Agisoft Metashape

Processing Report

29 April 2025

Survey Data
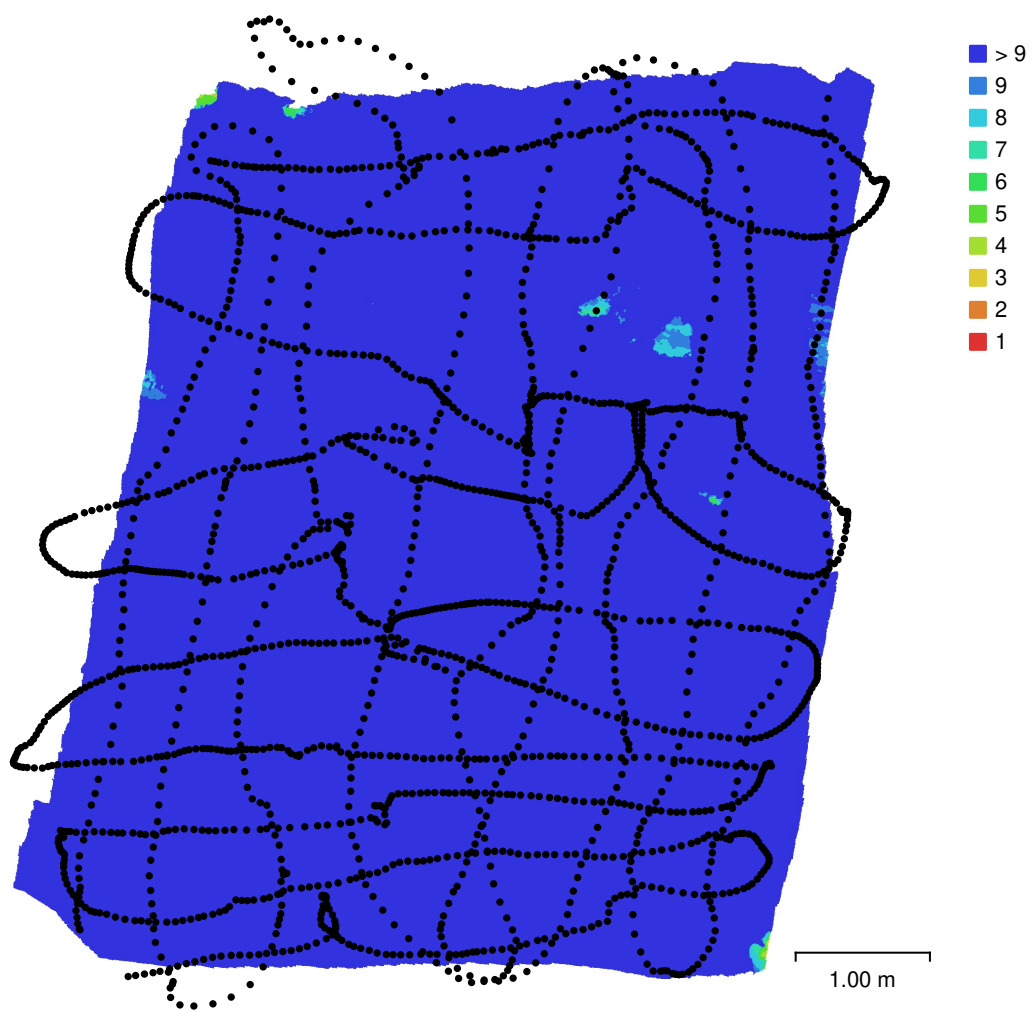
Fig. 1. Camera locations and image overlap.

Number of images:	2,046	Camera stations:	2,046
Flying altitude:	62.3 cm	Tie points:	978,887
Ground resolution:	0.198 mm/pix	Projections:	5,580,813
Coverage area:	35.0 m²	Reprojection error:	3.92 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
unknown	5312 x 4648	unknown	unknown	No

Table 1. Cameras.

Camera Calibration

3 pix
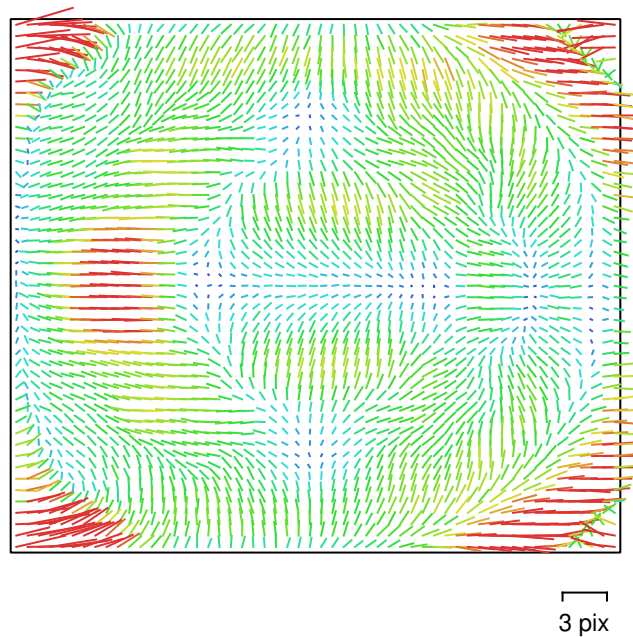
Fig. 2. Image residuals for unknown.

unknown

2046 images

Type	Resolution	Focal Length	Pixel Size
Frame	**5312 x 4648**	**unknown**	**unknown**

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	**3141.93**	0.12	1.00	0.16	0.22	-0.11	0.27	-0.02	-0.03	0.00
Cx	**-19.2659**	0.031		1.00	0.03	0.02	-0.02	0.08	0.59	-0.01
Cy	**-0.932482**	0.031			1.00	0.00	0.03	0.01	0.00	0.61
K1	**-0.0977593**	4e-05				1.00	-0.92	0.88	0.05	0.05
K2	**0.0962858**	7.9e-05					1.00	-0.95	-0.04	-0.01
K3	**0.00159552**	5e-05						1.00	0.05	0.01
P1	**-0.00410671**	3.1e-06							1.00	0.03
P2	**-0.000604495**	3.4e-06								1.00

Table 2. Calibration coefficients and correlation matrix.

Scale Bars

Label	Distance (m)	Error (m)
point 1_point 2	4.14905	-0.850951
point 2_point 3	5.67388	0.673879
point 3_point 4	3.94569	-1.05431
point 1_point 4	5.68077	0.680772
point 5_point 6	0.207655	0.00765478
point 7_point 8	0.124346	-0.00565362
Total		**0.677416**

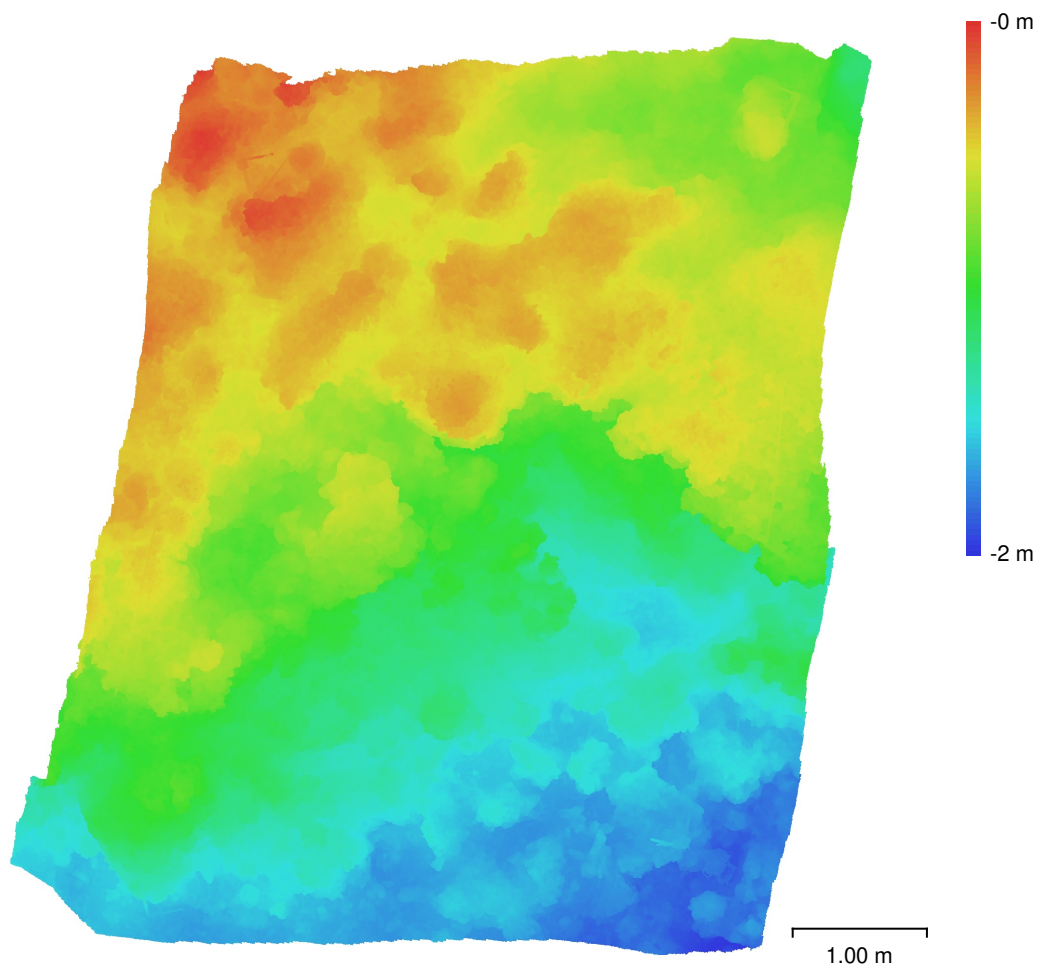Table 3. Control scale bars.

Digital Elevation Model

Fig. 3. Reconstructed digital elevation model.

Resolution: unknown
Point density: unknown

Processing Parameters

General

Images	2046
Aligned images	2046
Markers	8
Scale bars	6
Coordinate system	Local Coordinates (m)
Rotation angles	Yaw, Pitch, Roll

Tie Points

Points	978,887 of 1,373,265
RMS reprojection error	0.54586 (3.9221 pix)
Max reprojection error	1.6945 (107.434 pix)
Mean key point size	6.94526 pix
Point colors	3 bands, uint8
Key points	6.57 GB
Average tie point multiplicity	6.66588

    Alignment parameters

Accuracy	Medium
Generic preselection	Yes
Reference preselection	No
Key point limit	40,000
Key point limit per Mpx	1,000
Tie point limit	4,000
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	No
Matching time	36 minutes 25 seconds
Matching memory usage	2.74 GB
Alignment time	1 hours 34 minutes
Alignment memory usage	887.99 MB

Date created	2025:04:23 10:03:32
Software version	2.2.0.19890
File size	6.77 GB

Depth Maps

Count	2040

    Depth maps generation parameters

Quality	Medium
Filtering mode	Mild
Max neighbors	16
Processing time	48 minutes 20 seconds
Memory usage	2.48 GB

Date created	2025:04:23 12:48:18
Software version	2.2.0.19890
File size	5.10 GB

Point Cloud

Points	162,233,690
Coordinate precision	0.207 mm

    Point attributes

Color	3 bands, uint8
Normal	
Confidence	1 - 76

Point classes
    Created (never classified)   162,233,690
Depth maps generation parameters
    Quality   Medium
    Filtering mode   Mild
    Max neighbors   16
    Processing time   48 minutes 20 seconds
    Memory usage   2.48 GB
Point cloud generation parameters
    Source data   Depth maps
    Processing time   7 hours 13 minutes
    Memory usage   7.52 GB
Date created   2025:04:23 20:02:10
Software version   2.2.0.19890
File size   2.26 GB
Model
Faces   10,801,321
Vertices   5,409,997
Vertex colors   3 bands, uint8
Texture   8,192 x 8,192, 3 bands, uint8
Depth maps generation parameters
    Quality   Medium
    Filtering mode   Mild
    Max neighbors   16
    Processing time   48 minutes 20 seconds
    Memory usage   2.48 GB
Reconstruction parameters
    Surface type   Arbitrary
    Source data   Depth maps
    Interpolation   Enabled
    Strict volumetric masks   No
    Processing time   1 hours 4 minutes
    Memory usage   12.84 GB
Texturing parameters
    Mapping mode   Generic
    Blending mode   Mosaic
    Texture size   8,192
    Page count   1
    Enable hole filling   Yes
    Enable ghosting filter   Yes
    UV mapping time   11 minutes 1 seconds
    UV mapping memory usage   3.10 GB
    Blending time   22 minutes 28 seconds
    Blending memory usage   5.54 GB
    Blending GPU memory usage   2.71 GB
Date created   2025:04:29 10:37:16
Software version   2.2.0.19890
File size   586.52 MB
DEM
Size   8,418 x 9,514
Resolution   0.829 mm/pix
Coordinate system   Local Coordinates (m)
Reconstruction parameters
    Source data   Point cloud
    Interpolation   Enabled
    Processing time   1 minutes 24 seconds

Memory usage	305.45 MB
Date created	2025:04:24 08:11:30
Software version	2.2.0.19890
File size	209.95 MB

Orthomosaic

Size	13,960 x 15,777
Resolution	0.500 mm/pix
Coordinate system	Local Coordinates (m)
Colors	3 bands, uint8
Orthophotos	2.51 GB

Reconstruction parameters

Blending mode	Mosaic
Surface	DEM
Enable hole filling	Yes
Enable ghosting filter	No
Processing time	32 minutes 7 seconds
Memory usage	614.57 MB
Date created	2025:04:24 08:38:01
Software version	2.2.0.19890
File size	2.68 GB

System

Software name	Agisoft Metashape Professional
Software version	2.2.0 build 19890
OS	Linux 64 bit
RAM	251.28 GB
CPU	Intel(R) Xeon(R) W-2223 CPU @ 3.60GHz
GPU(s)	NVIDIA RTX A5000