

3

**E**xploring

for Natural Gas and Oil

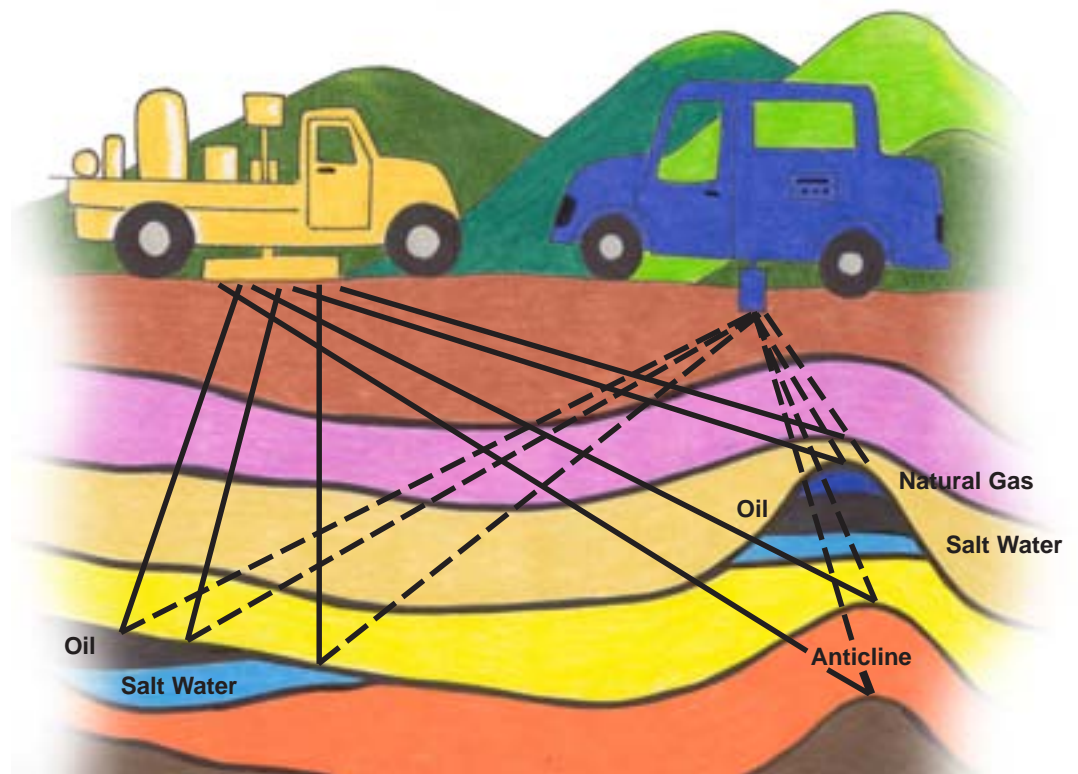
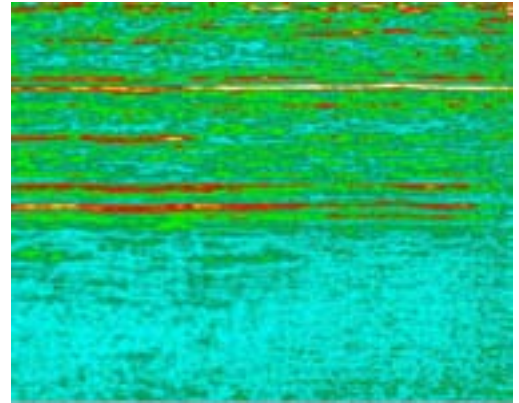
**E**xploring for oil and natural gas was once a matter of good luck and guesswork. Today,

the guesswork has been replaced by science and technology. Geologists and geophysicists use many high-tech tools to search for oil and gas filled rock layers called reservoirs. One

exploration method involves

sending sound waves into the earth and then interpreting the signals that bounce off the rock layers back to the surface.

This “seismic” data helps geoscientists find oil and gas traps.



# CareerConnection

## *The ultimate high-tech adventure...*

In the next 20 years, the world will need twice as much oil and natural gas as it uses today. Nearly half of this future production has yet to be found. Meeting this demand will require creativity and new technologies. As an **exploratory geoscientist**, you will apply the principles of physics and earth science to study Earth's interior in the quest for new oil and gas to power the world.

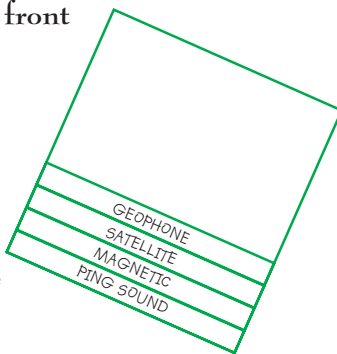
## Graphic Organizers

### *Exploring for Oil: Layered Book*

A layered book can be made to document the different ways technology is used for oil exploration: geophone, satellite, magnetic, ping sound. Under each heading students record research notes and draw pictures or diagrams.

### Directions

1. Stack two sheets of paper (8 1/2 x 11) so that the back sheet is one inch higher than the front sheet.
2. Bring the bottom of both sheets upward and align the edges so that all of the layers or tabs are the same distance apart.
3. When all tabs are an equal distance apart, fold the papers and crease well.
4. Open the papers and glue them together along the valley or inner center fold, or, staple them along the mountain.



## Facts *True or False?*

**Our economy runs on fossil fuels: natural gas, crude oil and coal supply 85% of our energy.**



TRUE.

### National Standards

#### *Science and Technology*

- UNDERSTAND THE ROLES OF MODELS AND SIMULATIONS

#### *Inquiry Science*

- FORMULATE SCIENTIFIC EXPLANATIONS AND MODELS USING LOGIC AND EVIDENCE
- CONDUCT INVESTIGATIONS AND RECORD DATA

#### *Earth and Space Science*

- UNDERSTAND GEOLOGICAL FORMATIONS



www.oogeeep.org