ESS103A Name_____
Igneous Petrology, Spring 2006

LAB 7
BISHOP TUFF

This lab is designed to introduce you to textures of pyroclastic rocks.

1. Briefly describe the following hand specimen of the Bishop Tuff by filling out the attached table.

    1) BT-02
    2) BT-10
    3) BT-19
    4) BT-28
    5) BT-39
    6) L-43-7

    a) Look for the following features:

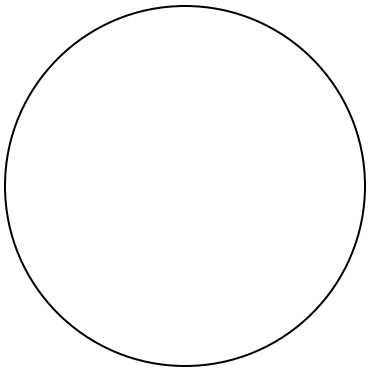
    - Degree of welding (non-welded, welded, strongly welded)
    - Size of fragmented material (ash-less than 2 mm, lapilli-2 to 64 mm, blocks-greater than 64 mm)
    - Fiamme
    - Lineation (eutaxitic)
    - Xenoliths
    - Lithic fragments
    - Vitrophyre (glassy)

    b) Relatively position each sample in order of least to most welded.

2. Examine the **thin section** for sample 7) **LV7 BT** Pumice.
    a) What does this pumice block consist almost entirely of?

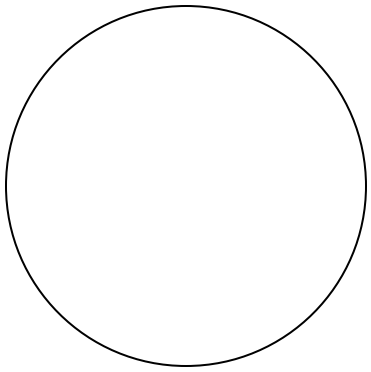
3. Examine the **thin section** for sample 3) **BT-19.**
    a) Find a section where 3 bubbles converge to produce a Y-shaped shard.

    Provide an illustration in plane light.



b) Find an example of incipient devitrification producing an axiolitic texture.

Provide an illustration in plane light.



4. Examine the following hand specimen (**A** through **F**) and fill in the following table by provide a name (obsidian, bomb, breadcrust bomb, pumice, scoria, pahoehoe, or aa), whether it has mafic or felsic mineralogy, and the degree of vesiculation.

	Mafic or Felsic Mineralogy	Name
A		
B		
C		
D		
E		
F		
G		

Lab 7 - Tuff Summary Chart

	Size of Fragmented Material (ash, lapilli, blocks)	Degree of Welding (non-welded, welded, strongly welded)	Mineralogy	Major Textures (fiamme, xenoliths, eutaxitic, lithic fragments, vitrophyre)	Field Name	Order of Least to Most Evolved
1) BT-02						
2) BT-10						
3) BT-19						
4) BT-28						
5) BT-39						
6) L-437						