

Introducción a la Fotogrametría Digital

CREANDO NUESTRO MODELO 3D



Softwares fotogramétricos

Nombre	Tipo	Sistema operativo	Precio
COLMAP	Aérea, corto alcance	Windows, macOS, Linux	Gratuito
Meshroom	Aérea, corto alcance	Windows, Linux	Gratuito
MicMac	Aérea, corto alcance	Windows, macOS, Linux	Gratuito
Multi-View Environment	Aérea, corto alcance	Windows, macOS	Gratuito
OpenMVG	Aérea, corto alcance	Linux, Windows, MacOS	Gratuito
Regard3D	Aérea, corto alcance	Windows, macOS, Linux	Gratuito
VisualSFM	Aérea, corto alcance	Windows, macOS, Linux	Gratuito
3DF Zephyr	Aérea, corto alcance	Windows	250 €/mes (sin IVA)
Autodesk ReCap	Aérea, corto alcance	Windows	55 €/mes o 450 €/año
Agisoft Metashape	Aérea, corto alcance	Windows, macOS, Linux	Desde 160 €/año
Bentley ContextCapture	Aérea, corto alcance	Windows	A petición
Correlator3D	Aérea	Windows	Desde 250 €/mes
DroneDeploy	Aérea	Windows, macOS, Android, iOS	Desde 90 €/mes
Elcovision 10	Aérea, corto alcance	Windows	A petición
iWitnessPRO	Aérea, corto alcance	Windows	2 200€
IMAGINE Photogrammetry	Aérea	Windows	A petición
Photomodeler	Aérea, corto alcance	Windows	50€/mes o 2 600 €/añ
Pix4Dmapper	Aérea	Windows, macOS, Android, iOS	215€/mes o 2 600 €/año
RealityCapture	Aérea, corto alcance	Windows	Unos 8 € para 3 500 créditos PPI Licencia ilimitada: 3 320 €
SOCET GXP	Aérea	Windows	A petición
Trimble Inpho	Aérea, corto alcance	Windows	A petición
WebODM	Aérea	Windows, macOS	Desde 50 €

Fuente: ALL3DP

Softwares fotogramétricos

3DF Zephyr

- Interfaz anticuada
- Intiutivo
- Opción gratiuta (limitada)
- Se ha quedado rezagado



3DF ZEPHYR

The Complete Photogrammetry Solution

3DF Zephyr Free	3DF Zephyr Lite	3DF Zephyr (Monthly)	3DF Zephyr
Free	€149.00 + VAT	€250.00 + VAT / mo	€3900.00 + VAT



Softwares fotogramétricos

Autodesk ReCap

- Interfaz muy sencilla e intuitiva
- Modelos 3D de buena calidad
- Opciones de exportación
- Licencia cara



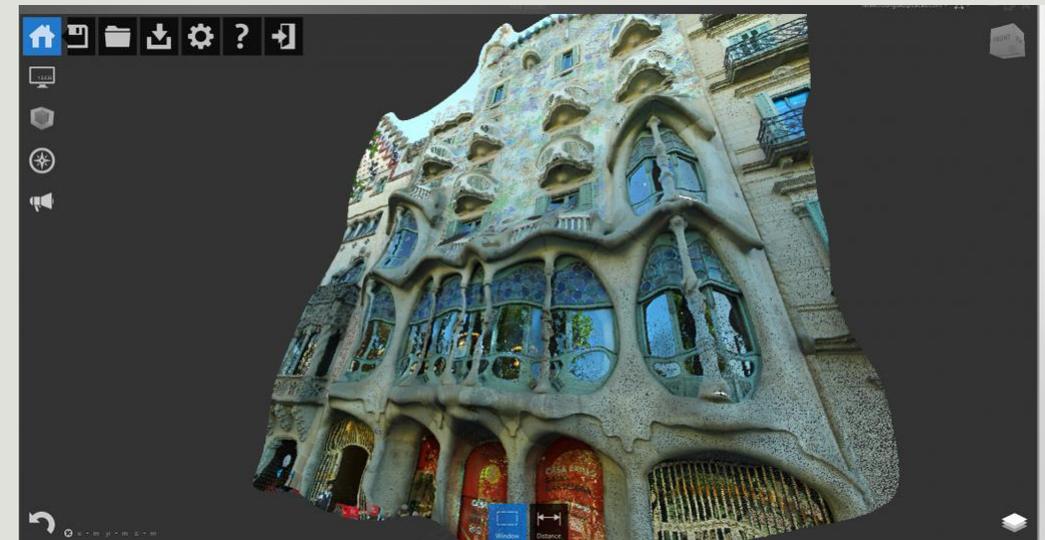
OPCIONES

1.277 € /pagado cada 3 años

VALOR ÓPTIMO

448 € /pagado anualmente

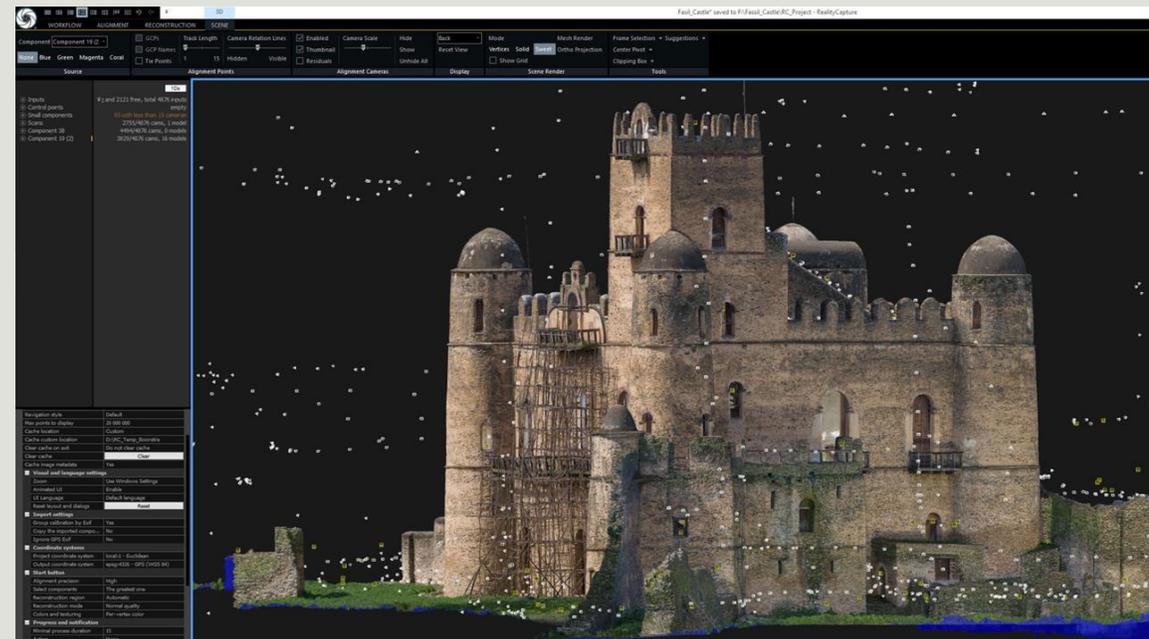
55 € /pagado mensualmente



Softwares fotogramétricos

Reality Capture

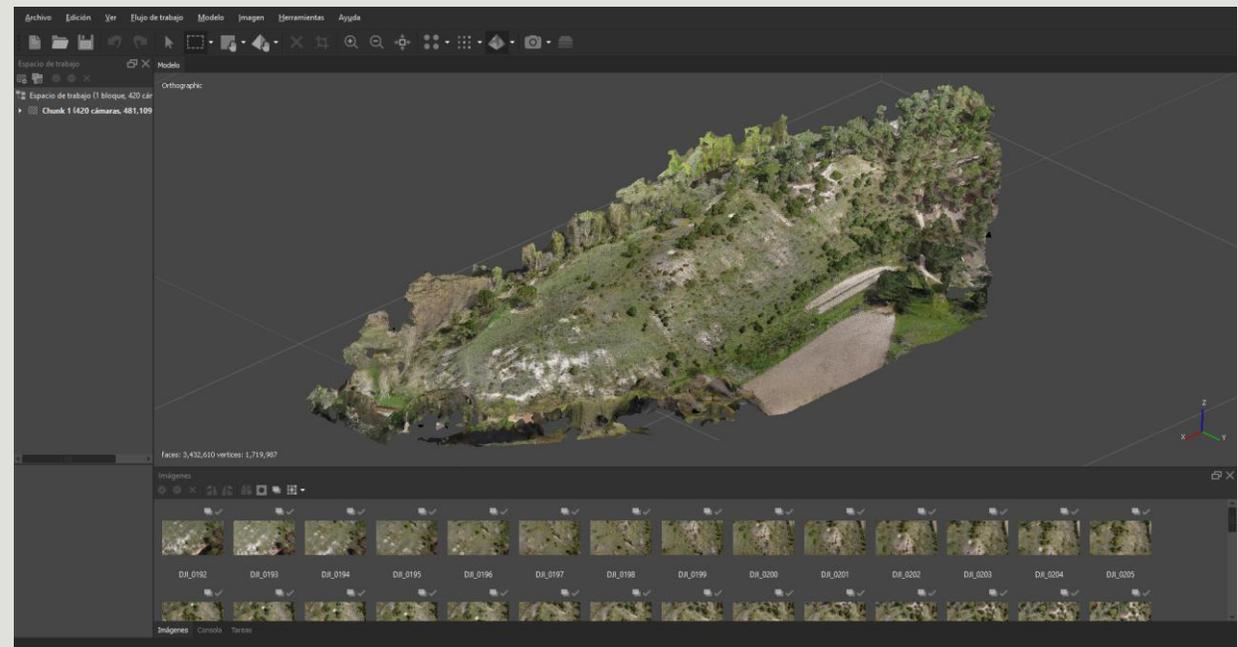
- Interfaz compleja
- Modelos 3D de gran calidad
- Rápido y versátil
- Licencia cara



Softwares fotogramétricos

Agisoft Metashape

- Interfaz sencilla
- Modelos 3D de gran calidad
- Multitud de opciones (algunas requieren PRO)
- Licencia asequible



Agisoft Metashape

<https://www.agisoft.com/>

The screenshot shows the Agisoft Metashape website homepage. The background is a vibrant green. At the top left, the Agisoft logo is displayed. The top right navigation menu includes links for Features, Support, Community, Downloads (circled in red), Buy, and About. The main content area features a large heading: "Discover intelligent photogrammetry with Metashape". Below this, a sub-headline reads: "Process digital images and generate 3D spatial data. Fast and highly accurate." A blue button labeled "TRY IT NOW" is positioned below the sub-headline. To the right, a video player shows a 3D reconstruction of a building with a play button overlay. The video title is "Metashape 1.7" and the description includes "Automatic image-based powerlines detection" and "Terrestrial laser scan processing". Below the main content, there is a section for users already using the software: "Already using Agisoft Metashape Professional or have 30-day trial? Check out Agisoft Cloud". At the bottom, three white boxes with rounded corners provide quick links: "SHOWCASE" (Watch featured Metashape videos), "FEATURES" (Explore Metashape features), and "KNOWLEDGE BASE" (Browse Metashape Knowledge base).

Agisoft

Features Support Community **Downloads** Buy About

Discover intelligent photogrammetry with Metashape

Process digital images and generate 3D spatial data. Fast and highly accurate.

[TRY IT NOW](#)

Metashape 1.7
Automatic image-based powerlines detection
Terrestrial laser scan processing

Already using Agisoft Metashape Professional or have 30-day trial? [Check out Agisoft Cloud](#)

SHOWCASE
Watch featured Metashape videos

FEATURES
Explore Metashape features

KNOWLEDGE BASE
Browse Metashape Knowledge base

Agisoft Metashape

<https://www.agisoft.com/>

The screenshot shows the Agisoft website's Downloads page. The header is green with the Agisoft logo on the left and navigation links (Features, Support, Community, Downloads, Buy, About) on the right. The main heading is 'Downloads' with sub-links for 'Installer', 'System Requirements', 'User Manuals', 'Geoids', and 'Sample Data'. The 'Installer' link is underlined. The main content area features a large card for 'Agisoft Metashape 1.8.3'. To the left of the title is an icon of a 3D terrain model. Below the title, it states 'This is the latest released version. Check Metashape [Tutorials](#) and [User Manual](#) to get started.' Underneath, there are two columns: 'Professional Edition' and 'Standard Edition'. Under 'Professional Edition', the links 'Windows', 'macOS', and 'Linux' are listed, with 'Windows' circled in red. Under 'Standard Edition', the links 'Windows', 'macOS', and 'Linux' are listed. To the right of the main card, there are three smaller sections: 'Full change log' with a book icon, 'Metashape & PhotoScan comparison' with a book icon, and 'Free update'. Each of these sections includes a 'Download PDF' link. At the bottom, there are two more cards: 'Python 3 Module' and 'Java Library', each with a description and platform links.

Agisoft

Features Support Community Downloads Buy About

Downloads

[Installer](#) System Requirements User Manuals Geoids Sample Data



Agisoft Metashape 1.8.3

This is the latest released version.
Check Metashape [Tutorials](#) and [User Manual](#) to get started.

Professional Edition

- [Windows](#)
- [macOS](#)
- [Linux](#)

Standard Edition

- [Windows](#)
- [macOS](#)
- [Linux](#)



Full change log

All new features in this version.

[Download PDF](#)



Metashape & PhotoScan comparison

Short list of major changes.

[Download PDF](#)

Free update

Update from PhotoScan to Metashape is completely free and does not require any additional payments from the licensed users.

New users can try Agisoft Metashape software either in demo mode (export and save functions are blocked) or test it in full function mode with

Python 3 Module

Python module for the latest Metashape version.

- [Windows](#)
- [macOS](#)

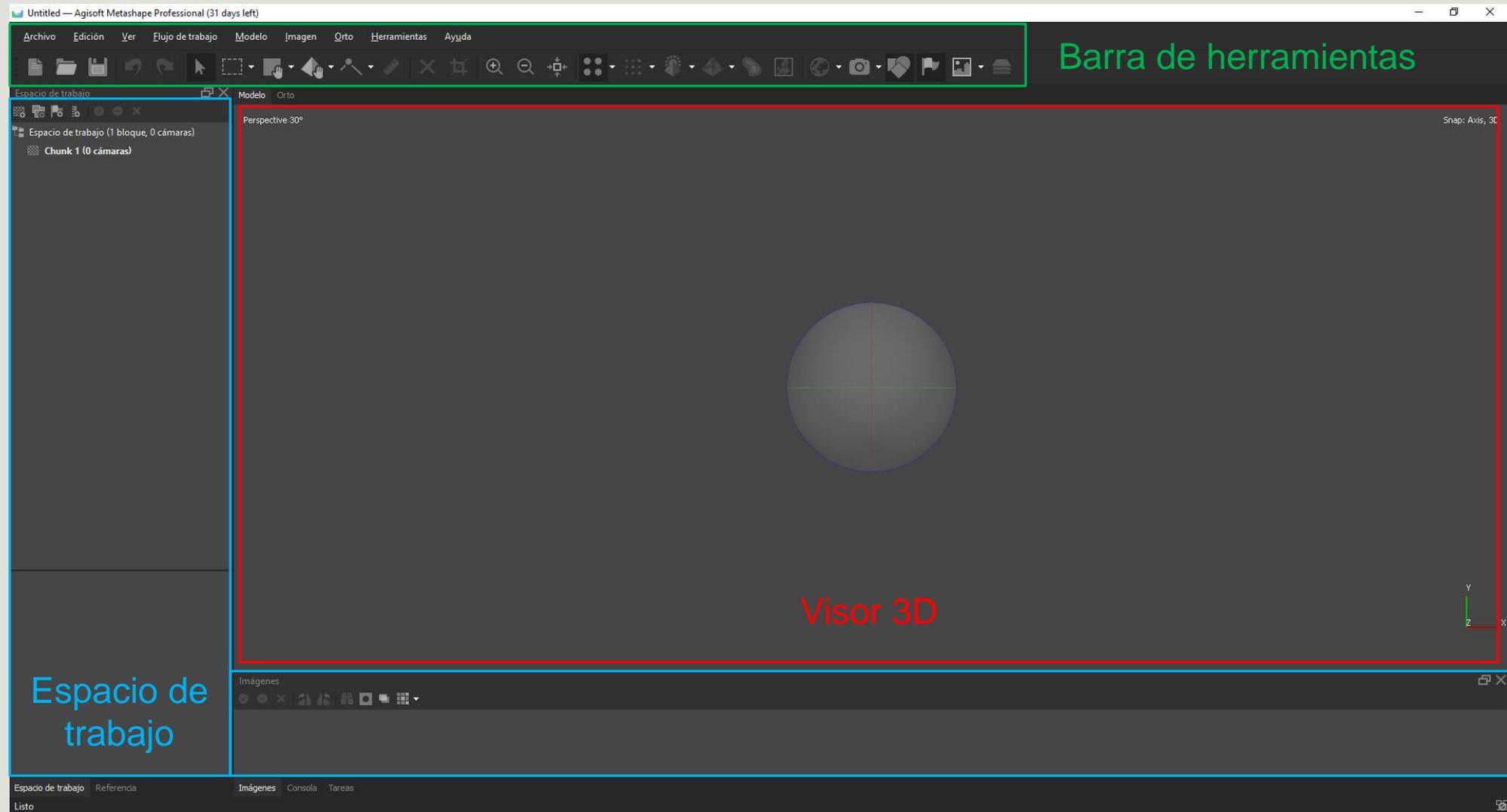
Java Library

Java library for the latest Metashape version.

Multi-platform

- [Windows, macOS and Linux](#)

Agisoft Metashape



Agisoft Metashape

Controles

Click **izquierdo** + ratón: **Rotación** del objeto

Click **derecho** + ratón: **Movimiento** del objeto

Barra de herramientas → Modelo → **Vistas** predefinidas

Num. 5: Cambio perspectiva/ortogonal

Num. 1: Frente

Shift + Num. 1: Detrás

Num. 3: Izquierda

Shift + Num. 3: Derecha

Num. 7: Arriba

Shift + Num. 7: Abajo

Agisoft Metashape

Proceso

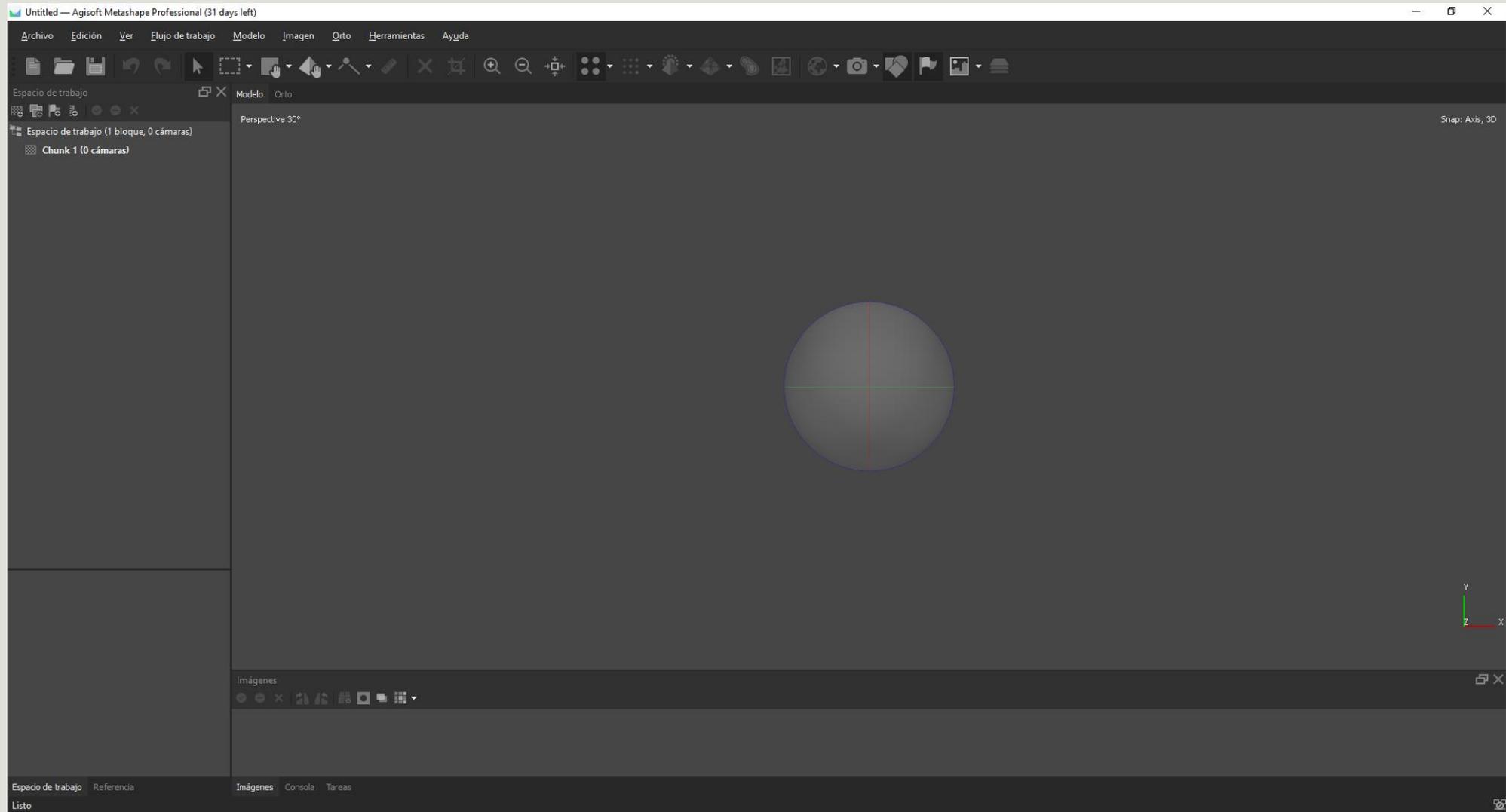
Alinear fotografías → Puntos clave

Puntos clave → Nube de puntos densa

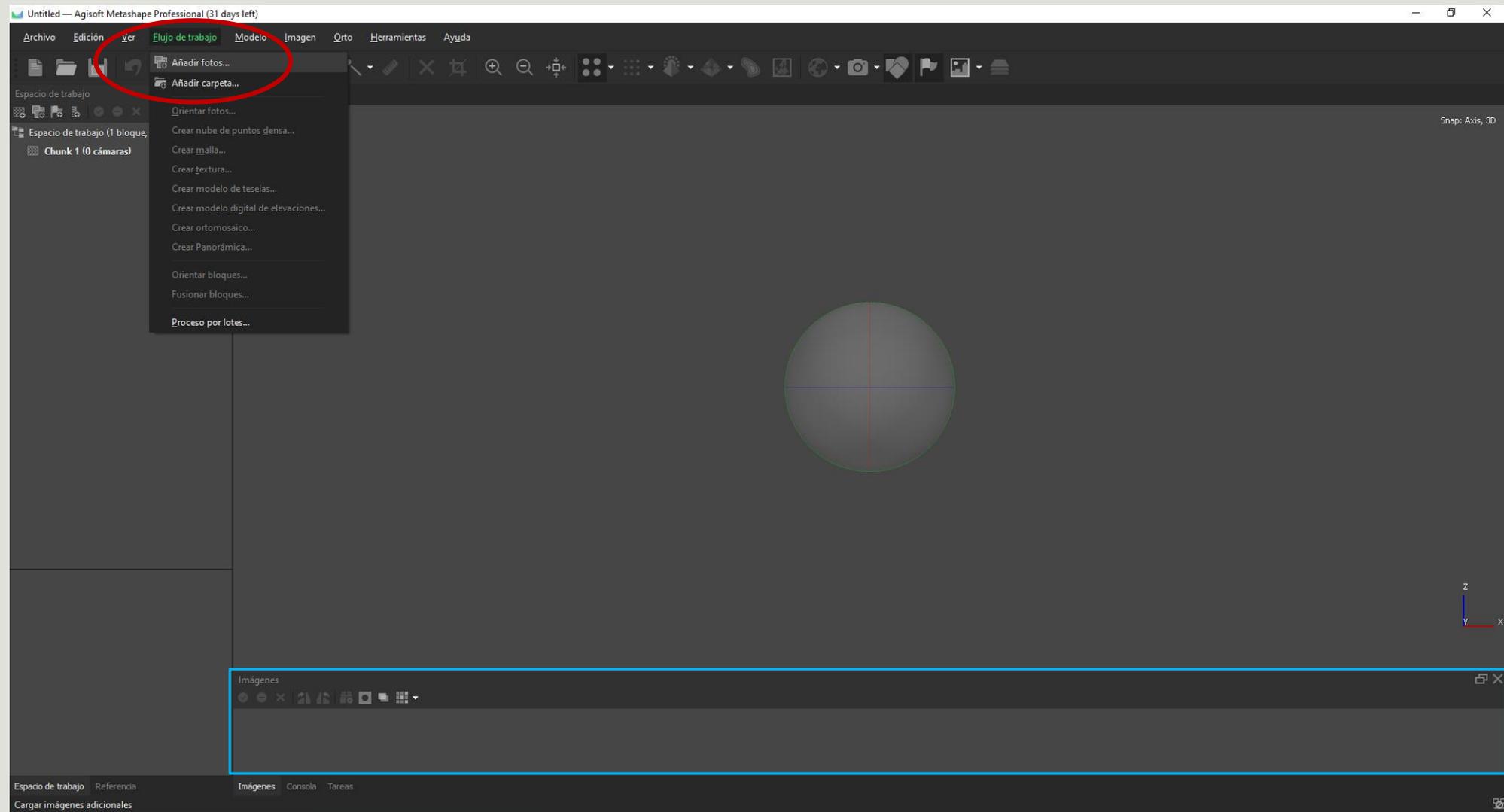
Nube de puntos densa → Malla geométrica

Malla geométrica → Texturizado

Agisoft Metashape

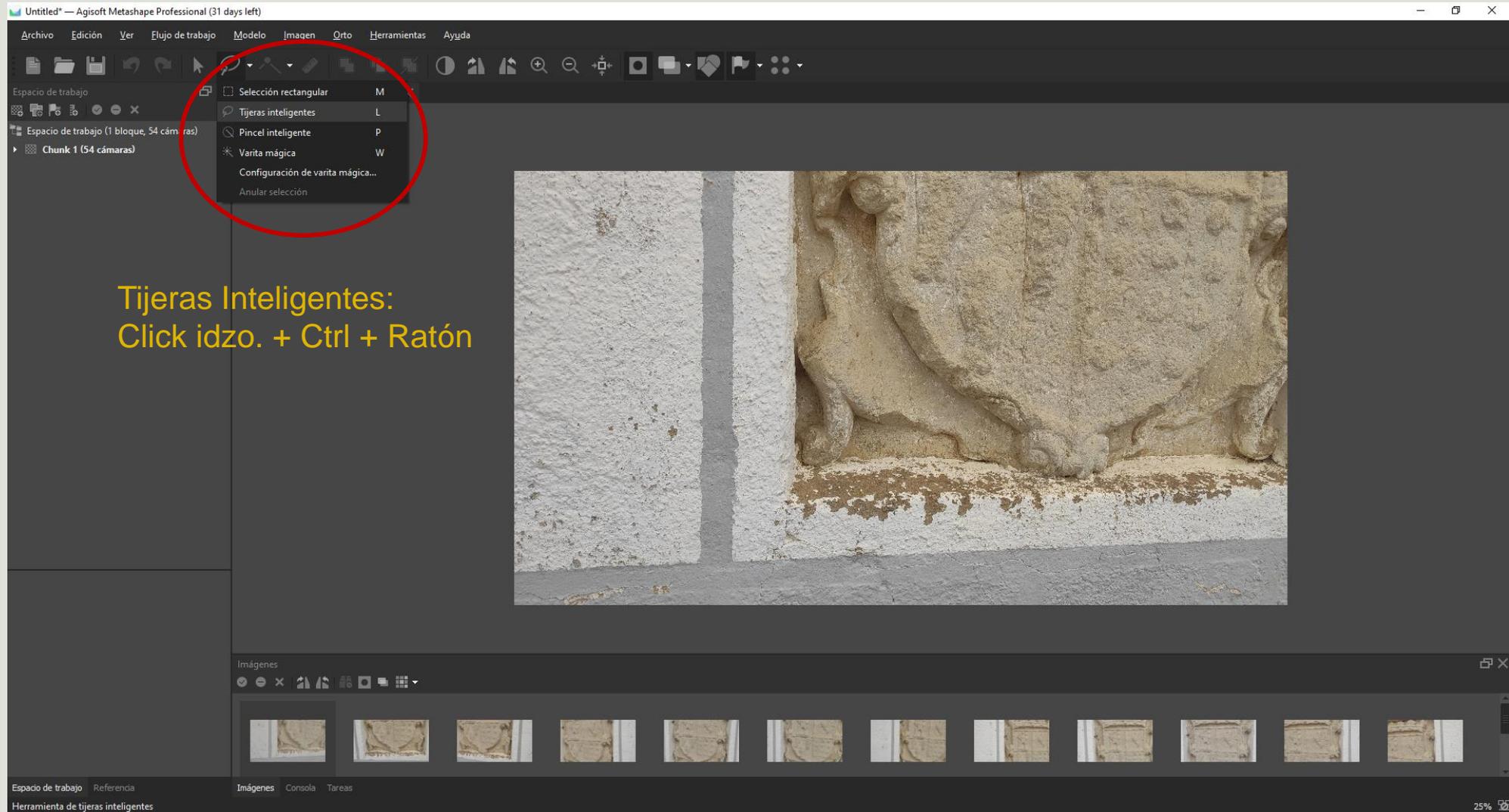


Agisoft Metashape



Agisoft Metashape

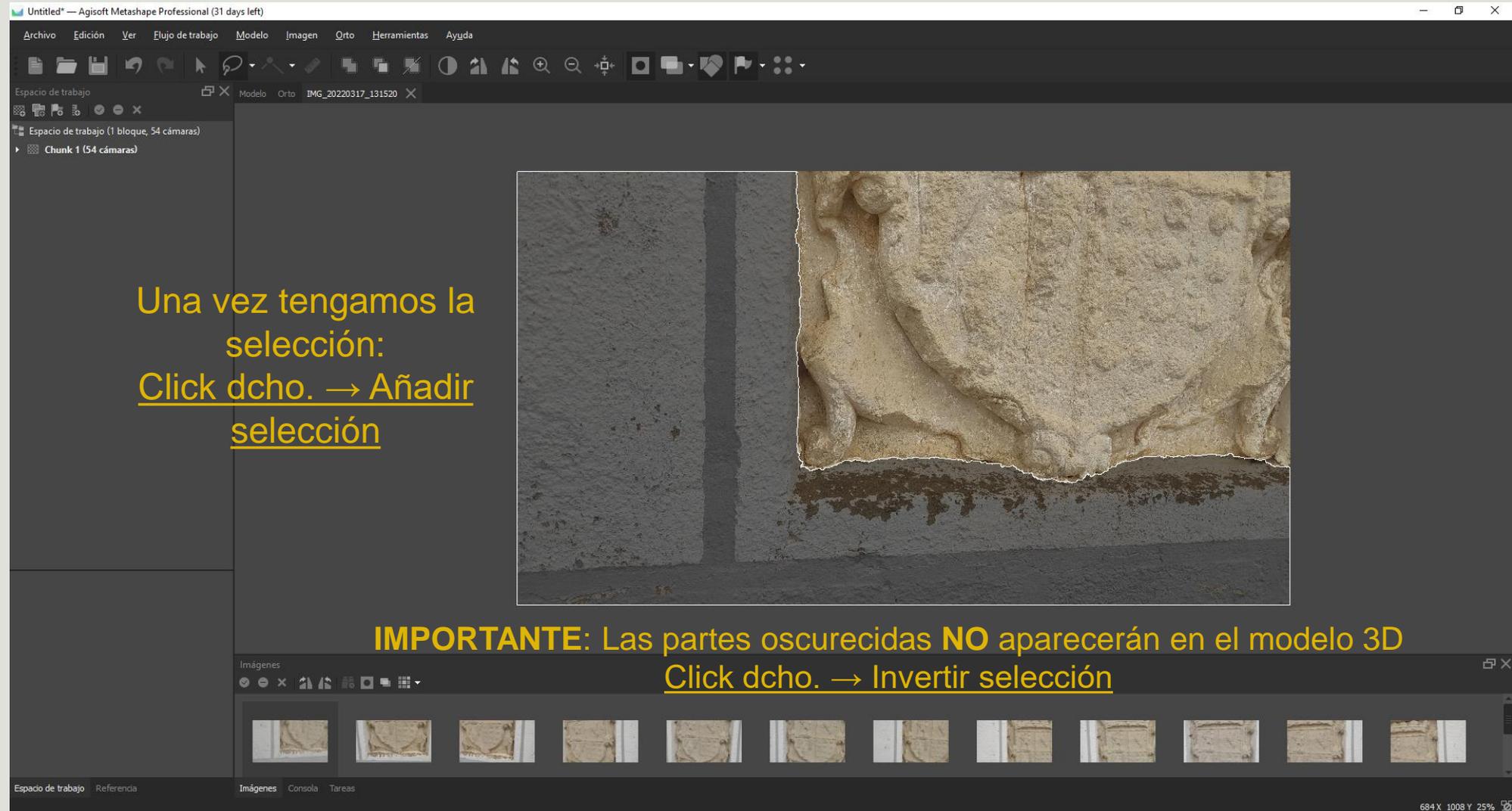
Máscaras



Tijeras Inteligentes:
Click idzo. + Ctrl + Ratón

Agisoft Metashape

Máscaras



Agisoft Metashape

Alineamiento de fotografías: Puntos clave

The screenshot displays the Agisoft Metashape Professional interface. The main window shows a 3D workspace in Orthographic view. A dialog box titled 'Orientar fotos' is open, showing settings for photo orientation. The 'General' section includes 'Precisión' set to 'Baja', 'Pre-selección genérica' (unchecked), 'Pre-selección de referencia' set to 'Secuencial', and 'Anular orientación de cámaras actual'. The 'Avanzado' section includes 'Puntos clave por foto' set to '50,000', 'Puntos de paso por foto' set to '5,000', 'Aplicar máscaras a:' set to 'Nada', and 'Excluir puntos de paso inmóviles' (checked). The 'Imágenes' panel at the bottom shows a grid of 24 photo thumbnails with filenames like 'IMG_20220317_131520'.

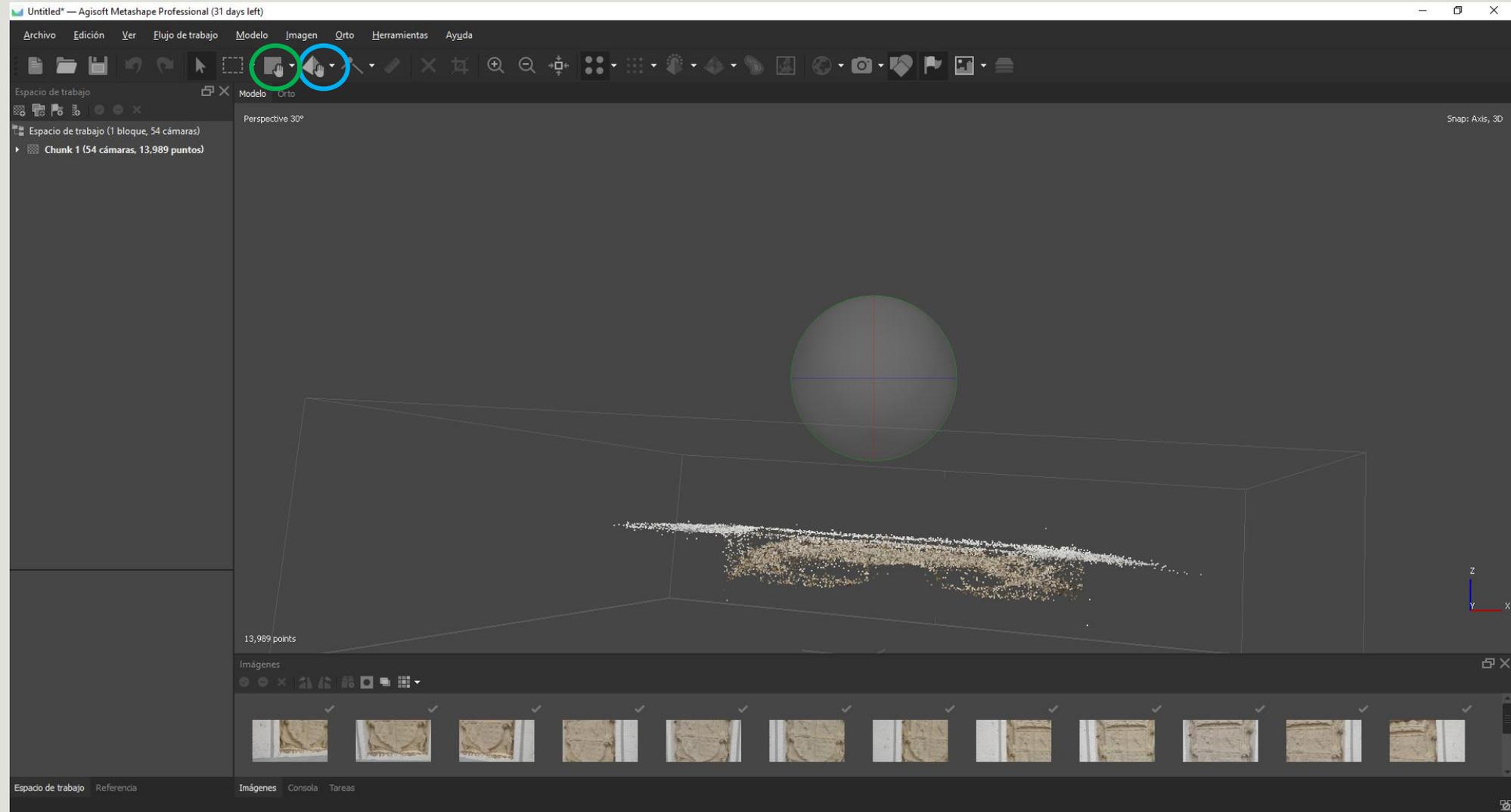
Puntos clave (si tenemos máscaras) ←

Ajustar la precisión en función de nuestro equipo →

> N° de puntos
> Nivel de detalle →

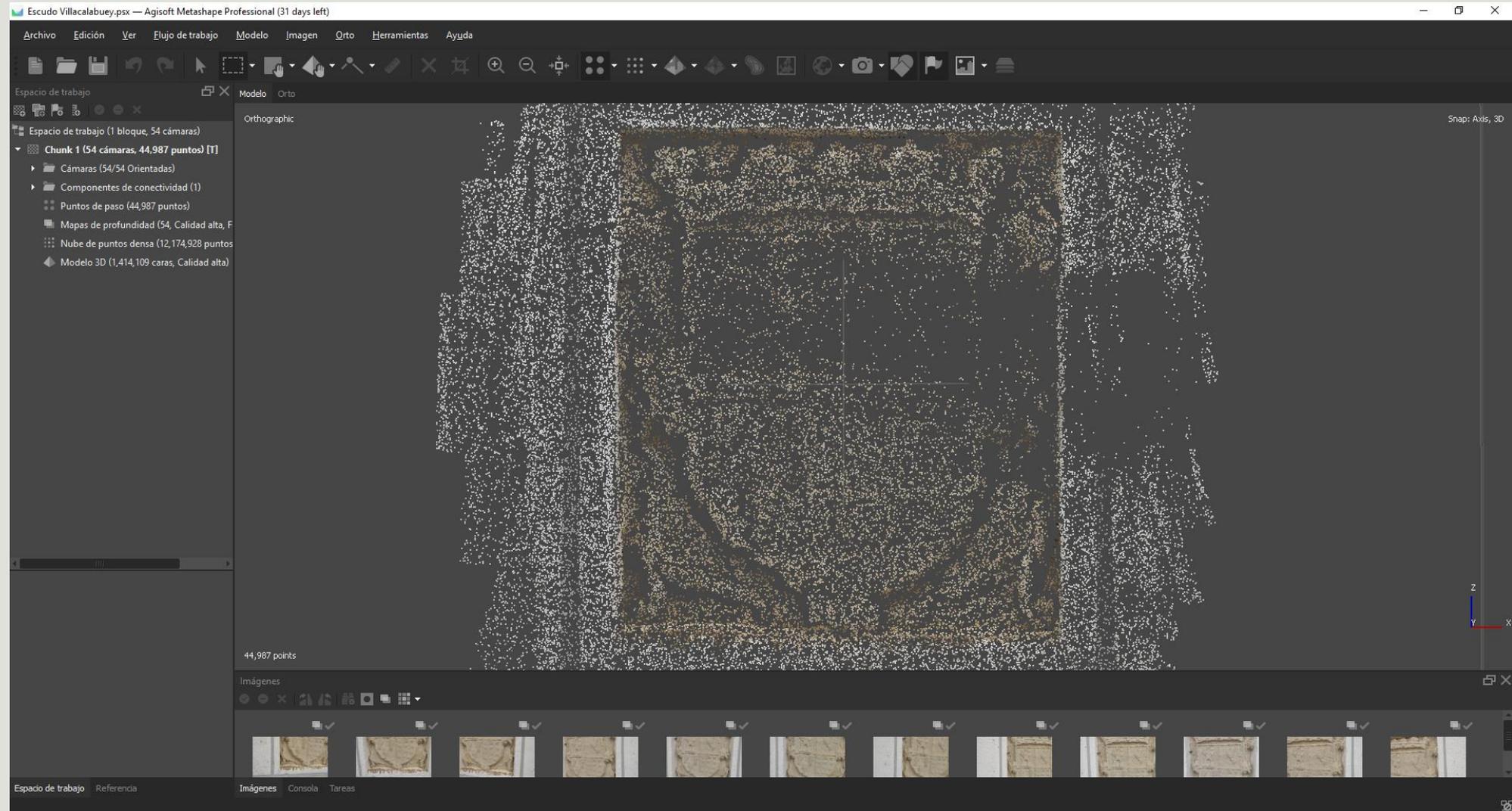
Agisoft Metashape

Alineamiento de fotografías: Puntos clave y orientación del modelo



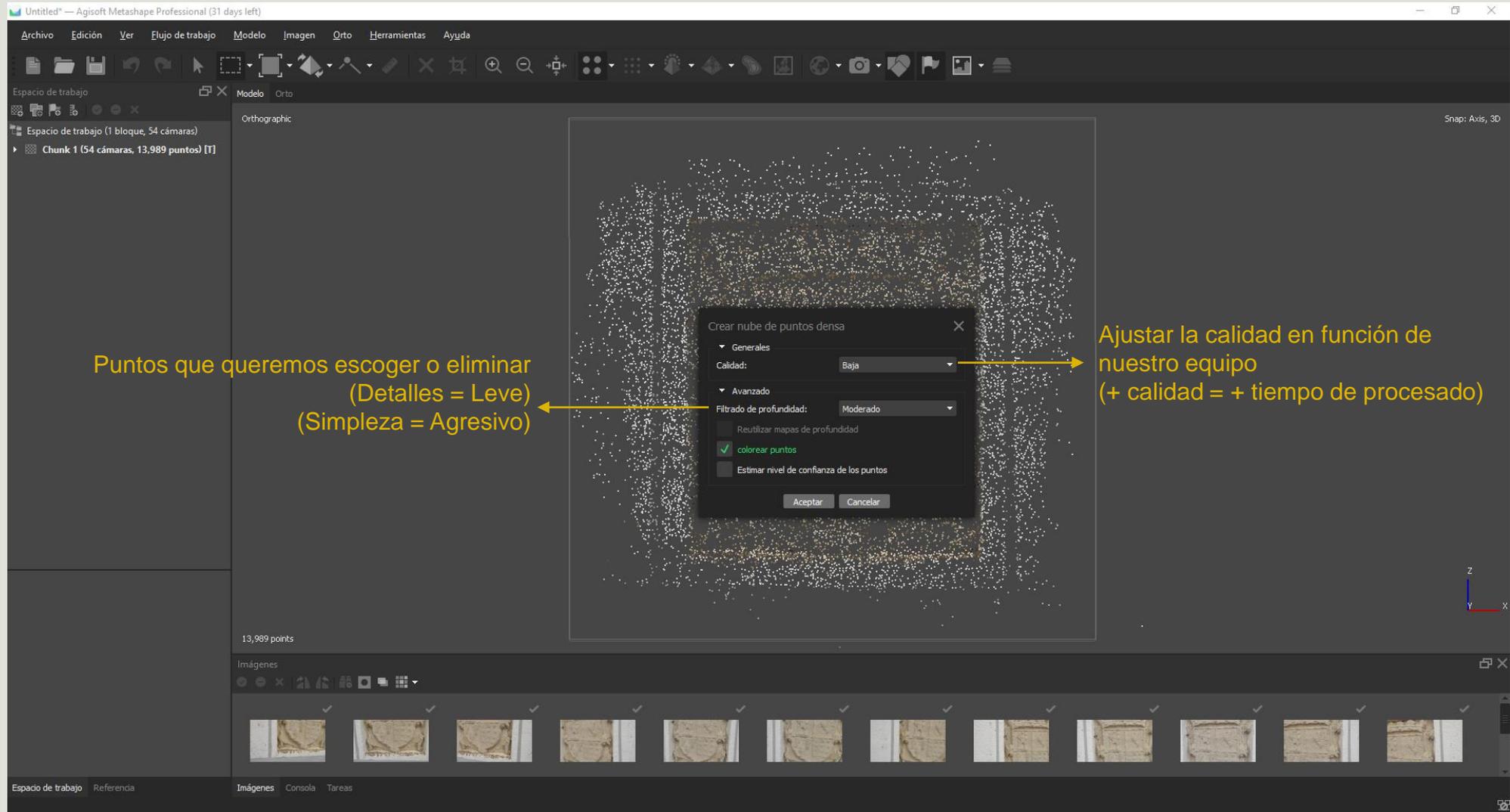
Agisoft Metashape

Orientación del modelo



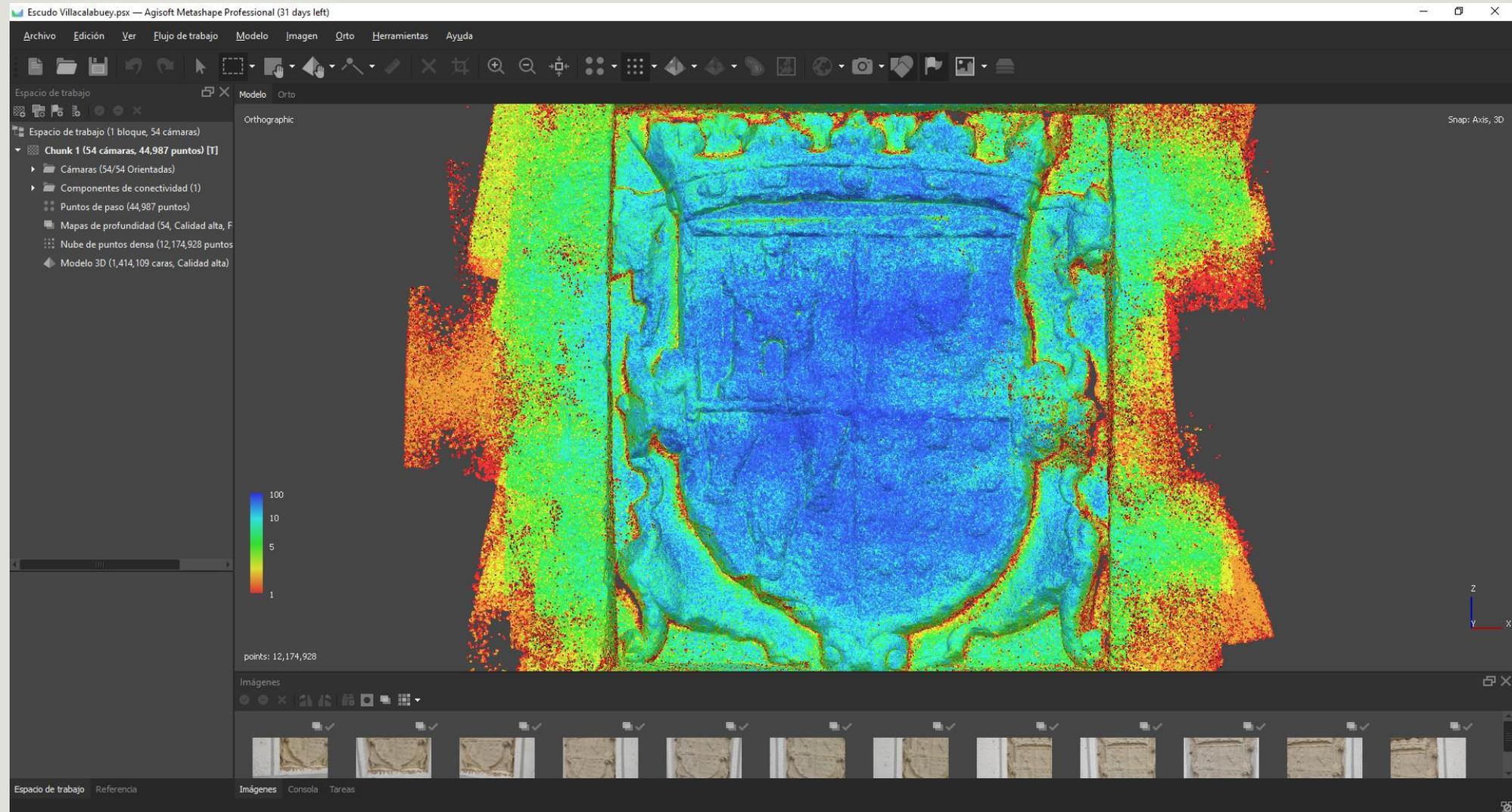
Agisoft Metashape

Nube de puntos densa



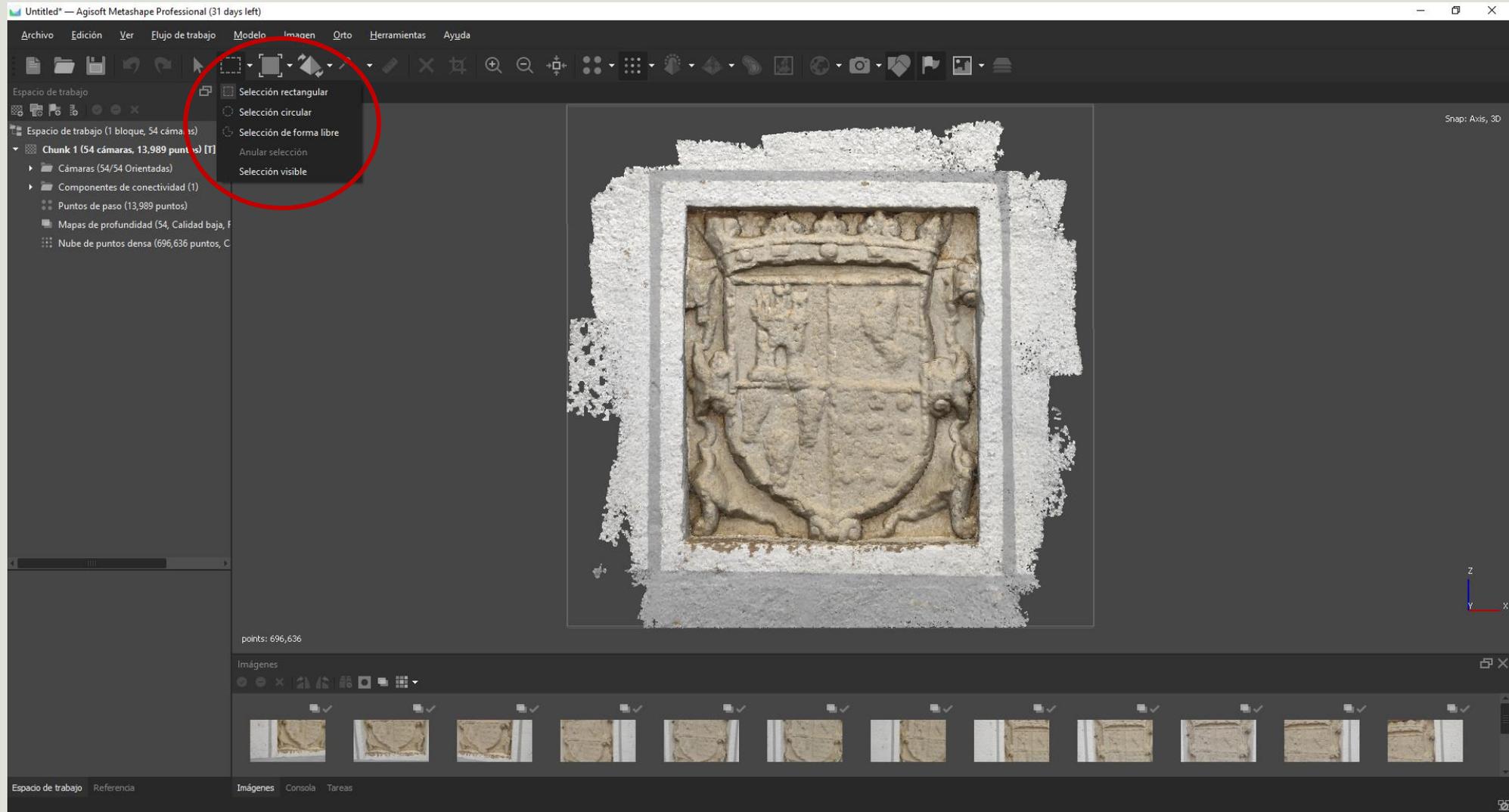
Agisoft Metashape

Nube de puntos densa



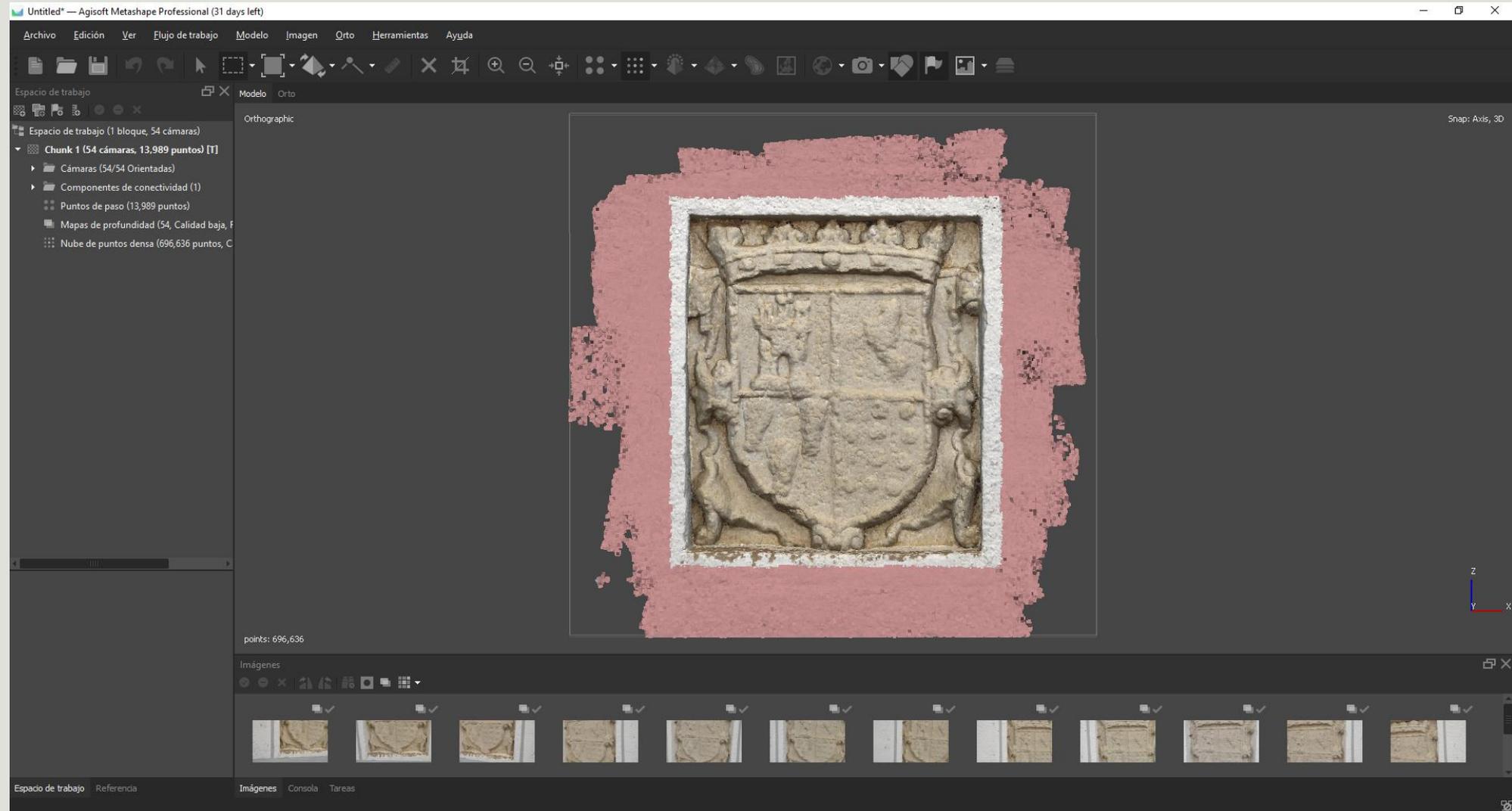
Agisoft Metashape

Eliminar puntos de error y sobrantes



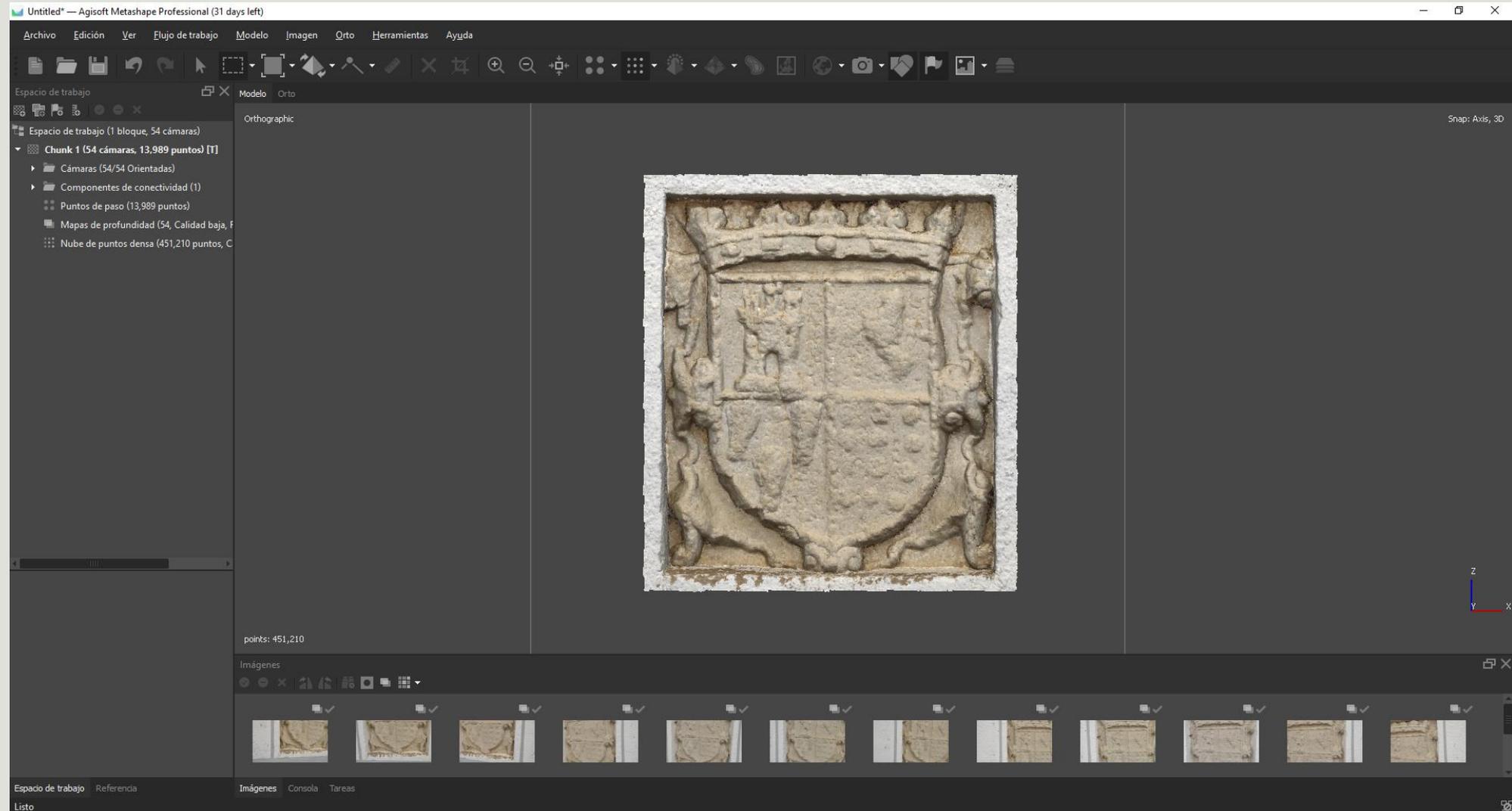
Agisoft Metashape

Eliminar puntos de error y sobrantes



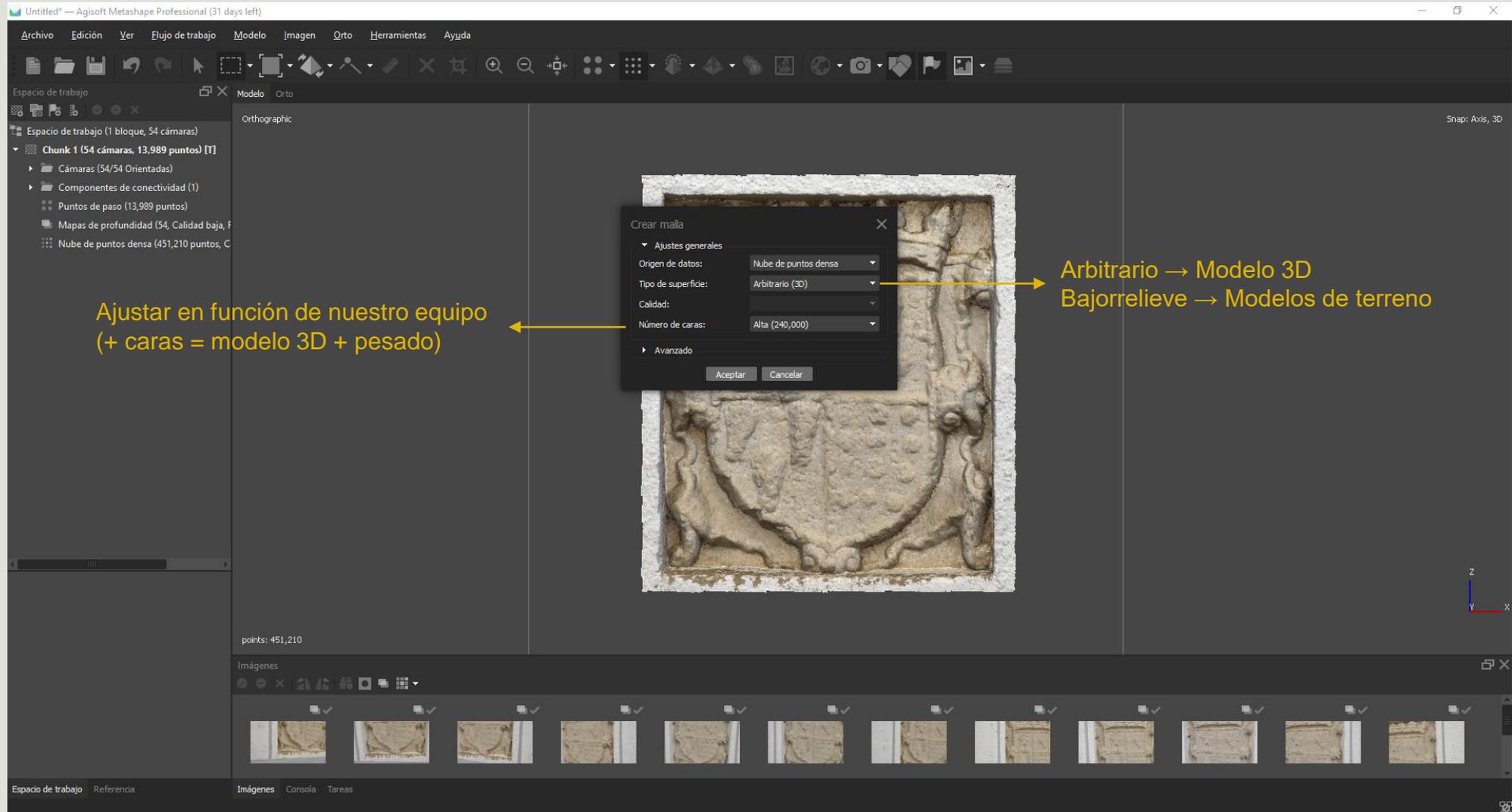
Agisoft Metashape

Eliminar puntos de error y sobrantes



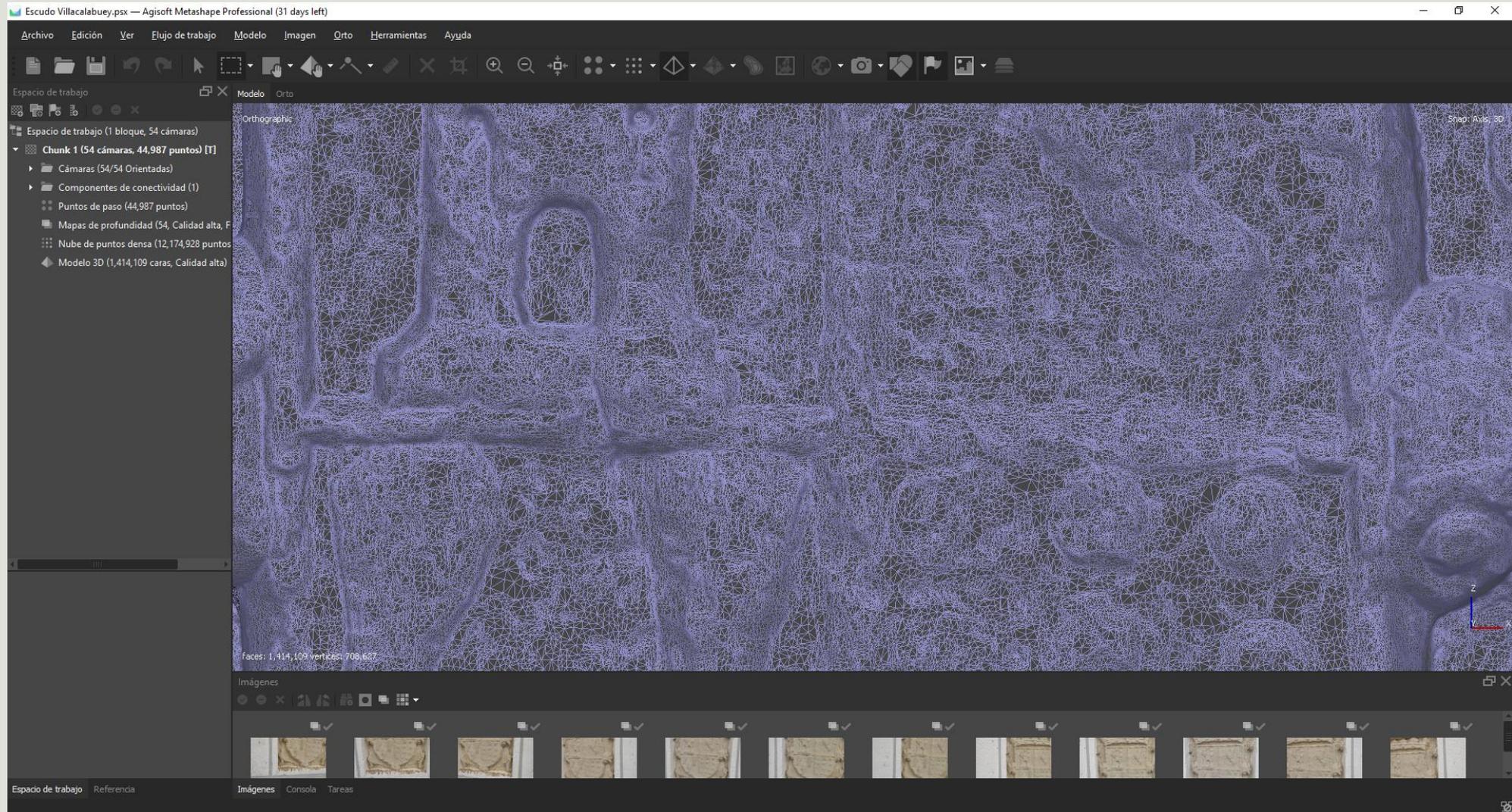
Agisoft Metashape

Generación de la malla



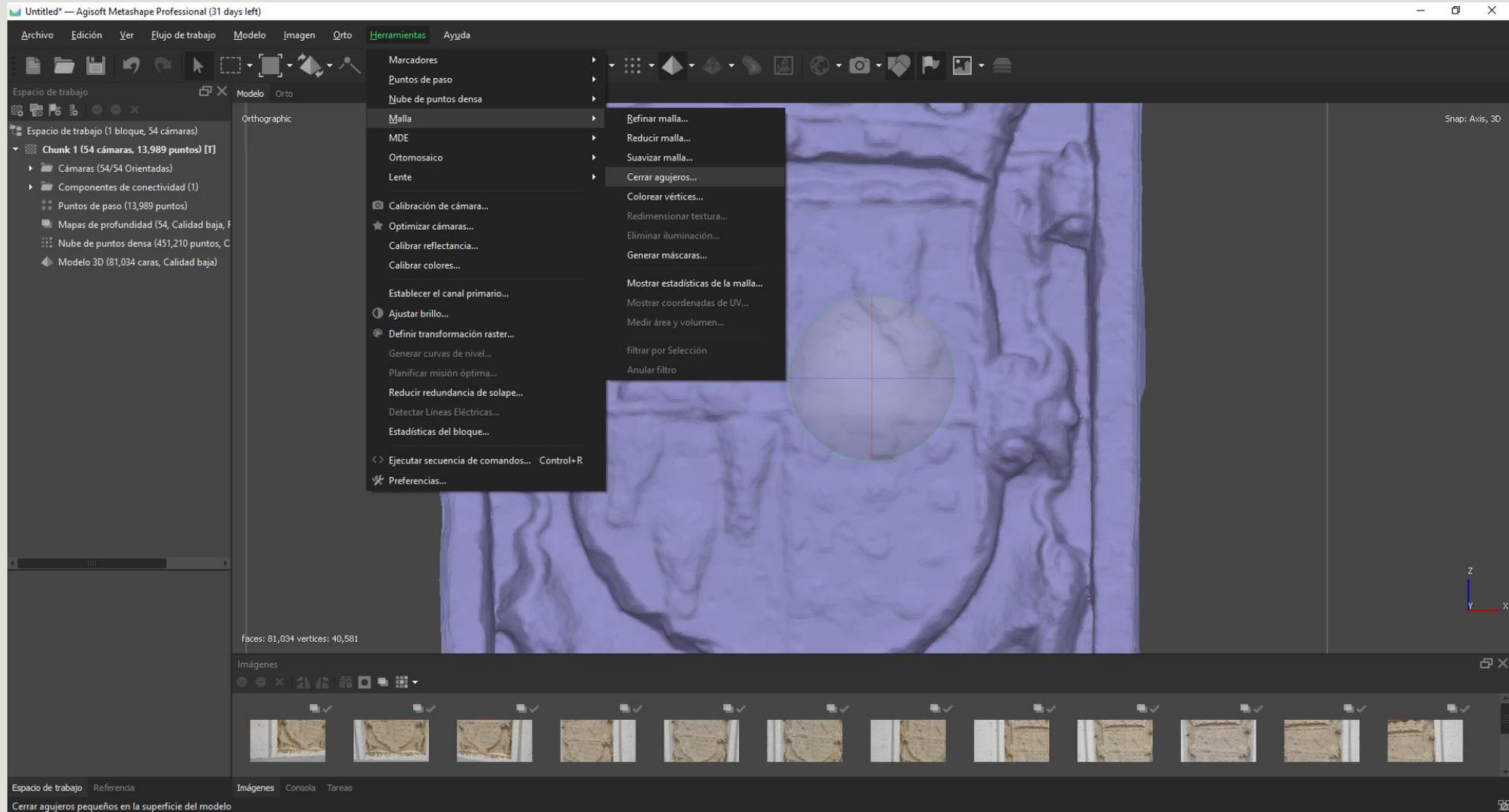
Agisoft Metashape

Generación de la malla

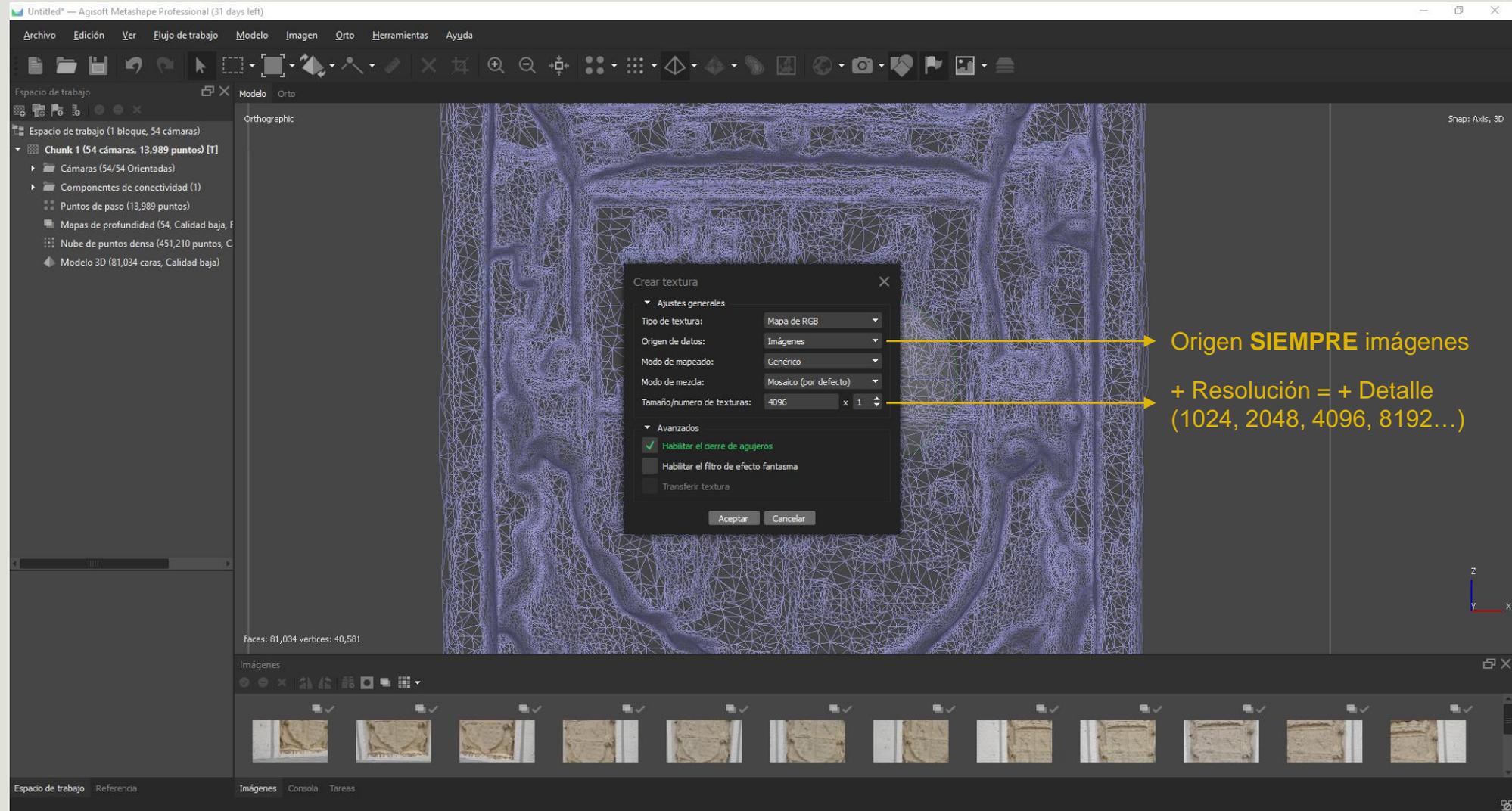


Agisoft Metashape

¿Errores en la malla? Cierre de agujeros

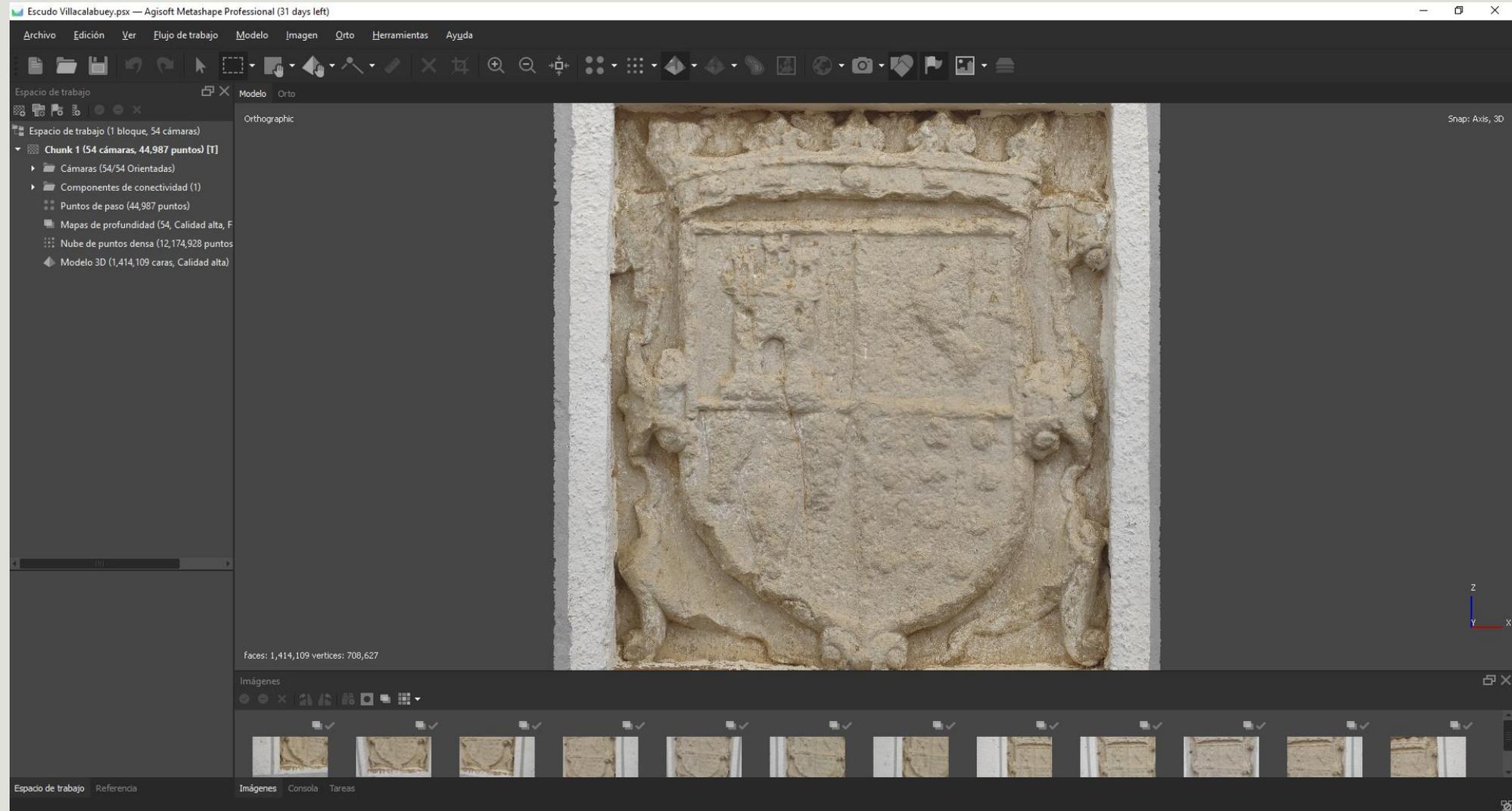


Agisoft Metashape Texturizado



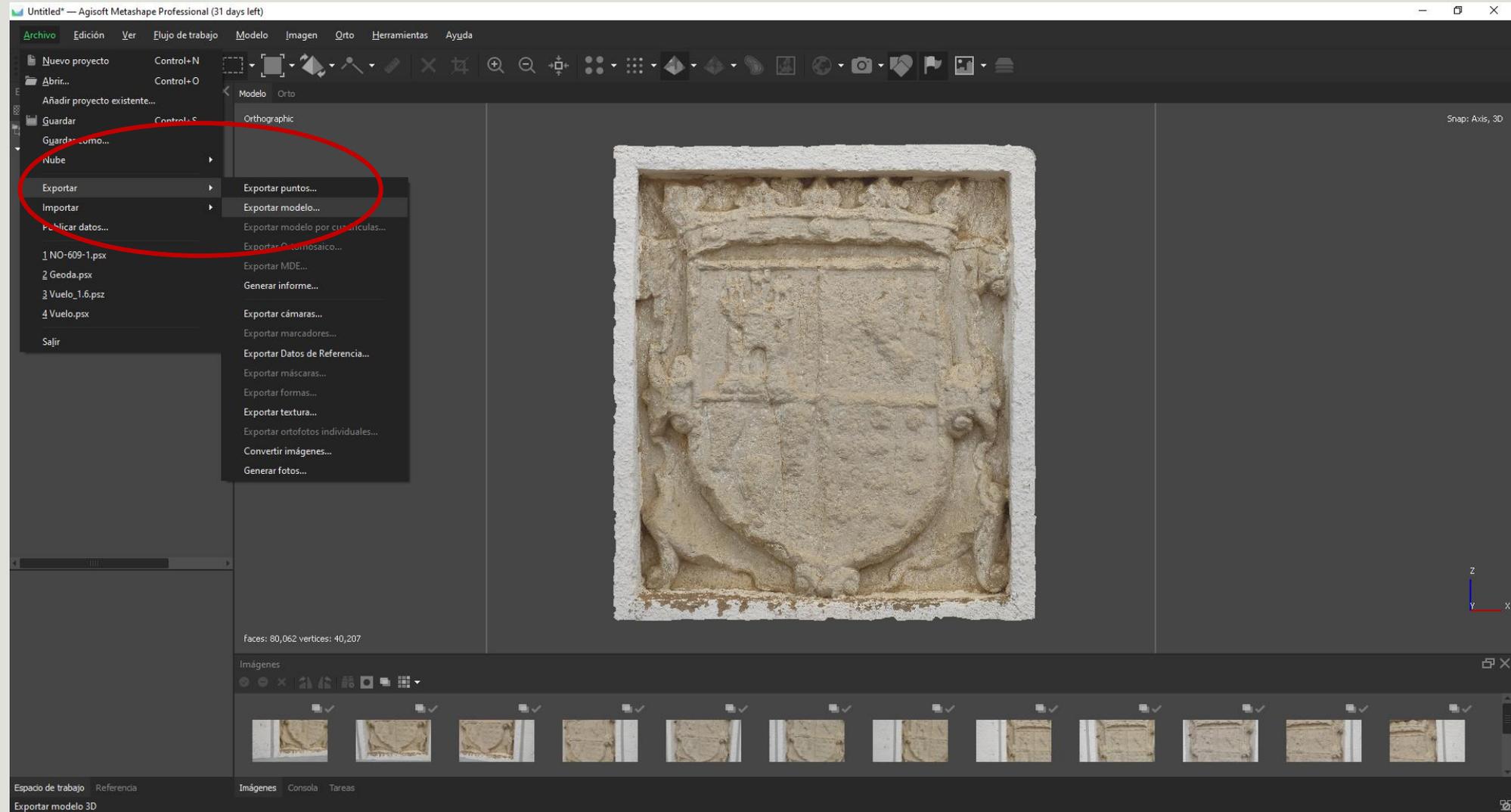
Agisoft Metashape

Texturizado



Agisoft Metashape

Exportar modelo 3D



Agisoft Metashape

Exportación

Formato **.obj** (+.mtl) o **.fbx**

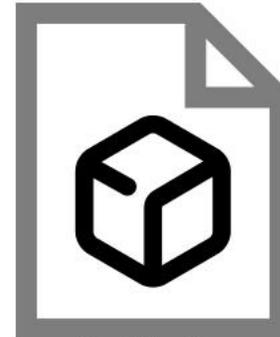
La textura está vinculada a nuestro archivo 3D: **MISMA CARPETA**



Escudo_Villacalabuey



Escudo_Villacalabuey



Escudo_Villacalabuey

