CENTRO DE INVESTIGACIONES DEL PATRIMONIO COSTERO - CIPAC

CENTRO UNIVERSITARIO DE LA REGIÓN ESTE – CURE

UNIVERSIDAD DE LA REPÚBLICA URUGUAY - UDELAR

AGISOFT PHOTOSCAN

BASIC TUTORIAL TO CREATE PHOTOGRAMMETRIC MODELS

2017

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http://cipac.cure.edu.uy

To refer this tutorial:

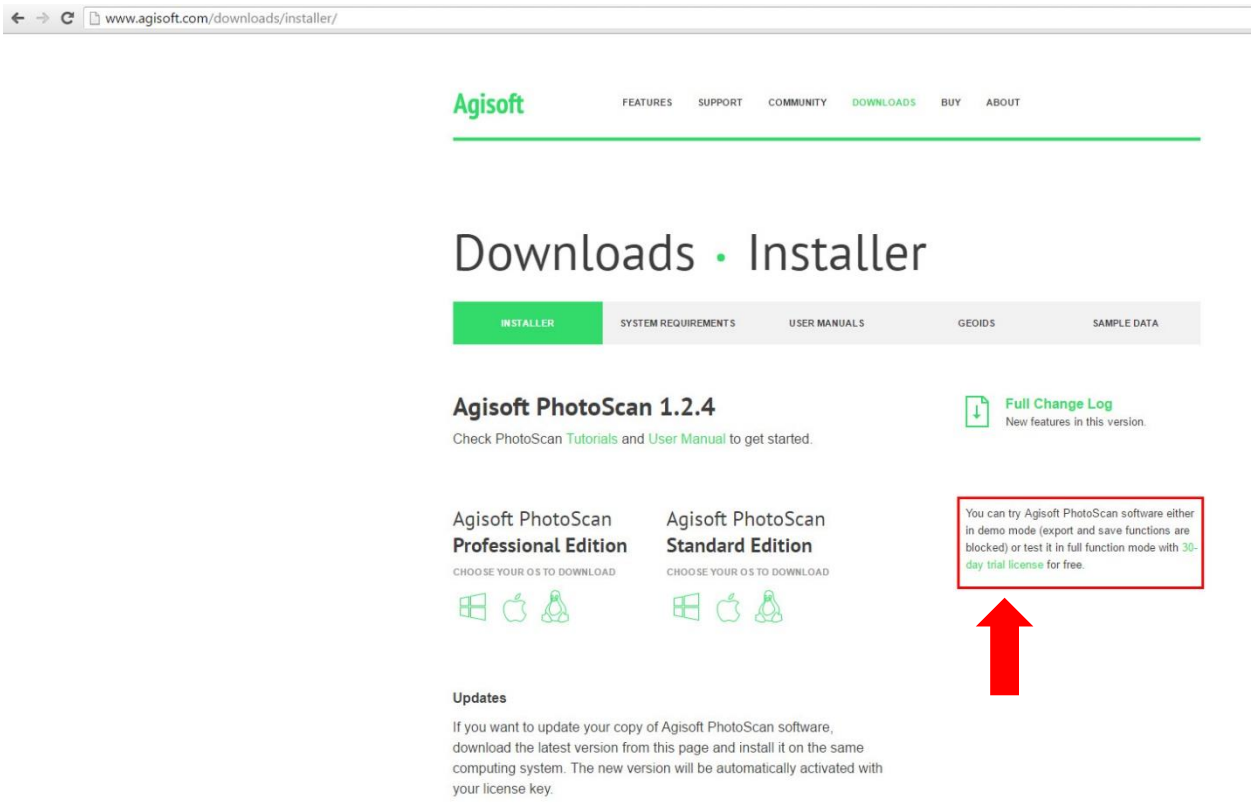
FERREIRA, Samila & TORRES, Rodrigo. Centro de Investigaciones del Patrimonio Costero. Agisoft Photoscan: Basic Tutorial to create photogrammetric models. Centro Universitario de la Región Este (CURE). Maldonado, 2017.

AGISOFT PHOTOSCAN

BASIC TUTORIAL TO CREATE PHOTOGRAMMETRIC MODELS

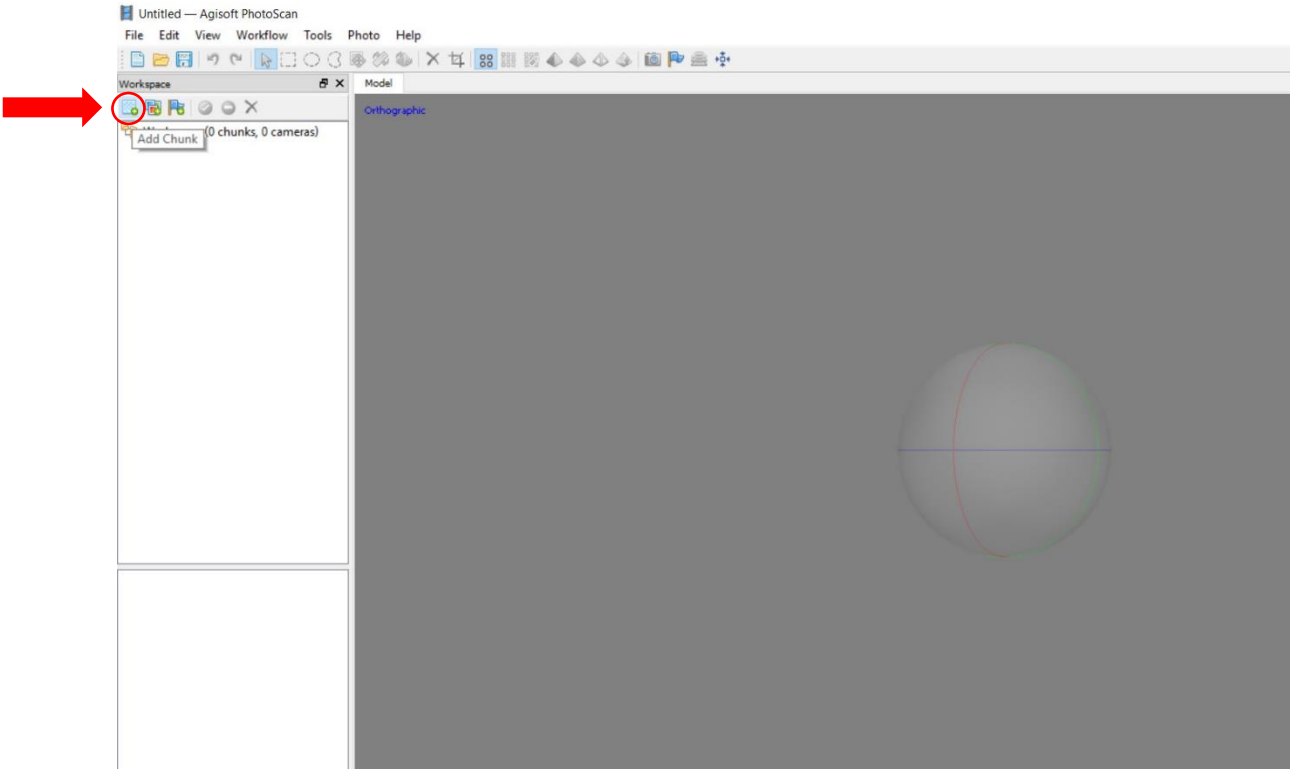
1. Download the Agisoft PhotoScan demo on: http://www.agisoft.com/downloads/installer/

2. Click on **"30-day trial license"**

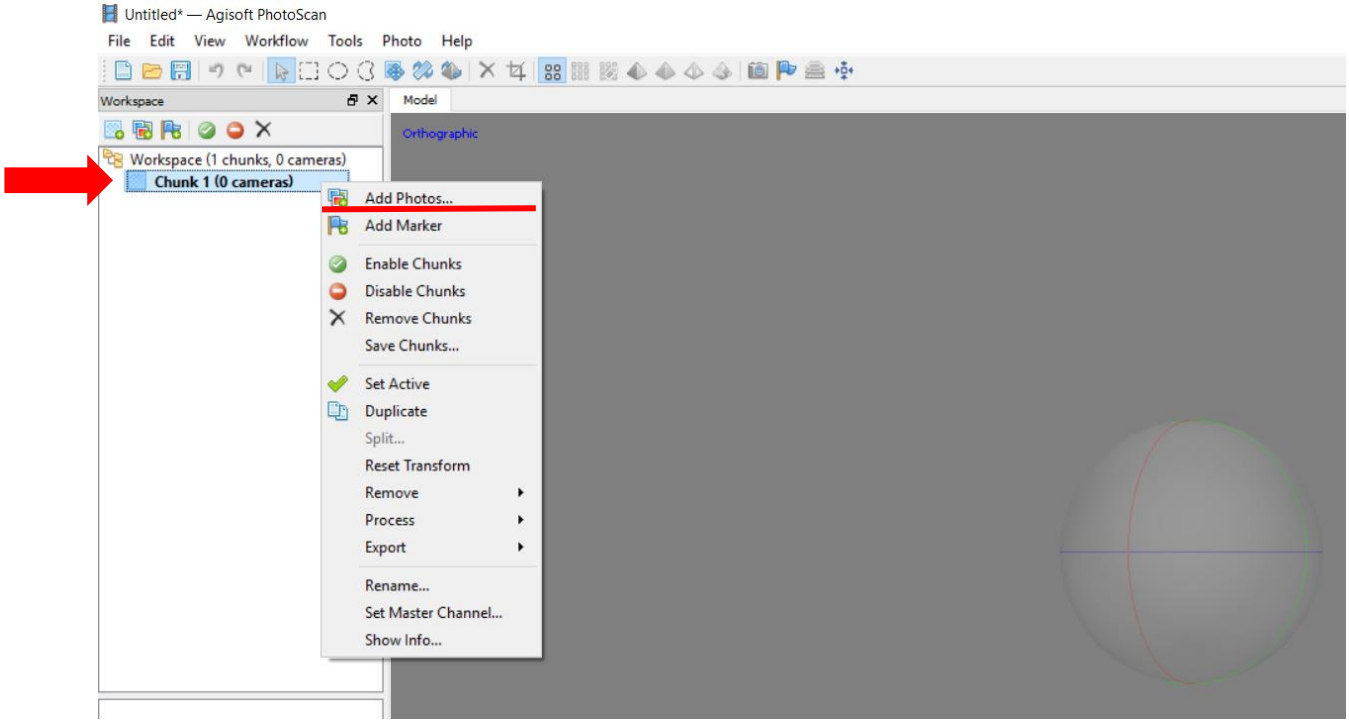


3. Open the software Agisoft PhotoScan.

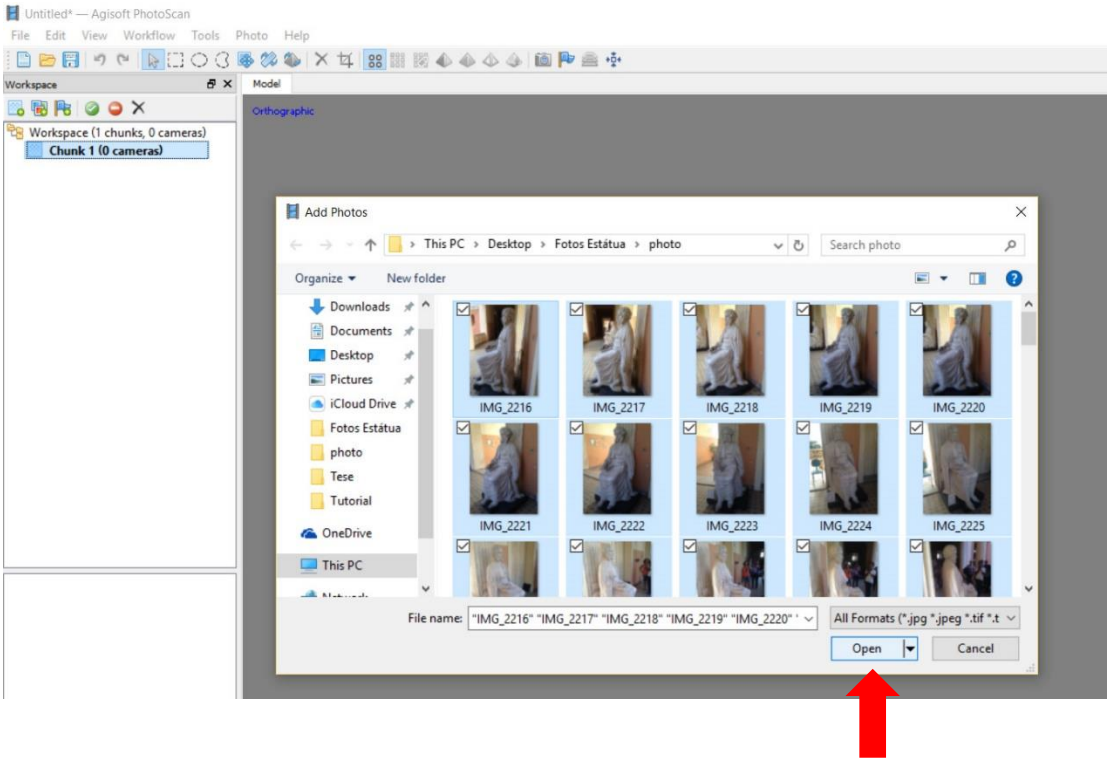
4. Click on "**Add Chunk**".



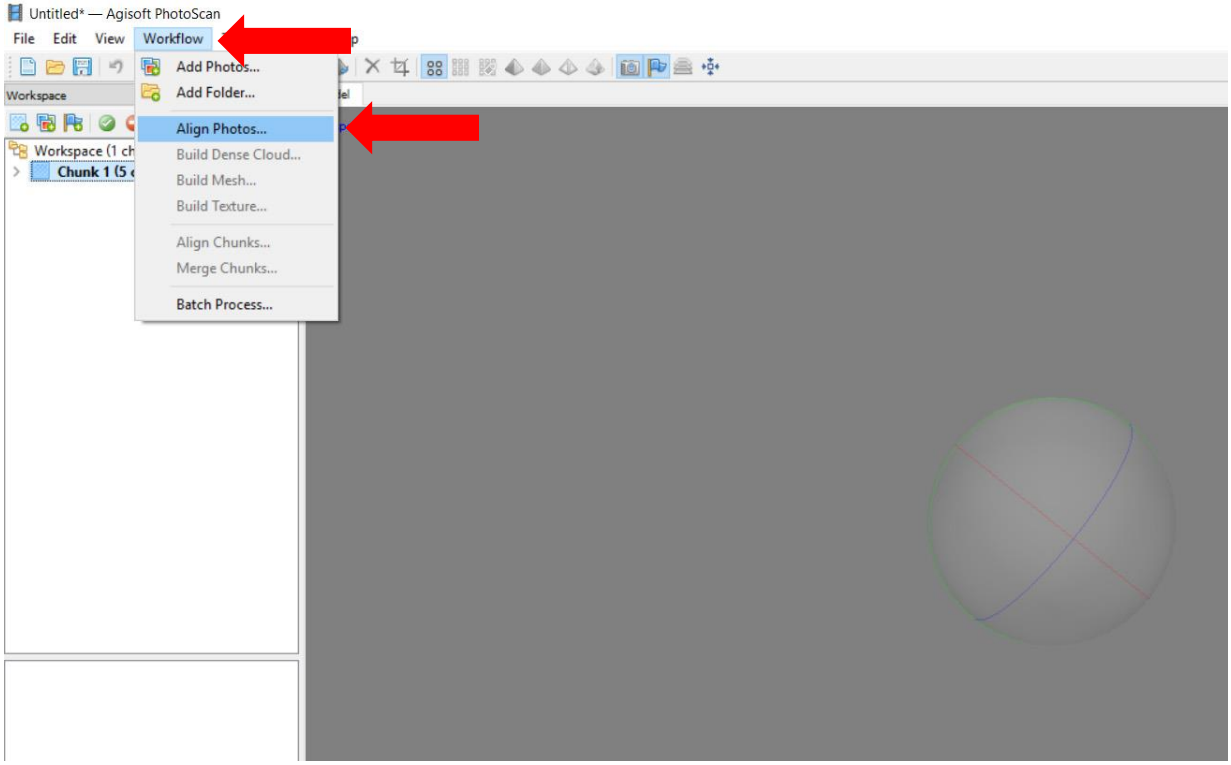
4. Right click (mouse) over **"Chunk 1"** and click on "**Add Photos**".



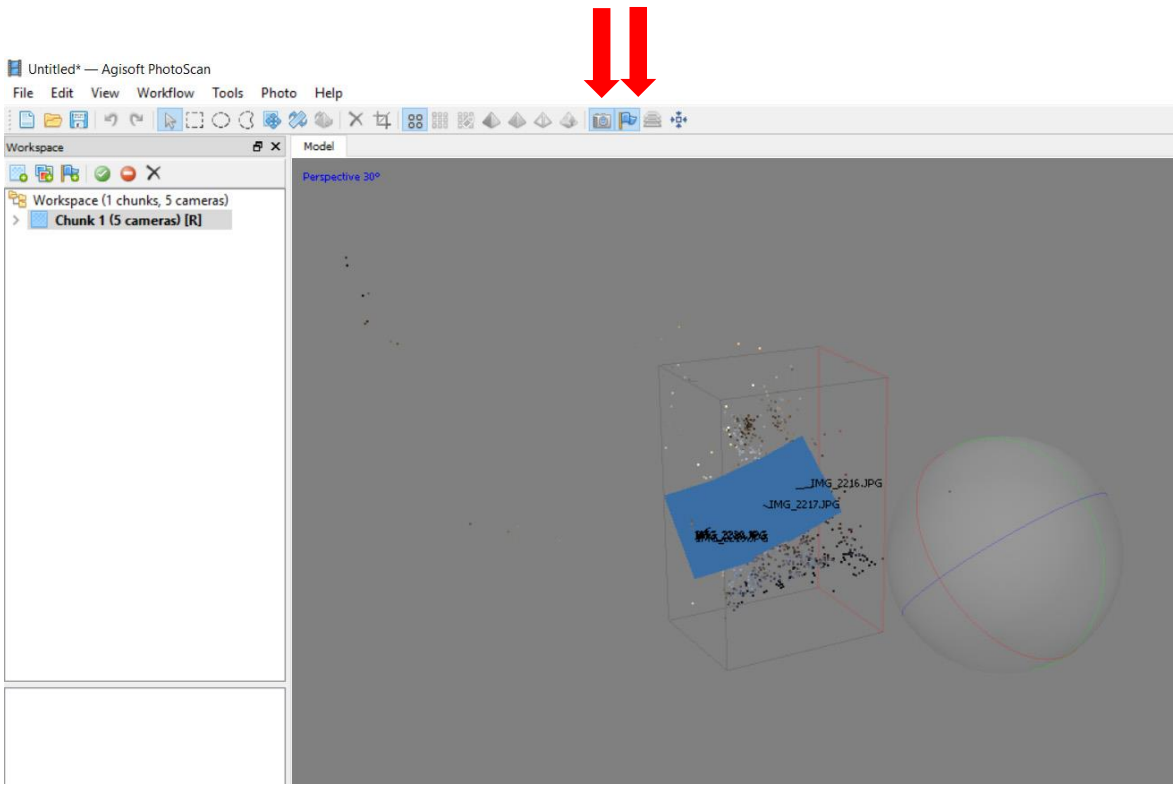
5. Select all photos and click on “Open”.



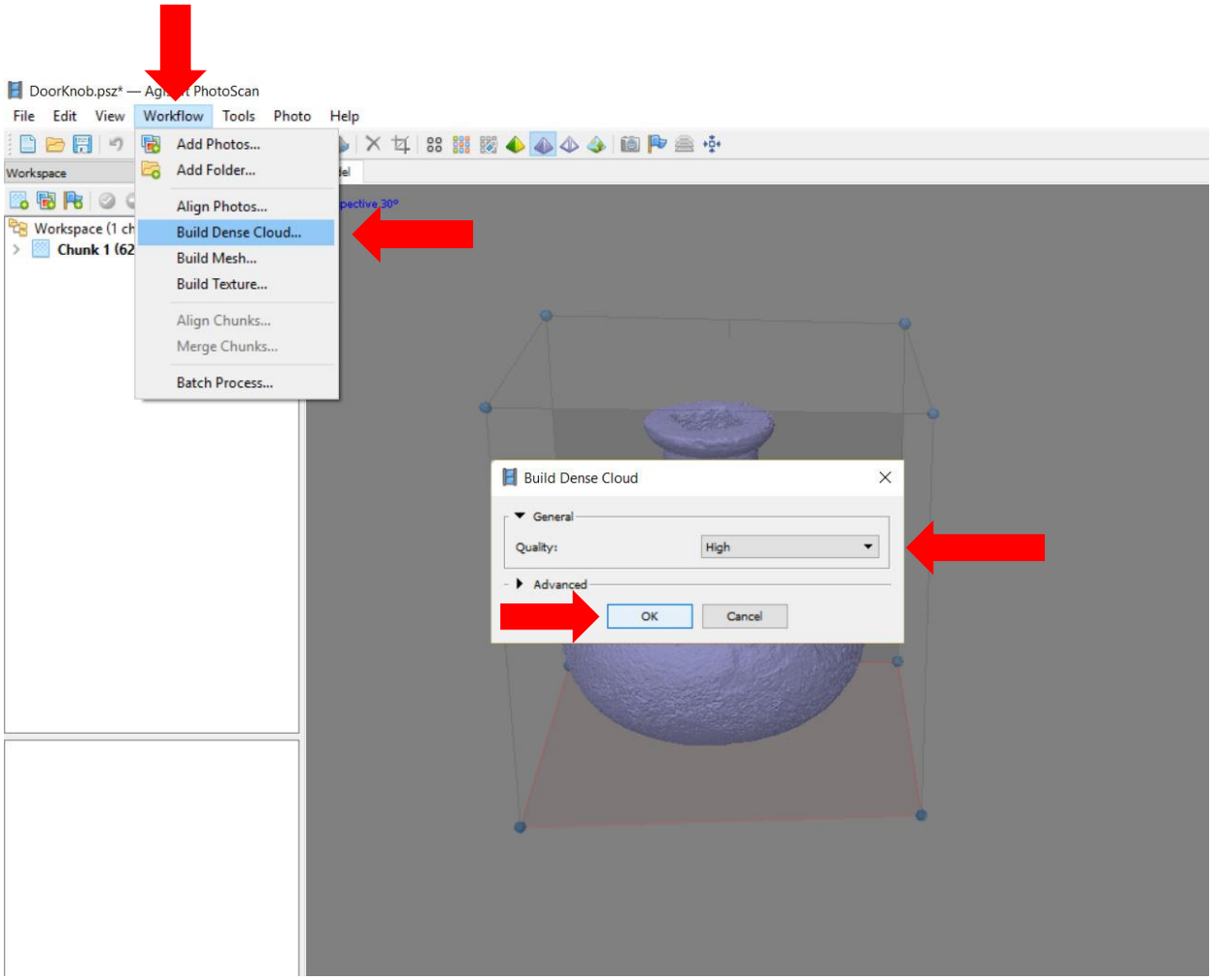
6. Select "**Workflow**" e "**Align Photos**".



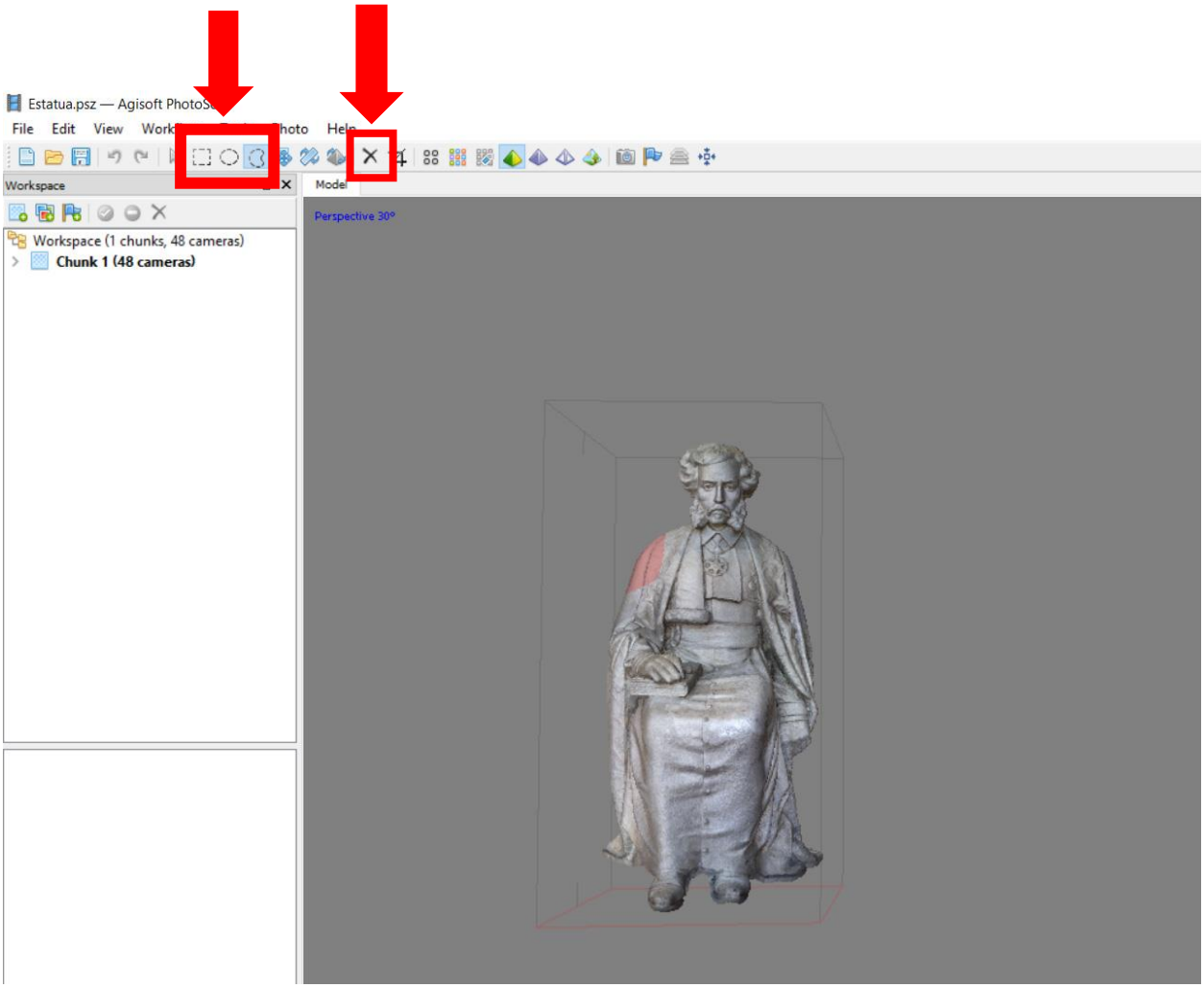
7. To check the model disable the cameras and the markers on the superior bar.



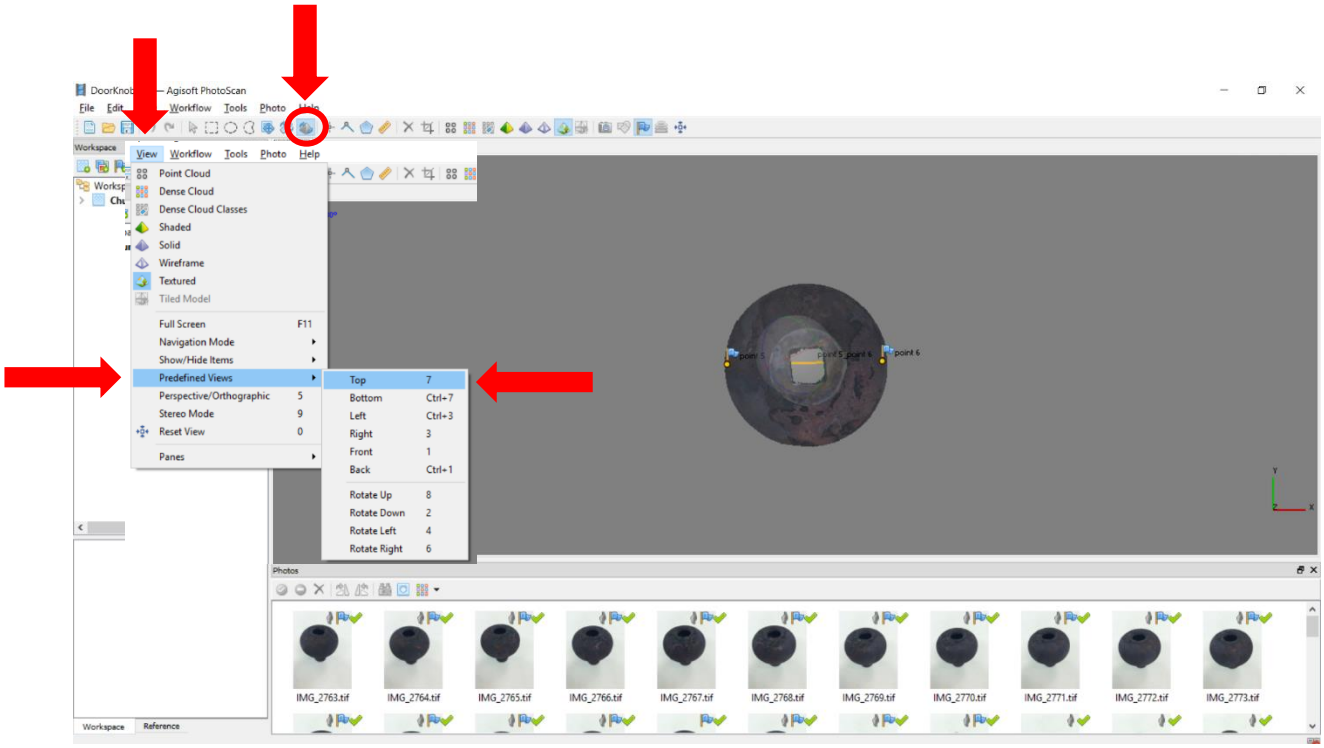
8. Continue the photos process on "**Workflow**" > "**Build Dense Cloud**", choose the quality and click on OK.



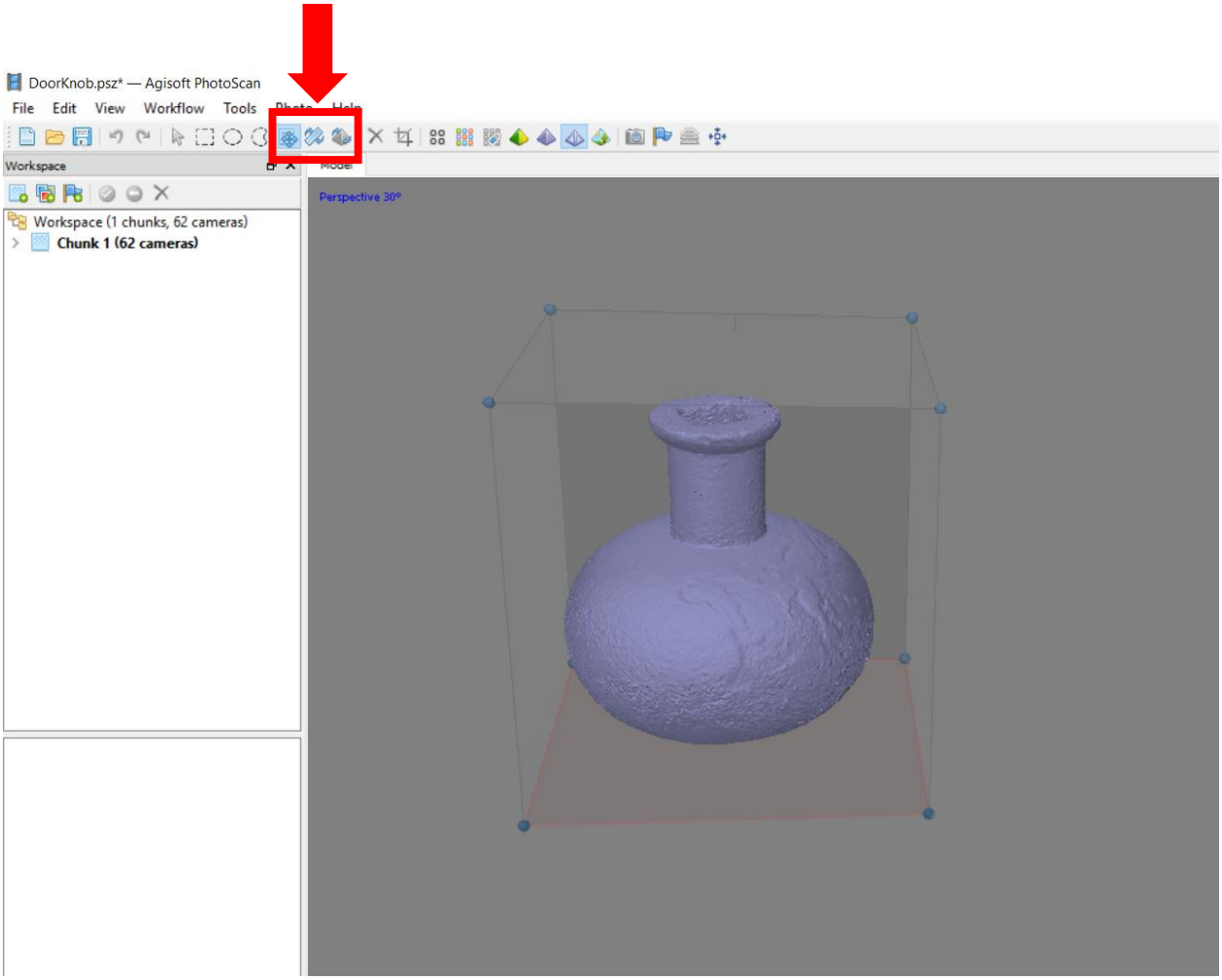
9. To clean the excessive points which do not belong to the object select any tool (rectangle, circle, and free form selection) from the superior bar to erase the extra points. After select the excessive points click on delete on the keyboard or on the X icon in the superior bar.



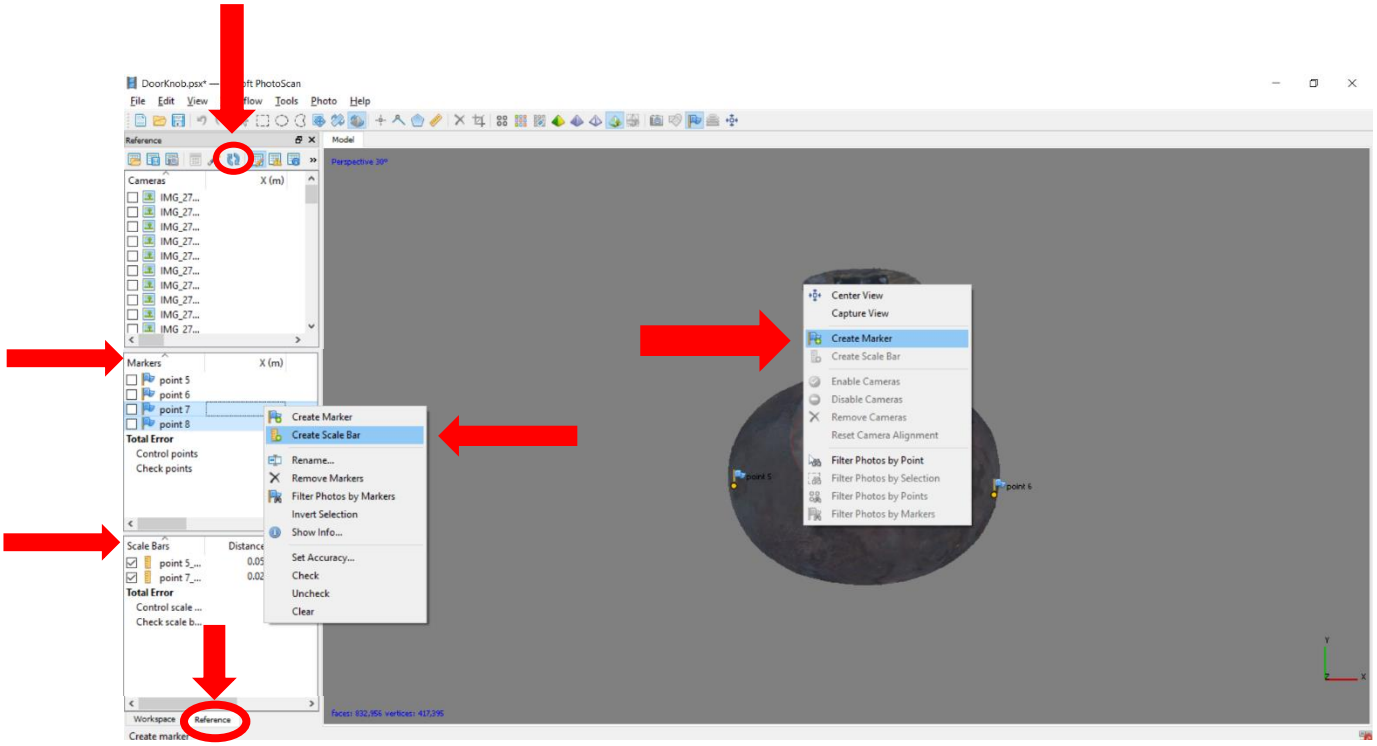
10. To orient the object on top, front, back, right and left positions, select **“Rotate object”** followed by **View > Predefined views** and choose the first position to start orienting the model.



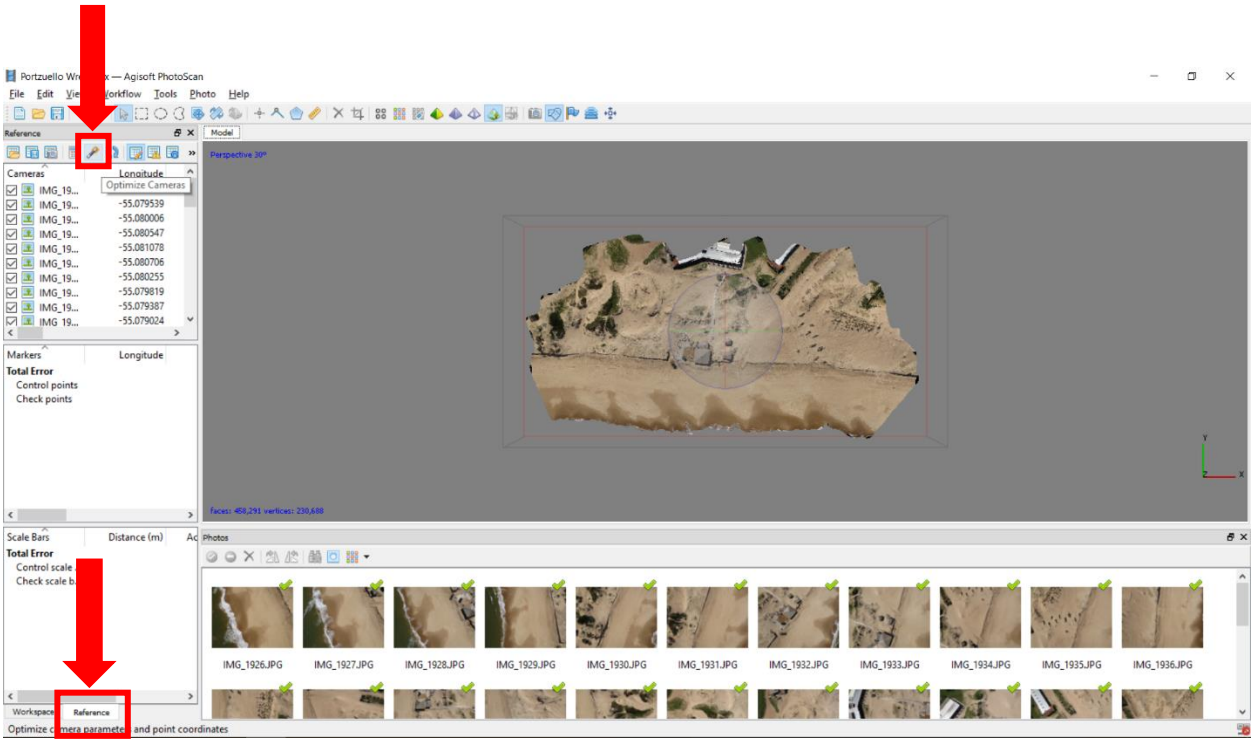
11. Position the object inside the box choosing the icons on the superior tools bar. The pink face shall be always at the bottom.



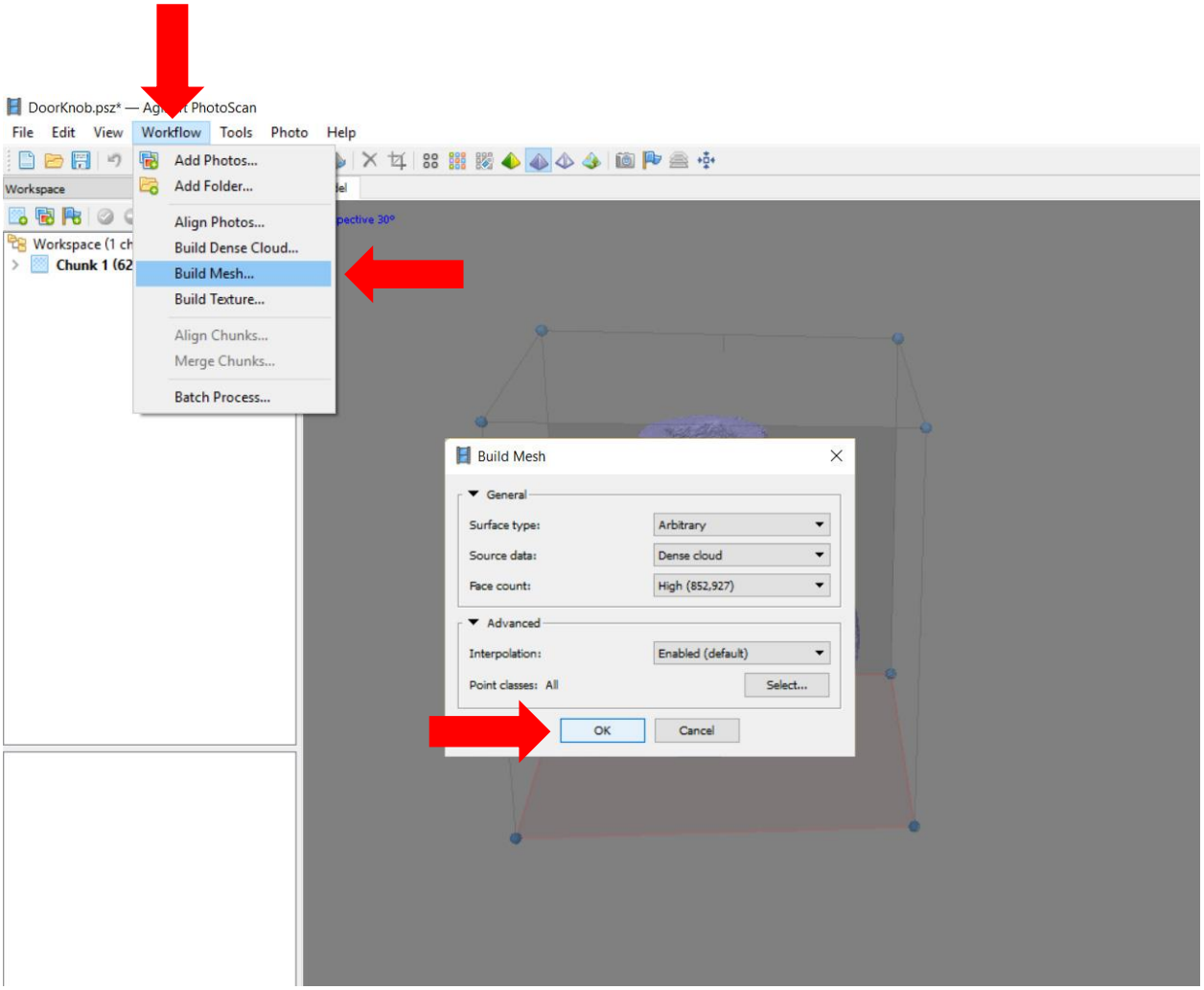
12. To scale the model. On the bottom of the left sidebar change the tab from **workplace** to **reference**. Select two points previously measured manually and right click (mouse) over the starting measure point and select **"Create Marker"**. Repeat the process for the ending point. On the left sidebar go in **Markers** and select the **points** (with known measurements, i.e. point 1 to point 2 is 1 meter) pressing **Ctrl** and right click (mouse) to select **"Create Scale Bar"**. Attribute the measurement in **meters** between the points previously measured on the **Scale Bars** on the left sidebar. After attribute all the measurements click on the **update** icon on the superior part on the left sidebar.



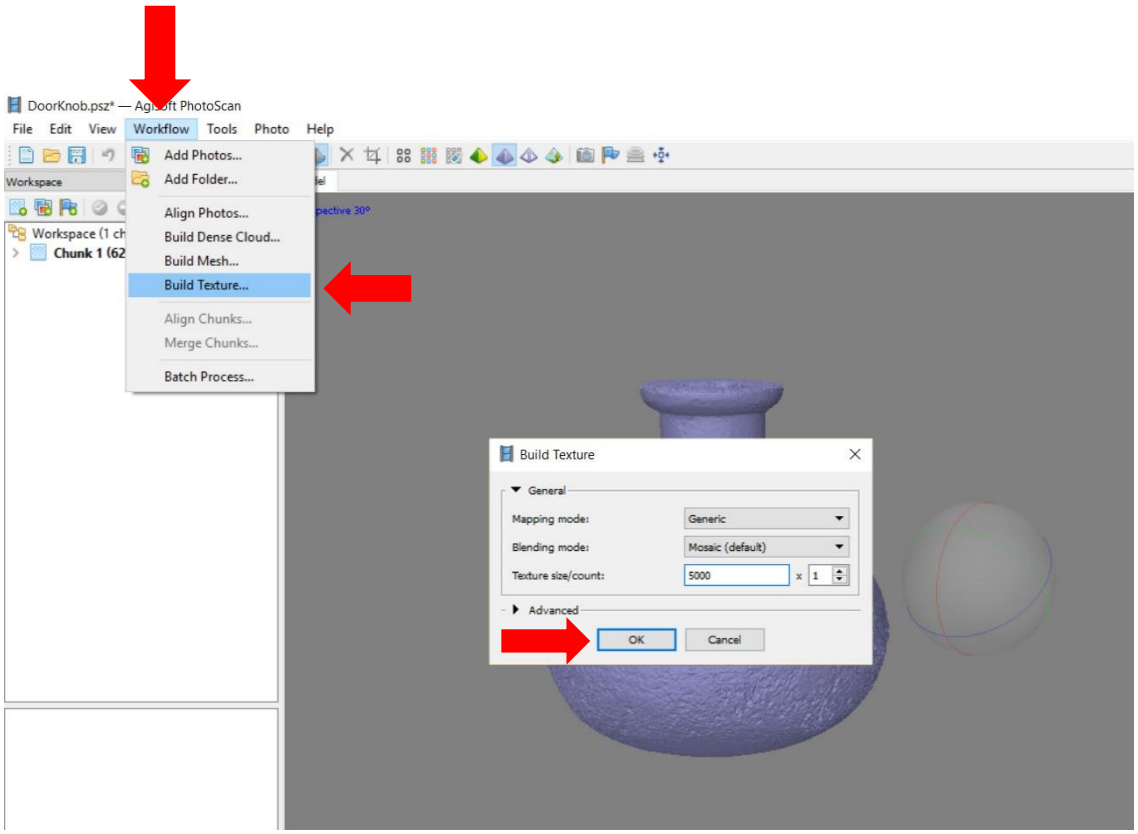
13. After scale the model and still on the **Reference** tab, click on **Optimize cameras** on the superior bar as shown in the print screen. After this command the project will return to the alignment step and will be necessary to redo the process of dense cloud, mesh and texture in case it was already done.



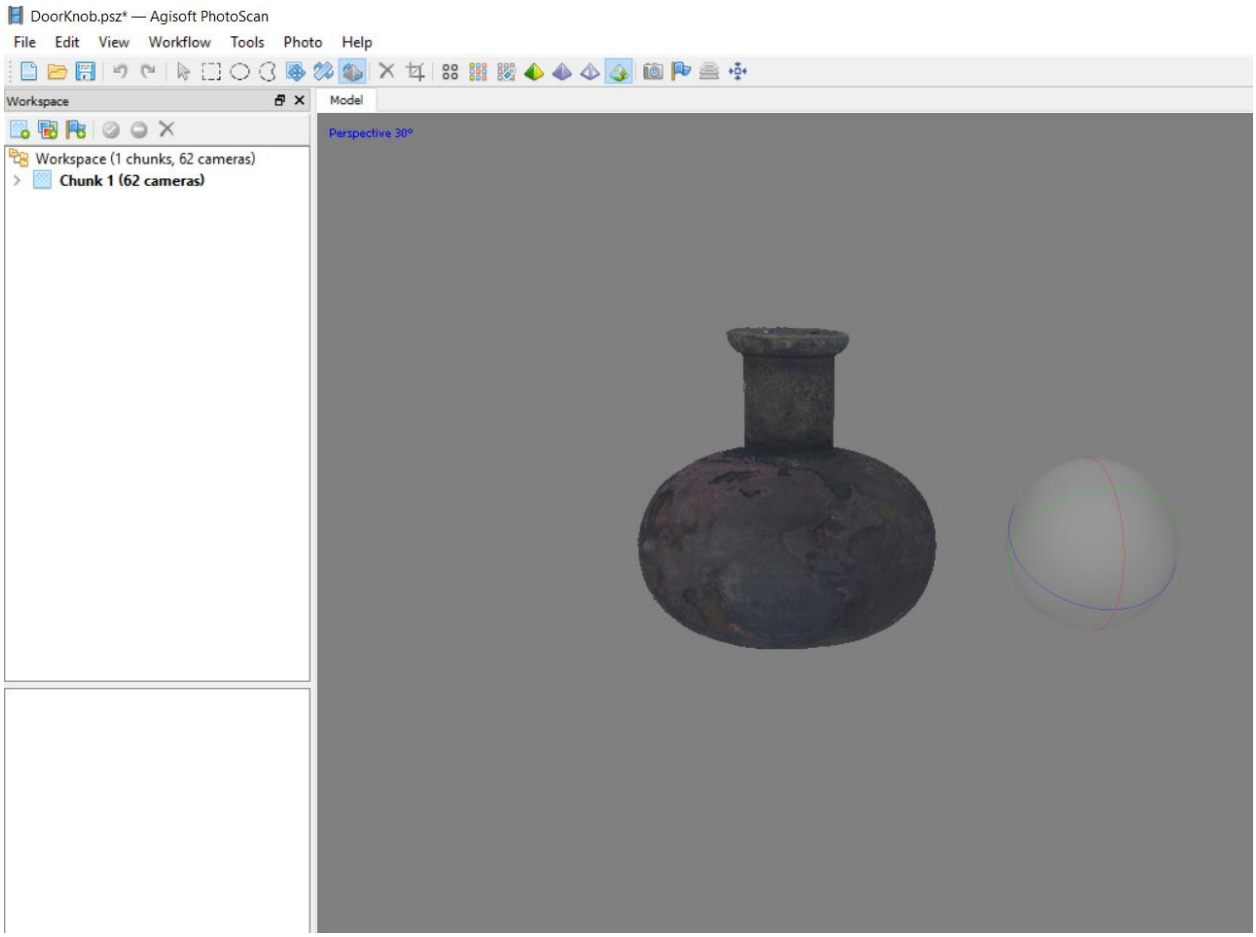
14. Continue the photos processing in "**Workflow**" > "**Build Mesh**", choose the general and advanced options (keep the standards from the print screen) and OK.



15. Continue the photos processing in "**Workflow**" > "**Build Texture**", choose the general options (keep the standards from the print screen) and OK.



16. The final result shall appear on the screen. Do not forget to save the project after each step!



17. If the final model shows up with open holes and there is the need to close them (i.e. 3D printing) go in **Tools > Mesh > Close holes**, and define the closure level percentage and OK.