CEST 50A PLANE SURVEYING
PROCEDURES FOR SETTING UP A WILD T-16 THEODOLITE

1. Set instrument over point by securing one leg of the **Tripod** in the ground and holding the other two legs, sight through the **Optical Plummet** and move cross hairs over point.

2. Loosening the locking screw under **Tripod**, sight through the **Optical Plummet** and moving cross hairs directly over the point, tighten locking screw.

3. Level the **Bullseye Bubble** by moving **Tripod** legs up and down.

4. Reset instrument over point (Step 2) if necessary.

5. Level instrument using **Leveling Screws** and **Level Vial**. Place **Level Vial** parallel to two of the three **Leveling Screws** and level instrument by turning screws in opposite directions simultaneously. Rotate instrument 90° (or perpendicular to the two leveling screws) and level instrument using third **Leveling Screw** only. Repeat as necessary until instrument is level.

6. Reset instrument over point (Step 2) if necessary.

7. Zero the instrument by sighting through the **Reading Microscope**, rotate the instrument with the **Toggle** up until 0° shows on the yellow AZ scale. Lock the **Horizontal Motion Lock** and fine tune with the **Horizontal Motion Screw** until the 0° mark lines up with the 0 on the lower portion of the yellow AZ scale (arrow pointing to the right). Flip **Toggle** down.

8. BACKSIGHTING: With the **Toggle** down. Sight the backsight target by releasing the **Horizontal Motion Lock**, turn the instrument, place the cross hairs on the target, lock the **Horizontal Motion Lock** and fine tune using the **Horizontal Motion Screw.**

9. TURNING A HORIZONTAL ANGLE RIGHT: Flip **Toggle** up. Release the **Horizontal Motion Lock**, turn the instrument to the foresight target, lock the **Horizontal Motion Lock** and fine tune the cross hairs onto the target with the **Horizontal Motion Screw**.

10. Sight through the **Reading Microscope**. Read the Degrees, minutes and seconds on the lower scale of the yellow AZ scale corresponding to the black line.