



**EECS 143
Microfabrication
Technology**

Department of Electrical Engineering and
Computer Sciences
University of California, Berkeley

Week #8 Quiz--Contact Cut

Name _____ Section _____ Date _____

- (1) What layer will we be cutting through today?

- (2) What etchant (and what concentration) will we be using? What is the nominal etch-rate? Assuming 1400 Å of the layer and using a 10% overetch, how long (in minutes and seconds) would you need to etch?

- (3) What are the potential problems if we overetch or underetch?

- (4) What is the purpose of the NH_4F in the BHF (i.e. why is there NH_4F in BHF instead of H_2O)?

- (5) Is today's mask (CONT) a bright-field or dark-field mask?

- (6) What will you be aligning this week's mask to, the ACTV or POLY alignment markers? If we're off by several microns in alignment, how will this affect the performance of your MOSFETs?

- (7) If the wet etch is done for twice as long as needed, how will this affect the performance of your MOSFETs?

- (8) Draw the cross-sectional view, and top down view of a MOSFET before and after today's processing (3 points).