You have been assigned to plan a well to a dry gas pay zone that is 14,000 – 14,500 feet, with an expected bottom hole pressure of 8500 psi. The base of the ground water is 450’, there is a salt formation from about 1000’ to 1800’, a red bed formation from 2000’ to 3500’. From 3500’ to 5000’ it is sandstone with shales sections then a limestone formation with anhydrite streaks. The area has a pressure gradient of .435 psi/ft from the surface to 13,000’ and a fracture gradient of .75 psi/ft. A pay zone at 10,543-612’ has been drained by an offset well.

Design the hole and casing sizes for this well.