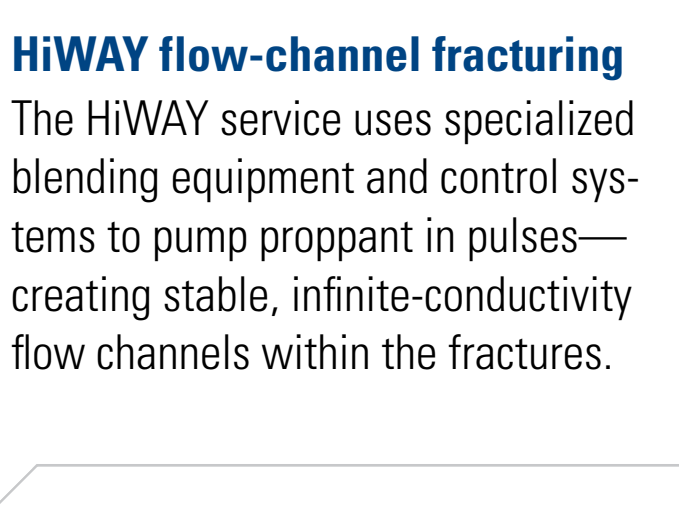
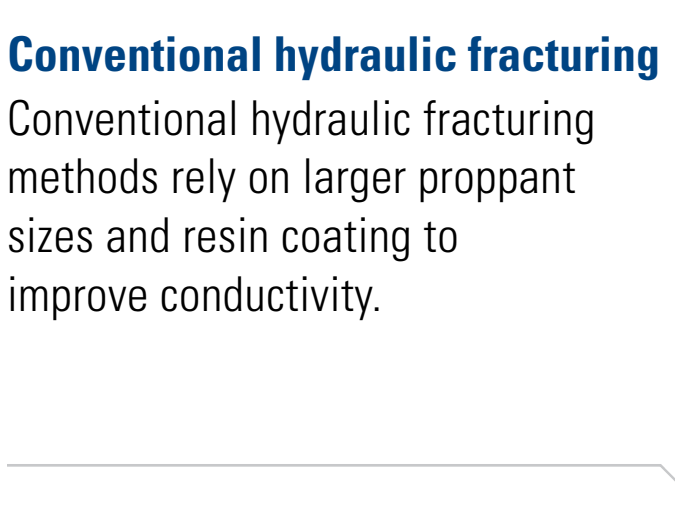


Since 2010, the HiWAY* flow-channel hydraulic fracturing service has helped operators increase production while using less water and proppant. The first technique of its kind, the HiWAY fracturing service creates stable channels within the fractures—decoupling fracture conductivity from the proppant pack. This results in infinite fracture conductivity.

“Petrohawk has converted 100% of frac services provided by Schlumberger in the Eagle Ford to the HiWAY technique.”

Dick Stoneburner,
COO and President, Petrohawk



Conventional hydraulic fracturing

Conventional hydraulic fracturing methods rely on larger proppant sizes and resin coating to improve conductivity.

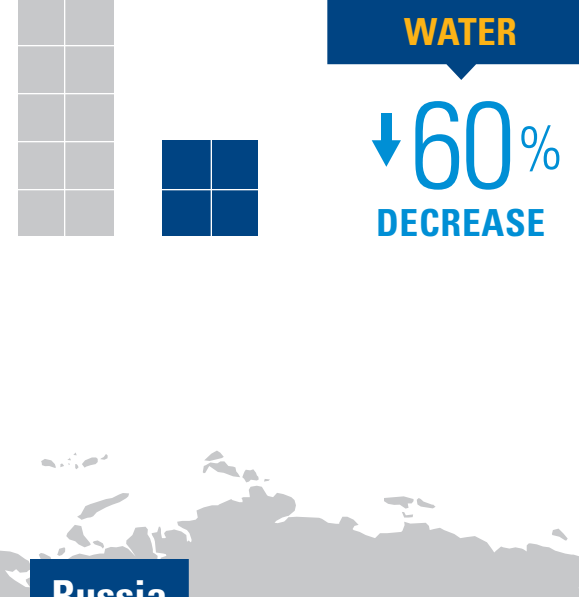
HiWAY flow-channel fracturing

The HiWAY service uses specialized blending equipment and control systems to pump proppant in pulses—creating stable, infinite-conductivity flow channels within the fractures.

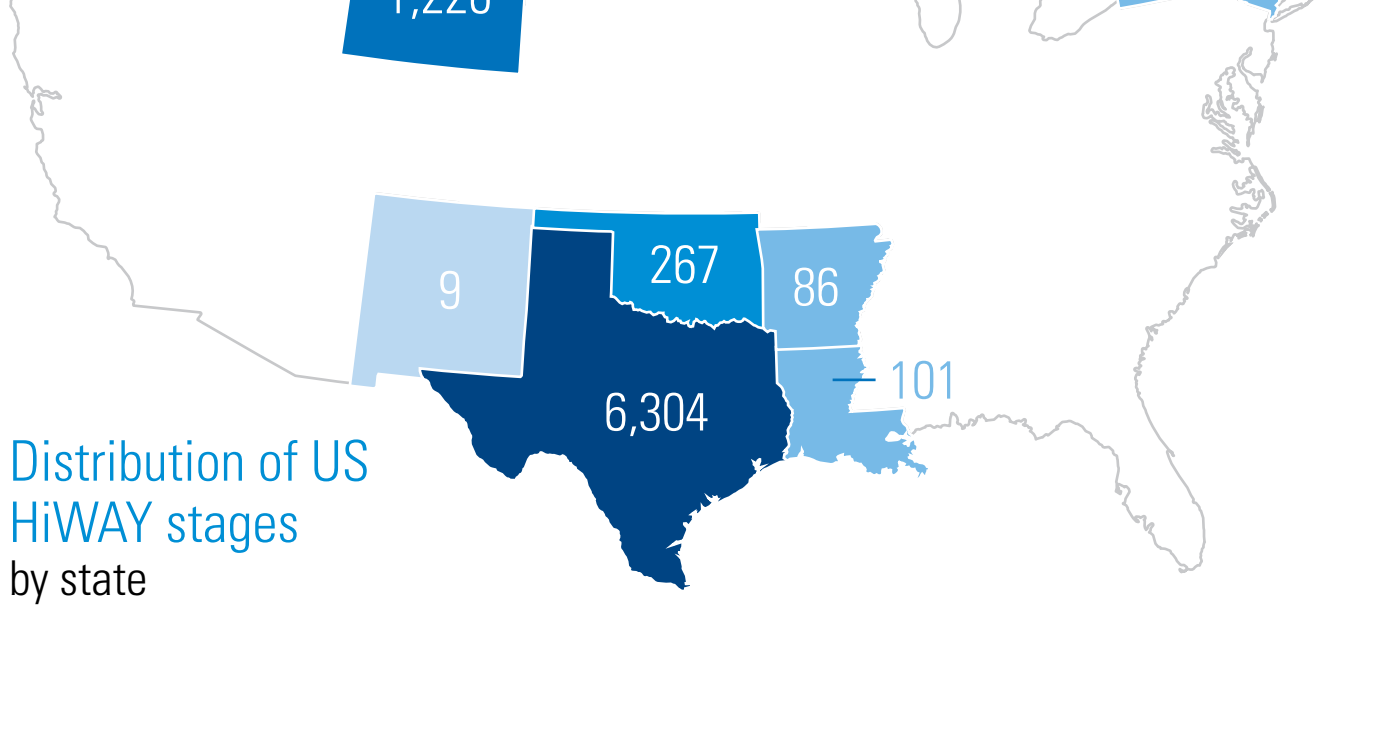
The average HiWAY channel fracturing job **increases production by more than 20%.**

On average, the HiWAY service helps operators **use 40% less proppant per job.**

Compared to slickwater treatments, the HiWAY service **uses up to 60% less water.**



10,000+ stages | 80+ customers | 15 countries



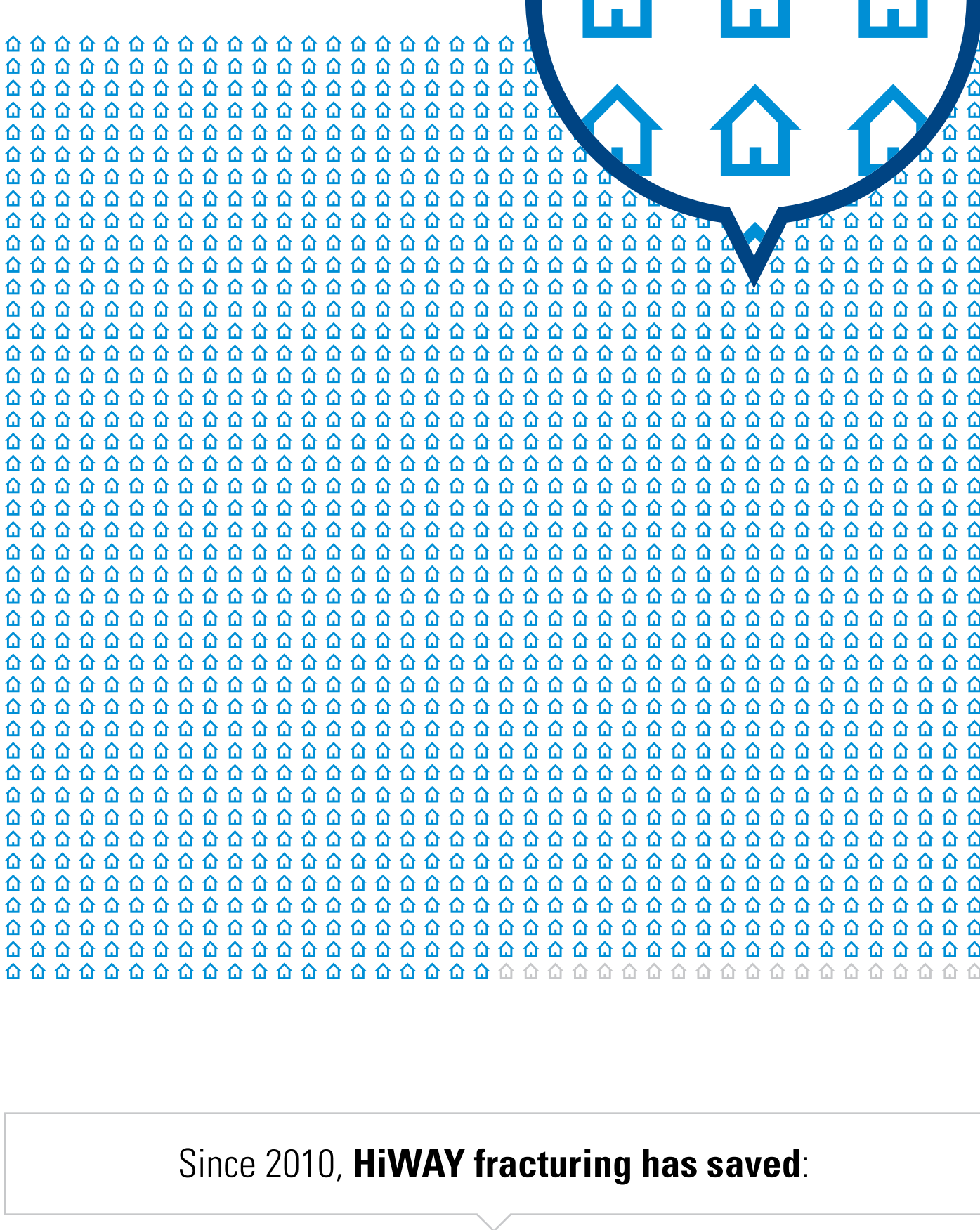
Distribution of US HiWAY stages by state

Since its inception, **HiWAY fracturing has conserved:**

350,000,000 gallons of water
8,300,000 barrels

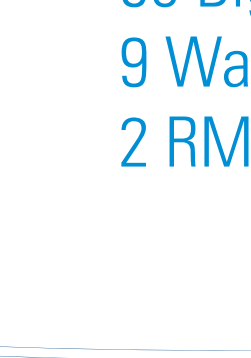


2,400+ households[†]
annual water usage

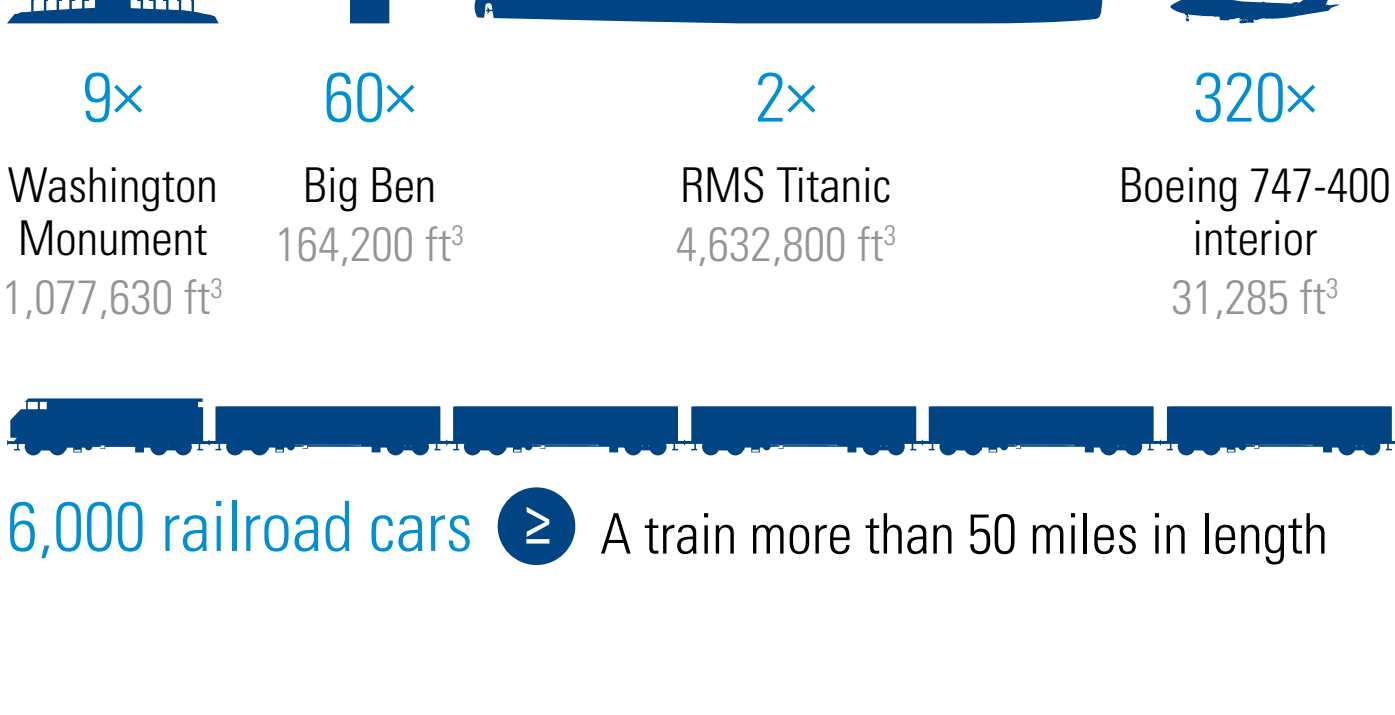


Since 2010, **HiWAY fracturing has saved:**

1.2 billion pounds of proppant
10,206,386 ft³



Enough to fill any of the following:
6,000 railroad cars
320 Boeing 747 interiors[†]
60 Big Bens (Clock Tower)
9 Washington Monuments
2 RMS Titans



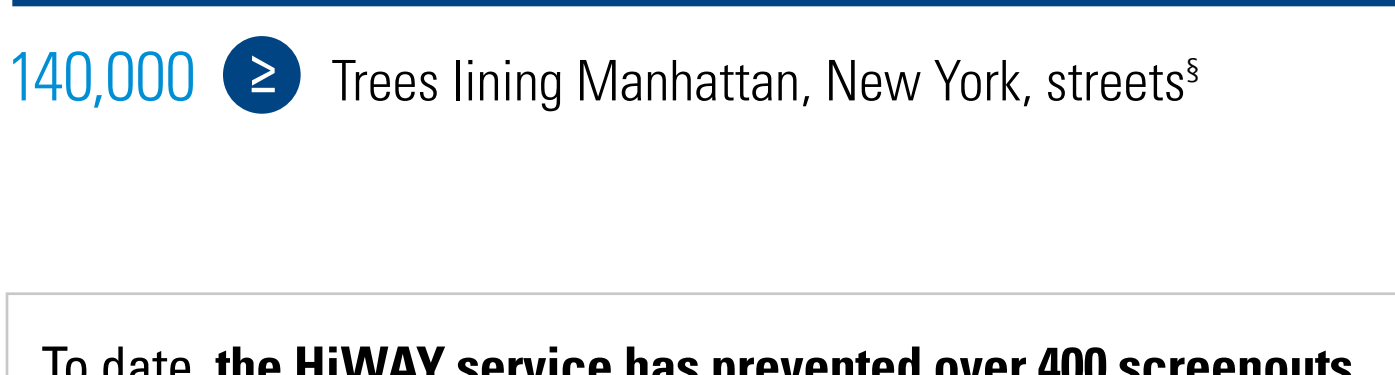
6,000 railroad cars ≥ A train more than 50 miles in length

The implementation of **the HiWAY service has prevented:**

12 million pounds of CO₂ emissions
More than 55,000 road journeys



CO₂ emissions equivalent to:
140,000 planted seedlings[†]
Carbon sequestered after 10 years
1,160 acres of forest[†]
Carbon sequestered annually
780 homes' electricity[†]
Annual usage



140,000 ≥ Trees lining Manhattan, New York, streets[§]

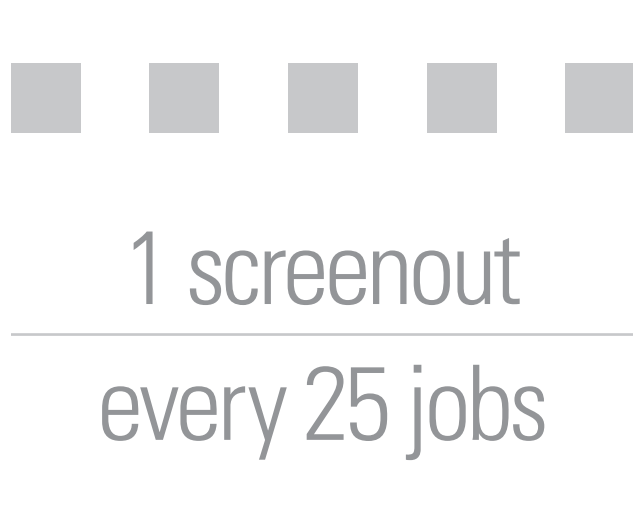
To date, **the HiWAY service has prevented over 400 screenouts.**

HiWAY Fracturing

Conventional Fracturing

99.95% proppant placement rate
Unprecedented in the industry

95–97% proppant placement rate
Industrywide average



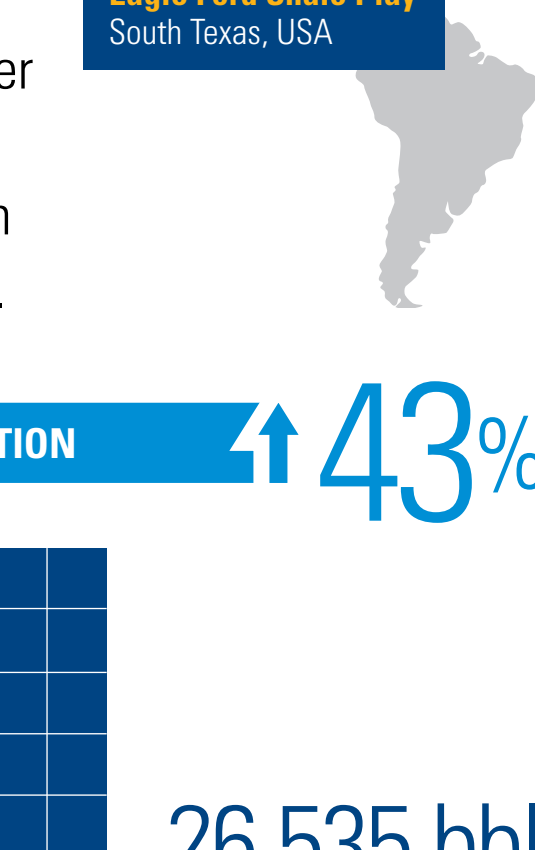
1 screenout every 2,000 jobs

1 screenout every 25 jobs

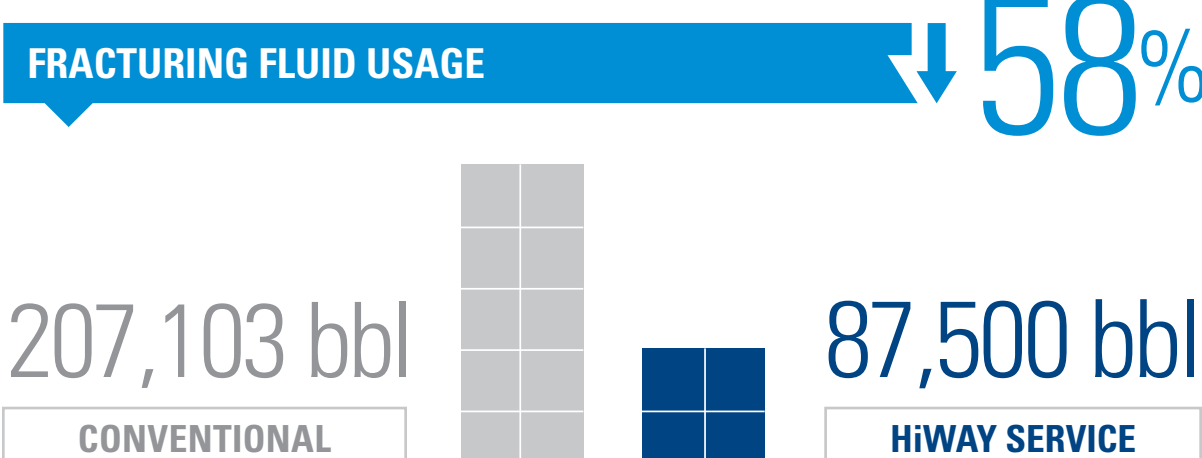
In a recent Eagle Ford case study...

The HiWAY service

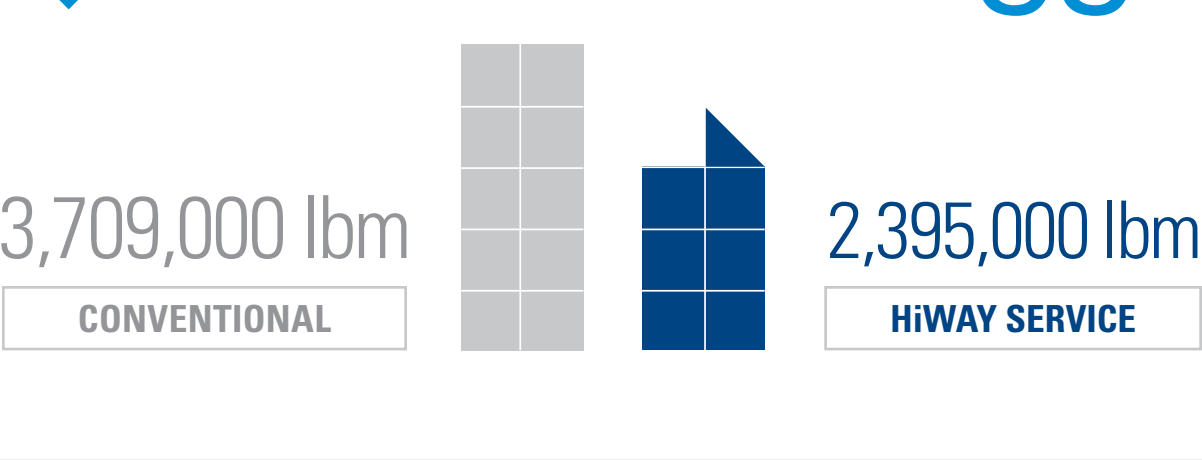
- increased 60-day cumulative oil production 43%
- increased 60-day cumulative gas production 61%
- saved 5 million gallons of water per well
- reduced proppant consumption by 1.3 million pounds per well.



CUMULATIVE CONDENSATE PRODUCTION ↑ **43%**



FRACTURING FLUID USAGE ↓ **58%**



PROPPANT USAGE ↓ **35%**



Learn more at www.slb.com/HiWAY