Draw the traps.

Name: Class: Date:

Oil and gas form in a source rock, then rise through porous rock until something stops them. Where the rocks stop them, they collect in a trap. The layers of four common traps are drawn below and over the page. Finish each one so that it shows how the trap works.

EVERY TRAP NEEDS

- a **reservoir rock** with connected spaces, such as sandstone
- a **seal** that oil and gas cannot pass through, such as shale or salt
- a **shape** that closes off the top, so they collect at a high point

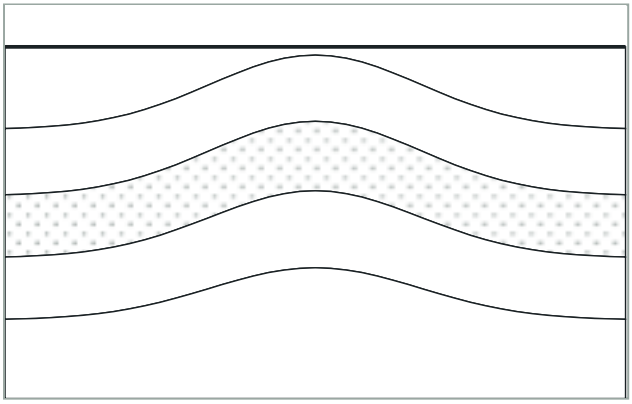
COLOUR KEY

- ☐ Sandstone (dotted): yellow
- ☐ Source rock: black
- ☐ Gas: red
- ☐ Water: blue
- ☐ Shale: grey
- ☐ Salt: pink
- ☐ Oil: green
- ☐ Other rock: leave white

Method

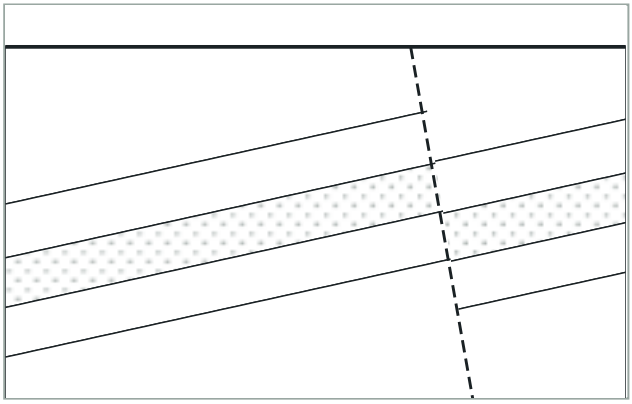
1. Find the layers. The dotted layer is sandstone, the reservoir rock, with shale over it. The source rock is the layer just above the bottom one.
2. Colour the sandstone, shale, source rock and salt, using the key.
3. In the sandstone, show where the oil and gas collect: gas at the top, then oil, then water below.
4. Draw arrows to show how the oil and gas moved out of the source rock and into the trap.
5. Label the source rock, reservoir rock, seal, gas, oil and water. Then answer the question under each drawing.

1 Anticline trap



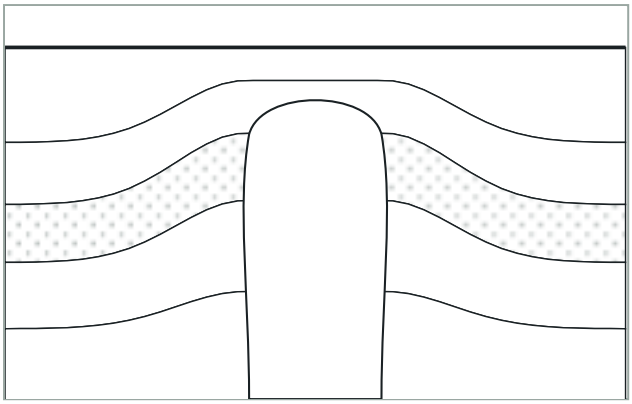
What stops the oil and gas here?

2 Fault trap



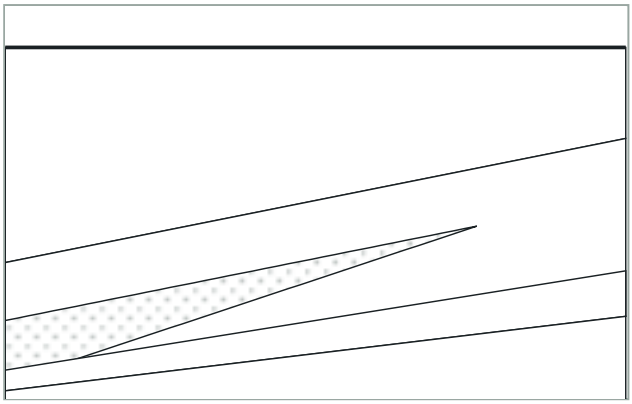
What stops the oil and gas here?

3 Salt dome trap



What stops the oil and gas here?

4 Stratigraphic trap



What stops the oil and gas here?

Questions

1. **In every trap, gas collects above oil, and oil above water. Explain why.**

2. **Which of your traps are structural, and which is stratigraphic? Explain the difference between the two kinds.**

3. **Choose one of your traps. Describe one way it could fail and let the oil and gas escape to the surface.**

4. **An explorer drills into trap 1 but finds only water. Where might the well be, and why?**

5. **Coal seam gas is not held in a trap like these. How is it held instead, and what must be done to get it out?**