



The Drilling Fields Student Activity Sheet

Wildcatter Oil & Gas Company of Ohio welcomes you as an important member of our company's team. We are constantly looking for quality locations for crude oil and natural gas to supply our customer's energy needs.

We have identified 3 potential drilling sites. Your team must travel to each of the sites and study the rock formations. Analyze your results and make a recommendation to the WOG Directors. Remember--your job depends on your ability to make good recommendations based on solid science.

Find each cache at the given coordinates. Identify the type of rocks you find. Use the chart to record your observations. Which site contains rocks that are most likely to contain crude oil and natural gas?

Sample _____ Site #1 Coordinates N _____ W _____

Rock	Observation	Comments

Sample _____ Site #2 Coordinates N _____ W _____

Rock	Observation	Comments

Sample _____ Site #1 Coordinates N _____ W _____

Rock	Observation	Comments

Rock Identification tools: http://geology.about.com/library/bl/blrockident_tables.htm

Observation

Observe the rock's texture, close up. What kind of particles is it made of, and how do they fit together? What's between the particles? This is usually where you may first decide if your rock is igneous, sedimentary or metamorphic. The choice may not be clear. Crude oil and natural gas are most often found in sedimentary basins.

Igneous rocks cooled from a fluid state and their grains fit tightly and are often uniform throughout. Igneous textures usually look like something you might bake in the oven. Examples are granite, mica, and quartz :



Sedimentary rocks consist of sand, gravel or mud turned to stone. Generally they look like the sand and mud they once were. They usually consist of layers or strata. They often have pores and spaces. Examples are limestone, sandstone, and coal.



Metamorphic rocks are rocks of the first two types that were changed by heating and stretching and pressure. They tend to be colored and striped.



Using your eTrex Garmin.

Your route to 3 caches of rocks has already been entered into your eTrex Garmin.

1. Turn it on by pressing Power button (right side)
2. Wait until the satellites have “found you” and it says “Ready to Navigate.”
3. Press the Page button twice (right side)
4. Begin to Navigate toward the destination symbol, a small flag. Use the compass to point you in the right direction and the number of feet to show you how close you are to the cache.
5. After you have found the cache, examine the rocks using the Observation forms to guide you.
6. After you have reached your first destination, the device will automatically send you to the second destination, then to the third and then “Home.”

