Questions from “How a well is drilled video”

Use word processor (e.g. Word) and formal English to answer as appropriate. Print using black/blue ink, 12 or 14 point fonts, print and hand-deliver paper copies to class.

1. **Part A**: What is a groundwater well? **Part B**: List 4 methods used to drill a groundwater well.
2. Define and list 3 functions of casing in a groundwater well.
3. What is meant by well yield and what is its unit of measure?
4. Why should well driller get permit and why call miss utility before drilling or digging?
5. **For 15 points**. **Show all processes or forfeit all points**. The yield or number of gallons per minute of a groundwater well is rated is 2.5 gallons per minute (gpm). A farmer needs a total of 500 gallons of water to water crops and feed cows. Assume that a farmer opens and allows the well to run continuously, how long (i.e. how many hours) will it take the farmer to obtain 500 gallons from the well? **15 points**
6. Explain the meaning of well grout and why grout groundwater wells?
7. What is meant by well screens and what do they do?
8. Explain how groundwater water gets from a groundwater well and into the faucets in homes.
9. What is meant by hard water? Explain the effects of hard water on humans and appliances.
10. True or false. Cable tool method of drilling is faster than rotary method of drilling.
11. Why is it that the diameter of a groundwater well is 1 to 2 inches wider/larger that the diameter of the well casing?
12. List two reasons for using pressure tank in the distribution of groundwater.
13. What is meant by water softener and what does it do?
14. List the four types of drill rigs.
15. Compare and contrast mud rotary drill rig and air rotary drill rig.
16. What is the purpose of standard penetration test?

<https://www.youtube.com/watch?v=IGk1HI1NGug> UC Davis video

<https://www.youtube.com/watch?v=8K6V450StO4> How a water well is drilled