

Name \_\_\_\_\_

**Initial power calculations  
for the Qattara Depression  
(due Mon., Nov. 17)**

**Getting ready for Col. Hensley's visit**

Be sure that you get yourself well organized to explain to Col. Hensley the geological reason for why the Qattara Depression is impassible to heavy vehicles. Be ready to paint a clear and coherent picture of the topography, the groundwater situation, why there isn't a lake there, and what the origin is of the salt quicksand bogs and salt crust. Air Force cadets are really good at briefings. Be sure you're ready to give her a little briefing!

**Initial power calculations for Qattara**

Read through the handout that I gave you on the Qattara Project so that you know what you have to do. We will work on this a bit in class as well as for homework. It will ultimately be due at the end of finals week.

This is something that I would like you to do yourself, rather than as a collaborative effort with other people in the class. If you are stuck or have questions, or if you want to check numbers, come see me.

For Monday:

Choose two effluent lake levels, and calculate the power that could be generated at peak capacity for each lake level.

- At this stage, you can be somewhat casual about your lake outline, because you are getting ballpark figures. But realize that you will eventually need to do a careful lake outline for each of your final chosen lake levels.
- Be sure to factor in rainfall and groundwater influx when you calculate the maximum allowable annual flow through the power station (see page 9).
- Assume that the power station will be underground beneath the very edge of the Depression. You can choose where along the edge of the Depression to put it. Remember that both the canal from the Med and the effluent canal must slope and will reduce the drop possible through the power plant.
- Be careful about unit conversions.