

# COMMERCE CITY DEVELOPMENT PLAN

Extraction Oil & Gas is proud to be a neighbor and do business in Commerce City

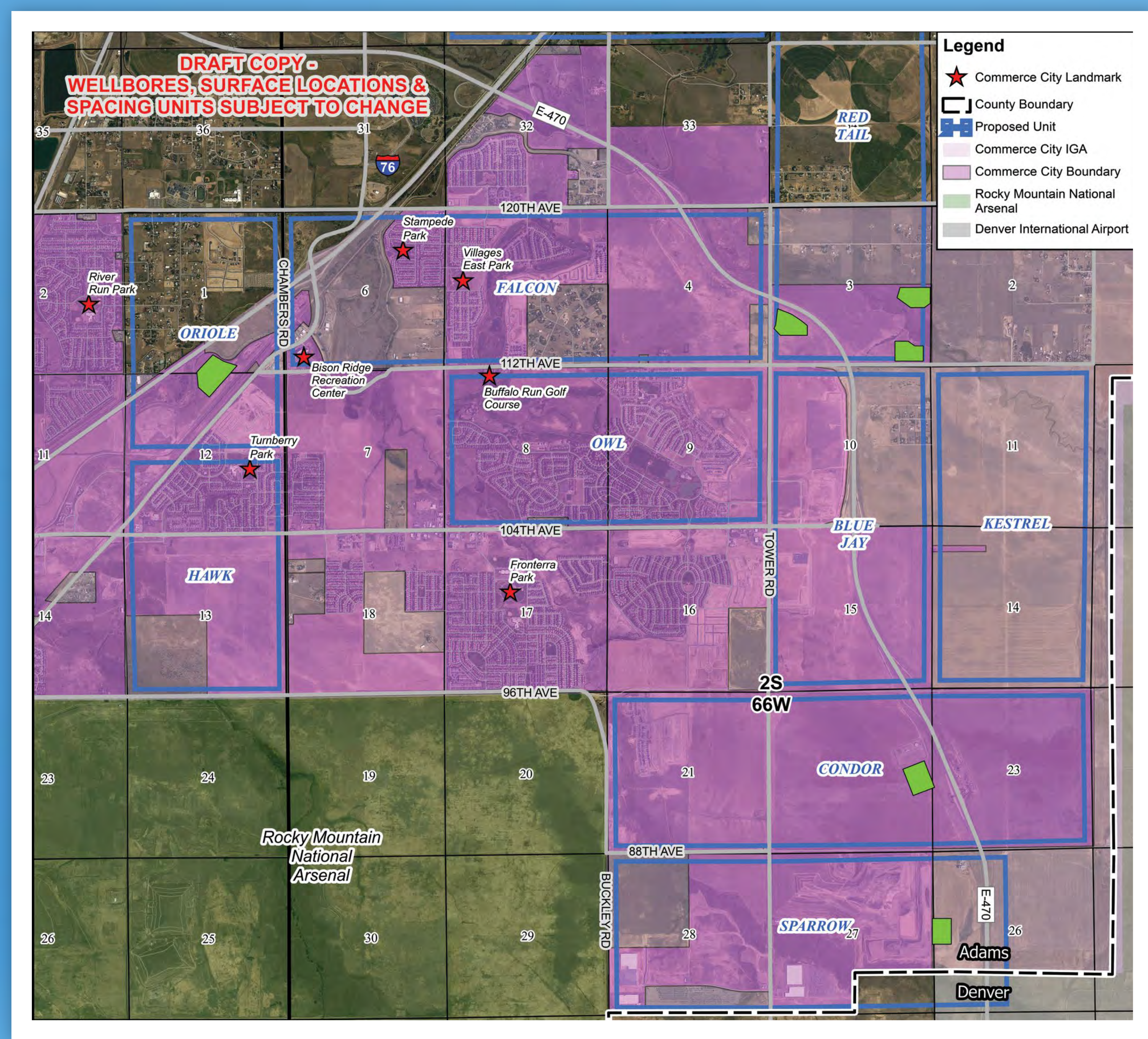


Extraction is currently incorporating City and landowner feedback into its current locations and also considering additional locations.

## OUR GOAL

is to operate safely and efficiently and to minimize impacts to the community. We are meeting with members of the community to be sure unique issues are addressed during the planning of this project as well as in the development phase. We encourage residents to reach out with questions or additional feedback at (720) 282-4582 or email to [info@extractionog.com](mailto:info@extractionog.com).

Operations are planned to occur 24/7 to complete the project as safely as possible. Each pad will have an individual neighborhood meeting as a part of the Commerce City regulatory process.



# AIR QUALITY STEWARDSHIP

Extraction Oil & Gas is an industry leader in engineering designs that eliminate emissions wherever possible.



## REDUCE EMISSIONS SOURCES

- ▶ Eliminates oil and produced water storage tanks from well pads located throughout the community
- ▶ Use of pipelines to remove truck traffic from roads
- ▶ Access to utility power - electric drive engines



## ENGINEERING IMPROVEMENTS

- ▶ Use of zero or low bleed pneumatic controllers
- ▶ Internal Floating Roof (IFR) tanks for control and storage of pressurized oil
- ▶ Utilize closed loop engineering designs that eliminate potential emission sources



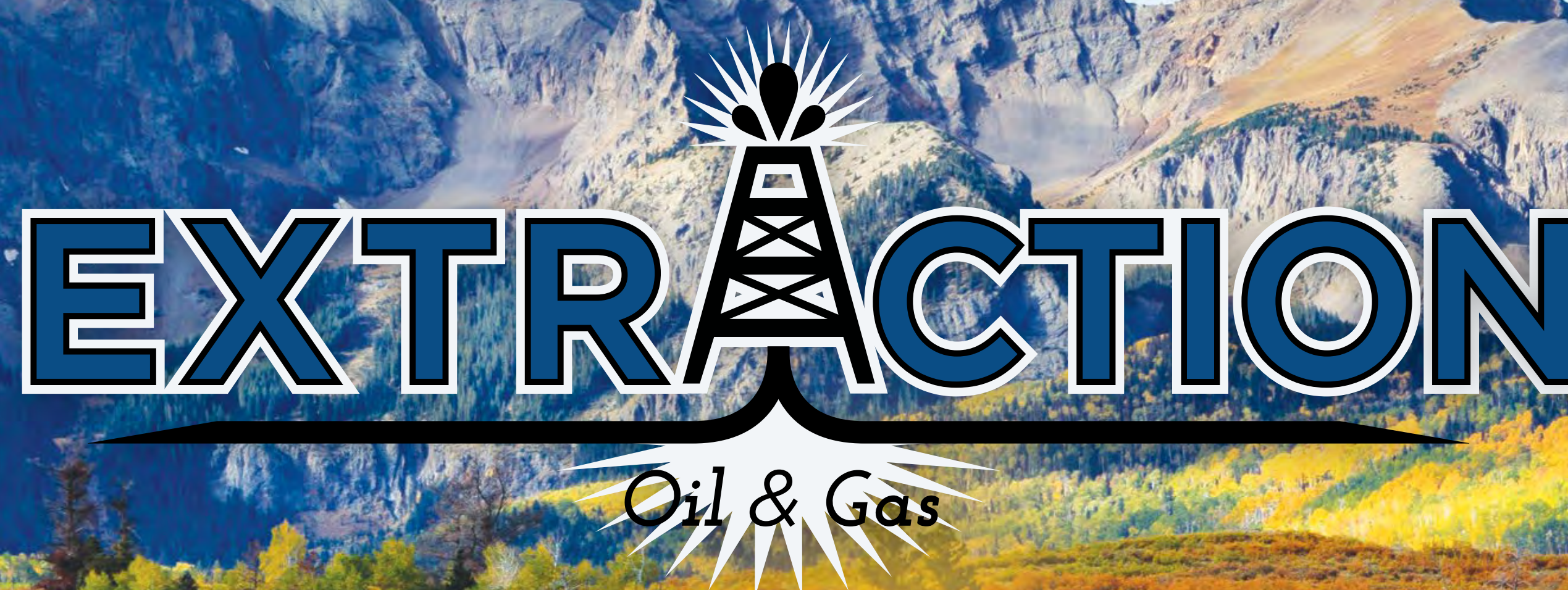
## MONITORING PROGRAMS

- ▶ Regular inspections
- ▶ Consistently perform Leak Detection and Repair (LDAR) audits, using infrared instruments called FLIR cameras
- ▶ FLIR cameras can detect emissions invisible to the human eye



## PERSONNEL AND TRAINING

- ▶ Meets and exceeds regulations
- ▶ Extensive training programs
- ▶ Company culture and core values



# SOUND MITIGATION

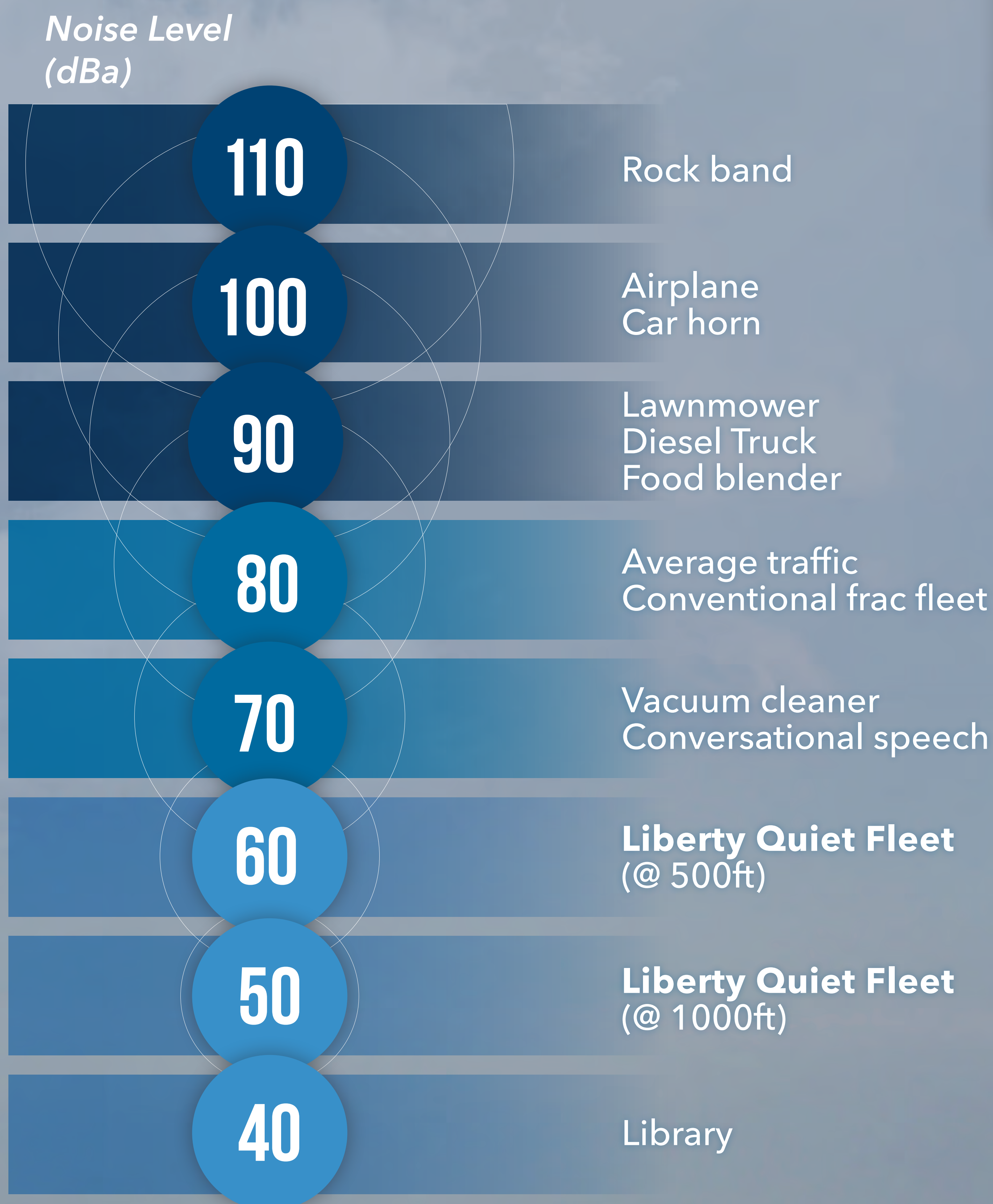
Extraction Oil & Gas is committed to minimizing noise by using industry-leading best management practices that ensure our operations are as quiet as possible.

Extraction Oil & Gas employs a number of techniques including sound walls, hay bales and even earthen berms around drilling sites to minimize noise traditionally associated with oil and gas development.

The sound walls are made of an earthen-colored polymer fabric that is designed to absorb sound.



## COMMON NOISE LEVELS



# BENEFITS OF A PIPELINE

## WHY A PIPELINE?

Pipeline installation will allow for safe, tankless production of oil, gas, and water. Additional external benefits include:

- Reduced equipment footprint
- Significant reduction in truck traffic
- Substantial decrease in air emissions



## 2018 PIPELINE SAFETY STATISTICS

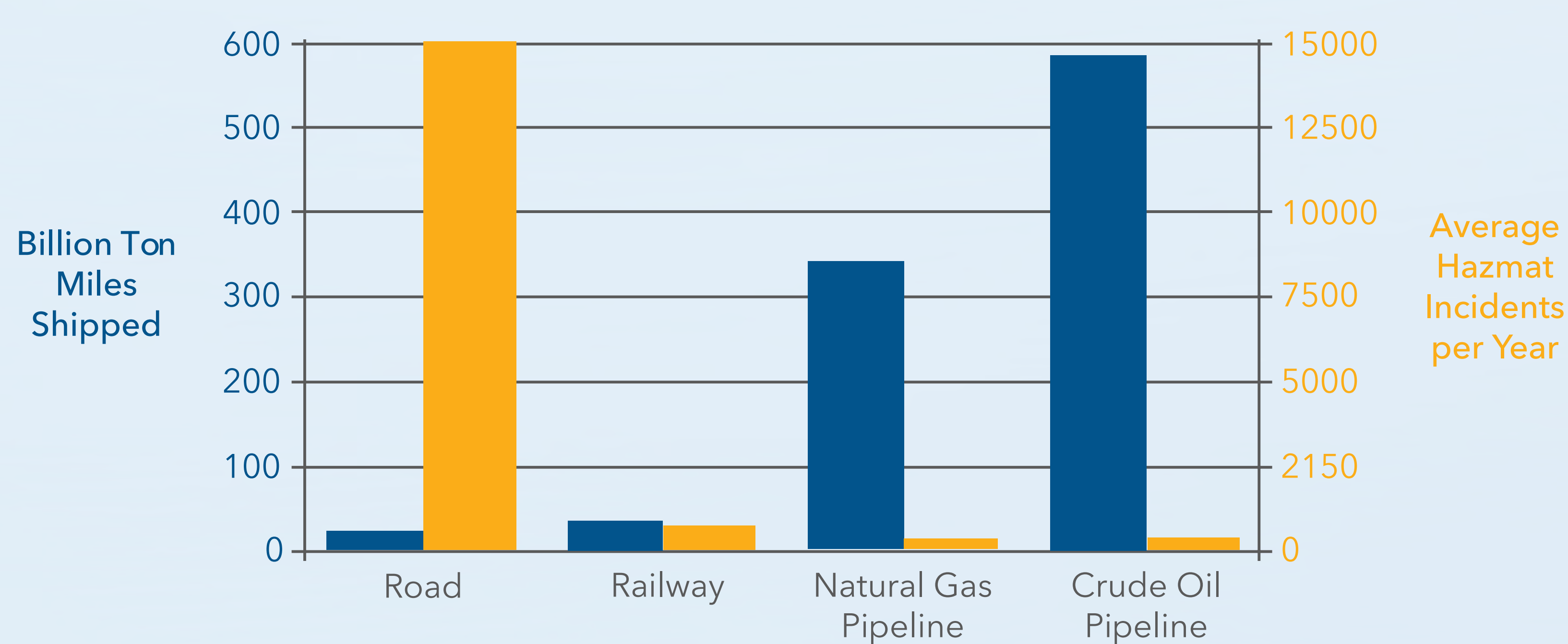
PIPELINES ARE BY FAR THE SAFEST MEANS OF PRODUCT TRANSPORT

## PIPELINE SAFETY CONTINUOUS IMPROVEMENT

Per a Pipeline and Hazardous Materials Safety Administration (PHMSA) 2018 report

- Stringent integrity management has increased safety by 3% over the past 5 years.
- Extensive maintenance programs have resulted in a 24% increase in safety over the past 5 years, including:
  - the x-ray and certification of all welds
  - hydraulic testing to 1.5 times the maximum operating pressure
  - 24/7 pipeline monitoring
  - remote operations and leak detection

## PIPELINES ARE THE SAFEST OPTIONS FOR MEETING OUR ENERGY NEEDS



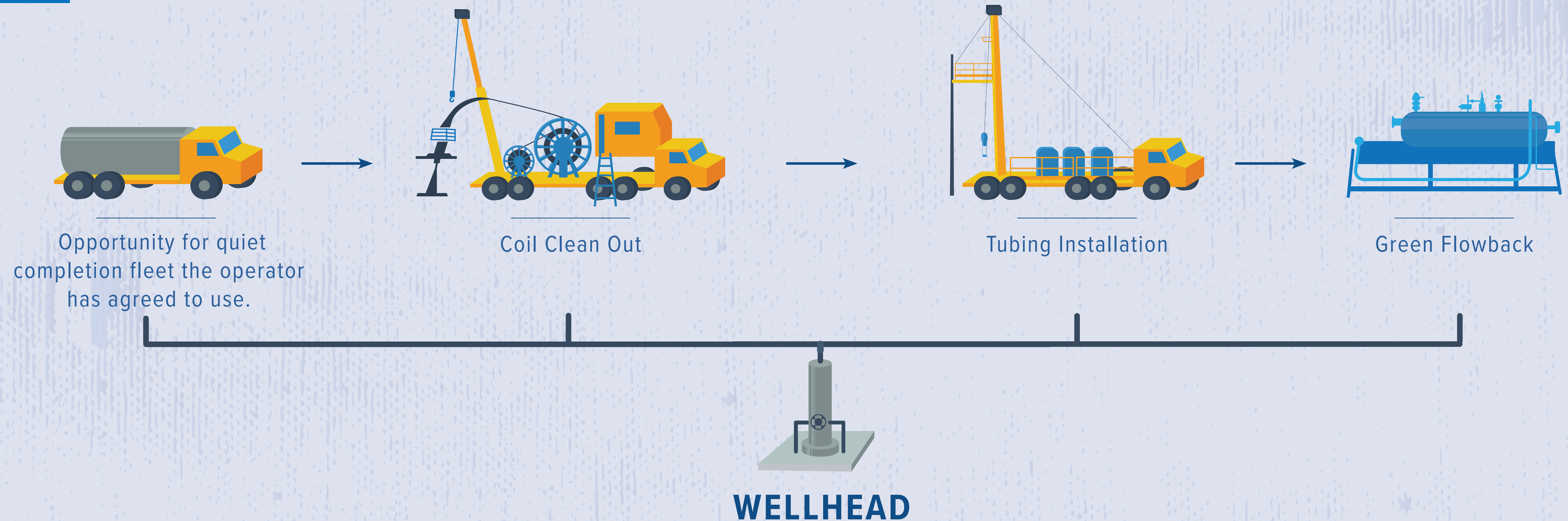
Already the safest mode of product transportation and continuing to enhance safety practices.

Total incidents impacting the public or the environment declined 19 percent over the last 5 years (2013 - 2017).

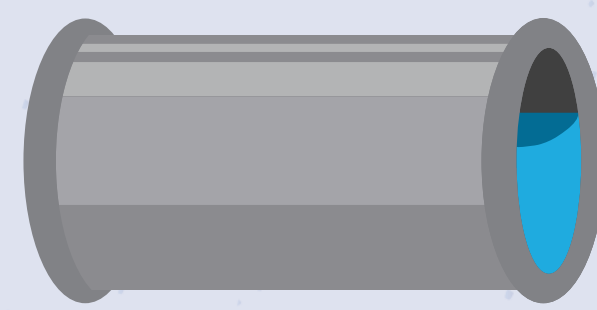


# COMPLETIONS PROCESS

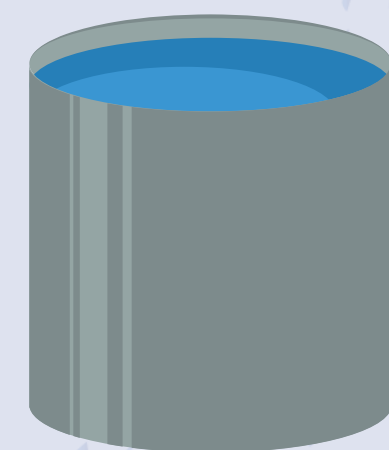
After the drilling phase, the completion process begins



## SUPPORTING TECHNOLOGY



Surface distribution system will bring fresh water to location.



Freshwater stored in modular large volume tanks.

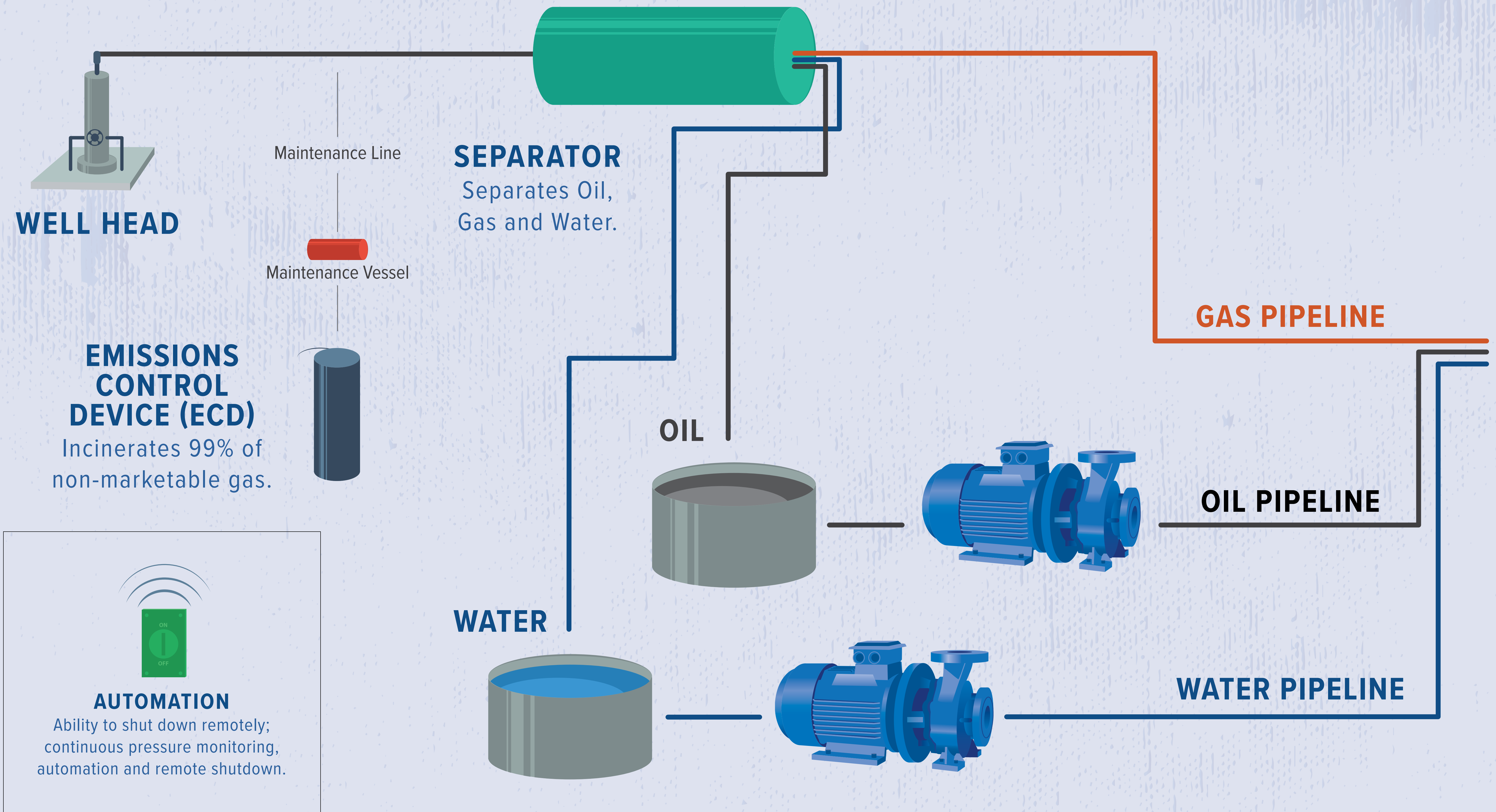


Sand is transported to location in containers, minimizing noise, dust and traffic and reducing wait time.

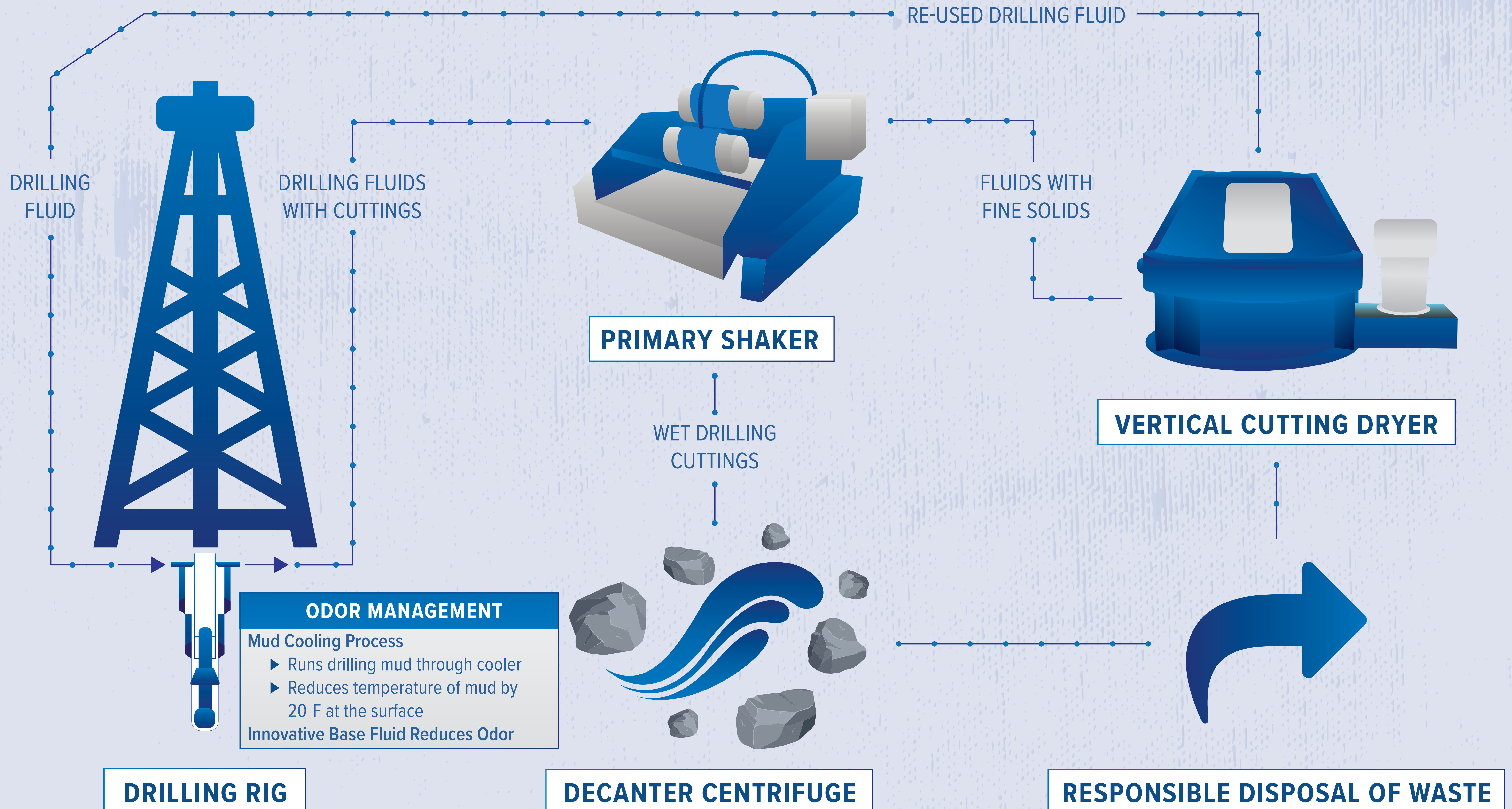


Updated processes that utilize the latest technology to reduce time on location and emissions.

# CLOSED-LOOP PRODUCTION SITE



# CLOSED-LOOP DRILLING SYSTEM



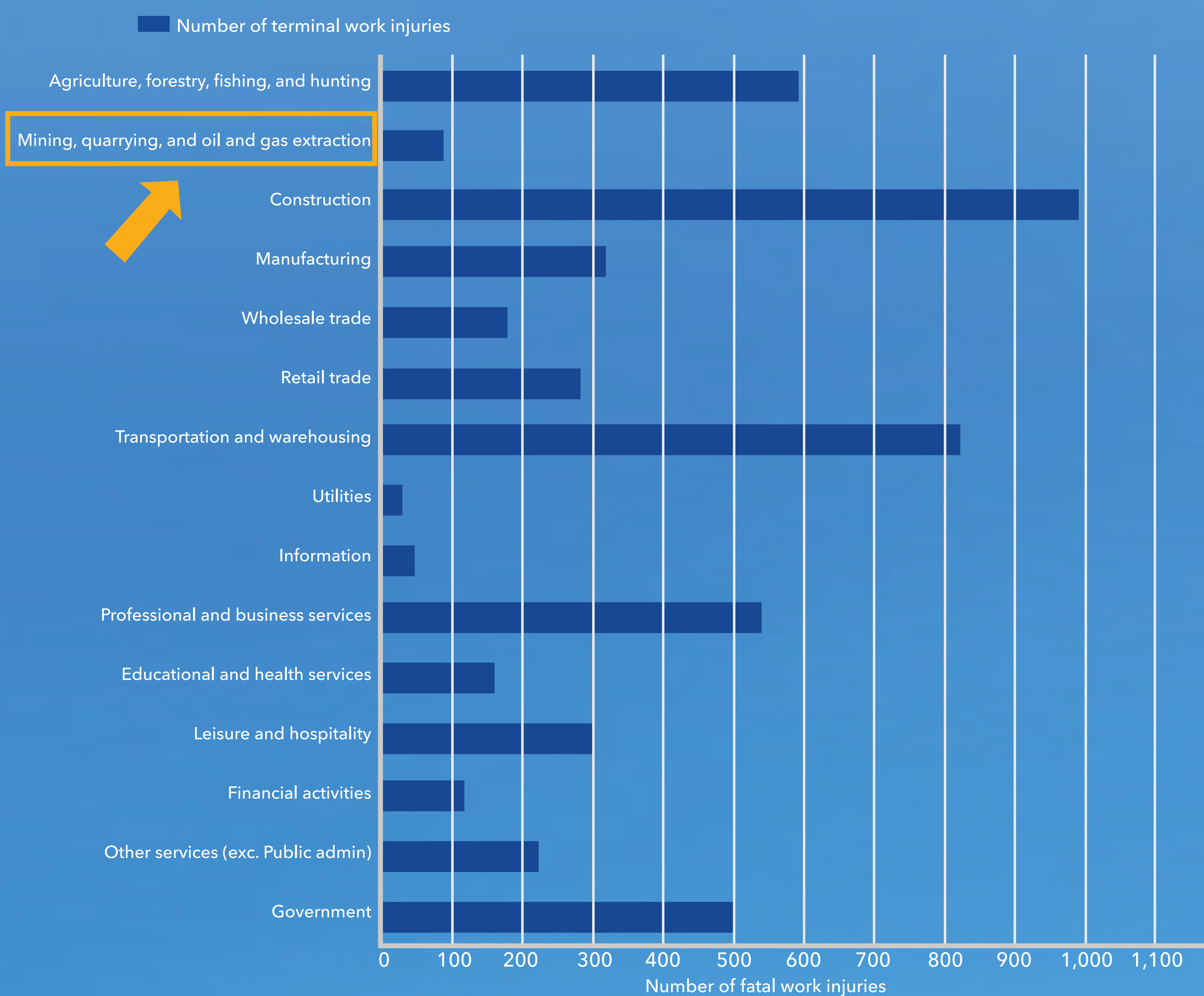
# OPERATIONAL SAFETY

Safety is our highest priority and one of our core values. Our success is defined by our safety record. Extraction values its trained, experienced and professional staff who adhere to our high safety standards and best management practices.

Colorado has the strictest regulations on oil and gas development in the country. **Extraction goes above and beyond these regulations with its best management practices.** In fact, the Colorado Department of Public Health & Environment awarded Extraction its Gold Environmental Leadership Award for its industry-leading work in developing oil and gas in a responsible manner and making safety and sustainability a cornerstone of its operations.

## Continuous Commitment to Safety in an Already Safe Industry U.S. Bureau of Labor Statistics : Oil & Gas ranks in the top 10 safest industries

Number and rate of fatal work injuries, by industry, 2016



Source: U.S. Bureau of Labor Statistics.



Overall, oil and gas is among lowest fatal work injuries

### Extraction Oil & Gas: Safe, Responsible & Reliable



1,221,000

hours without an employee lost time incident (as of Q3 2018)



**GOLD LEADER**

GOLD Leader Award from Colorado's Dept. of Public Health & Environment



**PLATINUM FACILITY**

Awarded to top 10% of companies with a demonstrated mastery over risk control and implementation



**AWARD WINNER**

2018 Rocky Mountain "Operator of the Year" and Award for "Corporate and Social Responsibility"



Collaborative effort with area emergency responders providing resources and training





# REMOVAL OF LEGACY SITES AND RETURN OF LAND

## STEP 1

### Permitting & Notifications

- » Notification to COGCC of Intent to Plug
- » 48-hr notice to COGCC
- » Notice to Local Government
- » Notice to Surface Owner
- » Notice to Surrounding Community

## STEP 3

### Well Abandonment

- » Workover rig plugs the well
- » Process takes approximately 1 week per well

## STEP 2

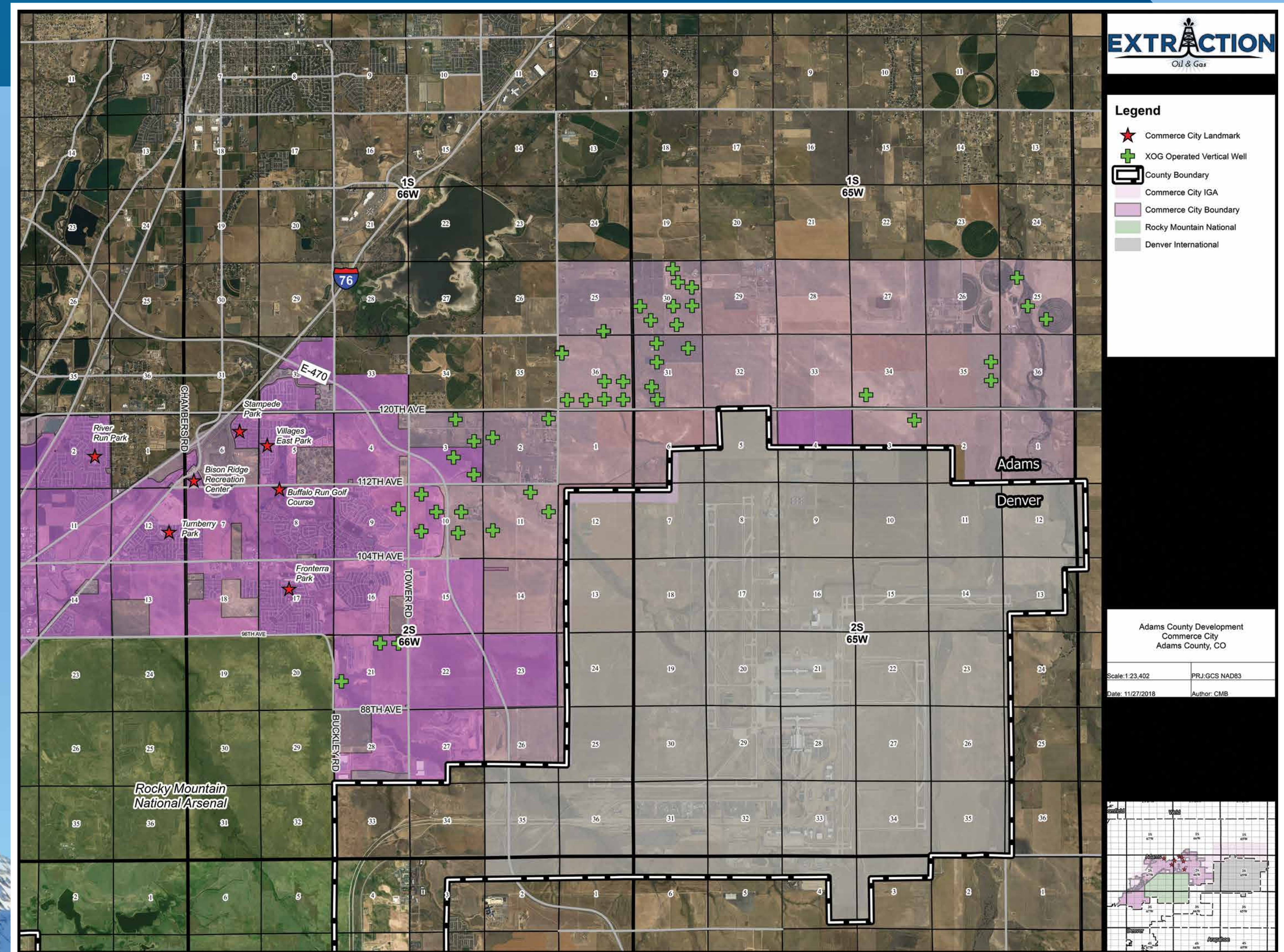
### Equipment Removal

- » All equipment flushed and plugged or removed according to COGCC regulations
- » All above ground equipment removed

## STEP 4

### Reclamation

- » Seeding and revegetation
- » Notification to COGCC as plugged



REMOVAL OF MORE THAN 40 WELLS AND 51 TANKS