









Name of Specimen: \_\_\_\_\_ Specimen Number: \_\_\_\_\_

Scale

Yet another bonus credit opportunity Draw a third (different) plant for 5 more points

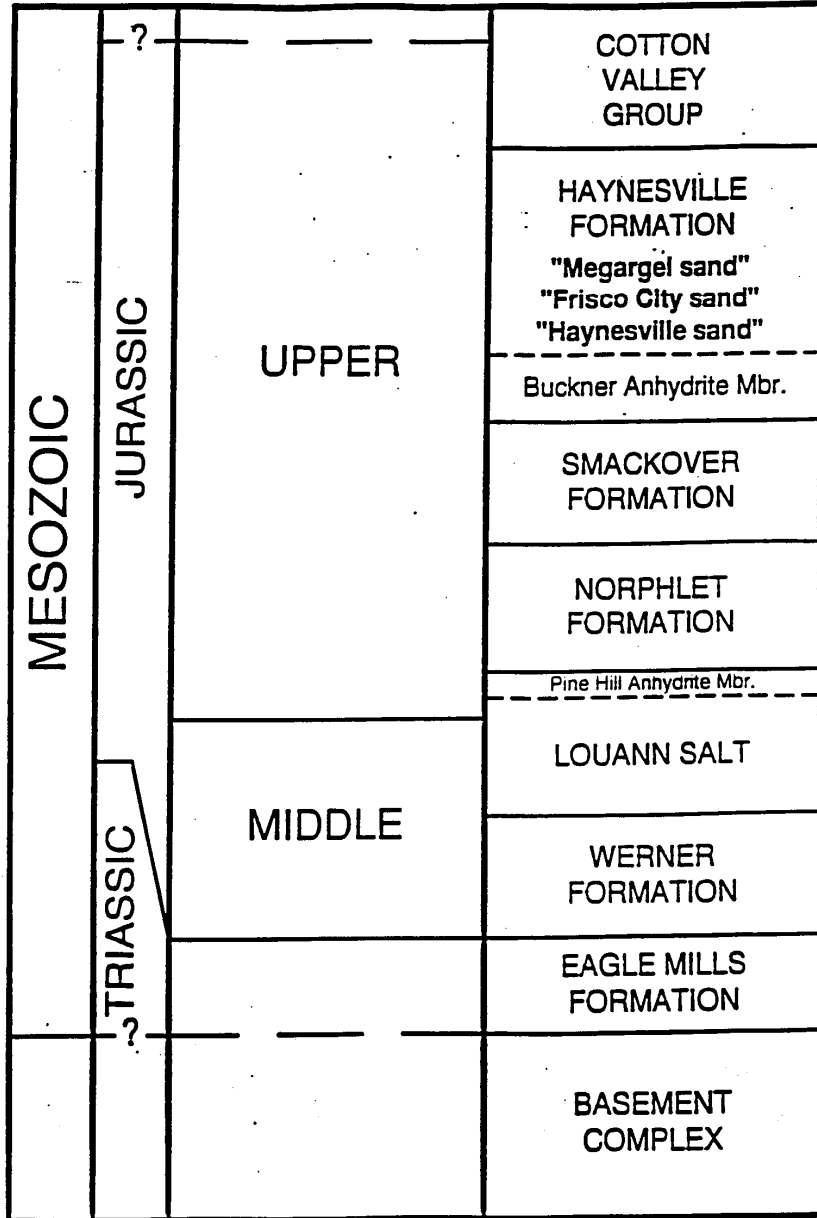
Name of Specimen: \_\_\_\_\_ Specimen Number: \_\_\_\_\_

Scale

**Part 2:**

**Mesozoic subsurface rocks of Alabama.**

Figure 10-7 below is a nice and short (and readable!) stratigraphic chart of the subsurface rock units of central and southern Alabama (including Mobile). Most of the rock specimens that you will see today are portions of cores (hence their cylindrical shapes). Coring is the best way of obtaining subsurface samples from rocks that do not crop out at the surface.



*Figure 10-7: Mesozoic subsurface geology of Alabama.*

**Specimen 10-9 (RI 3452):** Louann Salt (Jurassic)

a) What is the proper mineral name for this specimen? \_\_\_\_\_ [3 points]

b) In what paleoenvironment of deposition was it deposited?

\_\_\_\_\_ [3 points]

c) Why is this material (in the form of diapirs) important for petroleum exploration along the Gulf Coast? (You might need to ask for help to answer this question).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [5 points]

**Specimen 10-10 (RI 3154):** Norphlet Formation (Upper Jurassic)

This core rock segment is composed of thinly bedded mud and sand. In what paleoenvironment of deposition do you think it was deposited? (Hint: Tricky -- in which environment(s) could mud and sand be alternatively deposited time and time again?)

\_\_\_\_\_ [3 points]

**Specimen 10-11 (RI 3180):** Smackover Formation (Upper Jurassic)

a) What kind of rock is the core sample?

\_\_\_\_\_ [3 points]

b) Does it contain any fossils? If so, can you identify them?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [3 points]

**Specimen 10-12 (RI 3178):** Buckner Anhydrite Member (Upper Jurassic)

Yet another bonus opportunity for this week, but only because it will require internet research. The white nodules in this specimen are anhydrite ( $\text{CaSO}_4$ ). In which physical and chemical ways is this mineral different than its cousin gypsum ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ )? (Refer to the introductory mineral material in Week One of the GY 112 lab manual for help here).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [2 points bonus]

**Specimen 10-13 (RI 3453):** Haynesville Formation (Upper Jurassic)

a) What kind of rock is this core sample?  
\_\_\_\_\_ [3 points]

b) What do you think the dark material in the sample is? \_\_\_\_\_ [3 points]

**Part 3**

**Alabama Stratigraphy**

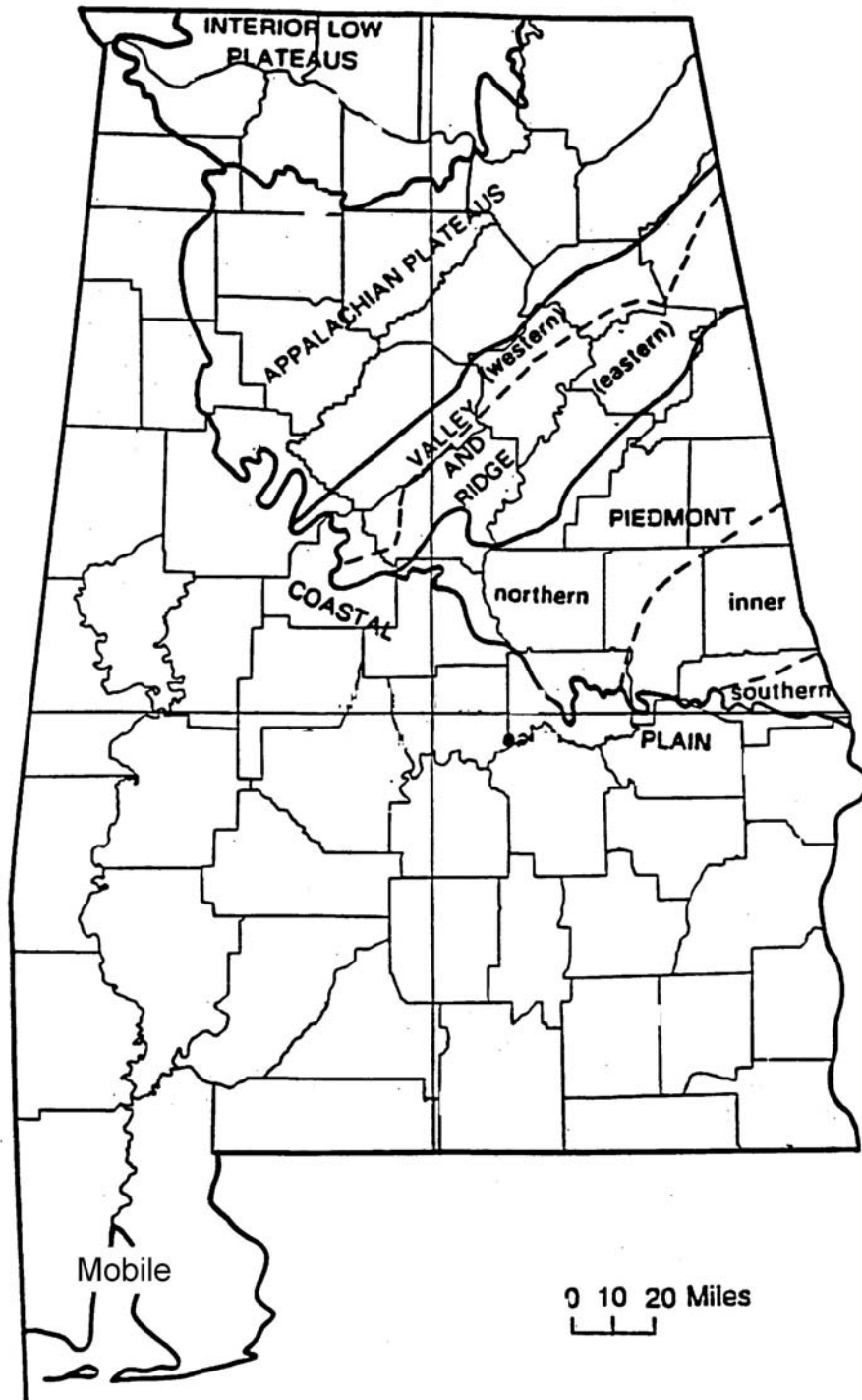
Color the distribution of Mesozoic rock outcrops in Alabama on the map on the following page. Use the map outside of room LSCB 335 to help you with this. There is another smaller map outside of Mary Anne Connor's office (LSCB 121) and it has a legend on it. Use a green color for the Mesozoic rocks. [4 points]

Using the map you just colored, estimate the percentage of the state where Mesozoic rocks are exposed at the surface

\_\_\_\_\_ [1 point]



Notes



Name: \_\_\_\_\_



More Notes