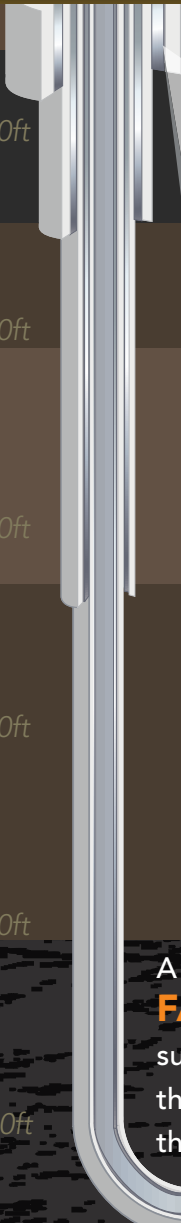


Understanding Hydraulic Fracturing Wells

3 MILLION POUNDS OF STEEL AND CEMENT

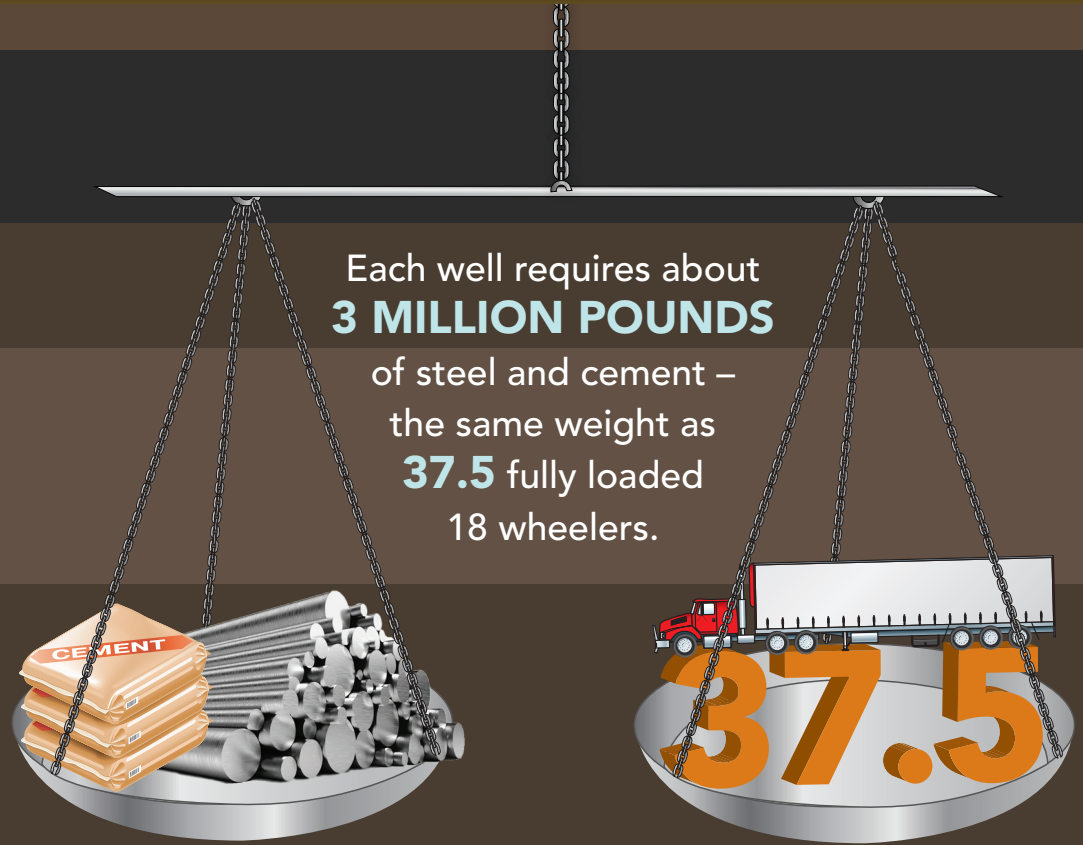


Well Construction: Safety First

Oil and natural gas wells are constructed to provide a shield between energy production and the environment. To ensure safety, these wells are constructed with redundant layers of steel piping, called **CASING**, that is cemented into place.

These layers of **STEEL** and **CEMENT** create an effective barrier between energy production and underground water supplies.

A typical well reaches 6,000 feet or more – **FARTHER THAN A MILE** – below the surface. When **HORIZONTAL DRILLING** is used, these wells can stretch several thousand feet through the shale formation buried deep below.



Each well requires about **3 MILLION POUNDS** of steel and cement – the same weight as **37.5** fully loaded 18 wheelers.

Fueling the U.S. Steel Industry

The emergence of new oil and natural gas production in places like Pennsylvania and Ohio has helped revive America's steel industry. For example, a new **\$650 MILLION** steel plant is under construction in Youngstown, OH to produce the tubing used in new oil and gas wells.