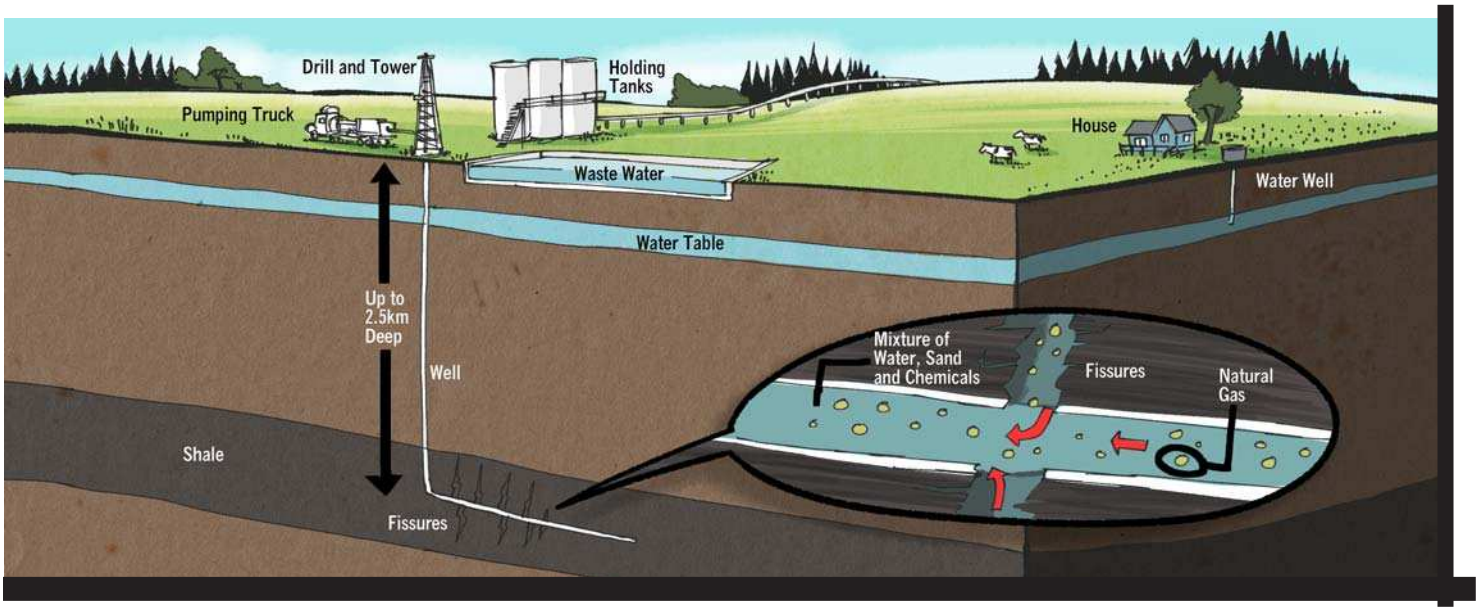
Why the fuss about fracking?



A new movie, *Promised Land*, stars Matt Damon as a salesman for a natural gas company. He tries to get ranchers to sell off drilling rights to their land.

The film has been getting lots of attention – and no wonder. It deals with the hot-button issue of hydraulic fracturing, also known as fracking.

What is fracking?

Fracking is a technique for releasing **natural gas** trapped deep underground in **shale**. It involves injecting water, sand and chemicals into the Earth at high pressure. The force of the liquid creates **fissures** in the rock. Then sand or another solid is pumped in. That keeps the cracks open, allowing methane gas to escape. Methane gas is the basic component of natural gas.

Benefits of fracking

New technology has made fracking easier than it once was. As a result, the practice is booming in parts of Canada and the United States.

Supporters are happy. They point out that natural gas is cleaner than coal or oil when burned. What's more, fracking could provide enough natural gas to supply North America for the next 100 years. That would make the continent less dependent on imported oil.

Other benefits? This new method of extracting gas is creating hundreds of thousands of jobs. As well, plentiful, cheap energy encourages more manufacturing.

Did you know?

Fracking can also be used to extract oil from underground rock formations.

Our water supply

Yet many people have serious concerns about fracking. Critics fear that the chemicals used and released during the process could pollute the water supply. They also worry about the amount of water the method requires. Just one well can use up to 19 million litres of water. That water is often taken from nearby rivers and lakes.

Definitions

fissures: long, deep cracks or openings

natural gas: a fossil fuel formed when layers of organic matter are exposed to intense heat and pressure over thousands of years

shale: a sedimentary rock formed from layers of clay

WHY THE FUSS ABOUT FRACKING?

And what about the huge amount of wastewater generated during drilling? It contains high levels of different poisons. It's also **radioactive**. It must be treated before it can safely be put back into the water supply. But suppose local treatment plants can't handle so much water. Will some end up dumped in rivers and lakes?

One way to dispose of wastewater is to re-inject it underground. Yet this can result in small earthquakes. British Columbia recently recorded 38 small quakes caused by fracking.

More worries

People living near wells have complained about fumes. They say the smells cause headaches, nausea and other symptoms.

Environmentalists also argue that shale gas isn't as clean as **conventional** natural gas. Why? Because fracking releases some methane directly into the atmosphere. So, they say, the solution to our energy needs isn't fracking. It's developing energy sources like solar and wind instead.

"We [should] move to a truly green, renewable future as quickly as possible. We need to look at the true environmental consequences of shale gas," said ecologist Robert Howarth.

The industry's view

For their part, industry officials maintain that fracking is safe. They say its effects are only felt hundreds of metres below the water table. Billions of tons of dense rock lie between the water supply and the wells below. That means substances used or produced during the process can't foul underground water.

Officials also claim that common chemicals used or released in fracking pose no real health risk to humans.

Finally, companies say they follow regulations for storing wastewater and recycle it when possible. Dumping used water back into rivers and lakes isn't tolerated, they add.

Who's in and who's out?

There are few restrictions on fracking in the U.S., so shale gas now accounts for 23 percent of energy production there. That's up from two percent in 2000.

Still, other **jurisdictions** are not sure about the technique.

In Canada, the provinces regulate fracking. B.C., Alberta and Saskatchewan allow the practice so a lot of it goes on in those provinces. But Quebec has stopped fracking until a study is finished in two to three years. Nova Scotia won't approve more fracking before a review is completed in 2014. New Brunswick is moving slowly.

Did you know?

Global demand for energy is expected to grow by about 30 percent over the next 30 years.

And Ontario appears opposed, even though there is no fracking going on there at the moment.

More study needed

Are the risks of fracking worth the rewards? Many countries are studying the question. In Canada, two environmental reviews are underway.

"We need to know a great deal more ... about this," said Federal Environment Minister Peter Kent. "[I'm trying] to accumulate the best scientific information to make sound decisions." ★

Definitions

conventional: of the usual, traditional, or accepted type, instead of being new and different

jurisdictions: countries or areas, such as provinces and states, where particular legal systems operate

radioactive: containing a very harmful form of energy, called radiation, that is produced during nuclear reactions

WHY THE FUSS ABOUT FRACKING?

WEIGH THE PROS AND CONS

1. Using the information in the article and your own thinking, what are some of the reasons for and against natural gas hydraulic fracturing? Give specific details to back up each point.

Reasons for	Reasons against

2. After completing the organizer, answer the following: *Are you more in favour of or more opposed to natural gas fracking? Give reasons to support your response.*