

IN THE BEGINNING: Oil and natural gas were formed from the remains of _____ and _____.

“Petroleum” means _____.

1 IN THE BEGINNING

how are oil and natural gas formed?
...and why are they called “fossil fuels”?

HEAT

Exposed rock strata (layers)
Elast, Illinois

Oil and natural gas were formed from the remains of animals and plants that lived millions of years ago in a marine (water) environment before the dinosaurs. Over the years, the remains were covered by layers of mud. Heat and pressure from these layers “cooked” the remains and turned these “fossils” into what we today call natural gas and crude oil. The word “petroleum” means “rock oil” or “oil from the earth.”

MILLIONS OF YEARS AGO **PRESENT DAY**

WHERE IS OIL AND GAS FOUND? Illinois ranks _____ out of 30 U.S. oil producing states.

What country is the largest oil importer (supplier) to the U.S. _____ ?



HOW DO WE FIND OIL? Thumper trucks produce _____ waves which are used to make underground maps.

3 How Do We Find Oil & Gas?

That looks like a good spot...

Luck! That was the way it was in the old days. Early explorers used signs that were available to them on the surface like oil seeping up from the ground or certain types of rock outcrops.

Now scientists have the ability to "see" what lies below ground. 3D Seismic technology uses the reflection of sound waves to identify subsurface formations. By studying how the sound moves through the ground, scientists can determine the types of rocks and formations that lie below them.

But until a well is drilled, it is impossible to know for certain whether the resource is there, whether it is oil or gas, and whether it can be recovered in commercial quantities.

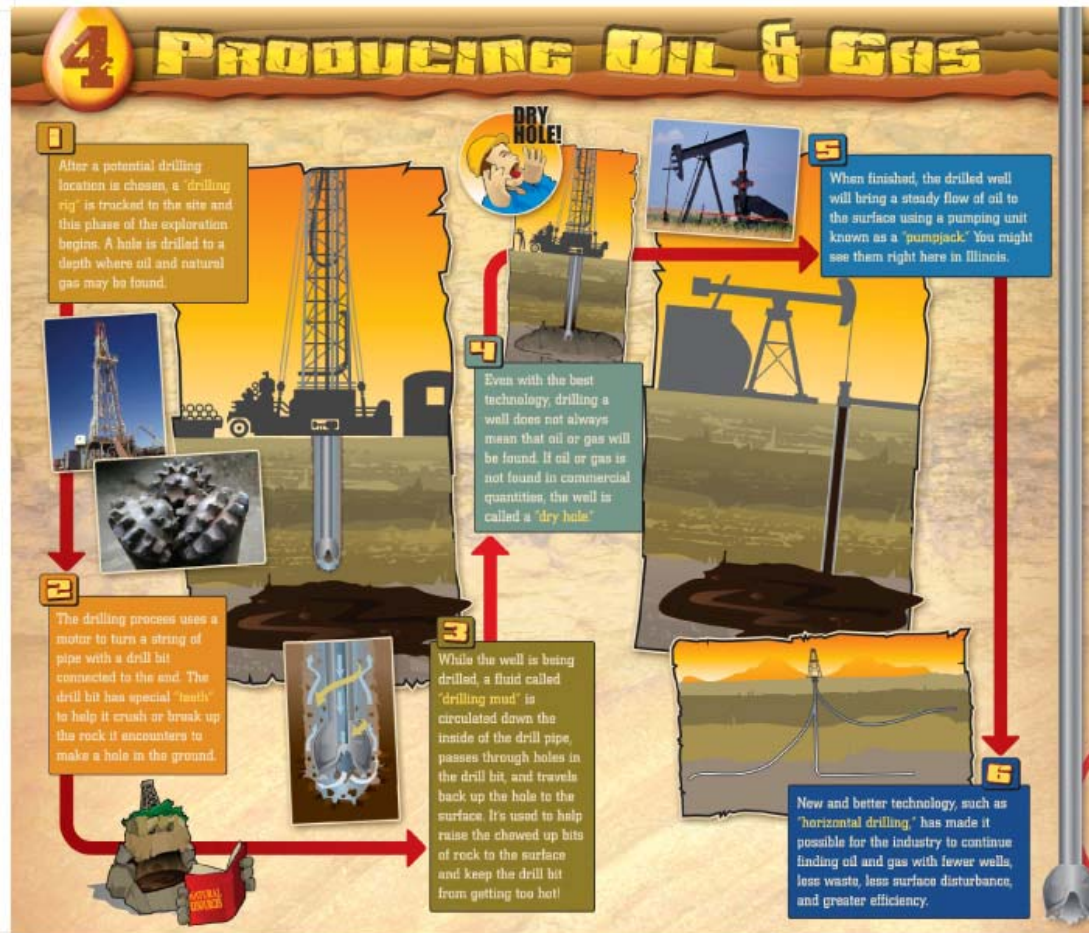
IT'S A GUSHER!

Don't believe everything you see in the movies! Despite the way it's portrayed in movies, like the 1956 hit "Giant" starring James Dean, the days of oil wells spouting oil into the air are long gone. Since the 1930s, oil producers have used an environmentally friendly device called a blowout preventer.

"Thumper" trucks weighing up to 20,000 lbs hit the ground with heavy steel plates to produce seismic waves, which are then read by earth scientists to produce 3D maps of the underground.

PRODUCTION OF OIL AND GAS:

A _____ is used to dig the hole and a _____ is used to bring the oil to the surface.



REFINING: One barrel (42 gal) of oil produces many products, including about _____ gal of gasoline.

Crude oil is refined by _____ it.



CAREER (JOB) OPPORTUNITIES: Name five.

7 CAREER OPPORTUNITIES

Who Does All of This Stuff?
Finding, developing, and extracting oil and gas is a long and complicated process. There are a LOT of people needed to make all of this happen safely, efficiently and cleanly. Below is a list of just some of these important jobs...

- Administration**
Like customer service, project control, receptionist, secretary, technical assistant, analyst or a landman
- Alternative Energy**
Like jobs in biomass, fuel cell, geothermal, renewable fuels, solar, wind energy
- Commercial/Financial/Legal**
Like an accountant, acquisitions/emergers, business analyst, auditor, banker, landman, economist, lawyer, division order analyst
- Design**
Like a CAD expert or a graphic designer
- Drilling**
Like a derrickman, driller, roughneck, roustabout, superintendent, supervisor
- Engineering**
Like chemical, civil, electrical, mechanical or petroleum engineers
- Environment**
Like an ecologist, environmental engineer, hydrologist, toxicologist
- Geoscience**
Like geologists, geochemists, petrophysicist, seismic interpreter
- Health & Safety**
Like fire fighters, emergency response personnel and risk managers
- HR/Personnel/Training**
Like recruiters, instructors and human resource personnel
- IT/Communications**
Like computer programmers and computer support staff
- Logistics/Procurement**
Like purchasing, shipping and transport
- Management**
The boss of everybody from accounting to drilling to IT
- Marine/Diving/ROV**
Like a diver, ships crew or port operations
- Operations**
Like surveyors, field workers, pilot or shift supervisor
- Quality/Inspection**
Like an auditor, inspector or quality control officer
- Sales/Marketing**
Like advertising, public relations or a salesperson
- Scientists**
Like a biologist, chemist or metallurgist
- Technician**
Like a laboratory or an electronic technician
- Terminal/Refinery/Distribution**
Like oil tanker loading, ship captain, train engineer
- Trades**
Like an electrician, machinist or mechanic


Helicopter Pilot (Service or Rescue)
Scientist/Chemist
Engineer

Geologist
Driller
Safety & Rescue
Offshore Rig Diver
Field Worker

CAREERS

IPRB MISSION: Name the two main goals.; Increasing _____
and Restoring the _____.

8 IPRB MISSION




Increasing Awareness...

...about the Illinois Crude Oil and Natural Gas Industry!

Through education, training, and research, IPRB promotes an understanding about the utilization of these natural resources and how they improve our quality of life.

Encouraging our young people to study the sciences and related curriculum is an investment in our state and nation's energy future!



Restoring the Land...

The Illinois Oil & Gas Industry demonstrates concern and resolve for environmental stewardship by restoring abandoned production sites in the state which have been abandoned by others no longer in the industry.

IPRB's free restoration and educational activities are completely funded by the Illinois Oil and Gas Industry.

IPRB.org
618-242-2861

The collage features several 'Before' and 'After' photo pairs. The 'Before' photos show abandoned sites: a field with a rusted tank, a structure by a lake, a polluted stream, and a derelict building. The 'After' photos show the same locations restored: a lush field with cows, a scenic lake view, a clean stream, and a park-like area with people.