**

- Incentivized via NM's Produced Water Act
- Regulated by 19.15.34 NMAC
- Significant pre-existing investments
- Delivery infrastructure minimizes truck traffic

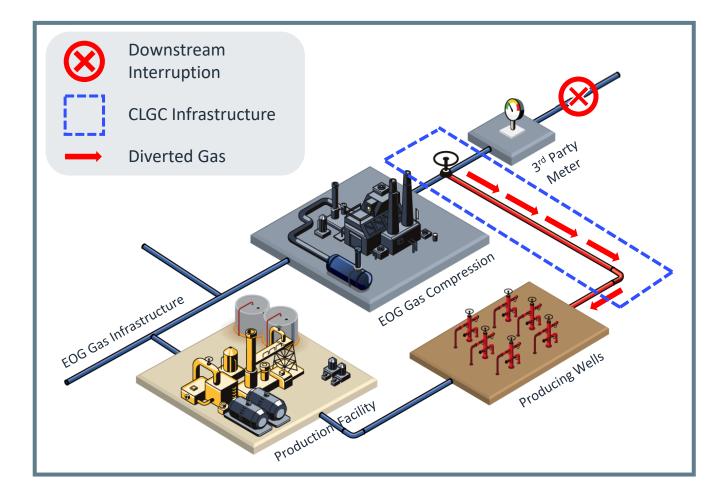
## **Types of Water**

- Reuse Water
  - Delivered by the Water Gathering System (WGS)
- Recycled/Treated Water
  - Primary source of completions water
- Non-Fresh Water (>1,000 ppm TDS)
- Fresh Water (<1,000 ppm TDS)
- Blended Water
  - Increases economic efficiency
  - Increases capacity



# Tackling GHG Emissions with Innovation: Flaring Reduction

Closed-Loop Gas Capture (CLGC) Pilot



#### **Project Scope:**

 Automated Flow Control to "Close Loop" Between Compression Station and Producing Wells

#### **Targeted Impact:**

- Reduce Flaring and GHG Emissions Resulting from Downstream Interruptions by Temporarily Diverting and Reinjecting Gas into Existing Wells
- Revenue/Royalty Uplift from Recovery of Natural Gas Volumes that Would Have Otherwise Been Flared

# Tackling GHG Emissions with Innovation: iSense

- Continuous methane monitoring technology
- Integrate data with existing operational data from EOG's proprietary systems
  - Analyze production and facility data to conduct root cause analysis
  - Prioritize resources and dispatch repair measures

