

CLEAN ENERGY ASSOCIATION OF NEW MEXICO

Radioactive & Hazardous Materials Committee Presentation

November 6, 2026

www.CleanNM.org

Who We Are



- CLEAN advocates for a safe, environmentally responsible, and cost-effective nuclear energy industry supported by In-Situ Recovery (“ISR”) uranium extraction.
- Our mission is to ensure the people of New Mexico benefit from their natural resources in a sustainable, informed manner, grounded in cultural understanding and knowledge sharing.
- ISR is a proven, low-impact method that protects groundwater and enables full land restoration.
- Our long-term goal is to drive job creation, business development and workforce development across a nuclear energy sector built exclusively on ISR technology.

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Our Goals

- Provide education and encouragement to advance the nuclear energy industry.
- Engage with communities.
- Support knowledge, training and workforce development.
- Promote high standards of sustainability.
- Undertake and advocate for industry-wide research and development projects.

ISR Extraction: How it Works

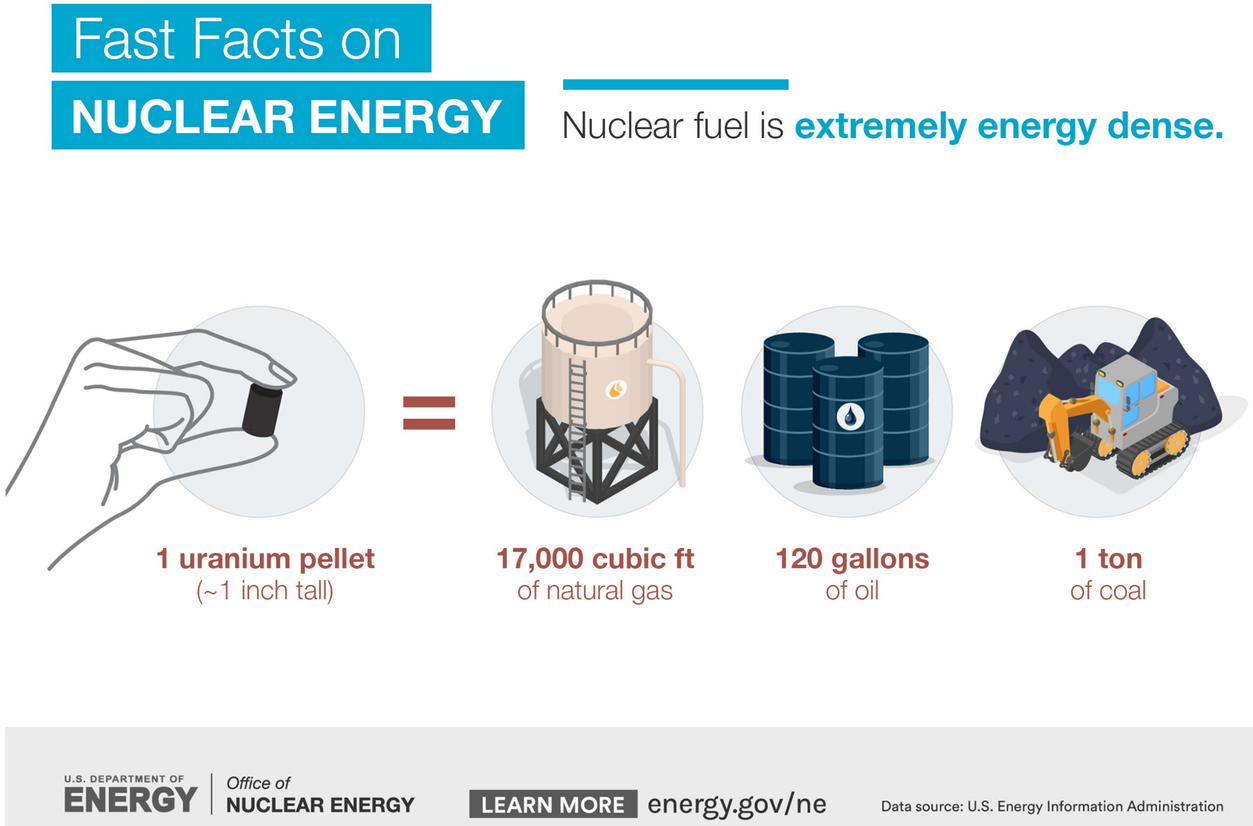


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Nuclear Energy

A safe, carbon-free energy source

- Nuclear energy is a key source of clean, secure, and cost-effective power.
- Nuclear energy is one of the safest energy sources and has seen dramatic changes over the last 50 years to make the technology even safer and more efficient.
- It is the largest source of carbon-free electricity in the United States.
- Nuclear is powerful, one uranium fuel pellet creates as much energy as one ton of coal, 149 gallons of oil or 17,000 cubic feet of natural gas.



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The Nuclear Landscape in the U.S.

Nuclear Energy's Role in the U.S. Power Mix

- 20% of total U.S. electricity generation currently comes from nuclear power.
- The U.S. Department of Energy forecasts an expansion of nuclear generation to support the nation's net-zero by 2050 targets.

Growing Demand for Domestic Uranium Supply

- The U.S. imports over 90% if its uranium needs, making domestic uranium production and supply chain security a growing priority.
- As new reactors come online and demand for nuclear fuel increases, investment in domestic uranium resources will be crucial to backstop US energy security.



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Source: U.S. Department of Energy. https://www.eia.gov/

Uranium is Essential to National Security and Energy Security

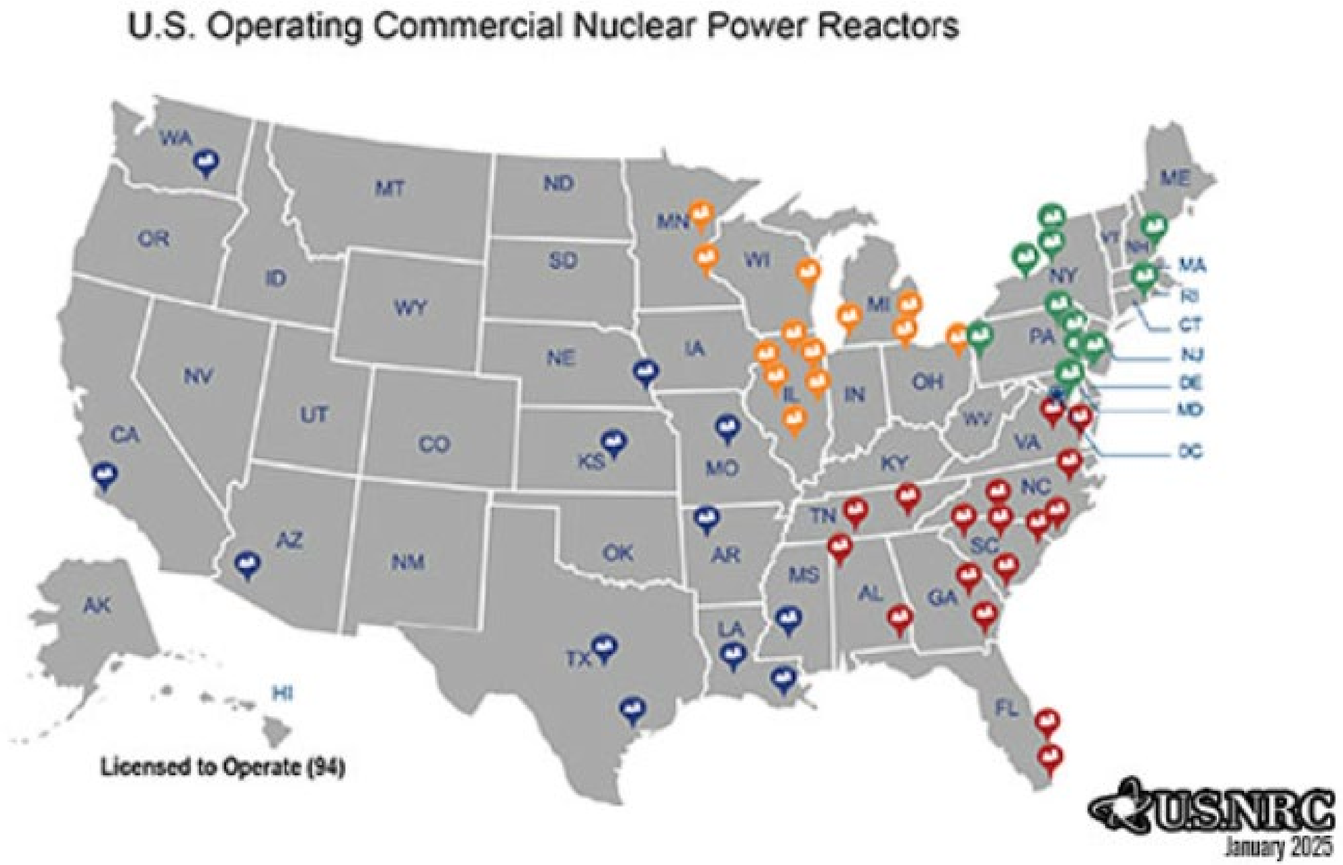
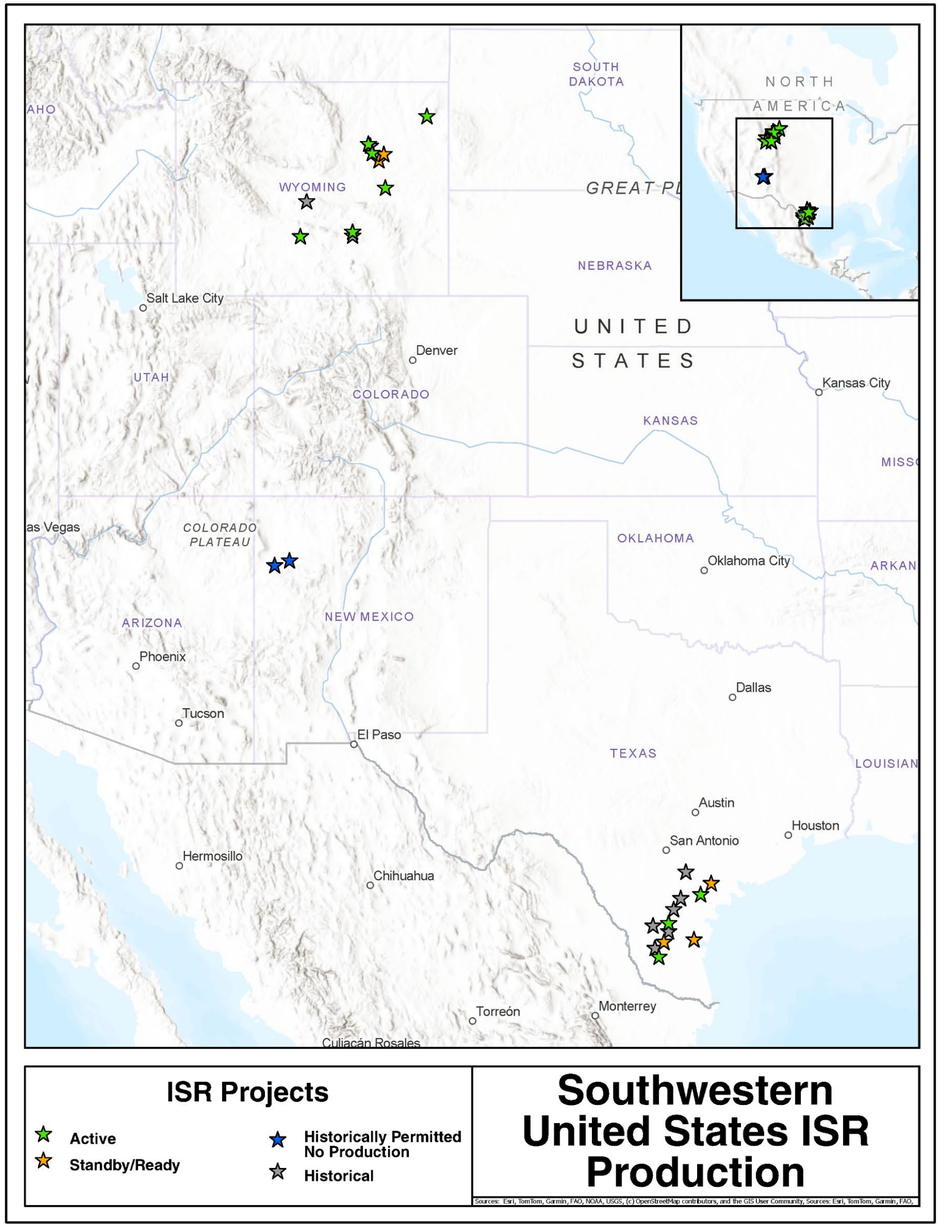


Figure: Operating commercial nuclear power reactors. Green = Region I, Red = Region II, Orange = Region III, and Blue = Region IV.

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ISR in the United States

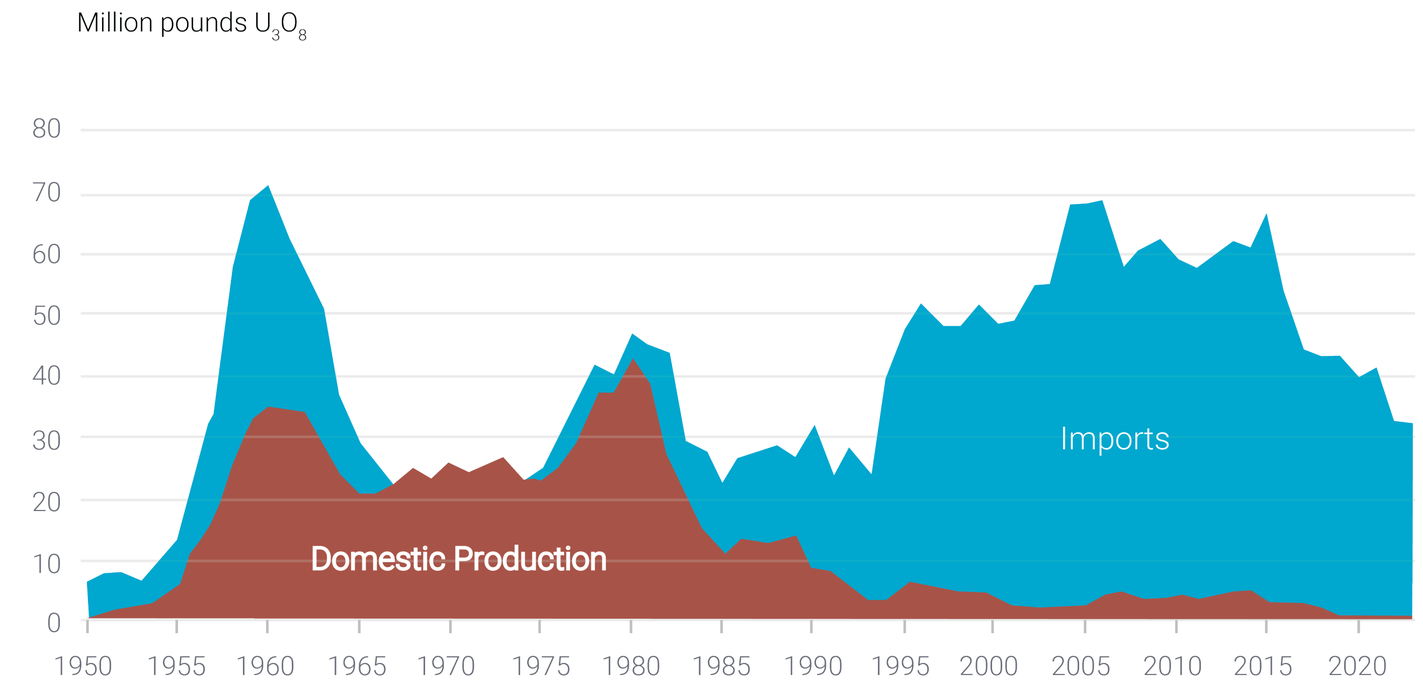
- ISR was commercially introduced in the uranium sector during the 1970s in the U.S. and then applied in many countries over the last 50+ years.
- The first commercial scale American ISR uranium project commenced production on April 1, 1975 at the Clay West Project, operated by Atlantic Richfield Company in partnership with US Steel and DALCO.
- ISR has occurred in Wyoming, Nebraska, Texas and tried in New Mexico.
- There are multiple ISR Central Processing Plants currently in operation in South Texas and Wyoming.



New Mexico's Opportunity for Leadership in America's Nuclear Renaissance

- 7th in worldwide uranium production.
- Grants Uranium District historically the largest U.S. uranium producer for nearly three decades.
- Largest identified uranium ore reserves in the U.S. with approximately 409 million pounds remaining in the Grants District.
- Decline in U.S. domestic uranium production and increased reliance on imports.
- Positioning New Mexico as a leader in ISR extraction.
- Strengthening U.S. domestic uranium supply.

U.S. uranium supply to commercial nuclear reactors (1950-2023)



Sources: McLemore, V. T. (2020, January 27). Uranium resources in New Mexico. New Mexico Bureau of Geology & Mineral Resources. https://geoinfo.nmt.edu/resources/uranium/nmresources.html. and McLemore, 2007; McLemore et al., 2013; table

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Conventional vs ISR

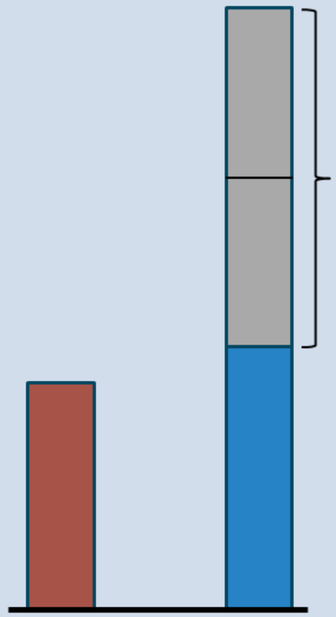




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How Much Uranium is in New Mexico?

Uranium Ore Produced & Resources (not extracted) Potential Resources
Grants Mineral Belt



Produced[1]

>340 mil lbs

Unextracted Resources[1]

403 mil lbs

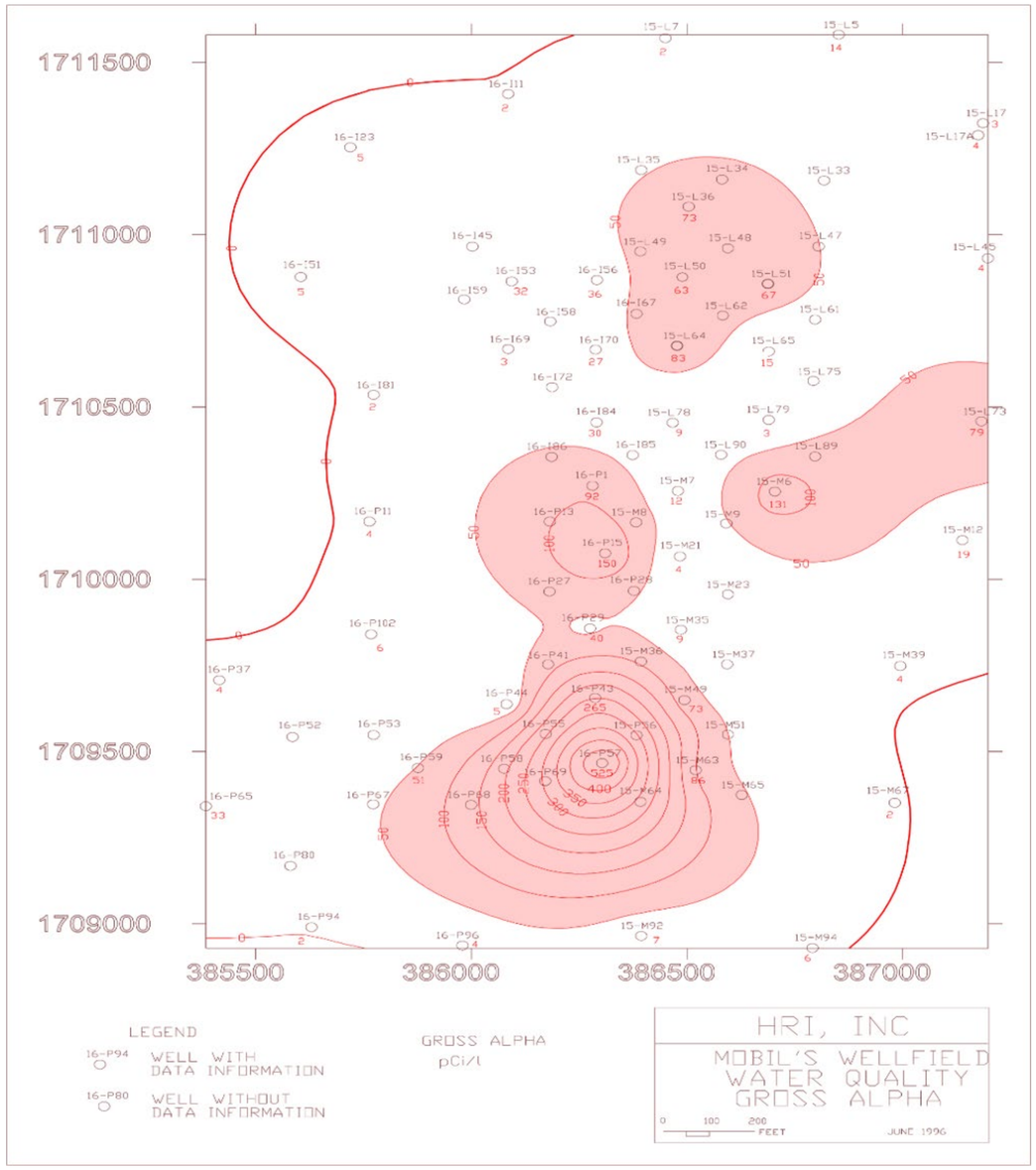
Geologic Potential[2]

250-500 mil lbs

[1]*McLemore, 2011*
[2]*Adams and Saucier, 1981*



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In-situ Recovery (ISR) in New Mexico

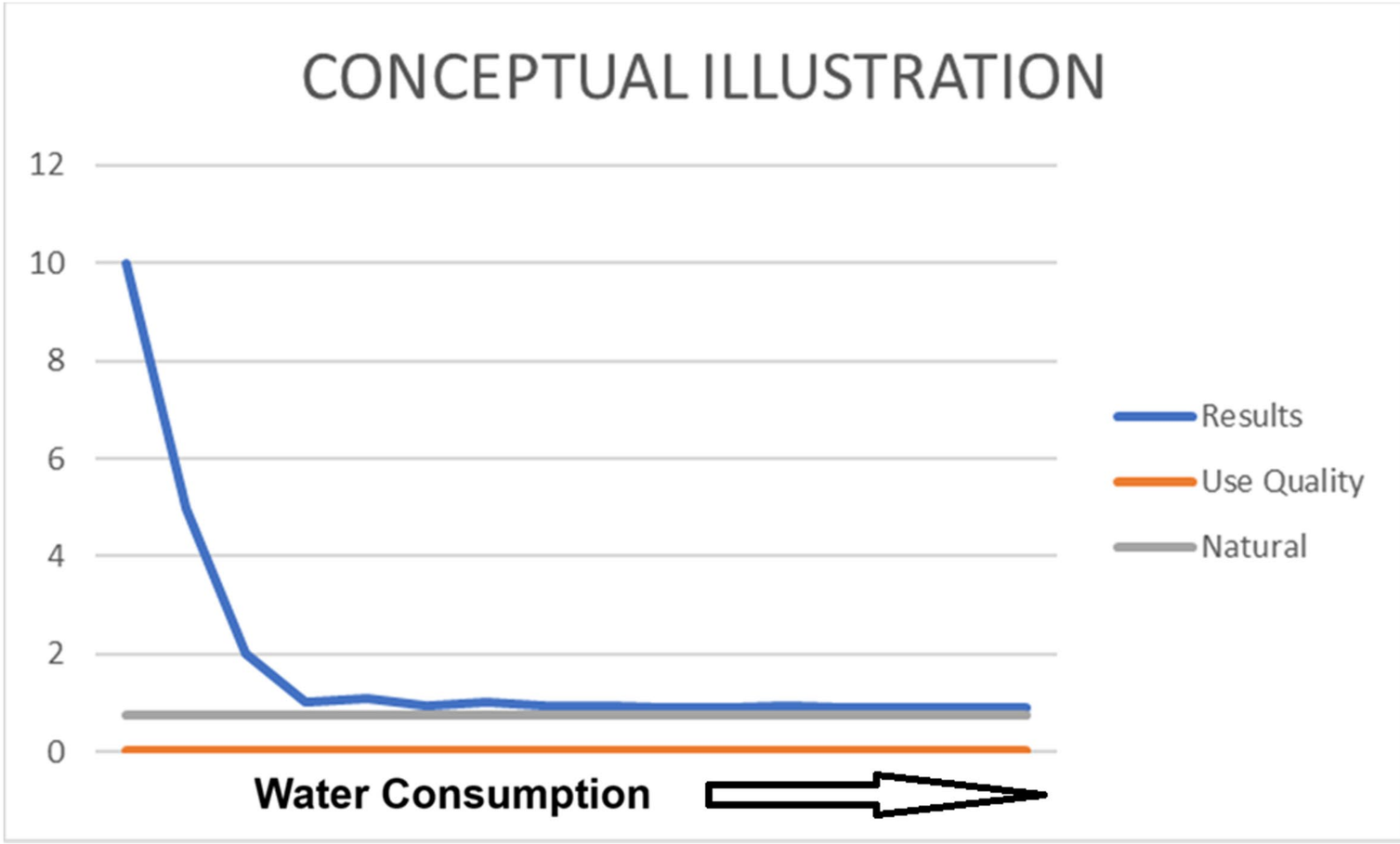
1979 New Mexico Pilot Project

- Mobil Oil successfully recovered uranium at a pilot project utilizing ISR from a depth of 2,000 feet near Crownpoint, New Mexico in 1979. This was the first in-situ uranium recovery project of its kind accomplished in New Mexico;
- Pilot ISR operations achieved uranium concentrations exceeding 100 mg/L;
- Demonstrated that some New Mexico uranium deposits are amenable to ISR extraction techniques;
- Groundwater restoration returned promising results.

Groundwater Restoration – Fundamental Component of ISR Regulation and Groundwater Conservation

Quality and Quantity Considerations

- Restored quality must be protective.
- Most consumptive of groundwater in the ISR cycle.
- Diminishing results need be considered (90-10 rule).



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Restoration Goal (Bonded to Assure Compliance)

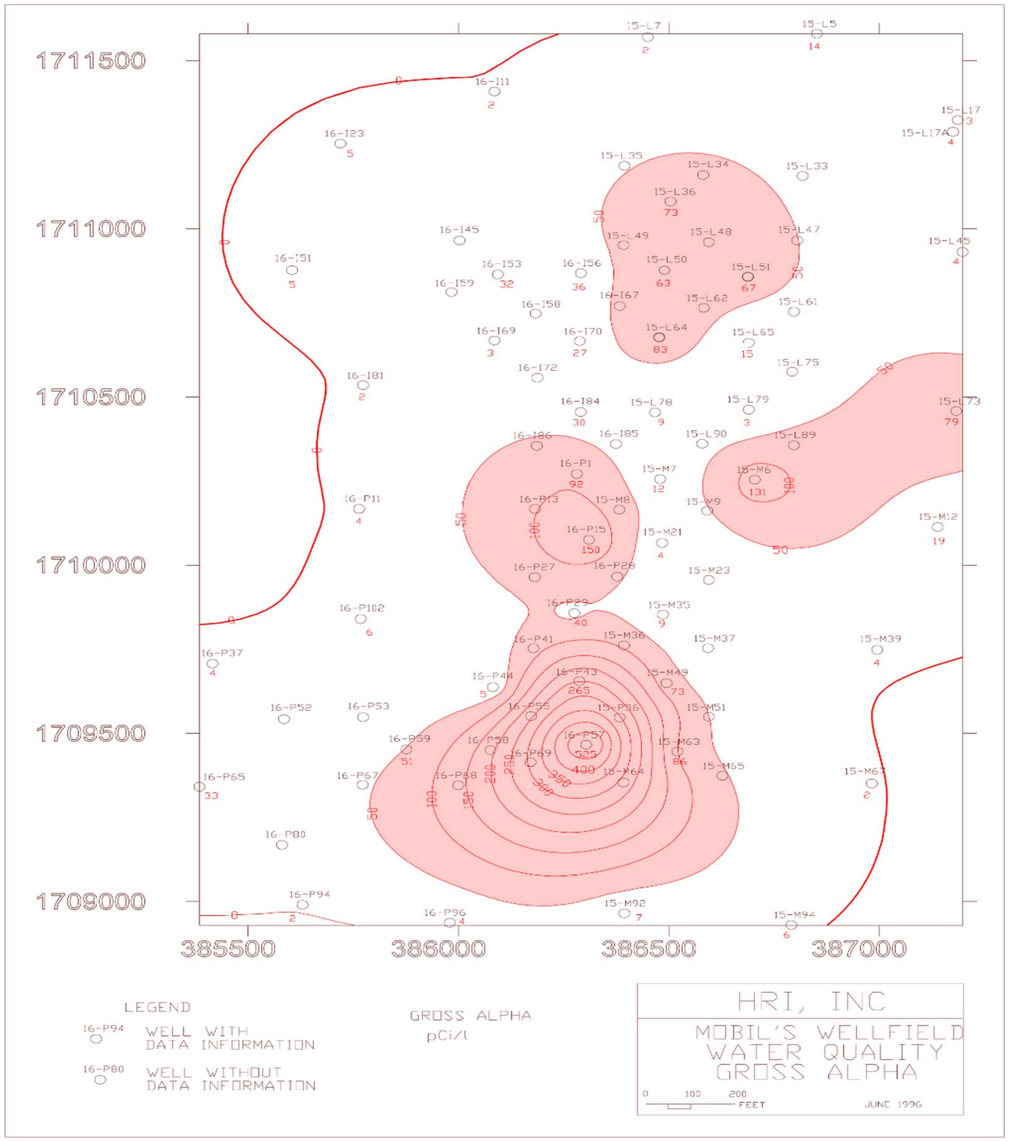
Nebraska	New Mexico	South Dakota	Texas	Wyoming
Uses for which the resource was suitable prior to the activity.	NMAC 20.6.2.5103 standards. Pre-ISR Conditions or Ground Water Standards.	Reestablish groundwater to permit restoration table.	Reestablish groundwater to permit restoration table.	Returned to the pre-discharge use suitability.

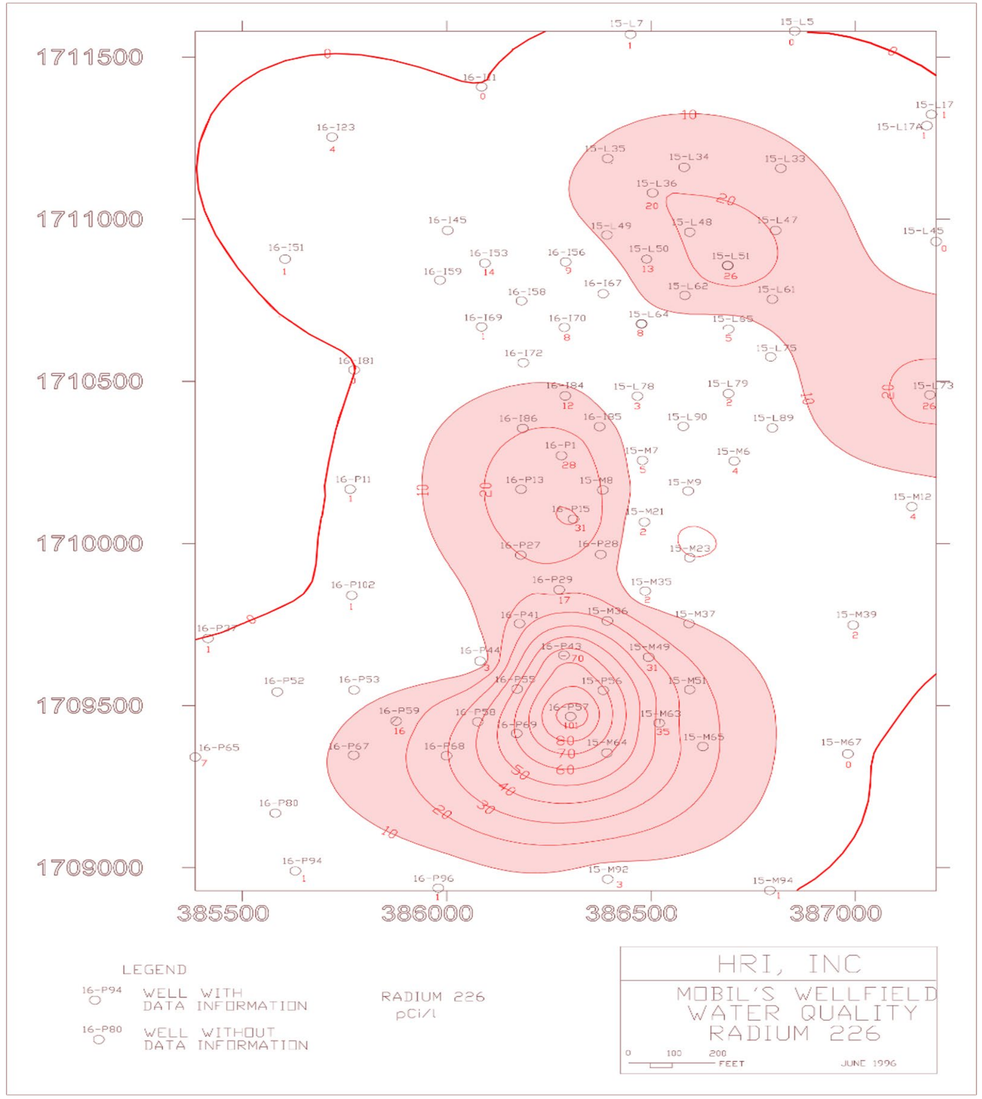
Restoration Goal (If Not Met)

Nebraska	New Mexico	South Dakota	Texas	Wyoming
Specified in permit.	Alternative abatement standards.	Multiple criteria including effort expended and baseline suitability.	Multiple criteria including effort expended, baseline suitability and the consumption of groundwater.	Specified in permit.

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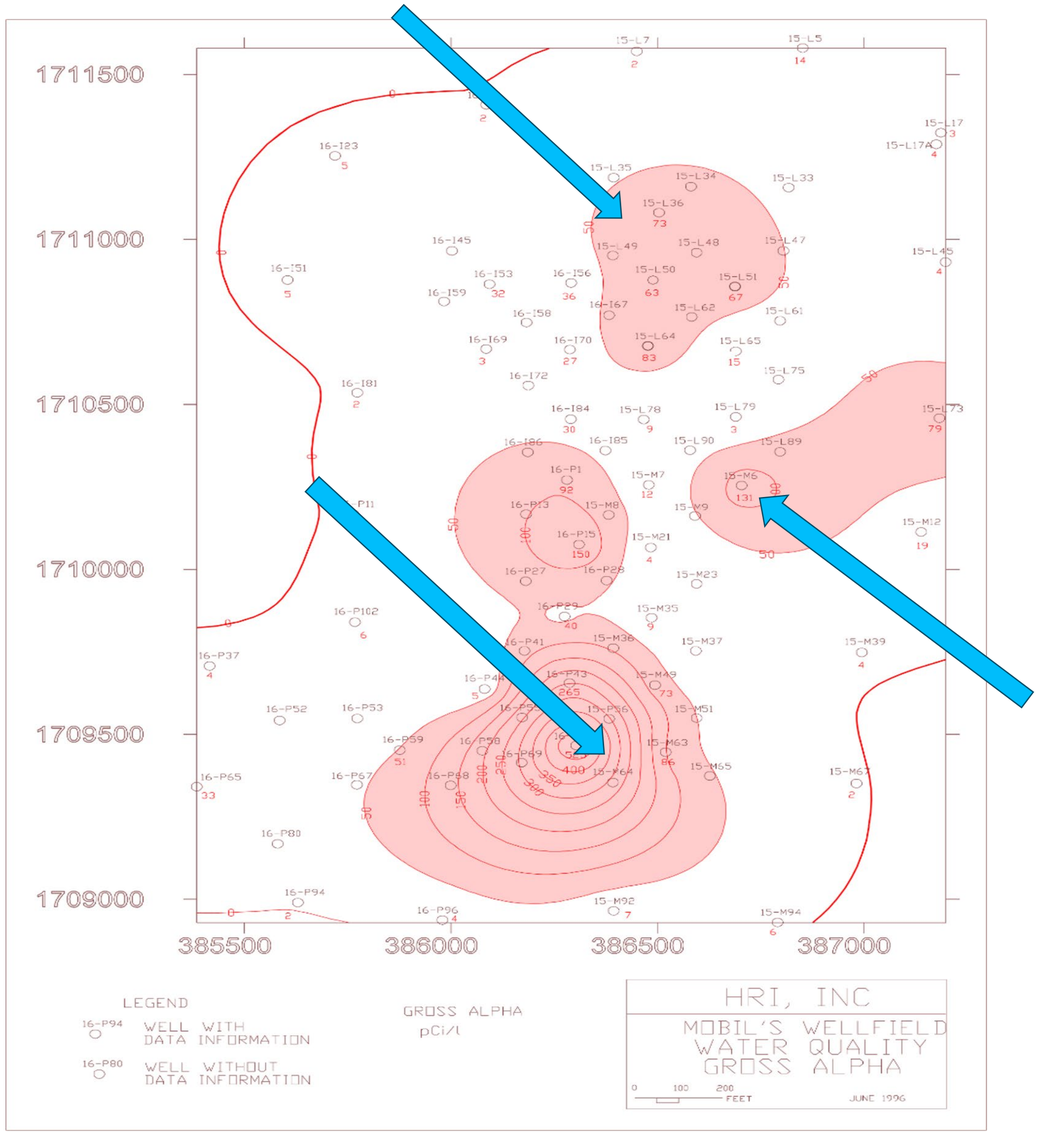
Mobil Oil Wellfield Water Quality

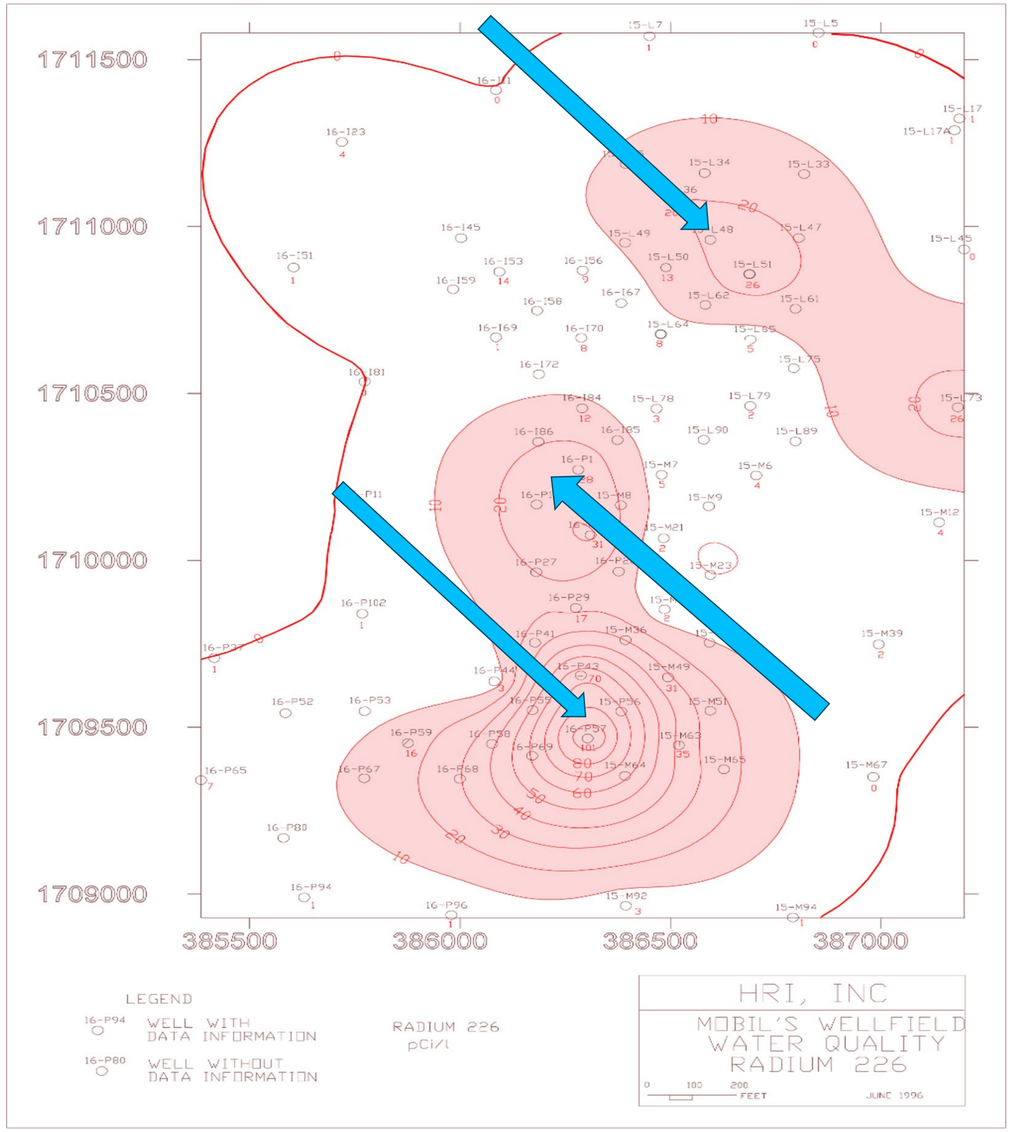




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Mobil Oil Wellfield Water Quality





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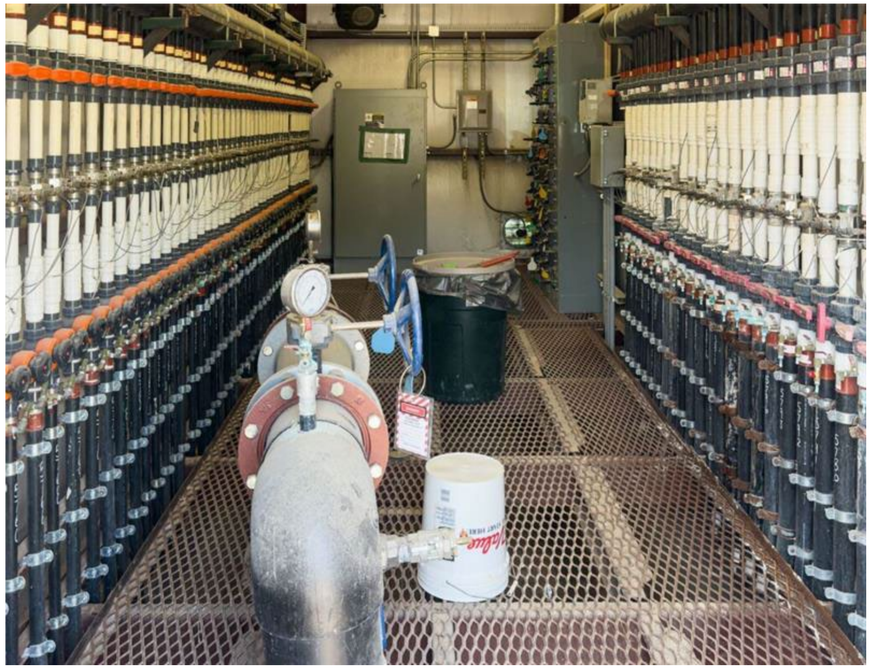
ISR Site Visit

Crow Butte Site Visit Hosted by CLEAN

CLEAN, with Grants Energy, hosted New Mexico stakeholders at the Crow Butte ISR uranium site in Nebraska to showcase low-impact modern ISR Technology versus historical conventional mining methods.



Charles Lundstrom, Benjamin Russ, Stanley Michael, Janet Lee-Sheriff, George Garcia, James Mercer, Mark Pelizza, and Scott Lopez



Crowe Butte Satellite Ion Exchange (IX) Plant, Nebraska

Photo Credits: ©Kim Cook Photography Inc.

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Employment Opportunities in ISR

Project Administration
- Management, accounting, IT, HR, and marketing, etc.

Environment, Health and Safety
- Safety engineers, environmental and radiation safety officers, etc.

Plant Personnel
- Chemist, plant operator, dyer operator, lab technician, etc.

Wellfield Personnel
- Drilling engineer, logger, wellfield operator, maintenance, etc.

Engineering and Geological Personnel
- GIS, geologist, reservoir engineer, surveyor, etc.



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Please Join Us in May 2027



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Thank you

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