**Exploring the distribution of natural resources**

**Part 1:** Porphyry copper

Porphyry copper deposits are ore bodies that contain precious metals, including copper, gold, silver, molybdenum, and platinum. An “ore” means that there is enough of the mineral or element concentrated in the deposit that it is profitable to mine it.

Describe the spatial distribution of the porphyry copper deposits of different ages with respect to topography and plate boundaries.

Look back at your volcano map and compare the distribution of porphyry copper deposits with active volcanoes.

In your group, develop an explanation for the distribution of the porphyry copper deposits based on the evidence you described above. Be prepared to share your explanation.

**Part 2:** Oil and gas fields

Oil and gas are two forms of petroleum that accumulate in subsurface reservoirs; they often occur together. A “field” is an area on the surface that is being drilled for oil and/or gas.

Describe the spatial distribution of the oil and gas fields with respect to topography and plate boundaries.

Look at the map showing sediment thickness to compare the distribution of oil and gas fields with thickness of sediments in the ocean.

In your group, develop an explanation for the distribution of offshore oil and gas fields based on the evidence you described above.

Now, based on the relationship you described for offshore deposits, make a prediction about the distribution of *onshore* oil and gas fields with respect to sediments and sedimentary rocks.